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Department of Health

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Primary Health Network Needs Assessment Reporting Template

This template must be used to submit the Primary Health Network's (PHN's) Needs Assessment report to the Department of Health (the Department) by **15 November 2019** as required under Item E.5 of the PHN Core Funding Schedule under the Standard Funding Agreement with the Commonwealth.

To streamline reporting requirements, the Primary Mental Health Care (including Suicide Prevention) Needs Assessment Report, Drug and Alcohol Treatment Needs Assessment Report and Indigenous Health (including Indigenous chronic disease) Needs Assessment Report are included in this combined template. This template should also include the needs assessment of primary health care after hours services.

Name of Primary Health Network

Central Queensland, Wide Bay, Sunshine Coast PHN

When submitting this Needs Assessment Report to the Department of Health, the PHN must ensure that all internal clearances have been obtained and the Report has been endorsed by the CEO.

Table of Contents

SECTION 1 – NARRATIVE

This section provides PHNs with the opportunity to provide brief narratives on the process and key issues relating to the Needs Assessment.

Needs Assessment process and issues (500-1000 words)

– in this section the PHN can provide a summary of the process undertaken; expand on any issues that may not be fully captured in the reporting tables; and identify areas where further developmental work may be required (expand this field as necessary. Where relevant please also nominate which process your input is relevant to i.e. General population health, Primary Mental health care, Alcohol and other drug treatment or Indigenous health needs assessment.

This Health Needs Assessment (HNA) refresh builds on the previous Needs Assessments for Central Queensland, Wide Bay, Sunshine Coast Primary Health Network (the PHN) and updates the information that is available via newly published datasets and/or via qualitative input from the region. In undertaking this HNA update, a range of quantitative indicators were examined in relation to determinants of health, health status, and health system performance. These newly published data were triangulated with previously available data (e.g. Census 2016) and qualitative information. This approach proved useful in uncovering the diverse nature of communities and service patterns within the PHN catchment.

For previous assessments, qualitative information was captured throughout the commissioning cycle through targeted, informal and opportunistic consultation with Hospital and Health Services (HHSs), primary care service providers and consumers, forums, mental health regional planning days. This HNA incorporates this information along with information obtained through internal stakeholder consultation in 2019. Involvement of the PHN in piloting the application of the National Mental Health Service Planning Framework (NMHSPF) has provided insights into the extent of mental health and service needs within the PHN catchment. This tool will be updated during next year's update. The PHN's Clinical and Community Advisory Councils were consulted during this update.

Information obtained through quantitative data analysis was combined with qualitative information to arrive at a set of prioritised needs and issues within the catchment. The needs prioritised in the previous needs assessments within the PHN catchment were reconsidered and resulted in re-confirmation of many of those needs, and the addition of others (notably sexual health, palliative care, end of life care, eating disorder, suicide prevention and emphasis on alcohol and other drug [AoD] needs and services).

In relation to the shortlisted issues and needs identified, some of these were already identified through previous needs assessments through extensive consultation with the PHN senior staff and subject matter experts. Based on the range of ideas put forward through this process, several ideas were combined into higher level strategies. These suggestions were collated into a consolidated list.

The PHN has established internal HNA working group. This group now guides PHN's scope and presentation of the HNA relevant publications tailored to the audiences. It is intended that in future updates, additional community consultation will be undertaken - particularly in relation to individuals from priority population groups such as people experiencing mental health issues, Aboriginal and Torres Strait Islander populations, aged persons, people from refugee backgrounds, culturally and linguistically diverse populations and people with disabilities. Although, sexually transmitted infections have been identified as an issue in certain locations within the PHN, it is envisaged that the PHN will work with Public Health Units and HHSs within the region to address this issue. PHN will inform the general practices within the region via practice support officers regarding the STI situation and play a role educating the practices.

Within the PHN, service mapping practices need to be enhanced – particularly within the palliative care sector. The PHN has a large elderly population; mental health issues in residential aged care have been a concern. A high proportion of the PHN population lives in rural and remote areas; workforce issues – along with other well-known challenges for commissioning services – means innovative approaches are required to address identified health and service needs in such locations.

Additional Data Needs and Gaps (approximately 400 words)

– in this section the PHN can outline any issues experienced in obtaining and using data for the needs assessment. In particular, the PHN can outline any gaps in the data available on the PHN website, and identify any additional data required. The PHN may also provide comment on data accessibility on the PHN website,

including the secure access areas. (Expand field as necessary). Where relevant please also nominate which process your input is relevant to i.e. General population health, Primary Mental health care, Alcohol and other drug treatment or Indigenous health needs assessment.

Localised data for certain population groups are frequently challenging to find. Groups include young people; and although there is a National Youth Information Framework and indicators (reported by AIHW), the data are not generally available at lower geographical levels. Data on Aboriginal and Torres Strait Islander people are often available at state and national levels, but not commonly at lower geographic levels across a range of indicators.

Having access to de-identified federal and statewide health data linkages – such as emergency department (ED), inpatient, outpatient, Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) data – along with availability of most recent data are two key areas that can help all the PHNs to undertake more effective and timely needs analysis.

In relation to data available on Department of Health's PHN website, the availability of the portal is certainly helpful, however the use of SA3s as one of the primary geographic units of reporting makes it challenging to compare those data with other datasets which commonly report by LGA and SA2s. Furthermore, many of the datasets are currently not age-standardised, nor do they generally facilitate easy comparisons (e.g. through ranking mechanisms, or comparative age-standardised rates [ASR]) between local and/or PHN catchments. The data could be made available in the same format overtime to allow further longitudinal analysis to produce time series analysis.

In addition there are some specific data requirements that will help to improve the understanding of health and service needs:

- Reliable and real time workforce data calculated in consistent manner. e.g. full time equivalent (FTE) per 1,000 population for each discipline (across all disciplines and portfolios). The National Health Workforce Dataset Tool seems to be open to interpretation as to how to inform reliable estimates.
- Practice Incentive Program (PIP/QIPIP) data is currently only available at PHN level - HHS/SA3 would be more appropriate to capture patterns of accreditation and best practice adherence to inform education and training.
- Comprehensive data on patterns of health care utilisation for Aboriginal and Torres Strait Islander people are not currently available.

In summary, if the PHNs are to be ranked by their efficient and effective outcomes, then a standardisation of the process of measuring needs, minimal standards and standardisation of all data and better acknowledgement of challenges for rural/remote areas is necessary.

Additional comments or feedback (approximately 500 words)

– in this section the PHN can provide any other comments or feedback on the needs assessment process, including any suggestions that may improve the needs assessment process, outputs, or outcomes in future (expand field as necessary).

Establishing the template for the HNA is useful, however separation of health and service needs as well as general, mental health, AoD and Indigenous assessments means the information becomes repetitious at times.

The current approach to needs assessment is not 'wellness' based. Wellbeing is a valid population outcome measure beyond morbidity, mortality, and economic status. It tells us how people perceive their own quality of life. Self-reports that incorporate an understanding of health and wellness can form an important part of wellness-based assessment of needs and healthy community approaches.

The PHN faces many challenges in trying to commission services to address the needs of its population. Some of these are:

1. Geographical challenges: rural/remote areas, workforce issues.
2. Multiple stakeholders creating conflicting forces that must be addressed for effective commissioning.
3. Maintaining active engagement with isolated areas.
4. Establishment and continuation of multiple offices across a large region, while supporting effective and efficient functioning of the PHN.

Although this needs analysis includes comprehensive approaches to options for action, the challenges above highlight the importance of building the necessary infrastructure (including data solutions) and practices to allow sustainable services and effective commissioning. This is not clearly reflected in this analysis due to the health and service needs focus.

Based on the identified health and service needs, the PHN recognises six key health portfolio areas for the region:

1. Chronic disease prevention and management
2. Maternal, reproductive and child health
3. Mental health and suicide prevention

4. Alcohol and other drugs
5. Older persons' health care
6. Palliative care

These portfolios are underpinned by two priority areas: **Access** and **Aboriginal and Torres Strait Islander health**.

There are four enablers identified that allow the PHN to address the needs identified under each portfolio efficiently. These are:

1. Workforce development
2. Systems integration and collaboration
3. Health intelligence and data analytics
4. Governance and clinical governance

SECTION 2 – GENERAL POPULATION HEALTH

This section summarises the findings of the health and service needs analysis in the tables below.

2.1 Health Needs (General Population Health)

General Population Health: Health Needs		
Identified Need	Key Issue	Description of Evidence
Social determinants of health		
Index of socio-economic disadvantage	The 2016 Socio-Economic Indexes for Areas (SEIFA) focuses on income, education attainment, unemployment and dwellings without motor vehicles. Low index values represent areas of most disadvantage and high values represent areas of least disadvantage. Low socio-economic status is associated with poor health, with people of lower socio-economic status bearing a significantly higher burden of disease. The SEIFA indicates that some areas within the PHN are more disadvantaged than Queensland overall.	**Data:** In 2016, 8.8% of the population in the PHN catchment was in the least disadvantaged quintile, while 27.1% was in the most disadvantaged quintile (QLD 20%). Within the PHN catchment, Central Highlands LGA had the largest percentage of persons in the least disadvantaged quintile at 26.0%. [1] Queensland Government Statisticians Office (QGSO) reported (2018) that the LGAs with high proportions of the population in the most disadvantaged quintile were **Woorabinda** (100% of population), **Fraser Coast** (59.4%), **North Burnett** (57.1%), **Bundaberg** (49.5%), **Gympie** (46.1%) and **Rockhampton** (39.1%).[1] **Consultation:** Due to decreases in the cost of rent, Gladstone had a rise in lower income families moving to the area. This started to put stress on health services, family support services, child support services and may have contributed to a shortage in foster carers.
Remoteness	Numerous studies have demonstrated that Australians living in remote or very remote areas have, on average, higher rates of risky health behaviours, such as smoking, poorer access to health services, and worse health than people living in regional or metropolitan areas. The PHN catchment includes a high proportion of people living outside major cities and includes significant numbers of people living in locations classified as rural and remote, predominantly in the Central Queensland area.	**Data:** The rate of disease burden in remote and very remote areas was 1.4 times as high as major cities; most notably for kidney and urinary diseases, injuries, infectious diseases, endocrine disorders and cardiovascular diseases [2]. The PHN was home to more than 840,000 people. According to ABS Census 2016, the majority of the PHN population (58% or 476,000 people) lived in inner regional areas, 33% lived in major cities (273,000 people in Sunshine Coast and Noosa LGAs) and the remaining 9% (73,000 people) lived in outer regional, remote or very remote areas. [1] Just over one quarter (25.2%) of the population in **Central Queensland** (CQ) area lived in outer regional, remote or very remote areas; Wide Bay (WB) area 7.3%; Sunshine Coast (SC) area 0.5%; Queensland (QLD) 16.8%.[1]

		Four of the 12 LGAs in the PHN catchment had 100% of their populations living in outer regional or remote/very remote areas: • **Woorabinda** in CQ (of which 100% are remote) • **Central Highlands** in CQ (of which 27% are remote or very remote) • **Banana** in CQ (of which 11% are remote) • **North Burnett** in WB (of which 2% are remote)
Education outcomes	A strong link between health and education has been evident for many decades and the evidence shows an association between low education level, poor health and employment. Health literacy has been shown to have strong associations with individuals' levels of education. Low levels of health literacy are associated with poor health outcomes including increased prevalence of chronic conditions and reduced use of health services. The PHN catchment includes specific populations with low education levels.	**Data:** According to ABS Census 2016: • 6.3% of the PHN population did not go to school or completed Year 8 or below, compared to 5.4% of the Queensland population. [1] • Eight out of 12 LGAs reported higher proportions of population that did not attend school or did not complete Year 8 or below. [1] LGAs with highest proportions in the PHN catchment were: • **North Burnett** (12.9%) and **Bundaberg** (9.3%) in WB • **Woorabinda** (10.2%) and **Banana** (9.8%) in CQ More than half of residents of Woorabinda reported their highest level of schooling as Year 10 or below. Residents of the 3 WB LGAs, as well as Gympie in SC, also had low school completion rates (47.2 – 48.4% Year 10 or below; PHN 39.3%; QLD 31.9%).[1]
Income	Financial housing stress leads to conflict in the household, promoting psychological distress. The PHN catchment includes locations with high mortgage or rent related stress.	**Data:** LGAs with the lowest median family incomes were [1]: • **Woorabinda** ($37k) in CQ • **Fraser Coast** ($57k), **North Burnett** ($60k) and **Bundaberg** ($62k) in WB • **Gympie** ($59k) in SC Torres University's Public Health Information Development Unit (PHIDU) estimates that 26.5% of low-income households in the PHN experience rental or mortgage stress (spending 30% or more of household income on mortgage or rent).[3] • The highest levels of financial housing stress in the PHN region were seen in Sunshine Coast LGA (29.5% or 14,000 households) • Gladstone, Noosa and Rockhampton LGAs also had high proportions (27.3 – 28.7% of households) • Bundaberg and Fraser Coast LGAs had high numbers of households (5,000 - 6,000 households)

Health determinants

Tobacco use	Smoking is a leading cause of death and disability from cardiovascular disease, ischaemic heart disease, chronic obstructive pulmonary disease (COPD) and lung cancer. Some 18,800 Australians die prematurely from tobacco-related illnesses each year. The smoking rate in the PHN catchment was higher than the corresponding QLD and national rates for specific locations.	**Data:** • In 2015, 9.3% of the disease burden in Australia was due to tobacco use, making it the leading risk factor that contributed to disease burden and deaths [2]. • The smoking rate in the PHN catchment had declined since 2015-16, however remained higher than the QLD and national rates. In 2017-18, 12.2% of adults surveyed in the PHN catchment were current smokers, with the proportion being slightly higher for males than females. This compares to 11.4% for QLD.[4] • Across the PHN catchment, smoking rates were highest in **WB (15.7%):** North Burnett (21.1%) and Fraser Coast (15.7%); and **CQ (14.1%):** Rockhampton (15.4%) and Central Highlands (15.3%); and lowest in **SC (9.4%):** Gympie (14.2%) [4]. • Adult smoking in **North Burnett** appears to have almost doubled from 11.3% of adults surveyed in 2013-14 (95% CIs 7.5,16.6) to 21.1% in 2017-18 (95% CIs 15.9,27.6) [4].
Risky alcohol consumption	Alcohol abuse affects families and communities in multiple ways. It has the potential to lead to anti-social behaviour, violence, assault, imprisonment and family breakdown (NHMRC, 2009). Long-term excessive alcohol consumption is a major risk factor for chronic physical and mental health conditions (NHMRC, 2009). Binge drinking contributes to injuries and death due to external causes such as suicide or transport accidents. Some of the LGAs within the PHN have high proportion of people drinking alcohol at risky levels.	**Data:** Queensland Government's Queensland survey analytics system (QSAS) 2015-16 reported: • Proportion of people who had lifetime risky alcohol consumption (exceeding guidelines) was higher within the PHN (24.5%) than Queensland (21.8%) [4]. • The LGAs with the highest proportion of adults reporting alcohol consumption that was risky (lifetime) were **Gympie** (29.5%), **Gladstone** (27.7%), and **North Burnett** (26.5%)[4]. This is explored further in Section 4.
Overweight and obesity	Being overweight or obese increases the risk of developing chronic diseases such as coronary heart disease, type 2 diabetes, some cancers, respiratory and joint problems. Overweight and obesity rates were significantly higher in specific locations than the rates for QLD.	**Data:** • In 2017-18, 61.5% of people aged 18 and over were overweight or obese in the PHN. This rate was slightly higher than the rate for QLD (59.2%), and up from 58.8% in 2015-16[4]. • Males (67.9%) living in the PHN catchment were much more likely than females (55.2%) to be overweight or obese in 2017-18. This disparity between males and females was evident at both the state and national level [4]. • Across the PHN catchment, **WB (68.4%)** and **CQ (65.7%)** had the highest proportions of adults who were overweight or obese. All LGAs except for Noosa and Sunshine Coast have a higher proportion of overweight or obese adults than

		the Queensland average. The top five LGAs were as follows: 1. North Burnett (WB) 71.6% of adults 2. Livingstone (CQ) 69.6% of adults 3. Bundaberg (WB) 69.1% of adults 4. Fraser Coast (WB) 68.1% of adults 5. Central Highlands (CQ) 66.8% of adults
Diet	There is a strong association between diet and health. While there are multiple nutritional guidelines developed for healthy living, unhealthy diet with insufficient nutrients impacts negatively on all age groups including during pregnancy. Vegetable intake was generally inadequate within the PHN catchment.	**Data:** • In 2017-18, only 10% of people aged 18 and over in the PHN reported eating the recommended daily intake of vegetables. This was slightly above the 8.7% for Queensland. • Across the PHN catchment, adults living in the SC area reported the highest proportion of adequate vegetable intake (11.8%) followed by WB (8.8%), and then CQ (7.7%). • Available estimates for children age 5 to 17 suggested that these figures were even lower for children, with approximately 5.7% eating the recommended daily intake of vegetables in 2015-16 (CQ 4.2%; WB 6.5%; SC 6.3%; QLD 3.8%)[4].
Perceived health status	Self-assessed health status is an important measure of the overall level of a population's health and a reliable predictor of morbidity and mortality. A significant proportion of people in the PHN catchment report being in fair or poor health.	**Data:** • In 2016, within the PHN, an estimated 18.4% of the population aged 45 and over (65,000 people) reported being in fair or poor health. This figure was approximately 15.6% for all people aged 15 and over in the 2016-17 Patient Experience Survey [5]. • In 2014-15, PHIDU estimates of the rates of fair or poor self-assessed health ranged from as low as 13.6% in Sunshine Coast LGA to as high as 20.9% in **North Burnett (WB)** and 19.8% in **Fraser Coast (WB)** [6]. • QSAS estimates for 2017-18 were even higher, especially in **WB** where 21.1 – 23.1% of adults surveyed reported fair or poor health (PHN 16.9%; QLD 15.3%) [4].
# Infants and children		
Infant mortality and low birth weight	Infant mortality rate remains an important indicator of health for whole populations. Similarly, low birthweight is closely associated with foetal and neonatal mortality and morbidity, inhibited growth and cognitive development, and chronic conditions later in life. Within the PHN, there were high infant and child	**Data:** **Infant mortality (0 to <1 years)** [7] • Latest infant mortality data (2014-16) indicated that the PHN rate (3.6 deaths in infants aged 0 to <1 year per 1,000 live births) was similar to the national rate (3.3). • The infant mortality rate in the PHN has been consistently improving since 2010-

	mortality rates and high percentages of low birth weight (LBW) babies in Wide Bay.	12, falling from 5 deaths per 1,000 live births down to 3.6 in 2014-16. • The highest rate in the PHN was in **WB;** 6.1 deaths per 1,000 live births (almost double the national rate) was seen in both **Hervey Bay and Maryborough** SA3s. This is the eighth highest rate of 80 SA3s reported in Queensland (2014-16). • The infant mortality rate in **Maryborough** SA3 has risen consistently (more than doubled) since 2010-12 period. • The infant mortality rate in **Sunshine Coast Hinterland** SA3 has remained high for the last three reporting periods (5.7 – 5.9 deaths per 1,000 live births). • The highest infant mortality rate in **CQ** was seen in **Rockhampton** (5 deaths per 1,000 live births), though this rate has been falling consistently from 7.3 in 2010-12 [7]. **Child mortality (0 to <5 years)** [7] • PHN child mortality (4.5 deaths in infants and children aged 0 to <5 years per 1,000 live births) remains slightly higher than the national rate (3.9). • The highest rates in the PHN are again seen in **WB** area: **Burnett** (7.0) and **Hervey Bay** (6.7) SA3s. High child mortality rates are also seen in **Rockhampton, Caloundra, Sunshine Coast Hinterland and Maryborough** SA3s (5.7 – 6.1 deaths per 1,000 live births). • Noosa's previously high rate has halved, from 6.5 in 2013-15 to 2.8 in 2014-16 [7]. **Low Birth Weight** [7] • On average, the percentage of births in 2014-16 that were of low birthweight (LBW) – less than 2500g – was slightly lower in the PHN (4.8%) than nationally (5.0%). • The highest proportions of LBW babies were seen in **WB** (5.4 – 6.5%) when compared to **CQ** (4.0 – 5.2%) and SC (3.5 – 5.4%) areas. • The largest increase from 2013-15 to 2014-16 reporting periods was seen in **Maryborough** (5.8 to 6.5%) and **Gympie-Cooloola** (4.7 to 5.4%) SA3s [7].
Immunisation	Immunisation through vaccination is one of the most effective preventive health measures developed for protecting against the spread of infectious diseases. Immunisation rates above the 90% threshold are considered critical for providing whole of population protection from infectious disease via herd immunity. In the PHN catchment, 1 in 10 children aged 0-5	**Children aged 0-5** • Childhood vaccination rates were high in the PHN catchment. In 2016-17, 92.6% of 1, 2 and 5 year olds in the PHN catchment were fully immunised, slightly below the national (93.8%) rate [8]. • Across the PHN catchment, **SC** area had the lowest rates of immunisation across 1, 2 and 5 year olds, with some postcodes – particularly **Maleny and surrounds** – with rates consistently below 80% [8]. • **SC** area SA3s **Nambour-Pomona**, **Sunshine Coast Hinterland** and **Noosa** had below

	years were currently under vaccinated or receive delayed vaccination. Specific postcode analysis identified several areas in the Sunshine Coast area with rates below 85% across all age groups. Agnes Water area within Wide Bay also had low immunisation rates.	90% coverage across all age groups in 2016-17 [8]. • In **WB**, **Agnes Water and surrounds** had less than 80% coverage among 2 and 5 year olds [8]. **Human Papillomavirus (HPV)** • By June 2016, 70.4% of males and 76.6% of females aged 15 years in the PHN catchment were fully vaccinated against HPV – the 6th lowest of 30 PHNs reported nationally. The corresponding rates for QLD were 70.8% and 77.6%, while the Australian rates were 74.1% and 80.1% [9]. • Across the PHN catchment, HPV vaccination rates were lowest in Sunshine Coast SA4 at 65.4% of boys (5th lowest of 87 SA4s reported nationally) and 73.9% of girls (11th lowest of 85 SA4s). [9]
Developmentally vulnerable children	Australian Early Development Census (AEDC) is a nationwide data collection of early childhood development at the time children commence their first year of fulltime school. The AEDC domains have been shown to predict later health, wellbeing and academic success. A higher proportion of children in the PHN catchment were developmentally vulnerable compared with the national rate – especially in Woorabinda and Wide Bay areas.	**Data:** • In 2018, 26.4% of children surveyed in the PHN catchment were developmentally vulnerable on **one or more** domains. This proportion was comparable with QLD (25.9%) [10]. • Across the PHN catchment, the highest proportions of developmentally vulnerable children continued to be seen in **WB** (32.7 – 33.8%), and **Rockhampton** (32.5%) in **CQ** [10]. • In the Indigenous community of **Woorabinda***, children were twice as likely to be developmentally vulnerable (62.1%) than other children in the PHN catchment [10]. *Woorabinda context is a discrete Aboriginal community, estimates based on small numbers, treat with caution. **Consultation:** Stakeholders in **WB** have expressed concerns that younger mothers in the area are not sufficiently empowered to identify child development issues (physical, cognitive, social) and so are presenting quite late to services. In Gympie, there was insufficient access to multidisciplinary allied health services for children.
# Youth		
Concerns about the health of young people in the PHN	There is evidence that young people in remote and very remote areas of Australia fare worse on a range of health indicators.	**Data:** The Young Minds Matter Survey (2013-14) [11] indicated that 4 to 17 year olds have a higher prevalence of mental health disorders under the following social and

catchment	High proportion of teenage pregnancies in Wide Bay were identified. High proportion of youth having AoD and sexually transmissible infection-related issues in Central Queensland have been identified.	demographic circumstances: • Step, blended, and one parent families (18.3 – 23.7%) compared to original families (10.4%). • Neither parent/carer employed (21.3 – 29.6%) compared to both parents/carers employed (10.8%) [11]. Young people in remote and very remote areas compared to their city counterparts: • have higher death rates [12] • are less likely to see a general practitioner and have more dental decay [12] • are less likely to be meeting minimum standards for reading, writing and numeracy and to be studying for a qualification • are more likely to be under youth justice supervision [13]. Additionally: • Over one-third of young people were overweight or obese, less than half (46%) meet physical activity guidelines, and nearly all do not eat enough fruit and vegetables [12]. • Considerable proportions of young people drink at risky levels and nearly four in ten (38%) young people were victims of alcohol- and drug-related violence [12]. • There were rising rates of diabetes (41% increase since 2001) and sexually transmitted infections (fourfold increase between 1998 and 2008, mostly due to increases in notifications for chlamydia) [12]. • Mental health problems and disorders account for the highest burden of disease among young people (26% aged 16-24 years) [12]. • Among young males, road deaths were nearly three times as high as females [14]. • National Health Survey findings indicated that anxiety-related problems, allergies and asthma were leading long-term health conditions in children and youth age 0-24 years [15]. With 96,000 young people (aged 15 to 24 years) living in the PHN catchment, the above national statistics suggest that the **PHN had high numbers of youth with health-related needs**. Based on the estimate of over one-third of young people being overweight or obese nationally, it is possible that **approximately 30,000 young people within the PHN are overweight or obese.** • PHIDU data indicated that **approximately 6,000 young people (7.0%) aged 16 to 24 years receive an unemployment benefit** (QLD: 4.7%). The LGAs with the highest proportions of young people receiving an unemployment benefit were **Woorabinda** (38.5%) and **Fraser Coast** (11.4%, **over 1,000** young people),

		Bundaberg (10.3%) and **Gympie** (10.2%) [6]. • Birth rates among women under 20 were highest in the **WB** area ranging from 26.1 to 46.4 per 1,000 (AUS 12.8) [16]. Youth mortality (deaths of persons aged 15 to 24 years) in the PHN (ASR 47.1 per 100,000) was above state (42.8) and national (37.4) figures. **North Burnett** LGA (145.2) had the **highest youth mortality rate in the PHN region,** almost four times the national average (37.4) and the 16th highest of 186 LGAs reported nationally.[3] **North Burnett (ASR 38.1 per 100,000)** also has **double the state (16.9) and national (15.8) rates of avoidable deaths from external causes** (transport accidents, drownings) in persons aged 0 to 74 years [3]. General population, 2013-2017 mortality data indicated that land transport accidents were the 7th leading cause of death in **Banana**, and the 11th in **North Burnett**, though due to the relatively small population sizes, age-standardised rates and national comparators cannot be calculated [17]. Notably, the age-standardised death rate due to land transport accidents in **Gympie** was more than double the national rate [17]. **Consultation:** Stakeholder feedback indicated concerns about: • sexually transmitted diseases and teenage pregnancies in CQ and WB areas, and Gympie LGA; • limited alternate housing options for adolescents whose homes were affected by drugs; • alcohol misuse and domestic violence; • lack of employment and hopelessness leading to mental health issues for young people in the SC area. Access to health services for young people was often impeded by their limited access to transport, lack of confidence in attending services and lack of their own Medicare card. Some of these issues were raised specifically in the context of barriers to accessing sexual health screening and education services. Stakeholder feedback from WB indicated that there were concerns regarding how mental health issues in youth affect engagement in school. There were concerns about intergenerational experiences (e.g. unemployment, disadvantage) impacting the health of young people. Young people living in out of home care required information and communication about how to look after their health. Strengthening health assessment pathways for young people is required. Stakeholders in WB and CQ identified risk-taking behaviours among young people as an issue of concern.

Reproductive health

Smoking during pregnancy	Tobacco smoking increases the risk of pregnancy complications, including miscarriage, placental abruption and premature labour. It is also a leading contributor to adverse perinatal outcomes such as low birthweight, intra-uterine growth restriction, pre-term birth and perinatal death. The rate of tobacco smoking during pregnancy in the PHN catchment was higher compared to QLD , especially in WB.	**Data:** • Smoking during pregnancy was a major problem within the PHN catchment. Smoking rates during pregnancy have largely been falling throughout the PHN over the last three periods (2012-14 to 2014-16) [7]. • During 2014-16, 15.6% of women who gave birth in the PHN smoked while pregnant. While this rate had decreased (from 17.2% in 2012-14) it remained significantly higher than the national rate (10.4%). In other words, women in the PHN were 1.5 times more likely to smoke during pregnancy than other Australian women [7]. • Across the PHN catchment, smoking rates during pregnancy were highest in WB (19.9 – 28.8%) [7]. Burnett SA3 (28.8%) had the highest rate in the PHN over the last three periods (2012-14 to 2014-16).The lowest rates were largely seen in the Sunshine Coast area (6.4 – 15.1%), except for Gympie-Cooloola SA3 (23.0%) [7].
Increasing incidence of sexually transmitted infections and blood borne viruses	Patterns of rising incidence of sexually transmitted infections and blood borne viruses (STIBBV) are evident throughout the PHN.	Analysis of state notifiable conditions data [18] indicated: • Chlamydia was the most notified STIBBV in the PHN (2018-19), followed by hepatitis C, though current pattern suggests that gonorrhoea will take over with 2nd highest incidence next financial year. • Gonorrhoea and infectious syphilis (less than 2-year duration) saw the highest growth in incidence, with both more than doubling between 2014-15 and 2018-19. • Nearly two in five (38.6%) hepatitis B notifications within the PHN occurred in **North Burnett** in 2018-19. **Consultation:** The arrival of the new hepatitis C treatment with 95% cure rate has prompted awareness campaigns such as *We need to talk about Hep C,* and targeted screening, which has likely translated to higher notifications of hepatitis C.

Elderly population

Ageing populations and aged care	Elderly people living independently within their communities live a longer and healthier life. The PHN catchment includes many areas with high	**Data:** In 2016, the percentage of people aged 65 years and over (19.2%) in the PHN was

	proportions of elderly people including many beachside locations which are known retirement destinations. There was a high proportion of elderly people in the PHN currently and projected for the future, and an increasing number of support services and systems to support older people to continue to live in their homes will be required. There were high numbers and proportions of elderly people in Wide Bay and Sunshine Coast areas, however Central Queensland was projected to experience higher growth in the number of elderly people, and showed some of the lowest rates of aged care service places in the region.	significantly higher than for the state overall (14.7%) [1]. Within the PHN, 5 out of 12 LGAs will have more than 20% of their populations aged 65 and above. **Fraser Coast** (25.5%), **Noosa** (23.3%), **North Burnett** (23.0%), **Bundaberg** (22.4%) and **Gympie** (21.8%) have the highest proportions of persons aged 65 years and over [1]. In 2016 there was an estimated 160,000 people aged 65 and over in the PHN – this is predicted to almost double to 300,000 by 2036 [19]. By this time, it is projected that 9 out of 12 LGAs (exceptions Central Highlands, Gladstone and Woorabinda) will have more than 20% population aged over 65 years. **Six LGAs** – Livingstone in CQ, Bundaberg and Fraser Coast in WB, and Gympie, Noosa and Sunshine Coast LGAs in SC – are projected to have **more than 30%** of their population aged **65 years and over in 2036** [19]. Population projections show that growth rates in the over 65 age group were greater in the PHN region compared to Queensland. By 2021, the proportion of the PHN population aged 65 and over will be 19.7%, compared to Queensland with 15.0%. This translates to 190,000 people aged 65 and over by 2021 (an increase of more than 30,000 elderly) and almost 300,000 people aged 65 and over in the PHN by 2036 [19]. **CQ** is projected to experience the highest growth in the number of people aged 85 years and over, increasing threefold by 2036. [19] Across the PHN, the total number of aged care places (home care, residential, restorative and transition care) were relatively low per 1,000 target population* (48.9 per 1,000; QLD 53.0 per 1,000) [20]. There was much variation in CQ: while Rockhampton and Banana show the highest number of places, **Gladstone** (31.7), **Central Highlands** (36.3) **and Livingstone** (37.1) LGAs had the **lowest number of aged care places** per 1,000, and were projected to experience some of the highest growth in older population (more than double by 2036) [19, 20]. Low availability was also apparent in Gympie, with 34.2 places per 1,000 target population. *Target population includes people aged 65 years and over plus Indigenous people aged 50 years and over **Consultation:** These demographic changes were compounded by limited public transport in many rural areas, which makes it difficult for elderly people to attend GPs and other primary health care services. Stakeholders commented on the need for transport for elderly people to and from their appointments with specialist services. Reduced availability of family networks can also place family carers at risk of stress and other health issues as there are often limited

		respite care options available. In CQ, there was inconsistency in the availability and response by GPs to RACF patients, with greater prioritisation for RACF patients needed. An insufficient availability of aged care beds and access to wound care consumables has been identified in Central Highlands and Gympie.
Improving health literacy among the elderly	Poor health literacy – including the ability to navigate the health system – commonly leads to reduced access to services and poorer health outcomes. Low levels of health literacy are also associated with undesirable outcomes, such as premature death among older people, lower participation in preventative programs (including influenza vaccination and cervical and breast cancer screening) [21], and poor medication adherence [22]. There was evidence that aged care reforms are not well understood by the elderly in the PHN catchment.	**Data:** The 2006 ABS Health Literacy Survey identified that only 4 in 10 adults have a level of health literacy that allows them to meet the complex demands of everyday life [23]. This was just over 2 in 10 for people aged 60-74. Results for the PHN from the 2016 Survey of Health Care [24] for patients aged 45 and over who had visited a GP in the preceding 12 months showed that: • 90.4% of patients reported usual GP or others in usual place of care usually or always involved them in decisions about their care (AUS 89.1%) [24]. • 92.8% felt that their usual GP or others in their usual place of care usually or always explained test results in a way they could understand (AUS 92.9%) [24]. **Consultation:** Stakeholders raised several issues concerning aged care, and the health of older people. Concerns were raised about the change from 1 July 2015 to the Commonwealth Home Support Program (CHSP) and the My Aged Care (MAC) portal. Stakeholders indicated increasing anxiety among consumers in relation to these reforms relating to difficulties navigating the system and accessing services. These concerns continued to be expressed within the region, including concern about the ability of very frail, vulnerable aged persons and their inability to access the system. Additionally, RACFs identified that few residents present with an existing Advanced Care Plan (ACP), suggesting poor awareness and uptake of ACPs in the community.
Dementia	The physical, emotional and economic impact of dementia extends to families and caregivers of the individual suffering from dementia. As the number of people aged 65 years and over in the population increases, a concomitant increase in the number of people with dementia is possible. Sunshine Coast and Wide Bay areas are projected to experience high increases in dementia prevalence.	**Data:** **Dementia** is a key challenge in Australia. According to the AIHW report Australian Welfare 2017, around 365,000 Australians had dementia in 2017, but this was expected to more than double to 900,000 by 2050 [25]. Estimated dementia prevalence for 2016 in **SC** (18.5 per 1,000) and **WB** (19.6) areas was significantly greater than the Queensland rate (12.6 per 1,000; CQ 9.4).[26]

		The Alzheimer's Australia 2011 report [26] estimated that: • The number of people in the PHN living with dementia was projected to almost double from 13,700 in 2016 to 27,000 in 2030. • The number of people living with dementia was projected to more than double for the **SC area** from 7,300 in 2016, to 14,800 in 2030. • The WB area was projected to experience the greatest increase in proportion of people living with dementia between 2016 (19.6 per 1,000 population) and 2030 (31.9). This was significantly greater than the Queensland estimates (12.6 to 18.4). Additionally, most people (93%) living with dementia were aged 65 years or over [27]. Latest mortality data[17] indicated that: • Together, dementia and Alzheimer's disease were the second leading cause of death in the PHN, responsible for 2,234 or 7.2% of deaths in the 2013-2017 period [17]. • Around half of those (951, 9% of deaths) occurred in **Sunshine Coast LGA**. • **Gladstone and Rockhampton LGAs** have the highest *rate* of deaths due to dementia and Alzheimer's disease in the PHN (ASRs 43.3 per 100,000; PHN 36.7; AUS 40.0). Livingstone LGA has the lowest (ASR 25.4).[17] The rate of geriatric evaluation and maintenance (GEM) and psychogeriatric hospital admissions per 100,000 population has increased from 115 per 100,000 in 2015-16 to 171 in 2017-18 (compared to QLD 102 to 115). These admission rates have more than doubled in Banana, Rockhampton and Gympie over the same period. The highest admission rate in the PHN (2017-18) was seen in **Rockhampton** (429 per 100,000, more than 3 times QLD 115) [28]. **Consultation:** Due to high proportion of elderly population in many LGAs within the PHN, the Dementia Alliance in Fraser Coast was trying to organise stakeholders and the community to become a "dementia friendly community".
Chronic conditions among the elderly	The prevalence of chronic conditions increases with increasing age. Effective prevention, early detection and management of chronic conditions can delay the progression of disease, reduce the need for high-cost hospital-based interventions, improve quality of life in old age. The population aged 65 and over was predicted to	**Data:** Results from the National Health Survey 2017-18 [15] indicated that about 75% of PHN residents over 65 years of age have one or more long-term health conditions (QLD 78.5%) [15]. Additionally, approximately: • 41% of PHN residents age over 65 had high blood pressure (QLD 38%) • 21% had high cholesterol (QLD 19%)

	increase within the PHN catchment at higher rate compared to Queensland. The high proportion of elderly people with chronic conditions indicated low quality of life and high use of health services.	• 16% had anxiety related problems (QLD 12%) [15]. Revised PHIDU estimates showed that LGAs with high proportions of persons over 65 years such as Fraser Coast, Bundaberg and Gympie also had higher prevalence of chronic conditions [3]. The rate of disease burden in the elderly increased with remoteness (1.5 times higher in very remote areas than in major cities) and socio-economic disadvantage (1.3 times higher for lowest SES than highest SES) [27]. Information contained in the National Primary Health Care Strategic Framework [29], 2013, showed that among older Australians living in the community, almost half of individuals aged 65-74 years had five or more long-term conditions, increasing to 80 per cent of those aged 85 years or over.
Injuries due to falls	Injuries resulting from falls were the major cause of death, hospitalisation and emergency department presentations among persons aged 65 years and over in our community. More than half of all injury deaths in this age group were due to falls. Although the PHN catchment shows similar rates of falls compared to Queensland, most falls are preventable and greatly contribute towards reducing quality of life for elderly. The PHN catchment had high numbers of persons aged 65 and over who may be at risk of injuries from falls.	**Data:** Falls are a major cause of hip fractures; Older Australia at a glance: 4th edition [30] reported that 91% of hip fractures were the result of falls. Chief Health Officer's report 2018 tables indicated that, of the seven Queensland PHNs, our PHN saw the **greatest number of falls-related hospitalisations** for over 65s – more than 6,300 hospital admissions in two years (July 2015 to June 2017) [31]. After adjusting for age, this translates to a hospitalisation rate of 4,125 per 100,000, which aligns to Queensland rates (4,382): • WBHHS ASR 3,961 per 100,000 • CQHHS ASR 4,174 per 100,000 • SCHHS ASR 4,203 per 100,000 Rates in all jurisdictions across QLD had increased significantly (around 1,000) since the last report in 2016. Queensland Health admissions data for 2017-18 indicated that there were 8,848 falls admissions for people aged 65 years and over in the PHN. The crude rate of falls admissions per 1,000 people aged 65 and over in the PHN (54.9) was significantly lower than the state average (72.9) in all areas except for North Burnett LGA (76.0) [28]. Queensland Stay On Your Feet [32] suggested that by the year 2051: • It is projected that one in four Queenslanders will be aged 65 years or older. • The number of hip fractures among older Australians is expected to increase fourfold, based on current incidence rates.

Vulnerable populations

Homeless people	Certain areas within the PHN catchment have recorded high numbers of people who are homeless. Homelessness is associated with higher prevalence of chronic conditions including mental health. Rockhampton and Central Highlands in Central Queensland, Bundaberg and Gin Gin in Wide Bay, and Nambour and Gympie in Sunshine Coast area have high numbers of homeless people.	**Data:** ABS Census of Population and Housing homelessness data [33] showed that more than 3,000 homeless people lived in the PHN. A large number of homeless people were living in Rockhampton SA3 area (n=463). The largest homeless populations in the PHN were **Rockhampton City** (169 people), **Nambour** (162) and **Gympie Region** (128) SA2s [33]. The largest rates of homelessness in the PHN are **Rockhampton City** (508 per 10,000), **Bundaberg** (152), **Gin Gin** (128) **and Central Highlands-West** (116) **SA2s** (compared to Australia 50 per 10,000) [33]. According to Census 2016, the number of homeless males in QLD was higher than the number of homeless females across every age group, and the total number of homeless persons was greatest in the age 25 to 34 years and for those under 12 years of age [33]. Surveys conducted by the Queensland Council of Social Services in 2014 and 2015 identified that homeless people report having co-existing mental health, chronic health problem and problematic substance use, dental health problems, and asthma [34]. Aboriginal and Torres Strait Islander people were almost seven times more likely to be homeless than non-Indigenous Queenslanders (239 per 10,000 population) and represented 21% of all homeless people in Queensland in the 2016 Census.[33] **Consultation:** Homelessness has been raised by stakeholders as a group who are vulnerable to poor health outcomes. Homelessness is associated with higher prevalence of chronic conditions including COPD. Stakeholders in the Gympie region reported a lack of appropriate short- and long-term housing solutions for homeless adults and homeless youth.
People with a disability	Chronic disease-related disability increases with increasing age. Although it is difficult to know the proportion of people with disability as an outcome of chronic conditions, the PHN catchment includes an ageing population and is projected to have increasingly higher proportions of elderly. Information contained in the National Primary	**Data:** AIHW report 2018, Australia's health [23], based on 2014-15 data indicates: • Australians living with disability were 6.2 times more likely than those without disability to assess their health as 'poor or fair'. • Australians living with severe or profound disability were about times 10 more likely than those without disability to assess their health as 'poor or fair' (61%). • People living with severe or profound disability were more than 4 times as likely to

	Health Care Strategic Framework, 2013 shows that the average person with disability has 3.1 long-term health conditions that may not be directly associated with their disability. The proportion of people with profound and severe disabilities in the PHN catchment varies significantly and is high compared to Queensland in some areas, particularly in Wide Bay.	experience anxiety-related problems and almost 6 times as likely to experience mood disorders (such as depression) than people without disability. Census 2016 data shows that in the PHN catchment, more than 50,000 people (6.4% of population) were in need of assistance due to a profound or severe disability. This has increased almost 10,000 people since Census 2011. LGAs with high proportions relative to Queensland (5.2%) include **Fraser Coast** (9.7%), **Bundaberg** (8.3%) and **Gympie** (8.0%) [1]. Disability in the PHN catchment rises steadily after the age of 40 years in all LGAs, increasing heavily after the age of 69 years. [1] **Consultation:** Stakeholders have raised concerns around difficulty navigating the National Disability Insurance Scheme (NDIS) and highlighted the lack of navigation support available for consumers located in rural and remote areas who may require services.
Lesbian, Gay, Bisexual, Transgender, Intersex (LGBTIQ+)	Higher prevalence of risk-taking behaviours among LGBTIQ+ community.	**Data:** It is estimated that about 1 in 10 (11%) Australians identify as LGBTIQ+ [35], equating to approximately 90,000 people in the PHN. Region specific data not available. Australia's Health 2018 reported that gay, lesbian and bisexual people are more likely to experience intimate partner violence and psychological distress, more likely to smoke cigarettes, consume unsafe levels of alcohol, engage in illicit drug use unsafe sex practices [23].
Chronic conditions		
Prevalence of chronic conditions	Chronic conditions are associated with reduced quality of life and reduced satisfaction with health. Within the PHN, the prevalence of chronic conditions varied substantially, however was higher compared to the national average in many LGAs. Estimates were consistently high in **Fraser Coast, Gympie** and **Bundaberg** LGAs across multiple chronic conditions.	**Data:** The 2016-17 Patient Experiences Survey [5] showed that 53.9% of people aged 15 years and over reported having a long-term health condition in the PHN (compared to 49.9% nationally). Updated PHIDU estimates [3] indicated that: • Higher rates of mental health and behavioural problems, asthma and arthritis were reported for the **Bundaberg** and **Fraser Coast** LGAs. • Higher rates of mental health and behavioural problems, asthma, COPD, diabetes and arthritis were reported for the **Gympie** LGA.

		• **Noosa** had seen a large increase in estimates for circulatory diseases, and mental and behavioural health problems. The prevalence of selected chronic conditions, by LGA (ASR per 100, modelled estimates; highest three) that had higher rates compared to QLD [3] were: • Type 2 diabetes (QLD 4.1 per 100): Fraser Coast (4.9), Gympie and Bundaberg (4.5), North Burnett and Rockhampton (4.4) • Circulatory conditions (QLD 17.5 per 100): Noosa (19.9), Fraser Coast (19.1), Sunshine Coast (18.6) • Heart, stroke and vascular conditions (QLD 5.7 per 100): Fraser Coast (7.2), Gympie (6.6) Bundaberg (6.5) • Respiratory conditions (QLD 30.0 per 100): Gympie (32.6) • Arthritis (QLD 13.5 per 100): North Burnett (16.4), Fraser Coast and Gympie (16.1), Rockhampton and Central Highlands (15.9) • Mental and behavioural conditions (QLD 18.3 per 100): Noosa (20.2), Gympie (19.8), Fraser Coast and Bundaberg (19.8) • Mood/affective conditions (QLD 9.9 per 100): Fraser coast (11.9), Gympie (11.8) Bundaberg (11.4). [3] **Consultation:** Stakeholders in the CQ area reported that although travelling to larger centres for specialised treatment would always be the reality for regionally based patients, many chronic conditions should be addressed locally. Increased health promotion and access to prevention programs were also seen as advantageous. Many stakeholders felt that people needed to be supported to undertake more self-management of their conditions, including commitments to changing their lifestyles.
Cancer incidence and mortality	The PHN cancer incidence rates (2009-2013) were above national rates (for breast, cervical, colorectal, lung, melanoma and prostate). Higher bowel cancer mortality was seen in Wide Bay areas, despite highest screening participation rates. Low breast cancer screening and higher breast cancer mortality was seen in Maroochy (SC). Incidence and mortality of melanoma was much higher across the whole PHN region.	**Data** [36]**:** • Incidence rates (2009-2013) for all cancers within the PHN were all above national rates (for breast, cervical, colorectal, lung, melanoma and prostate cancer). • Incidence of melanoma within the PHN was particularly high at almost 1.5 times the national rate (ASR 71 per 100,000; AUS 49; rate ratio 1.44). • Incidence of **all cancers** combined in **Bundaberg** SA3 is the 4th highest of 80 SA3s reported in Queensland **Bowel cancer** [36]: • Bowel cancer screening participation rates (2015-16) were higher in the PHN

		(44.4%) than nationally (40.9%). The lowest rates were seen in CQ (34.5 – 41.9%). • Colorectal cancer was the 6th leading cause of death (2012-2016) in the PHN, causing 900 deaths (ASR 16.4 per 100,000; AUS 15.7) [17]. • Between 2011-2015, the highest rates of colorectal cancer deaths across all ages occurred in **Bundaberg** (ASR 19.4 per 100,000; PHN 15.7; AUS 15.6 – rate ratio 1.24). • In the bowel cancer screening target age group (50-74) the highest mortality was seen in **Hervey Bay** (ASR 33.3, rate ratio 1.19). • Hervey Bay and Bundaberg SA3s had the highest screening rates in the PHN 2015-16. **Breast cancer** [36]: • Incidence of breast cancers (2009-2013) in the PHN (ASR 121.9 per 100,000) was slightly higher than national (119.8); ranging from 97.3 in Maryborough to 156.8 in Buderim SA3. Incidence of breast cancer in Buderim SA3 was the 2nd highest of 80 SA3s reported in Queensland. • Breast cancer was the 11th leading cause of death (2012-2016) among women in the PHN, causing 562 deaths (ASR 20.0 per 100,000; AUS 20.1) [17]. • Between 2011-2015, the highest rate ratios of breast cancer deaths occurred in the 50-69 age group in **Maroochy** (ASR 53.9 per 100,000; rate ratio 1.30) and **Rockhampton** (ASR 51.0; rate ratio 1.23). **Cervical cancer [36]:** • Cervical cancer screening participation rates (2015-16) were lower in the PHN (54.2%) than nationally (55.4%). The lowest rates were seen in CQ (48.1 – 50.4%) and highest in SC area (57.4 – 62.0%), except for Gympie-Cooloola (51.2%). **Lung cancer [36]:** • Lung cancer was the 4th leading cause of death (2012-2016) in the PHN, responsible for almost 1,900 deaths (ASR 33.8 per 100,000; AUS 30.7). It was the 2nd leading cause of death in Central Highlands (ASR 42.3), Gympie (37.2) and Banana (32.8) [17]. • Lung cancer mortality rates were highest in CQ (33.1 – 42.3) and WB (34.3 – 40.9) and lowest in the SC area (23.6 – 37.2). • Between 2009-2013, high incidence of lung cancer was also seen in CQ (ASR 49.8 – 66.4 per 100,000) and WB (49.9 – 58.2; SC 35.7 – 49.0; PHN 48.5; AUS 43.6). **Melanoma [36]:** • Incidence of melanoma of the skin (2009-2013) in the PHN (ASR 71.0 per 100,000)

		was much higher than national rates (49.3); the lowest rates were seen in CQ (47.1 – 62.7) and high across WB (67.5 – 76.7) and SC (62.8 – 89.3) areas. • Melanoma was the 13th leading cause of death (2012-2016) in the PHN, responsible for 440 deaths [**Error! Bookmark not defined.**]. Of the 31 PHNs in Australia, the PHN had the highest mortality rate associated with melanoma (ASR 8.3 per 100,000; rate ratio 1.5). • The highest melanoma mortality is seen in **Fraser Coast** (ASR 9.7) and **Rockhampton** (9.4) LGAs [36].
Coronary heart disease	High coronary heart disease (CHD) mortality in Central Queensland and Wide Bay	**Data:** Coronary heart disease (CHD) is the leading cause of death nationally and in the PHN [17]. Overall the mortality rate in the PHN (ASR 66.7 per 100,000; 3,956 deaths in 2013-2017) aligns to the national rate (65.5). The highest age-standardised death rates continue to be seen in **CQ** (61.4 – 88.7) followed by WB (66.8 – 81.8), and then the SC area (57.2 – 66.1) [17]. While CHD mortality in Banana had consistently declined from ASR 155 in 2009-13 to 68 in 2013-17, it had been steadily rising in **Central Highlands** to ASR 88.7, 35% higher than the national rate and 8th highest of 42 Queensland LGAs reported [17]. LGAs with the highest age-standardised mortality rates (per 100,000) were all in the CQ area: • **Central Highlands** LGA (ASR 88.7 per 100,000, rate ratio 1.35) • **Rockhampton** (82.5) • **Livingstone** (81.9) • High rates were also seen in Fraser Coast (81.8) and North Burnett (80.6) in **WB.** [17] According to recent PHIDU estimates (2014-15) [3], the PHN had the second highest age-standardised rate of people with heart, stroke and vascular disease of the 31 PHNs (ASR 6.2 per 100; QLD 5.7; AUS 5.2) The highest LGA level estimates were seen in **WB** and **SC**: • **Fraser Coast** (ASR 7.2 per 100) • **Gympie** (6.6) • **Bundaberg** (6.5). [3]
Stroke	Stroke is the third leading cause of death. High mortality was seen in pockets throughout the	**Data:** In 2015, 1.7% of Australians had had a stroke at some point in their lives. Of those,

	PHN, especially **Fraser Coast**. High stroke-related hospital admissions were seen throughout **Wide Bay.** High prevalence of hypertension in **Central Queensland** and **Wide Bay.**	around 40% lived with ongoing disability as a direct result [23]. Cerebrovascular disease (which includes stroke) is the third leading cause of death nationally, and in the PHN. Overall the mortality rate in the PHN (ASR 35.7 per 100,000; 2,125 deaths in 2013-2017) aligned to the national rate (35.0) [17]. The highest number of deaths occurred in Sunshine Coast LGA, the largest population centre in the PHN [17]. **Fraser Coast** had the highest cerebrovascular disease-related mortality rate in the PHN, and ranked 3rd highest of the 35 QLD LGAs reported (ASR 45.5 per 100,000; 394 deaths, rate ratio 1.3). This was followed by **Gladstone** (39.4) and **Noosa** (37.8) in the PHN [17]. New Queensland Health data indicated that the rate of stroke-related hospital admissions in the PHN was higher than state levels, increasing from 311 per 100,000 population in 2015-16 to 339 in 2017-18 (QLD 283 to 298) [28]. The highest 2017-18 admission rates were seen in **Fraser Coast** (580 admissions per 100,000 population, almost double that of QLD) followed by **Bundaberg** (525) and **North Burnett** (471) [28]. High blood pressure (hypertension) is a major risk factor for stroke. PHIDU estimates that 21.4 in 100 adults (age-standardised) in the PHN have high blood pressure (QLD 23.4) [6]. Estimates are much higher in more regional areas, particularly Central Queensland: • **CQ:** Central Highlands (ASR 26.4 per 100), Gladstone (26.1), Banana (25.4), Livingstone (24.7) and Rockhampton (24.7) LGAs • **WB:** Fraser Coast (ASR 25.0 per 100) and north Burnett (24.2) LGAs. [6]
Diabetes	Increasing obesity is associated with increased diabetes prevalence worldwide. The risk of most diabetes-related complications can be reduced by providing appropriate care, at the right time. Within the PHN catchment, incidence and prevalence of diabetes was high and is varied across the areas. It was high in the Wide Bay area and Woorabinda.	**Data:** Data (June 2018) based on the National Diabetes Services Scheme [37] shows: • 47,940 people (5.2% of the population) have diabetes, and of these 88.2% have type 2 diabetes, 9.1% have type 1 diabetes, 2.1% have gestational diabetes, and 0.6% have some other form of diabetes. • **Woorabinda** still had the highest number of NDSS registrations per 100 population in the PHN (9.6; PHN 5.2; QLD 4.7). • Followed by the three WB LGAs: **Fraser Coast** (6.8 per 100), **Bundaberg** (6.6) and **North Burnett** (6.3) [37]. In addition, as at June 2018 [38]: • An average of 12.2 people were diagnosed with diabetes each day (12 in 2015).

		• A total of 41,363 people had type 2 diabetes in the PHN. • A further 20,000 people were estimated to have undiagnosed type 2 diabetes (19,000 in 2015). • In addition, nearly 90,000 people were at high risk of developing type 2 diabetes (82,000 in 2015) [38]. AIHW 2013-2017 mortality data indicated an ASR of 14.4 deaths per 100,000 (841 people) due to diabetes in the PHN catchment (AUS 15.9; lowest PHN 8.3) [17]. LGAs within the PHN region with the highest age-standardised rates (available) of deaths due to diabetes were [17]: • **Gladstone** (ASR 28.2 per 100,000, 5th highest of 65 QLD LGAs) • **Central Highlands** (25.9) • **Fraser Coast** (19.0) • **Bundaberg** (18.0) [17].
Chronic disease related mortality and preventable hospitalisations	Inefficiencies in a health system are highlighted when there are high rates of premature deaths and potentially preventable hospitalisations. Higher diabetes-related premature deaths and potentially preventable hospitalisations in the PHN catchment suggest an urgent need for improved diabetes management.	**Data:** Of 31 PHNs nationally, this PHN had the 6th highest rate of potentially preventable hospitalisations (PPHs) due to chronic conditions (ASR 1,482 per 100,000; AUS 1,249, lowest PHN 811) [39]. High rates of PPHs due to chronic conditions continued to be seen in **WB** (ASRs 1,646 – 1,825 per 100,000) and **CQ** (ASRs 1,360 – 1,770 per 100,000) HHSs compared with national rates, much of which is attributable to COPD, diabetes complications, congestive heart failure and angina [39]. Very high rates per 100,000 for 2016-17 at the SA3 level included: • **Rheumatic heart disease** PPHs in **Noosa** were more than six times the national rate (ASR 109; PHN 24; AUS 17), and 6th highest of the 34 SA3s reported nationally. • **Hypertension** PPHs in **Biloela** were more than three times the national rate (ASR 132; PHN 57; AUS 40), the highest of 76 SA3s reported nationally. • **Angina** PPHs in **Gympie-Cooloola** and **Hervey Bay** were more than double the national rate (ASRs 280 and 249 respectively; PHN 198; AUS 121). • **Diabetes complications** PPHs in **Maryborough** were more than double the national rate (ASR 388; PHN 224; AUS 180), 11th highest of 185 SA3s reported nationally [39]. High COPD and CHD mortality was seen throughout WB and CQ (refer to COPD and CHD

		sections below). **Consultation:** Stakeholders highlighted the high costs of wound care and the lack of general clinics as a service gap, particularly for the elderly populations in the Kilkivan community in the Sunshine Coast, and throughout Central Highlands.
COPD prevalence	Estimated rates of COPD varied within the PHN catchment and were higher in specific locations – mostly Wide Bay and Central Queensland.	**Data:** • Latest PHIDU estimates (2014-15) indicated that 28,600 people in the PHN had COPD (ASR 3.1 per 100; QLD 2.9; AUS 2.6) [3]. • WB area ranked 1st, CQ area ranked 10th, and SC area ranked 13th among all 61 former Medicare Local regions (2011-12) [40]. The top 5 LGAs within the PHN region with the highest age-standardised rates with COPD in the PHN region (2014-15 estimates) were [3]: • **Gympie** (ASR 3.8 per 100) • **Fraser Coast** (3.6) • **Bundaberg** (3.4) • **Rockhampton** (3.3) • **North Burnett** (3.2) [3].
COPD hospitalisations	There is good evidence to show that interventions for managing COPD patients involving multiple chronic care models can reduce the rate of hospitalisations and ED visits. There is also good evidence to show that self-management support for COPD and asthma patients can reduce rates of hospital admissions. High potentially preventable hospitalisations associated with COPD are evident in the PHN, particularly in Wide Bay and Central Queensland SA3s.	**Data:** In 2016-17 there were over 4,000 potentially preventable hospitalisations in the PHN due to COPD. This translates to an age-standardised rate of 347 hospitalisations per 100,000 population, well above the national rate (276) [39]. The highest rates in the PHN continue to be in WB and CQ SA3s: • **Central Highlands** in CQ (ASR 538 per 100,000) • **Maryborough** in WB (463) • **Burnett** in WB (449) • **Bundaberg** in WB (444) • **Rockhampton** in CQ (435) • **Hervey Bay** in WB (433).[39]
COPD mortality	Higher premature deaths associated with COPD in certain LGAs within the PHN catchment were reported. These areas also continue to experience high smoking rates.	**Data:** AIHW 2013-2017 mortality data indicated an ASR of 26.0 deaths per 100,000 (1,537 people) due to diabetes in the PHN catchment (AUS 24.6; lowest PHN 12.6) [17].

		The highest COPD mortality rates in the PHN occurred in CQ (ASRs 27.9 – 35.7) and WB (27.2 – 33.0) [17]. **Rockhampton** had the 7th highest rate of 64 QLD LGAs (ASR 35.7 per 100,000, rate ratio 1.45) [17]. 2011-2015 PHIDU data estimated that there were nearly 500 premature deaths in the PHN associated with COPD (age 0-74 years). Almost half of those occurred in Sunshine Coast (130) and Fraser Coast (106) LGAs [3]. The rates of premature deaths from COPD were significantly higher in **Rockhampton** (ASR 15.3 per 100,000), **Fraser Coast** (14.4), and **Gympie** (13.1) compared to Queensland (10.0) and national (8.8) rates [3].
Arthritis	Chronic complex conditions like arthritis are associated with increasing disability, increased cost of living and sometimes inability to travel. The PHN catchment includes some areas with significantly higher rates of arthritis.	**Data:** Latest PHIDU estimates (2014-15) for the PHN indicated [3]: • About 140,000 people were estimated to have arthritis (ASR 14.9 per 100; AUS 15.3). The highest rates continued to be seen largely in WB and CQ: • North Burnett (ASR 16.4 per 100) • Fraser Coast (16.1) • Gympie (16.1) • Central Highlands (15.9) • Rockhampton (15.9) [3].
Asthma	The PHN catchment included areas with higher rates of asthma and these rates varied across the region. There is evidence to show that people with asthma have a higher prevalence of risk factors than those without asthma. Some areas in the PHN had asthma prevalence compared to the national rate.	**Data:** Around 11% of people nationally reported having long-term asthma [41]. AIHW national level data (2014-15), asthma, associated comorbidities and risk factors, indicated that people with asthma aged 18 years and over, had a higher prevalence of selected risk factors including [41]: • current daily smoker (15.4% compared to 14.4% of people without asthma) • physically inactive (61.7% compared to 53.6% of people without asthma) • overweight or obese (69.1% compared to 62.6% of people without asthma). [41] Asthma-related PPH rates varied across the PHN, but continued to remain higher in parts of WB (ASRs 133 – 235 per 100,000) and SC (ASRs 142 – 197 per 100,000) SA3s (CQ 117 – 172; PHN 145; AUS 144).[39] The latest PHIDU estimates (2014-15) for the PHN indicated that: [3]

		• 91,163 people were estimated to have asthma (ASR 11.2 per 100; AUS 10.8) [41]. • A high prevalence specific to Gympie LGA (ASR 13.4 per 100), as well as Rockhampton (11.7), Fraser Coast (11.6) and Bundaberg (11.5) [3]. MBS data (Asthma Cycle of Care items 2546-2559 and 2664-2677) indicated that in the PHN catchment, increasing numbers of asthma patients were accessing and completing annual cycles of care in general practice: steadily increasing from 1,816 patients in 2012-13 to 2,744 patients in 2016-17 [42].

2.2 Service Needs (General Population Health)

General Population Health: Service Needs		
Identified Need	Key Issue	Description of Evidence
Access to services for vulnerable groups	The PHN catchment included diverse population groups such as Aboriginal and Torres Strait Islander peoples, homeless people and people with disability in high proportions in specific areas. NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	**Data:** Emergency data collection (2018-19) indicated that [43]: • nearly one quarter (23.5%) of all episodes were for people aged 65 years and over (CQ 16.4%; WB 28.1%; SC 25.7%; QLD 19.9%). • The highest proportions of ED episodes in 65 years and over age group continue to be seen in SC (**Noosa** 35.1%; **Sunshine Coast** LGA 26.2%; **Gympie** 24.7%) and WB (**North Burnett** 26.6%; **Fraser Coast** 30.5%; **Bundaberg** 26.2%) areas. • Over-representation of Indigenous people is explored later in the Aboriginal and Torres Strait Islander services needs table. **Consultation:** Affordable transport for vulnerable groups had been raised by stakeholders throughout outer regional and remote areas in the PHN in terms of accessing health services and activities for social wellbeing, particularly in Gympie and surrounds. Stakeholders also identified: • Gaps in service access, coordination and availability for children and youth in out-of-home or foster care in WB. • Large gaps in availability of Commonwealth Home Support Programme (CHSP) funded services particularly in outer regional / remote areas (Gympie and surrounds in SC). • Limited or complete lack of availability of public specialist disciplines in WB, requiring patients who cannot afford to attend privately to travel to the Sunshine Coast or Brisbane. • Lack of emergency accommodation for men experiencing homelessness from Brisbane to Maryborough, and housing solutions for homeless youth in Gympie. • Barriers to accessing services including social isolation and lack of support for people who are homeless. • Lack of health promotion and screening/prevention that reaches at-risk groups. • Limited access to youth services for Cooloola Coast area, and difficulties in accessing female doctors for young women in Gympie and surrounds. • Lack of child-safe transport options in Gympie means parents are taking their children to

		Queensland Children's Hospital in Brisbane (as it is on the train line) rather than trying to commute to Sunshine Coast University Hospital (SCUH). • Some regional areas such as Kilkivan / Goomeri / Widgee in SC face very limited service availability in general. • Many frail aged people living at home, particularly in the Bundaberg area, were failing to phone My Aged Care for home care services due to cognitive challenges and hearing or dexterity issues.
Support practices to improve immunisation rates	Immunisation remains the safest and most effective way to stop the spread of many of the world's most infectious diseases. Rates of immunisation coverage in the PHN catchment varied, however many locations had low immunisation coverage. This was reflected in higher PPHs due to vaccine-preventable disease in these areas.	**Data:** Australian Immunisation Register data for 2016-17 indicates that childhood immunisation rates within the PHN overall were aligned to national rates. The lowest rates in the PHN (below 85%) occurred largely around the **SC** (Eumundi-Yandina and Caloundra/ Maroochy/ Noosa Hinterlands) and Agnes Water in **WB** [8]. Overall, vaccine-preventable PPHs continued to sit lower in the PHN (ASR 179 per 100,000) than nationally (213) [39]. Interestingly, statistical areas previously amalgamated now show very divergent patterns of vaccine-preventable PPHs [39]: • Nambour (ASR 239 per 100,000) previously flattened by amalgamation with Noosa Hinterland (176) • Hervey Bay (219) (the greatest rate rise in the PHN) • Gladstone (203) previously amalgamated with Biloela (174) [39].
Quality of life for older adults and end of life care for patients with life-limiting illness	The PHN catchment included high proportions of elderly populations. Due to the ageing population and enhancements in medical treatments that increase lifespan, individuals live longer even with life-threatening illness. Support systems to help patients to live as actively as possible and to help the family cope during the patient's illness and in their own bereavement will be required. Ensuring sufficient aged care staff, retention of aged care workforce and access to primary care services in the residential care facilities are key issues in the region. High rates and high growth in palliative care admissions are seen in Fraser Coast and Sunshine Coast LGAs	**Data:** More than half of the people receiving palliative care were aged 65–84 [44]. The number of palliative care related hospital admissions in the PHN is expected to double from 2013-14 to 2026-27 [45]. Queensland Health admissions data indicates that increase in palliative care admissions in the PHN (3.3% from 2015-16 to 2017-18) was occurring at a slower rate than Queensland (10.2%) [28]. However, high growth from 2015-16 to 2017-18 was seen in Noosa (28.8% increase in admissions), Sunshine Coast (12.9%) and Fraser Coast (20.8%) LGAs.[28] Palliative care admissions had fallen around 20% throughout Central Queensland over the same period and reductions of 7% and 9% were seen in Bundaberg and North Burnett respectively [28]. Queensland Health admissions data indicated that the rates of palliative care admissions per 100,000 population were highest in WB and SC [28]: • WB: Fraser Coast (366, more than 1.5 times QLD 236), North Burnett (282) and Bundaberg (253) LGAs • SC: Gympie (278) and Sunshine Coast (259) LGAs.

		AIHW's 2019 report on dementia hospitalisations found that nationally [46]: • The rate of dementia hospitalisations had decreased by almost a quarter in the last decade to 313 hospitalisations per 100,000 population in 2016-17. • The majority (71%) of dementia hospitalisations were of the highest clinical complexity, compared with 16% of hospitalisations without a diagnosis of dementia. • The most common co-morbid conditions for hospitalisations where dementia was the principal diagnosis were type 2 diabetes (listed in 24% of hospitalisations) and urinary incontinence (23%). • Where dementia was an additional diagnosis, the most common principal diagnoses were injury or poisoning (21%) and respiratory conditions (12%) [46]. **Consultation:** Stakeholders expressed concerns about limited availability of Level 3 and 4 aged care packages (which support people to stay at home) and requirements for palliative care, geriatric specialists and dementia services in the area. Stakeholders have longstanding concerns about long waits for the MyAgedCare Contact Centre causing poor access to aged care services. In the CQ area, stakeholders pointed to the need for additional aged care beds and staff. They noted difficulties in attracting and retaining staff in residential aged care facilities, which is compounded by difficulties that people face in this area in obtaining access to training that is required to work in these services. The need for improved and easy access to primary health care and allied health services in residential aged care facilities was mentioned often. This included incorporating processes that were time efficient and easy to navigate for the elderly population in this area. In many rural areas, younger generations were having to move out of the area for work, leading to greater social isolation for their older relatives. At the same time, a number of older people were moving to coastal areas to retire, with limited family support nearby. These demographic changes were compounded by limited low cost or public transport in many rural areas, which makes it difficult for elderly people to attend GP and other primary health care services. Reduced availability of family networks can also place family carers at risk for mental health and other health issues, as there are often limited respite care options. Stakeholders in WB highlighted that gerontology and palliative care services were limited. • There was no public gerontologist in Bundaberg, and Fraser Coast has relied on locum for at least the last 12 months.

		• There was no hospice facility or public palliative care physician currently available in WBHHS. The main palliative GP specialist is of retiring age. • Multiple stakeholders have expressed concerns about the lack of after hours support for palliative care patients in their homes/RACFs. Overall, current palliative care staff arrangements did not meet the current demands in CQ and with the steady increase in elderly population within the region (CQ and SC), there was an increasing demand on services. • The workforce is not sufficient to do home visits for palliative care. • In Gympie there was no local paediatric palliative care service, and limited support for people caring for loved ones at home, resulting in caregiver stress and burnout. • In Gympie, there was a gap in accessing in-home CHSP services or accessing support services from NGOs. • Stakeholders in Gympie identified long wait times for MAC assessments and approvals for home care packages.
Gaps in antenatal care and early childhood services	Timely and regular antenatal care is essential for identifying individual needs; screening for a range of infections and abnormalities; providing support and advice; and providing first-line management and referral if necessary. Although rates are improving, expectant mothers in the PHN catchment attend antenatal care below the recommended schedule of visits for antenatal care – **particularly in Wide Bay.**	**Data:** Expectant mothers in the PHN catchment attended antenatal care below the recommended schedule of visits for antenatal care. Perinatal data for 2014-2016 indicated that 67.2% of expectant mothers in the PHN attended their first antenatal visit within their first trimester (less than 14 weeks) (regional PHNs 68.2%; AUS 65.0%) [7]. This rate had continued to improve from 61.1% in 2012-2014, however there was much variation within the PHN – **particularly in WB and CQ:** • In **WB:** Hervey Bay, Maryborough and Burnett SA3s remained below 51% • In **CQ:** Rockhampton and Central Highlands remained below 60%. Gladstone-Biloela is the only SA3 that showed a downward trend in antenatal coverage over the last three periods [7]. In 2014, 13% of expectant mothers in the PHN catchment had fewer than five antenatal visits during their pregnancy [47]. This proportion was 4% in 2017, that is the decline of 7%. Recent AIHW estimates indicated that in 2017, 96.2% of pregnancies *of known gestation* in the PHN had five or more antenatal visits (aligns to QLD 95.8%; AUS 95.7%) [48]. **Consultation:** Regarding antenatal services, stakeholders raised the following concerns: • CQ: multiple closures of maternity/birthing services (Theodore/Banana and Gladstone) reduced local accessible options for mothers.

		• WB: there were no specific antenatal clinics tailoring to the needs of pregnant adolescent women and adolescent mothers, and no private maternity unit in Bundaberg. Although there were QH Community Family Health Centres in Hervey Bay and Bundaberg that provide postnatal care including home visiting services up to four weeks post birth; stakeholders from both centres acknowledged that service provision relies mostly on women accessing the services themselves (i.e. not proactive) and probably does not engage well with 'hard to reach' populations. Stakeholders raised the following issues in relation to services for young children: CQ: • A number of stakeholders commented on the need for more services – especially allied health/ referral pathways for children with behavioural issues and their families. • Opportunity to educate and intervene early to prevent chronic conditions. WB: • Similarly, stakeholders in WB raised allied health services for children as a concern, particularly the need for speech pathology in Hervey Bay. • There were limited paediatric-specific allied health services in the community and hospital system and engaging with 'hard to reach' or 'priority populations' was difficult. There were other concerns such as limited capacity for screening, assessment and referrals for developmental delay. SC: • Ear health for Aboriginal and Torres Strait Islander children was raised as a major issue resulting in childhood deafness - incorrectly diagnosed as behavioural issues and learning difficulties. Council members raised concern regarding closing maternity ward in Gladstone. Similarly, no private hospital maternity unit in Bundaberg was available.
Low oral health services	Lower availability of dental health services in some areas the PHN catchment and varied distribution of dental health workforce in the PHN region.	**Data:** National Health Workforce data for 2017 indicated there were 688 dental practitioners registered in the PHN, equating to about 84 per 100,000 population (note this does not reflect FTE) [49]. The highest concentrations were seen in SC areas (Noosa 134 per 100,000, Sunshine Coast 99 and Gympie 81). The lowest concentrations were seen CQ and WB, especially in Banana (21 dental practitioners per 100,000 people) and North Burnett (38) [49]. **Consultation:** • A significant demand for dental services was raised by multiple stakeholders and across

		the WB area. • Stakeholders have raised the issue of oral health in vulnerable groups such as homeless people.
General practice and allied health access	There were areas within PHN that were identified as areas with high proportion of elderly or people with chronic conditions. Many areas were rural and remote and did not have transport. Areas with high triage category 4 and 5 emergency presentations suggest ED utilisation for care that may be more appropriately treated within primary settings. However, this is dependent on many factors such as accessibility, availability and affordability of those services. NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	**Data:** In 2016-17 [5]: • 83.5% of adults aged 15 years and over saw a GP in the preceding 12 months (AUS 82.5%). This was a significant rise from last year (78.1% in 2015-16). • One in eight (12.5%) reportedly needed to see a GP but did not in the preceding 12 months (AUS 14.1%); this has been steadily declining in the PHN from 19.8% in 2013-14. Of those who did see a GP, they had an average of 6.1 attendances per person (age-standardised; AUS 5.9). This ranged from 5.1 in Burnett and 5.3 in Gympie-Cooloola to 6.8 in Hervey Bay and 7.0 in Maryborough)[50], areas that have all been identified as having relatively high burdens of chronic conditions. In 2016-17 [5]: • 11.2% of adults saw a GP more than 12 times in the preceding 12 months (AUS 12.1%). • 8.9% of adults in the PHN saw a GP for urgent medical care in the preceding 12 months (AUS 11.2%; 3rd lowest of 30 PHNs reported). GP attendance rates from AIHW (for 2016-17) indicated an average of 15.1 attendances per person in a residential aged care facility. This compares to a national rate of 16.6 and ranks 13th lowest of the 31 PHNs [50]. In 2017-18, the rate of GP attendances per 100 people was higher in the PHN (672) than nationally (627) [51].However, this rate was much lower in regional areas: • CQ: Central Highlands (499 per 100 people), Biloela (514) and Gladstone (573) SA3s • WB: Burnett SA3 (566 per 100 people) • SC: Gympie-Cooloola SA3 (617 per 100 people) In 2017-18, there were nearly 100,000 emergency department episodes considered low urgency from people living in the PHN (public EDs only) – 55% of which occurred during the *in-hours* period (regional PHNs 54%; AUS 52%) [52]. These episodes could be considered appropriately serviced in general practice (triage category 4 or 5, did not arrive by emergency services, discharged without referral to another hospital) however, this is dependent on many factors pertaining to accessibility, availability and affordability of services. The highest proportions of low urgency ED presentations occurring *in-hours* were seen in Burnett (63%, Central Highlands (59%) and Gladstone (59%) SA3s in CQ, and Bundaberg (59%)

		SA3 in WB [52], with some alignment to areas with low GP attendance rates. The rate of in-hours lower urgency ED per 1,000 population was 64.6 in the PHN (2017-18), slightly above national (61.1) and well below regional average (85.8). Gympie-Cooloola (130.0) and Bundaberg (123.6) rates per 1,000 population were more than double the national rate. High rates of in-hours lower urgency ED per 1,000 population were also seen in Maryborough (115.6), Gladstone (100.8) and Hervey Bay (91.2) (public EDs only) [52]. Additional analysis of public ED data indicates in 2018-19 there were more than 180,000 non- or semi-urgent (triage category 4 or 5) ED presentations in the PHN, accounting for 46% of all presentations in 2018-19 : • CQ 46%; WB 49%; SC 44%; QLD 44% • The rate was highest in WB (ASR 29 per 100; CQ 26.7; SC 18; PHN 23) • The highest crude rates continue to be seen from patients living in Woorabinda (56 episodes per 100 people) and Banana (39) in CQ, approaching double the PHN average. • Triage category 4 and 5 accounted for 70% of all ED presentations in Banana in 2018-19, suggesting higher utilisation of public emergency departments for care that could be managed in primary care settings where available. • High crude rates per 100 people also seen in North Burnett (31), Central Highlands (28), Gympie (27), and Bundaberg (27) [43]. **Consultation:** Recent stakeholder feedback described difficulty accessing GPs in Gympie and Wide Bay areas, and concerns around RACF attendance in Bundaberg especially. RACFs in CQ have requested support from the PHN to find GPs to service residents. There was reported difficulty in retaining GPs and health workforce across CQ. Stakeholders indicated insufficient GP workforce to address growing demand of services, some clinics (especially in Gympie area) have closed books and will not take new patients. In CQ, there were prolonged waiting hours due to insufficient allied health services. Community stakeholders in Gympie reported not being advised of or aware of telehealth availability until well into their journey. Areas such as North Burnett that were isolated geographically required greater practice support due to more locums and constantly moving workforce.
Challenges with recruitment	Primary care workforce numbers and full-time equivalent rates varies across the PHN catchment, with some areas showing very low rates compared	**Data:** Many locations within the PHN catchment were classified as Districts of Workforce Shortage

and retention of staff	to Queensland Many inner regional, rural and remote locations in the PHN catchment are indicated as District of Workforce Shortage for general practice.	(DWS). Under the new Distribution Priority Area (DPA) 2019 classification, most of the PHN (except for Rockhampton, Gladstone, Hervey Bay, Sunshine Coast and Noosa) were considered DPA for GPs which suggested they are not receiving adequate GP services for the needs of that population [53]. MBS data for 2017-18 indicated that the number of full-service-equivalent (FSE) GPs varied significantly across the PHN (117 FSE GPs per 100,000 population; AUS 107) [54, 55]. Service coverage appeared lowest in more regional areas, aligning to national trends: • Lowest coverage in CQ: **Central Highlands** (81 FSE GPs per 100,000) and **Gladstone-Biloela** (82) SA3s. • Above national rate in WB except for **Burnett SA3** (102 FSE GPs per 100,000) • Above national rate in SC except for **Gympie-Cooloola** (100 FSE GPs per 100,000) and **Sunshine Coast Hinterland** (100) SA3s [55]. Central Highlands and Gladstone-Biloela in CQ, Burnett in WB, and Gympie-Cooloola and Sunshine Coast Hinterland in SC area all had at least 7 of 8 specialist disciplines classified as DWS throughout the area [53]. Shortages of psychiatry and obstetrics/gynaecology disciplines were the most pervasive, classified as DWS throughout 12 of the 14 SA3s in the PHN [53]. Findings from the 2019 Health Workforce Needs Assessment [56] identified highest perceived workforce gaps in the following disciplines: • Psychology (54.5) • Social work (51.5) • General practitioner (49.5) • Occupational therapy (47.6) • ATSI health worker/practitioner (45.1) [56]. **Consultation:** Stakeholders in the CQ area commented on lower availability of specialists in the area, which often made the management of complex medical issues difficult to address. Service gaps, especially for preventive health, mental health (bulk-billed), dental (bulk-billed), allied health, nursing, drug and alcohol services were identified along with need for speech and occupational therapy in Banana Shire. HHS stakeholders indicated difficulties in filling staffing positions in rural and regional facilities, resulting in inconsistent availability of visiting primary care services.

		Stakeholders in the WB area showed concerns regarding women's health and domestic violence related assistance and services. Concerns regarding access to and distribution of services in the Discovery Coast area were voiced by many stakeholders. Short-term funding of community-based services was also a concern. Stakeholders in the SC area were concerned about the Gympie LGA regarding workforce shortages leading to possible closure of services/insufficient services, limited bulk billing and limited drug and alcohol rehabilitation services for adults, veterans and youth. Service providers identified various challenges that they experience in the provision of primary health care services: • A lack of knowledge about what services were available within an area. • A lack of consistency of service and/or irregularity of visiting services (e.g. due to funding cuts, workforce shortages), which can lead to confusion about which services are available. • Difficulties recruiting local, qualified staff. • A lack of clear pathways for care. Significant issues with workforce retention were identified – particularly in regional and remote areas: allied health in Emerald (CQ) and Kilkivan/Goomeri (WB), GPs in across WB, Gympie (SC) and Gladstone (CQ) and a general issue with distribution of workforce which impedes access to services in the region. Lack of specialist availability in WB area across multiple disciplines: haematology, urology, neurology, rheumatology, ophthalmology, ear/nose/throat, infectious disease, gastroenterology, and psychiatry.
Specific service needs within the region	Specific areas within the PHN consistently show the need for general practice and allied health services	**Data** Although information from Health Workforce Queensland (HWQ) report, 2019[56] created for the PHN has limitations in terms of representativeness of the sample, it clearly supports the services needs analysis undertaken for the PHN. Areas listed as priorities differ according to the area and services: The identified workforce gaps (reported from highest to lowest and only for >=55 score as measured by HWQ on a scale of 0 to 100 where 100 indicates agreement with the statements indicating service gaps) were: • Bundaberg and surrounds: GPs, psychology workforce • Gladstone and surrounds: psychology, GPs, social work • Gympie and surrounds: GPs, social work, speech pathology • Maryborough, Hervey Bay and surrounds: Indigenous health worker (score =53) • Rockhampton and surrounds: dentistry, speech pathology

		• Emerald and surrounds: psychology, exercise physiology, social work, occupational therapy, podiatry • Sunshine Coast Hinterland: social workforce • Inland Communities: dentistry, sonography, podiatry, psychology, radiology, optometry, social work.[56] Similarly, identified service gaps were: • Bundaberg and surrounds: mental health services, alcohol and other drug services • Gladstone and surrounds: mental health services, alcohol and other drug services, social support services, aged care services, oral health services, palliative care services, maternal health services, disability services • Gympie and surrounds: alcohol and other drug services, health prevention/ promotion services, social support services, mental health services, oral health services • Maryborough, Hervey Bay and surrounds: No service gap ratings >=55 • Rockhampton and surrounds: oral health services, aged care services, alcohol and other drug services, disability services, mental health services • Emerald and surrounds: disability services, mental health services, palliative care services, alcohol and other drug services, social support services, child health services • Sunshine Coast Hinterland: alcohol and other drug services, disability services, refugee and immigrant health services, mental health services, social support services • Inland Communities: oral health services, refugee and immigration health services, child health services, social support services, alcohol and other drug services.[56] **Consultation (by HWQ within the region) identified:** • No capacity to accept new patients, shortage of trained staff, fewer public health service options in Bundaberg and surrounds • Long waiting lists for Gladstone and surrounds for mental health services • A lack of specialist outpatient services, limited access to public psychiatrist, long waits for dentists and issues with finding vocationally registered GP in Gympie and surrounds • A lack of enough bulk billing services for psychology services in Maryborough, Hervey Bay and surrounds • Limited allied health services in Gracemere • Child safety and mental health needs to be the priority in Rockhampton and surrounds, ACAT waiting lists, wait for dental services • Limited radiology services in Blackwater, psychologist specialised in children's health,

		changing workforce, palliative and elder care in Emerald and surrounds [56]. Additional stakeholder feedback has identified a insufficient availability of affordable pain specialist in WB and CQ.
Health services affordability	Socio-economic disadvantage is well known to be a major adverse influence on health and wellbeing. In addition to higher burden of disease among disadvantaged populations, socio-economic disadvantage often affects the ability of people to access primary health care (and other health) services through lack of affordability, including costs associated with the need to travel. Central Queensland, the most remote area in the PHN, experiences some of the lowest bulk billing rates and highest out of pocket costs in the region. Out-of-pocket GP costs are highest in Central Queensland and lowest in Wide Bay. Gympie has one of the lowest bulk billing rates, one of the highest proportion of out-of-pocket costs and lowest after-hours attendance rates.	**Data:** Overall, GP bulk-billing rates in the PHN were slightly above national rates at (86.1% in 2016-17; AUS 85.7%). Central Highlands continued to have the lowest bulk-billing rate in the PHN for several years (69.8% in 2016-17), followed by Gladstone-Biloela and Gympie SA3s [50]. While the proportion of patients in the PHN who faced out-of-pocket costs when visiting the GP (36.3%) was higher than the national figure (33.8%), the median out-of-pocket cost was lower at $17 per attendance (AUS $20) [57]. Central Highlands SA3 had the highest percent of patients with out-of-pocket GP costs (55.3%), and the highest median cost ($28 per attendance) in the PHN region. This was the highest median cost of 44 outer regional SA3s reported. This was followed by Biloela (47.4% out-of-pocket costs) and Gympie-Cooloola (46.9% out-of-pocket costs) [57]. ABS Patient Experience Survey 2016-17 showed that in the PHN [5]: • 4.0% (95% CI 2.4-5.5) of adults did not see or delayed seeing a GP due to cost in the preceding 12 months; aligns to national rate (4.1%). • 7.8% (95% CI 5.2-10.4) of adults delayed or avoided filling a prescription due to cost in the preceding 12 months (AUS 7.3%). • 19.6% (95% CI 15.6-23.6) of adults did not see or delayed seeing a dentist, hygienist or dental specialist due to cost in the preceding 12 months (AUS 18.4%) PHIDU estimated that nearly 18,000 adults in the PHN experienced a barrier to accessing healthcare when needed it in the last 12 months, with main reason being cost of service. The highest number and rate were seen in Fraser Coast LGA (ASR 5.0 per 100) followed by Bundaberg (3.9; PHN 3.0: QLD 2.7) [3]. According to PHIDU estimates, the PHN showed variability in the access to transport; Bundaberg, Fraser Coast and Gympie reported highest ASR per 100 (4.1 to 4.4) for often having difficulty to get to places needed due to transport issues (PHN 3.7; QLD 3.8) [3]. **Consultation:** Cost was repeatedly mentioned by the stakeholders as an important limitation for accessing

		services. Stakeholders in the CQ area commented that the cost of often having to travel away from home to access specialist services (e.g. Brisbane) compounds issues of accessibility. In CQ, accessibility impeded by need to travel/transport issues and lack of associated support services was reported as a very common issue. Similarly, in the Gympie region stakeholders consistently raise the cost of transport and lack of availability of transport as a barrier to primary health care access.
Access to after-hours primary health care	There are some areas in the PHN catchment that do not have readily available access to primary health care after hours services. Relatively low after-hours attendance rates across the region, but particularly in Gympie-Cooloola SA3.	**Data:** As per AIHW (2016-17) data, ASR of after hours GP attendance for the PHN was 0.27 attendances per person (Australia 0.49) [56]. This rate ranked 8th lowest of the 31 PHNs. Gympie-Cooloola (ASR 0.12) and Burnett (0.19) SA3s ranked the lowest and Hervey Bay (0.46) ranked the highest [56]. This reflected stakeholder consultation that identified reduced hours of operation in Rainbow Beach due to a doctor shortage resulting in limited to nil after-hours GP services for patients in Cooloola Coast / Rainbow Beach areas in Gympie. In 2016-17, only 4.5% of the PHN population saw a GP after hours in the preceding 12 months (AUS 8.4%; ranked 3rd lowest of 30 PHNs reported) [5]. Review of 13HEALTH call data showed much variation in regional utilisation in the afterhours period. The lowest number of calls in the after-hours period was seen in more rural areas: North Burnett (5 calls per 1,000 population), Banana (8), Livingstone (9) and Central Highlands (11) compared to PHN (14) and QLD (15). Sunshine Coast areas made the highest proportion of 13HEALTH calls in the afterhours period (30% of all calls; CQ 28%; WB 26%; QLD 29%).[58] A total of 227 GP practices received PIP payment in the May 2018 quarter. Of those, 90% (205 practices) received some sort of after-hours payment, and 52% (119 practices) received a level 1 After Hours Incentive payment for the quarter [59]. These figures have been steadily increasing since 2016; sub-regional data was not available. National Health Performance Authority analysis of ABS Patient Experience Survey 2013–14, showed the percentage of adults who thought their care could have been provided by a GP instead of a hospital emergency department was: • WB area 38% (95% CI 24%-53%) • SC area 24% (95% CI 11%-36%) • CQ area (data not available) In 2017-18, there were about 45,000 lower urgency emergency department episodes from people living in the PHN that occurred in the after-hours period (public EDs only) [52].These episodes could be considered appropriately serviced in after-hours primary care where

		available. The rate of after-hours lower urgency ED per 1,000 population was 52.9 in the PHN (2017-18), below national (56.0) and regional (73.0) average. However, high rates of after-hours lower urgency ED presentations per 1,000 people were seen in Gympie-Cooloola (101.1), Maryborough (87.8), Bundaberg (86.7), Hervey Bay (79.4) and Gladstone (68.9) (public EDs only) [52]. New data released in 2019 indicates the rate of after-hours GP attendances per 100 people in the PHN (27.8) was well below the national average (49.9) [51]. This is the 9th lowest rate of 31 PHNs nationally. The highest rate of after-hours GP attendances per 100 people in the PHN was at Hervey Bay (46), all other SA3s were below 32. The lowest rates were seen in Biloela (9.4) and Gympie-Cooloola (11.7) SA3s [51]. The rate of non-urgent after-hours GP attendances per 100 people in the PHN (19.4) was less than half the national average (43.6). This rate was very low in Biloela (6.5), Gympie-Cooloola (7.8) and Bundaberg (9.7) SA3s [51]. **Consultation:** • In CQ, only three HHS facilities offered 24-hour access to emergency treatment, so for many residents outside of these towns who lacked transport, the Queensland Ambulance Service was their only option for after-hours treatment. • Furthermore, the downturn in the mining industry has had considerable impact on incomes in some areas, creating a financial barrier to access where many general practices only bulk bill people with a health care card. • CQ stakeholders also commented on the lack of availability of counselling and drug and alcohol services after hours. • Stakeholders in regional areas like Gympie reported that after hours home visiting GP services do not service their area.
Continuity of care	Continuity of care is the degree to which a series of discrete healthcare events are experienced as coherent and connected and consistent with the patient's medical needs and personal context. Many stakeholders in the region identified that uninterrupted care is often not provided due to insufficient care co-ordination extending across general practice, allied health, hospital and residential services.	**Data:** Results for the PHN from the 2016 Survey of Health Care for patients aged 45 and over who had visited a GP in the preceding 12 months showed that: • 88.9% had a usual GP (AUS 87.4%) and 96.3% had a usual GP or usual place of care (AUS 97.5%). This increased with age and fell with remoteness and socio-economic disadvantage [5]. • Most people (84.2%) rated the quality of care from their usual GP as excellent or very good [5]. • 91.1% reported that their usual GP practice seemed informed about a patient's specialist

		care after their most recent visit (AUS 89.6%) [60]. • 79.6% reported that their usual place of care seemed informed (always/ usually/sometimes) about care provided by an allied health professional for physical health (AUS 77.1%) [60]. • 69.2% reported that their usual general practice seemed informed about patients' follow-up needs or medication changes after the last time patient went to a hospital emergency department (AUS 77.0%) [60]. **Consultation:** Stakeholders across the PHN identified continuity of care (in terms of discharge summary or preferred language, clinical handover) as a priority issue. It was noted that it was not uncommon for a discharge summary to be sent to the GP 3-5 weeks after discharge. This was a significant concern to GPs, aged care and pharmacy providers, who often aren't aware of medication changes, treatment or management plans, or any ongoing care plans or investigations that may be prescribed or required. In CQ, stakeholders expressed a desire for greater collaboration and non-duplication of services. The need for better coordination of visiting services to rural communities was a specific suggestion, as was the need to improve communication between hospitals and GPs. More clarity around agreed referral pathways, knowledge about who to refer to locally and available services were suggested as unmet needs towards improving continuity of care. In the WB area, stakeholders also pointed to the need for increased coordination and communication among services providers. It was noted that this was required across the broader region, not just in Bundaberg. A closer working relationship between the HHS and the PHN was also needed to reduce duplication, increase efficiency and develop effective referral pathways between the HHS and GPs. Other areas requiring attention included the need to improve information flows between the HHS and GPs e.g. timely discharge summaries, timely specialist letters from the Outpatient's Department to GPs, and agreements on hospital referral requirements. Similarly, stakeholders in the SC area pointed to the need to avoid duplicating services funded by the PHN and the HHS and for health services in the region to improve communication and coordination. • No continuity of care in Banana due to transitioning health workforce. • Long wait times for GP appointments in Gladstone. • Lack of integrated care, continuity of care n Banana and Gladstone. PHN stakeholders commented on the need for better coordination of visiting services to rural communities, especially allied health; the need for integration between primary and secondary services, as well as more effective referral pathways between the HHS and GPs.

		There were no discharge planners for the WB area, which affected continuity of care. Similarly, in Gympie region, a lack of transitional care post discharge limits continuity of care. For services such as palliative care in rural and remote areas, there were no arrangements for backfilling services. Some low performing practices were reluctant to implement quality improvement processes, have low staff members, and were overworked.
High potentially preventable hospitalisations associated with chronic conditions	A high Potentially Preventable Hospitalisation (PPH) rate can indicate shortcomings in the system in terms of its efficiency and effectiveness. Rates for potentially preventable hospitalisations due to chronic conditions are higher in the PHN catchment compared to Australian rates, particularly in Wide Bay: Maryborough SA3. Higher diabetes related premature deaths and potentially preventable hospitalisations in the PHN catchment require attention to diabetes care.	**Data:** Hospitalisation data for the period 2016-17[39] identified higher rates of PPHs due to chronic disease for the PHN (ASR 1,482 per 100,000) compared to Australia (1,249). The highest overall rates in the PHN continued to be seen in WB (ASRs 1,646 – 1,825) and CQ (ASRs 1,597 – 1,770 excluding Gladstone 1,360). Additionally: • Higher rates of PPHs due to angina were seen in all areas (PHN ASR 198 per 100,000) compared to Australia (121). Angina PPHs in **Gympie-Cooloola** and **Hervey Bay** were more than double the national rate (ASRs 280 and 249 respectively). • Higher rates of PPHs due to COPD for the PHN (ASR 347 per 100,000) compared to Australia (276). The highest rates were seen in WB (433 – 463) and CQ (312 – 538) and the lowest rates were seen in SC (190 – 342). • Hypertension PPHs in **Biloela** were more than three times the national rate (ASR 132; PHN 57; AUS 40), the highest of 76 SA3s reported nationally. • Rheumatic heart disease PPHs in **Noosa** were more than six times the national rate (ASR 109; PHN 24; AUS 17), and 6th highest of the 34 SA3s reported nationally. • Higher rates of PPHs due to heart failure were reported for the PHN (ASR 225 per 100,000) compared to Australia (213). High rates continued to be seen in WB (240 – 318), but the highest rates were in **Biloela** (367) and **Central Highlands** (346) in CQ.[39] • Higher rates of PPHs due to diabetes complications for the PHN (ASR 224 per 100,000) compared to Australia (180). Diabetes complications PPHs in Maryborough were more than double the national rate (ASR 388; PHN 224; AUS 180), 11th highest of 185 SA3s reported nationally. Age-standardised specialist attendance rates in the PHN (ASR 0.66 per person in 2016-17)) were consistently (range 0.47 – 0.77 across SA3s) and significantly (0.66) lower than national average (0.89) and ranked 6th lowest of 31 PHNs [50]. Lowest rates were seen in WB (0.47 – 0.74), CQ (0.51 – 0.65) and Gympie-Cooloola SA3 (0.53) [50]. **Consultation:** Specialist attendance rates fell with increasing remoteness, reflective of stakeholder feedback that identified:

		• limited or complete lack of availability of public specialist disciplines in WB, CQ and Gympie requiring patients who cannot afford to attend privately to travel to SC or Brisbane.
Chronic disease management	Individuals with chronic, complex conditions are frequent users of primary care services as well as hospitals. This issue is further complicated for disadvantaged and/or vulnerable populations and people living in rural and remote communities. Chronic complex conditions are associated with increasing disability, increased cost of living and sometimes inability to travel. Low GP Chronic Disease MBS service rates were found in Central Queensland. High rates of emergency department presentations for chronic diseases for found in Central Queensland, Wide Bay and Gympie. NB: PHN and HHS level rates were based on all presentations to hospitals within the PHN, LGA rates were based on presenting patient's usual residence (PHN residents only, therefore rates were lower). NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	**Data:** MBS data from 2016-17 indicated that [42, 61]: • Nearly 150,000 people in the PHN received at least one GP Chronic Disease (MBS Group A15) service (approx. 18% of PHN population). • Around 380,000 services were delivered, equating to around 451 GP Chronic Disease MBS services per 1,000 population, much higher than QLD (353). These service rates were lowest in Central Highlands (237) and Gladstone-Biloela (246) SA3s and highest in Noosa (697) and Nambour-Pomona (562) • Nearly 115,000 Chronic Disease Management Plans (MBS Item 721) and 96,400 Team Care Arrangements (MBS Item 723) were billed in the PHN (approx. 136 and 115 per 1,000 population). A similar geographical pattern was seen for 721s and 723s as the broader MBS chronic disease item group, however 729 (GP contribution to TCA) was only utilised consistently in WB [42, 61]. Analysis of Emergency Department data from 2018-19 indicates [43]: **Coronary heart disease:** there were more than 12,000 CHD-related ED presentations in the PHN (ASR 1,170 per 100,000): • High ASRs continue to be seen in CQ (ASR 1,612 per 100,00) and WB (1,521; SC 806) • The highest crude rates were seen for patients living in Livingstone (1,811 per 100,000) and Rockhampton (1,680) in CQ, and North Burnett (2,109) and Fraser Coast (1,950) in WB. **Diabetes:** there were over 1,400 ED presentations with diabetes as principal diagnosis (ASR 161 per 100,000): • Higher ASR per 100,000 seen in CQ (211; WB 177; SC 130) • The highest crude rates were seen for patients living in Banana (288 per 100,000), Rockhampton (224) and Livingstone (210) in CQ, North Burnett (226) and Fraser Coast (203) in WB, and Gympie (209) in SC. **COPD:** there were over 3,400 ED presentations with COPD as principal diagnosis (ASR 292 per 100,000): • High ASRs continue to be seen in CQ (ASR 420 per 100,00) and WB (389; SC 189) • Very high crude rates were seen for patients living in Fraser Coast (717 per 100,000) and Bundaberg (555) in WB – compares to PHN crude rate of 409 per 100,000) **Asthma:** there were 2,900 ED presentations with asthma as principal diagnosis (ASR 363 per

		100,000): • High ASRs continue to be seen in CQ (ASR 449 per 100,00) and WB (488; SC 250) • High crude rates per 100,000 were seen from patients living in Banana (548), Gladstone (458) and Livingstone (421) in CQ, North Burnett (546) and Bundaberg (422) in WB. Very high crude rate was seen for patients living in Woorabinda; however, this is based on very low numbers. **Consultation:** Stakeholders in the Central Queensland area felt that many chronic conditions should be treated locally, rather than requiring patients to travel long distances for treatment. Increased health promotion and access to prevention programs were also seen as beneficial. Many stakeholders spoke about the need for people to be supported to undertake more self-management of their conditions, including commitments to changing their lifestyles. Similarly, stakeholders in the Gympie region pointed to the limited availability of chronic disease prevention activities/community support. Stakeholders in WB and CQ identified challenges related to lack of persistent pain management service availability in outer regional / remote areas.
Cancer screening	Low rates of cervical cancer screening among various age groups within the PHN catchment. Overall, bowel and breast cancer screening participation in the PHN were above national rates. Patterns of cancer screening varied greatly throughout the PHN. Central Queensland had some of the lowest bowel and cervical cancer screening rates in the PHN • Bowel cancer screening participation was lowest in CQ and highest in WB. • Breast cancer screening participation was highest in CQ and lowest in SC. • Cervical cancer screening participation was lowest in CQ and highest in SC.	**Data:** Cancer screening participation in 2016-17 [62]: • Bowel (44.6%) and breast (56.5%) cancer screening participation in the PHN was higher than the national rates (41.3% and 55.0% respectively); • Participation in cervical screening (54.2% of women age 20-69 years) was slightly below national rate (55.4%) (2015-16) and was consistently lower through CQ and WB. • In CQ area: **Central Highlands** (34.6%; 5th lowest of 80 in QLD), **Gladstone-Biloela** (38.4%) and **Rockhampton** (42.1%) SA3s had the lowest bowel cancer screening participation in the PHN. Rates of breast cancer screening in these areas were above PHN and national averages, except for Biloela (54.2%). • In WB area: bowel cancer screening participation rates remained high (45.6 – 47.5%; AUS 41.3%). **Burnett SA3** had the lowest cervical screening participation rate in the PHN (47.8%). • In SC area: Breast cancer screening participation in 2016-17 was lowest in the PHN and had declined since 2014-15 in all SA3s except for Nambour. Cervical cancer screening participation was above PHN and national averages in all areas except for **Gympie-Cooloola** (51.2%).[62]

		Consultation: A barrier to cervical screening identified by women in the Gympie region was the difficulty in accessing female GPs who bulk-bill. National health workforce data indicated that 32% of GPs registered in Gympie-Cooloola were female (PHN 39%; QLD 43%) [49].

2.3 Priorities and Options (General Population Health)

This section summarises the priorities arising from the Needs Assessment and options for how they will be addressed.

General Population Health: Opportunities, priorities and options				
The following opportunities, priorities and options have been suggested based on the identified needs , however actual implementation of these depends on various factors such as available evidence base, ability to tailor it to local conditions, careful consideration of opportunity cost, and consultation/collaboration with PHN stakeholders.				
Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
Workforce development				
Promote chronic disease prevention and management	Work with training organisations and professional bodies such as universities, Health Workforce Queensland and the Vocational Education and Training sector to strengthen workforce capacity to deliver person-centred early detection, treatment and management of chronic conditions Support actions to develop and retain health professionals with expertise in chronic conditions	Enhanced capacity to prevent, detect and manage chronic conditions across the local region Reduced incidence of chronic conditions over the long term Reduction in secondary complications associated with chronic conditions	Increased number of full-time health professionals providing services within the PHN catchment Attendance at continuing professional education focused on chronic disease prevention and management	PHN in collaboration with universities, workforce peak bodies and professional colleges and associations
Improve knowledge about available workforce	Work with health care providers and health consumer organisations to increase access to information and resources on the range and use of health services available across the region, e.g. Emergency Departments, after Hours services - within the PHN region	Improved health literacy among consumers Improved ability to navigate health system	Emergency department presentations Service utilisation of primary healthcare services	PHN
Improve access to primary care services	Encourage a broader spectrum of health care workers, including pharmacists, patient navigators, and community health workers to help people manage their own	Improved health outcomes for vulnerable groups e.g. people of social disadvantage, people living with disability, Indigenous peoples and	Service activity measures – commissioned services Service utilisation by vulnerable	PHN

	health Use health promotion, education and outreach to improve health literacy and improve the capacity of individuals and communities to better manage their own health Develop and implement strategies to improve access to health services, including increasing after hours primary health care services	homeless people Improved quality of life for people with chronic conditions Reduced co-morbidity among people with chronic conditions Improved access to after-hours care in areas of need. Reduction in Category 5 emergency department presentations	populations Geographical distribution/availability of services. Increased allied Hhealth service utilisation Increased referrals to primary health care services and lifestyle programs	
Enhance workforce capacity to meet the needs of vulnerable population groups	Work collaboratively with Indigenous communities, organisations and service providers to raise awareness and encourage uptake of annual 715 health checks and follow-up appointments Strengthen the capacity of primary health care providers to meet the health needs of people with disabilities, LGBTIQ+ , homeless and disadvantaged groups through the provision and promotion of information, resources and education	Improved uptake of 715 health checks among Aboriginal and Torres Strait Islander populations Improved confidence and competency among health service providers to deliver health services to various vulnerable population groups More responsive health care services to meet the needs of vulnerable populations Improved health outcomes for people with disabilities and Aboriginal and Torres Strait Islander peoples	Utilisation of MBS item - 715 for health checks. Health status indicators for the vulnerable populations Accessibility of primary healthcare services for vulnerable groups	PHN
Enhance workforce planning	Encourage health service providers, health workforce planners and support agencies to develop and implement local strategies to enhance workforce capacity and retention within the region Address workforce and geographical	Sufficient number of primary care workforce in the PHN catchment Strong and productive relationships between professional workforce bodies	Available primary health care FTE within the catchment Utilisation of MBS and Better Access services	PHN, HHS, Health Workforce Queensland, NGOs, universities

	isolation related issues in relation to providing general practice support	and the PHN Equitable distribution of primary healthcare providers across the catchment		
Maternal and child health	Build capacity, knowledge and confidence of health workforce to deliver effective care Ensure that GPs have up to date knowledge of the immunisation schedule Encourage practitioners to address maternal smoking	Improvement of maternal, infant and child health outcomes, **especially in Wide Bay** Increase in immunisation rates in targeted areas Reduction in maternal smoking rates	Improvement in maternal and child health indicators Immunisation rates over time	PHN, Public Health Unit, HHS
Older persons' health	Enhance skills within the primary health care workforce to detect, manage and treat issues affecting the health and wellbeing of older people through: • Provision and promotion of training opportunities in relation to over 75 health assessments, dementia detection and treatment, palliative care, advance care planning, falls prevention and significant policy and process changes e.g. My Aged Care • Facilitating access to specialist aged care by primary care services Strengthening workforce roles such as nurse practitioners who can provide high level, independent aged care expertise and services.	Enhanced knowledge and skills related to specific health conditions in the elderly population among the primary care workforce Implementation of new service delivery and workforce models to support improvements in the delivery of primary care services to older people	Attendance at continuing professional education focused on aged care Service utilisation by age groups	PHN in collaboration with relevant peak bodies and education providers
System integration and collaboration				
Co-design integrated	Work with care providers to develop and implement strategies to improve integration and continuity of chronic	Improved care pathways for chronic disease patients leading to better patient	Number of general practices with recall systems Number of HealthPathways developed	PHN jointly with HHSs, private providers and general practitioners

services	disease prevention, early detection and management and promote multidisciplinary care planning, coordination and review. Strategies may include: • Establish integrated models of chronic disease care between primary, secondary and tertiary health service providers • Support the establishment of chronic care coordinators within general practice Supporting development of HealthPathways • Strengthen engagement with consumers by working with consumer groups and primary health care providers to identify ways to improve health literacy and encourage individuals and the community to become more actively involved in development • Develop integrated care strategy through established partnerships to facilitate and progress integrated care to improve chronic disease related health outcomes	outcomes identify potentially preventable hospitalisations and premature death from chronic conditions Improved communication between primary and secondary health providers More effective and efficient service delivery and patient-centred care Improved awareness and knowledge regarding health and wellbeing Improved collaborations with universities and other non-government organisations that have established themselves as health promoters in the community	and in use Reduction in biomedical risk factors Utilisation of MBS health check items Reduction in prevalence of premature mortality for specific conditions but not limited to: • Cancer: Wide Bay and Gympie • Lung cancer: Central Highlands, Fraser Coast, Livingstone, Rockhampton and Gympie • Breast cancer: Sunshine Coast and Rockhampton • COPD: Fraser Coast, Rockhampton and Gympie	
Create locally based solutions to improve integration	Foster and develop local service hubs and integrated service models via partnerships to maximise the use of available community resources	Improved efficiency of primary care service delivery models Improve access to youth related primary health care services	Accessibility of primary health care services	PHN in collaboration with relevant service providers and community organisations
Co-design solutions to improve health literacy	Develop partnerships with consumers for the development of better healthcare systems Improve health literacy to ensure that consumers can fully participate and that the health system and healthcare	Improved ability to make decisions and act to manage health Reduction in proportion of people with chronic disease	Measures of self-reported health Prevalence of risk behaviours and biomedical risk factors Utilisation of MBS items for health checks	PHN in collaboration with relevant peak bodies and universities

	organisations are oriented to support such partnerships Work with local organisations to develop effective health promotion campaigns targeting chronic conditions and their underlying behavioural and environmental drivers, e.g. tobacco smoking, physical activity, poor diet and nutrition, and risky and high-risk alcohol use Partners with local organisations to develop and implement preventive strategies for high-risk groups across the region Support health services to identify opportunities to promote healthy living by identifying and addressing risk factors for chronic conditions, and support for self-management. Encourage general practices to develop chronic disease plans	related risk factors Patients feel supported and empowered to improve their own health Improved uptake of 45 to 49-year-old health checks Increased in knowledge and awareness of risk factors among target groups for chronic conditions Increased early identification of elevated risk for chronic conditions	Reduction in chronic disease-related hospitalisations Identification of potentially preventable hospitalisations due to chronic conditions	
Develop strategies to address rising STIBBV incidence in specific regions within the PHN	Commission community-based STIBBV-related activities based on identified needs Develop strategies to address rising STIBBV incidence within specific regions within the PHN	Establishment of an activity that promotes information regarding STIs and BBVs Improved literacy around safe sexual practices and STIBBVs	Reduced rates of STIBBVs Timely identification of STIBBVs Improved literacy in intervened areas	HHS to lead in collaboration with PHNs and NGOs
Improve access to appropriate and quality maternity care by facilitating coordination and continuity of maternity and child care	Develop HealthPathways addressing care coordination for children and families with complex needs Work with HHS to develop integrated care projects Promote and facilitate access to available existing parental programs	Improved continuity of care Improved parental capacity to enhance child development	Number of HealthPathways developed and in use Provider data showing improved parental engagement	PHN and HHSs

Ensure safe and quality care	Establish collaborative partnerships between organisations to deliver flexible and responsive care Promote and support the development of service options such as Palliative Care Partnerships that enable people to receive care in their place of choice and avoid hospital admission Encourage service providers involved in the provision of aged care services to share knowledge and learning and work more collaboratively Identify ways to better integrate services within local communities, especially between residential aged care facilities, general practices and hospital services	Enhanced access to palliative care services in community-based settings Improved integrated of aged care services within local communities Reduced fragmentation of palliative care health system	Increased availability and utilisation of community based palliative care services Reduced potentially preventable hospitalisations among the over 65 population	PHN, HHSs, NGOs
Health intelligence and data analytics				
Increase the use of eHealth	Work with primary health care providers to identify opportunities to improve uptake of telehealth capabilities as a way of optimising access to health care, especially in the primary care and aged care services sectors Encourage and support primary health care providers to use the MyHealth Record as a way of improving accessibility of patient information Develop a digital health strategy Improve data related literacy of the PHN staff Develop localised health pathway resources and increase awareness amongst the providers	Improved uptake of telehealth by primary care providers Improved knowledge regarding available telehealth services Increased uptake and use of MyHealth Records Better understanding of data related practices within the PHN Frequent use of and increasing use of health pathways solutions	Use of telehealth Number of practitioners registered for access to MyHealth Records Rates of patient records uploaded in the MyHealth Record system Local GPs satisfied with the accuracy of referring a patient to local specialists and services and saving time while doing so	PHN and HHS

	Develop integrated smart referral system			
Develop data analytics capacity	Use available data resources to promote comprehensive collection of data Establish data warehouse Development of standardised vocabulary and data registries Initiate automated internal reporting Use data to inform health service planning (e.g. integration partnerships and PPHs) Use data platforms to monitor commissioned services activity and quality Use available information to identify population health needs and service needs Develop suggestive and predictive analytics	Better quality data collected from service providers A portal that stores internal service provider datasets is created Data is analysed to inform the commissioning and quality improvement processes	Data storage and analysis solutions established Analysed data is being used for improving services and commissioning PHN staff using the portal to inform the policy and activities	PHN and HHS
Governance and clinical governance				
Quality improvement Improving accreditation standards for general practices to encourage quality improvement and identify opportunities to make changes that will increase quality and safety for patients.	Provide guidance on clinical leadership Work with providers to gather better quality data and information Support quality improvement processes within primary care Provision, support and training for reporting services Support practices to track chronic and complex patients Identifying areas for practice improvement Building clinical capacity and capability of contracted clinical services	Improved practice performance in accreditation Improved quality of care Improved quality of data collected Improved benchmark reporting More commissioned services accredited or self-assessed against key standards (e.g. MH standards)	Change in understanding of and engagement in quality improvement process Data being used for tracking patients with multi-morbidities	PHN, commissioned services and general practices

Ensure continuation of clinician-led workforce that enables PHNs to make informed decisions	Seek guidance from clinical councils and other clinical stakeholder groups to ensure capability of workforce within the region	Continue commissioning health services with providers who have the appropriate capacity and expertise to deliver safe care	Improved quality of care measured as patient satisfaction	PHN and HHS
Clinical risk management to ensure that service providers have the capacity to meet legislative requirements and national and jurisdictional standards when designing best practice for their service	Develop and establish a quality assurance framework Ensure policies, processes and systems accurately capture clinical components and have realistic data requirements Ensure clinical events involving commissioned services are captured and assessed timely by developing a data system that supports receiving, escalating, investigating and resolving clinical events Ensure clinicians conduct meets satisfactory standards and if not undertake appropriate process of investigation and corrective action Ensure timely service commencement and in case of approved services not being able to deliver services as expected; seek alternative pathways Undertake contract management reviews to ensure compliance with the clinical quality assurance policies	Framework developed and approved by the executive management team A data system built in Folio that improves efficiency of response Improved quality of care Ensured quality care provided in timely manner Improvement in compliance overtime	A quality assurance framework in use Improved timely identification of adverse clinical events Complaint and compliments managed and reported consistently and in a timely manner Client satisfaction Client and stakeholder confidence in PHN commissioned services	PHN, GPs and commissioned service providers

SECTION 3 – PRIMARY MENTAL HEALTH CARE AND SUICIDE PREVENTION

This section summarises the findings of the health and service needs analysis in the tables below.

3.1 Health Needs (Primary Mental Health Care and Suicide Prevention)

Primary Mental Health Care and Suicide Prevention: Health Needs		
Identified Need	Key Issue	Description of Evidence
Mental health		
Address prevalence in populations with socio-economic disadvantage	The National Mental Health Service Planning Framework (NMHSPF) estimates mental health needs and demand for services based on the average prevalence of mental illness within the Australian population. Selected socioeconomic indicators associated with mental illness help us identify those locations within the PHN where relative need of mental services is likely to be higher than predicted by the NMHSPF.	**Data:** The latest Burden of Disease (BoD) report [2] reported a steep socio-economic gradient for mental health. The burden of disease of mental health (and substance use) for the most socio-economically disadvantaged was 1.6 times the burden compared to the least disadvantaged [2]. When compared to Queensland, the PHN showed higher levels of socio-economic disadvantage (i.e. 27.1% in the bottom SEIFA quintile, vs. 20% in Queensland and annual family income of $73k vs. $86k in Queensland (2016) [63]. In the PHN, the population living in all of the LGAs in WB **(Bundaberg, Fraser Coast, North Burnett)** as well as **Gympie (SC), Woorabinda (CQ), Rockhampton (CQ)** showed high levels of socioeconomic disadvantage as measured by annual family median income and the SEIFA quintile [63]. Similarly, unemployment rates (as per July 2019) were highest in WB (7.7%) compared to the PHN (6.6%) and compared to Queensland (6.1%)[63]. However, **Fraser Coast (WB) and Woorabinda (CQ)** also had unemployment rates over 8%, with **Bundaberg (WB) and Rockhampton (CQ)** rates at over 7%[63]. Geographical location: Populations in rural and remote areas suffered from low access to health services as well as socio-economic disadvantage and high levels of risk factors and chronic diseases. Across the PHN half of all the LGAs in CQ (Banana, Central Highlands and Woorabinda) and one LGA in WB (North Burnett) had all of their populations living in outer-regional/remote areas [63]. Indigenous: For the Indigenous population, the burden of disease related to mental health was 2.4 times the burden of non-Indigenous [64]. The PHN was home to one discrete Aboriginal community, **Woorabinda**, while over 5% of the population in **Rockhampton** (7.4%) and **North Burnett** (6.5%) identified as Indigenous [63].

		Consultation: Stakeholders highlighted that mental health issues in the area of Gympie were linked to lack of employment and homelessness [65]. Stakeholders commented about socio-economic disadvantage due to multiple factors, not just one. Factors such as lower educational attainment, lack of appropriate support systems, unemployment, decreased physical health and association with crime were all contributing factor to poorer mental health. There was an identified need to address this through sustainable, effective, long-term strategies and solutions [65].
Address morbidity associated with mental health	The relatively higher burden of mental health disorders observed across the PHN also helps with identifying locations with higher than average mental health needs.	**Data:** Five of the 12 LGAs in the PHN had age-standardised rates of mental/behavioural problems higher than 19 per 100 - **Noosa SC** (ASR 20.2 per 100), **Gympie SC** (ASR 19.8 per 100), **Bundaberg WB** and **Fraser Coast WB** (both ASR 19.6 per 100), and **North Burnett WB** (ASR 19.2 per 100) showed the highest rate of mental/behavioural problems (2014-15) [66]. Similarly, two of the three LGAs in WB (**Bundaberg** ASR 14.3 per 100 and **Fraser Coast** ASR 15.1 per 100), two LGAs in CQ (**Livingstone** and **Rockhampton**), and **Gympie** in the SC (all 3 LGAs are 13.9 ASR per 100) showed the highest rates of high/very high psychological distress (2014-15) across the PHN [66].
Use evidence-based needs based approach to address mental health in overall PHN population	Drawing on the prevalence of mental illness within the Australian population, the NMHSPF estimated the numbers of people in the PHN catchment that need mental health (MH) treatment services. NMHSPF estimates along with other available information serve to gauge the broad patterns of need for mental health treatment across different age groups and severity. Understanding these patterns is crucial for planning the delivery of services across the stepped care model. This information along with the relative differences in need noted above help us prioritise those areas, population groups and services with the highest unmet need.	**Data:** NMHSPF estimates, along with other available information, suggested that across the PHN catchment, 16.7% of the population (approximately 152,116 people as per 2021 data) will need MH treatment of different levels of severity [67]. Of these, approximately: • 50,000 (5.4% of the PHN population) will require early intervention and relapse prevention. They represent people who do not yet meet the criteria for a mental disorder and those that had previously experienced a mental disorder, but no longer have a diagnosable disorder, • 41,000 (4.5% of the total PHN population) will need a variety of services to treat mild mental illness/disorders, • 33,000 (3.6% of the PHN population) will need services for moderate mental illness/disorders • 28,372 (3.1%) will need services for severe mental illness. Culturally and linguistically diverse (CALD) population – 15.2% of the PHN (124,713 people) were born overseas [63]. Almost 45,000 people were born in non-English speaking (NES) countries [63]. The highest numbers of people of NES background were found in the Sunshine Coast (17,823), Fraser Coast (4,838) and Bundaberg (4,798) LGAs [63]. The 3 highest proportions of NES background were in Noosa (6.6%), Gladstone (6.1%) and

		Sunshine Coast (6.1%) [63]. According to the Australian Human Rights Commission, up to 11% of Australians may have a diverse sexual orientation or gender identity, and more than a third of those hide their LGBTIQ+ status when accessing services [35]. Applying 11% prevalence to the PHN population, approximately 90,000 people within the PHN might be representing the LGBTIQ+ community. **Consultation:** Considering the above patterns of disadvantage, and stakeholder feedback, these estimates represent a low case scenario, with higher numbers expected in rural and remote areas – such as those in CQ – and socioeconomically disadvantaged areas such as LGAs in WB and Gympie in SC.
Use evidence-based approach in prevention and treatment for young people	Approximately half of all lifetime mental health disorders emerge by age 14 years and three quarters by age 24 years. The negative effects of untreated mental health disorders may have persistent effects later in life.	**Data:** National data shows that one in four young Australians aged 16-24 lives with a mental illness (in the last 12 months) [68] and one in three experiences moderate to high levels of psychological distress [69]. The PHN was home to a large number of young people with an estimated number of 164,000 people aged 10-24 years in the year 2021. Mental health problems and disorders account for the highest burden of disease among young people [12]. Preliminary estimates for youth populations based on prevalence data and the NMHSPF suggest that approximately 26,558 young people (12 to 24-year-olds) will need mental health treatment across the PHN [67]. Of these: • 8,502 will need early intervention/relapse prevention, • 6,628 will need services for mild disorders, • 5,386 will need services for moderate disorders, and • 4,500 will need services for severe disorders. These estimates are also likely to be a lower than actual numbers, particularly for young people living in remote and disadvantaged areas. **Consultation:** Stakeholders have also identified young people from rural and remote areas as a key priority population group. Stakeholders have also commented on the various social determinants which contributed heavily to poor mental health, particularly amongst the youth population in the Gympie region.

Need for psychosocial support by those with severe and complex mental illness/ disability/high risk groups	People living with mental illness can experience functional limitations that impact activities of daily life in one or more functional domains such as communication, social interaction, learning and employment, mobility, self-care and self-management. High proportions of people within the PHN were living with severe mental illness.	**Data:** In our PHN: • Approximately 490,000 adults were aged between 18-64 years. Of these, 16,900 adults (18-64) in the PHN lived with severe mental illness [67]. • Within that we estimated that 2,200 individuals (0.45% population) had very high needs, 4,900 (1%) lived with severe persistent and 9,800 (2%) lived with severe episodic mental illness. **Consultation:** Stakeholder feedback has identified that: • With the transition to NDIS, many services that may have previously serviced the psychosocial support needs of this cohort have scaled back or closed entirely. • Those experiencing moderate mental illness and those not known to services are at risk of falling through service gaps. • High risk groups could be overlooked (e.g. refugees/migrants/Indigenous)
Eating disorders	High prevalence of acute presentations of eating disorders, specifically in the Sunshine Coast area.	**Data:** Episodes of admitted patient care for eating disorder diagnoses in the Sunshine Coast HHS (2017 preliminary data) [70]: • Average age for eating disorder admitted patient episodes for SCHHS was higher (30% episodes aged >29 years) than Queensland average (20% episodes aged >29 years) • The highest number of episodes was in the 0-19 years age group (92 episodes). • There was a higher number of episodes in the 0-19 years age group (93.5 per 100,000 population) than the Queensland average (78.0). • There was a much higher number of episodes in the 30-39 years age group (82.2 per 100,000 population) than the Queensland average (30.2). • A higher proportion of males (10.4%) in 2017 than the Queensland average (6.0%) • Eating disorder admissions more than doubled (2.32 times) in **SCHHS** between 2015 and 2017 (QLD x1.85) **Consultation:** • Stakeholders expressed concern about the high prevalence of acute presentations of eating disorders on the SC. • An Eating Disorders Clinic was opened at SCHHS in October 2018. • In collaboration with Butterfly Foundation and SCHHS the PHN is participating in a trial to deliver evidence based first line treatments for eating disorders in primary care.

Address mental health issues in older adults (65+ years) and those living in residential aged care facilities (RACFs)	Due to high proportion of elderly in many of the areas within the PHN along with young people leaving the region to look for work, means many older adults from rural/remote areas are not only isolated geographically but also have lack of social supports.	**Data:** There were an estimated 160,000 people aged 65 years and over in the PHN. This is predicted to almost double to 300,000 by 2036 [19]. Recent AIHW figures (2017-18) [71] on residents of residential aged care facilities, outlined that: • The majority of residents (86%) had at least one diagnosed mental or behavioural condition • Depression was the most commonly diagnosed mental health condition (49%) • Dementia was diagnosed in over half of the residents (52%) • The largest proportion of "high needs" was in the cognitive and behavioural assessment area (64%). Analysis of Aged Care Funding Instrument (ACFI) data suggested that, across the PHN, there were **3,748 RACF residents** with at least one mental or behavioural diagnosis [72]. Proportionally (55% of 6,834 residents), this is lower than state (59%) and national (60%) rates, though it was the 3rd highest proportion of the seven Queensland PHNs. • SC (56 – 70%): Caloundra and Maroochydore SA3s had the highest numbers of permanent residents with a MH/behavioural diagnosis (538 and 499 respectively), however Noosa had the highest proportion in the PHN at 70% (350). • CQ (45 – 57%): Rockhampton SA3 had the 3rd highest number of residents in the PHN with a MH/behavioural diagnosis (478). Gladstone had the highest proportion in CQ area at 57% (120). • WB (41 – 59%): Bundaberg and Hervey Bay SA3s had over 300 residents each with a MH diagnosis. Burnett SA3 had the highest proportion (59%, 236), however this area lies across both our PHN (North Burnett LGA) and Darling Downs West Moreton PHN (South Burnett LGA). Applying the proportion to the number of residential places inside our PHN, this equates to approximately 89 people [72]. **Co-morbid mental health and dementia:** Of the 3,748 RACF residents with at least one of the four diagnostic categories for mental and behavioural disorders [72]: • Around half also had a dementia diagnosis (1,908 residents, 28% of all permanent residents). This aligned to QLD (30%) and national (29%) rates. • This proportion is significantly higher in Noosa (43%), Buderim (38%) and Maroochy (35%) SA3s on the Sunshine Coast [72]. **ACFI 10 Depression ratings:** More than half (59.7%, n=4,083) of permanent residents in

		the PHN had an ACFI 10 Depression rating of B, C or D (mild to major symptoms of depression). This proportion was significantly higher in Noosa Hinterland (84%), Noosa (78%), Maroochy (72%) and Gympie-Cooloola (71%) SA3s on the Sunshine Coast [72]. Other sub-groups who have been found to have a higher prevalence of poor mental health included people in hospital and/or with physical comorbidities, people with dementia, and older people who are carers. This report also highlighted the high levels of psychological distress in older Australians [73]. Aged Care and Community Service report (2015) [74] also noted that older Australians often suffer from **social isolation** and **loneliness**. This rate was higher in rural and remote, migrant and refugee, and LGBTIQ+ communities. Higher levels of social isolation are often correlated with other co-morbidities such as high blood pressure, high cholesterol, dementia and Alzheimer's, sleep disorders, alcoholism and other social factors such as loss of independent living and the death of a life partner. In addition, "co-presence" such as shared areas in residential care facilities without true interaction can often increase the sense of loneliness. **Consultation:** Stakeholders have raised concerns about the burden of mental health issues for residents of RACFs.
Suicide prevention		
Mortality due to suicide and self-inflicted injuries – Measuring the burden of suicide across the PHN and understanding differences in regional patterns	Deaths by suicide and self-inflicted injuries were unacceptably high in Queensland and the PHN. There were different patterns across the three areas, suggesting different target groups. Largest rates of suicide were seen in disadvantaged locations across the two periods for which data are available. Over half of the deaths by suicide took place in two LGAs.	**Data:** According to the latest Burden of Disease study (2015), the second leading cause of total burden in males is suicide, with 3 other mental health conditions in the top ten (dementia 6th, anxiety disorder 8th, depression disorders 10th) [2]. Conversely, suicide was 15th highest for females with 3 other mental health conditions in the top ten (dementia 2nd, anxiety disorder 5th, depressive disorders 6th) [2]. **Overall patterns of suicide across the PHN** The Australian Institute for Suicide Research and Prevention - Griffith University 2016 Report [75] noted that across the PHN for 2011-2013, the suicide ASR (per 100,000) was 15.3 in WB, 14.0 in CQ and 13.0 in the SC areas (QLD ASR 14.0 per 100,000). Similar to Queensland and Australia, males showed a much higher suicide mortality rate than females across the three areas [75].

		However, different age patterns were observed across the regions [75]: • Older cohorts in SC and WB. These two areas showed the largest proportions of over 55 year olds and the lowest proportions of young people who died by suicide in Queensland. • Younger cohorts in CQ, which has the highest proportion of 35 to 54 year olds who died by suicide in the state. **Trends and more localised estimates** Suicide was the 9th leading cause of death in the PHN – accounting for 2.2% of all death in 2013-2017 [76], compared to the national average of 1.9% (12th highest) [77]. 2013-2017 data showed an average ASR of 16.4 per 100,000 for the PHN, with a total of 667 deaths by suicide over this period [76]. The largest population centre of the **Sunshine Coast** LGA accounted for 28.8% of all suicide deaths in the PHN (192 deaths). This was followed by **Fraser Coast** (99) and **Bundaberg** (81), which accounted for 14.8% and 21.1% of all suicide deaths, respectively. Further, **Fraser Coast** had the highest ASR at 19.3 per 100,000, followed by **Rockhampton** ASR 18.8 per 100,000, **Gympie** ASR 18.3 per 100,000, and **Bundaberg** ASR 18.2 per 100,000 [17]. However, in relation to ranking, **Central Highlands** and **Gladstone** both ranked suicide as the 7th highest cause of death (2013-2017) [17]. Comparable data for 2009-2013 showed increase in rates for deaths by suicide for most LGAs. The greatest shifts were in **Gladstone** (ASR12.2 in 2009-13; ASR16.5 in 2013-17); **Fraser Coast** (ASR14.3 2009-13; ASR 19.3 in 2013-17); and **Bundaberg** (ASR14.6 2009-13; ASR18.2 2013-17). There was a small rate reduction for Gympie (ASR 20.4 in 2009-13; ASR 18.3 in 2013-17), but the number of deaths had not changed substantially. Conversely, the ASR for Rockhampton increased from ASR15.1 in 2009-13 to ASR18.8 in 2013-17, even though there was a reasonable reduction in the number of suicide deaths. Rates for Banana, Central Highlands, Livingstone, North Burnett and Noosa, all had numbers too small to report in one of the periods, so no comparison was possible [17]. Among males, suicide was the 8th leading cause of death in the PHN – accounting for 3% of all male deaths in 2013-2017 (ASR 25.7 per 100,000) [76]. This was much higher than the national rate of 18.4 (9th highest cause of death for males)[77] and is 6th highest rate among the 31 PHNs [76]. All LGAs in the PHN with male rates reported, were above the national average (ASR 18.4 per 100,000) [17]: • SC area: **Sunshine Coast** (21.0), **Gympie** (29.5) and **Noosa** (27.0) • CQ area: **Rockhampton** (28.7) and **Gladstone** (27.8) • WB area: **Bundaberg** (27.7) and **Fraser Coast** (30.8) • Banana, Central Highlands, Livingstone, North Burnett, Woorabinda - no ASR reported

		According to ABS data [78], Queensland reported the largest increase in suicide deaths (804 deaths in 2017, compared with 674 deaths in 2016). Further, in 2017 suicide accounted for a little over a third of death (36%) for those aged 15-24 years [78]. However, in 2017 the highest age-specific suicide rates were amongst males 85 years and older. Gender aside, age-specific death rates for intentional self-harm in 2017 were highest for those aged 45-49 [78].
Suicide attempts and suicide ideation	Actual data on suicide attempts and suicide ideation at local levels was hard to come by, but often quoted estimates can be used to gauge the burden across the PHN.	**Data:** Available studies suggest that for each person who dies by suicide, an estimated 20-30 people attempt suicide [79]. In a given year, suicidality prevalence (ideation, plans and attempts) may stand at 2.4% of the population [80]. Our estimates, drawing on available suicide rates for 2013-2017 and the above, suggest that in a year, approximately 3,335 people would attempt suicide across the PHN (1,455 in SC, 965 in WB and 916 in CQ) [76] [17]. With a 2.4% suicidality prevalence in a given year, we expect that a much higher number, closer to 20,200 across the PHN, would be affected by suicide including other issues such as suicide ideation and planning.
Identifying high-risk populations in need of suicide prevention services	In addition to gender and age considerations, other vulnerable population groups in the PHN include those living in remote areas, young people, and LGBTIQ+ communities NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	**Data:** Although disaggregated local data were not available, 2011-2015 data for Queensland suggested that suicide rates (ASR per 100,000) were substantially higher in remote areas (remote 23.3; very remote 20.3), compared to regional (inner 14.9; outer 17.2) metropolitan (12.6) [3]. Disaggregated data for young people (under 25 years of age) at local levels was not available. National data suggested that one in thirteen 12 to 17-year-olds had seriously considered attempting suicide in the previous 12 months [81]. These rates were significantly higher among young people with major depressive disorders (between 35% to 49%). Local ED data also suggest a shift in over 65 year-olds' suicide related presentations, doubling from 92 in 2015-16 to 189 in 2018-19 [43]. Nationally, ABS data (2017) [78] showed that 80% of suicides had a co-morbid health condition: • 43% mood disorder including depression, • 29.5% drug and alcohol use disorders, • 17.5% anxiety, • 14.9% alcohol and other drugs in the blood. Australia's Health 2018, [23] noted that while national suicide data by diverse sex, gender

		and sexual orientation were not currently available, evidence suggested that LGBTIQ+ people were at a high risk of suicidal behaviours and had higher rates of suicidality compared to other Australians.

3.2 Service Needs (Primary Mental Health Care and Suicide Prevention)

Primary Mental Health Care and Suicide Prevention: Service Needs		
Identified Need	Key Issue	Description of Evidence
Service gaps: Available mental health beds	There was sufficient capacity to provide adult acute inpatient services. However, their utilisation will be compromised by the need for access to: - sub-acute and non-acute services - Acute services for older people, children and young adults Rates of admission to general hospital non-specialist beds were very high for some populations within the PHN.	**Data:** Shortages in some specialised services will compromise availability to meet expected mental health bed needs. Across the PHN, current levels of acute adult beds stand at 90% of NMHSPF targets for 2021, indicating that under the specific assumptions of the NMHSF, they are sufficient to meet the expected need of bed services. In contrast, only 15% of sub-acute older adult, 44% of non-acute older adult, 45% of community care unit and acute older-adult bed needs will be met. Some of these services need to be provided locally, particularly community based sub-acute and non-acute services [67]. Mental health admission rates in 2017/18 per 100,000 were 1,770 in SC vs. 771 in WB and 770 in CQ, which were low when compared to the QLD rate of 2,131 per 100,000. Highest rates were observed in all three LGAs in SC (per 100,000 - Gympie 1,147, Noosa, 1,671, Sunshine Coast LGA 1,793) and Rockhampton (CQ) 1,233 per 100,000 [82]. Greatest improvements in MH hospital admission rates from 2015/16-2017/18 were seen in Banana (46%) and Central Highlands (33.1%). The largest reductions were seen in Gladstone (39.5%), Fraser Coast (22.9%), and Gympie (22.8%) [82]. According to AIHW [83], hospitalisations across the PHN for all mental health conditions (2015-16) included: • 90 hospitalisations per 10,000 (age standardised) (AUS 102) • 1,279 bed days per 10,000 (age standardised) (AUS 1,401) • 7,429 hospitalisations • 102,845 bed days According to the AIHW report Mental Health: In brief 2018 [84]: • Patients aged 65 years and over account for 11.0% of mental health ED, compared with 21.1% of total ED presentations • The highest rates for overnight mental health-related separations without specialised care occurred for people aged 65 and over (92.1)

		• The rate of same-day mental health-related separations with specialised psychiatric care in public hospitals was highest for patients aged 65 and over (15.8 per 10,000 population) • Nationally, more than one-quarter (26.3%) of mental health-related emergency department presentations were for people aged under 25 years in 2016–17. • In 2016-17, nearly 8 out of 10 mental health-related ED presentations were for patients aged 15-54 years (77.0%) compared with less than half of all ED presentations for the same age group (48.4%). The proportion of mental health presentations for patients under 15 years (4.1%) was less than all ED presentations for patients the same age (21.3%). **Consultation:** High rates of admission to general hospitals reflected the desire to provide local support and the challenges to provide safe transport to major service centers. Specifically, stakeholders in CQ commented that the cost of often having to travel away from home to access specialist services compounded issues of accessibility. Other stakeholders also commented on the need for transport for elderly people to and from their appointments with specialist services No mental health beds were available in Gympie, resulting in patients being transferred to SCUH or Buderim Private hospital, which makes it difficult for family to provide support.
Service gaps: GP MBS mental health services	Notwithstanding the importance of the GP's role in MH, access to their services was low across the PHN and showed extremely large disparities between rural and urban areas.	**Data:** MBS data 2016-17 [61] [42] indicated 122,592 mental health services (74,535 consumers) provided by GPs, with a further 188,541 mental health services (43,531 consumers) provided by allied health professionals, across the PHN region. According to Mindspot data [85], only 40.3% of respondents (116/288) from the PHN who received an assessment in 2017 had a GP who they would speak to about mental health. For GP Mental Health MBS Items (Group A20) [50]: • PHN rates 146 per 1,000 based on provider location (aligns to QLD 146), were around half of modelled estimates of required services (380 per 1,000 population) • There was also large variation across the PHN. The lowest services rates were seen in Central Highlands (65 per 1,000), Burnett (71) and Gympie-Cooloola (98) SA3s. • Regional service rates were lowest in CQ (65 – 118 per 1,000) and highest in SC (98 – 245) • Of note, barriers to access these services and, in particular, mental health plans were identified by stakeholders in CQ as a priority issue to be addressed. Trends in MBS GP mental health service data for 2016-17 showed slightly higher growth

		trends in the PHN compared to those in Australia [86]. The fastest growth from 2012-13 to 2016-17 was observed in CQ (71.3%), followed by WB (53.6%), and SC (37.8%). However, there were some SA3 differences, with the strongest improvements seen in Central Highlands (141.2%), Maryborough (102.3%), and Gladstone (90.6%); and the weakest improvements in Noosa (24.5%), Maroochy (27.8%) and Bundaberg (28.8%). In terms of annual improvement in use of GP mental health MBS items from 2015-16 to 2016-17, the highest was SC (8.6%), CQ (6%), then WB (1.5%). The strongest SA3 improvements were Gladstone (13.9%), Sunshine Coast (12.7%), with the rate change going backwards in Bundaberg (-6.1), and only marginal improvement in Burnett (0.3%)[50, 87]. **Consultation:** Stakeholders expressed concerns around the lack of specialised mental health support for older people living both in the community and residential facilities. Current funding tends to finish at 65 years of age, with very few aged care services having the expertise to support people beyond Domestic Assistance and Social Support.
Service gaps: Structured psychological therapy services – allied health services	Standard structured psychological therapies (SPT) show relatively low coverage across the PHN. Large disparities across localities, partly due to limited availability of a suitable workforce in rural and remote areas. Low-cost alternatives with greater capacity to scale-up coverage include low intensity services and clinician moderated web-based interventions. However, their coverage is almost negligible for the PHN population	**Data:** Specifically looking at MBS data for 2016-17 based on patient location (SA3 level) showed that while service rates in structured psychology services per 1,000 were below 90 in for Central Highlands (69.9) Gladstone-Biloela (78.7), and Burnett (86.6), service rates per 1,000 were over 200 in Nambour-Pomona (214.7), Sunshine Coast Hinterland (225.1) and Maryborough (233.8) [87]. The almost negligible availability of web-based and low-intensity services was also shown by our previous service mapping. Only 7 (out of 50 providers delivering SPT) offer online services (approximately 30 occasions of service per month), while only one delivers computerised therapy (two occasions of service per month). Mindspot data for July to December 2017 indicated that 288 assessments were carried out for clients in the PHN (down from 540 previous year) [85]. In regard to trends, the most recently available MBS dataset for 2016-17 [87] used provider location and might be less reliable for allied health services. However, it provides some encouraging signs of accelerating growth across the PHN in some areas. While Central Highlands experienced the highest growth in service rates (doubling from 2012-13 to 2016-17) they still had the lowest rate in the PHN (69.9 per 1,000 population), with Sunshine Coast Hinterland, Noosa, Maryborough, Hervey Bay, and Buderim, all increasing over 40% since 2012-13. Conversely, Rockhampton had a reduction in service rates from 2012-13 of -3.6%, and only very modest increases (under 10%) were seen in Gladstone-Biloela and Bundaberg [87].

		Consultation: The overall unavailability of mental health services in CQ has also been noted by stakeholders. Stakeholders commented that referrals were often received for psychologists who usually have a wait list or clients can't afford to access. They have also noted other access barriers such as lack of information about services and support available, and stigma and fear around mental illness. Stakeholders also commented on issues with the mental health stepped care model in the CQ area due to a lack of communication and long wait times.
Service gaps: Structured psychological therapies – service data (for all service streams combined)	The PHN increased coverage of structured psychological therapies with a focus on disadvantaged areas, but large gaps remain.	**Data:** MBS data 2016-17 reported 61,478 mental health services (11,132 consumers) provided by psychiatrists, with a further 59,764 mental health services (14,404 consumers) provided by clinical psychologists, across the PHN region [86]. Current PHN commissioned services (2018 including headspace) [88], provided 36,064 service contacts or related to 8,118 people being 6% of the estimated treatment population (132,000); 1% of the regional population (840,493), which is similar levels to 2017-18 [88] via the stepped care model. As expected, the largest volume of PHN commissioned services were provided in the largely populated Sunshine Coast LGA (5,939), followed by Gympie (3,045), Bundaberg (2,789) and Rockhampton (2,266). However, when looking at LGA service rates per population for 2018, WB had the highest consumer access (6.8 consumers per 1,000 population; CQ 5.4; SC 4.2; PHN 5.2). The largest rates were in areas of high need such as North Burnett (WB), and Gympie (SC). However, there was some regional variation between the different service streams [88], but Gympie was among the top three across all service streams. The second most commonly accessed stream was S1: Low Intensity (784 consumers), however these consumers attended the fewest service contacts on average (3.0). More than half (59.3%) of all face-to-face service contacts occurred within the same postcode as the consumer's home address. Overall, nearly 40% (1,681) of all consumers seen in 2018 had one or more flags relating to underserviced priority groups. Underserviced consumer groups accounted for between 24% and 100% of consumers across the service stream available [88]. **Consultation:** Lack of affordable ongoing access to mental health care beyond the Medicare reimbursable items available with a GP Mental Health Treatment Plan was highlighted in Gympie and

		surrounds, and was likely to reflect the wider region.
Service gaps: Structured psychological therapies for young people – service data (incl. service Stream 2: child and youth; and headspace).	Low access to specialised youth mental health services across the PHN, particularly in rural and remote areas. Increasing efforts across the PHN to expand coverage during the last year have seen larger numbers of young people accessing youth specific services.	**Data:** Preliminary modelled estimates show that approximately $76 million will be required by 2021 to fund staff requirements for delivering services to approximately 26,558 young people in need of mental health services across the PHN. The vast majority of this funding (approximately 70%) will be required to address the needs of the 17% of young clients (i.e. 4,500) with complex and severe mental disorders [67]. Over 22,000 young clients across the PHN in need of early intervention, relapse prevention and treatment services for mild and moderate mental illness will require approximately $14 million funding. Unfortunately, only partial data on services were available for this cohort. However, it is expected that similar gaps as those noted earlier for SPT are observed. MBS data 2016-17 (commissioned and non-commissioned services) denoted 74,908 mental health services (13,959 consumers) provided by psychiatrist, with a further 80,340 mental health services (19,616 consumers) provided by clinical psychologists, across the PHN region for persons 0-24 years old [86]. In 2018, 4,165 clients (12.4% of the estimated treatment population – 34,000) received youth specific mental health services across the PHN. This included both headspace and Stream 2: Child/Youth commissioned services, for which WB had the highest rate (24.25 per 1,000 population) followed by CQ (14.79) and SC (14.79)[88]. However, this disguises the fact the Fraser Coast LGA saw one of the lowest rates (0.2 per 1000) across the PHN region, whilst Bundaberg saw the highest (4.9 per 1,000) and Gympie the second highest (3.8 per 1,000; PHN 1.4 per 1,000). Due to implementation issues in CQ, no child and youth specific services were provided under stream 2 of the stepped care model for January to April 2018. When looking specifically at headspace data, occasions of service delivered increased from 8,250 in 2015 to 15,158 in 2018. This was partly due to the new centres opened in Gladstone in late 2015 FY; and Bundaberg in late 2016 FY.
Service gaps: Severe and complex needs – service data (Stream 4: severe and complex)	Large gaps in primary care services delivered by mental health nurses to those with severe mental illness/disorders across the PHN	The period from 2017-18 saw the transition from the Mental Health Nurse Incentive Program (MHNIP) program to a stepped care model in which severe and complex consumers have their care provided using this approach. Stepped care services began in January 2018; however, care transition took place up until March 2018. Commissioned services delivered 3,472 service contacts for 777 clients across the PHN in 2018 [88]. This service will be expected to deliver 32,907 occasions of service across the PHN in 2021 [67]. Consumers of Stream 4: severe and complex services living in WB had the lowest attendance rates (only 2.8 service contacts per consumer). However nearly three quarters

		(71.4%) of all severe and complex consumers accessing services lived in Fraser Coast and Gladstone LGAs [88]. Service data in 2018 followed the consistent declining trend with less service contacts than the previous MHNIP data (2016-17), indicating that 3,763 occasions of services were delivered to 1,347 clients.
Service gaps: Community support services	Total available funding for community support services seem to be adequate. However, key priority services such as individual support and rehabilitation show substantial funding gaps. Services for complex clients particularly in areas with low access to other primary care MH services, might not be targeting clients with complex and severe needs.	**Data:** PIR data (July 2016 – June 2019) suggested that SC and CQ have large proportions of clients with a diagnostic profile consistent with markers of severity such as schizophrenia and/or delusional disorders (42% and 43% respectively). However, in WB, the majority of clients had been diagnosed with mood affective disorders (54%) [89]. Funding for psychosocial support had become available to address a service need gap for those who require this support for their severe/complex mental illness but are ineligible for the NDIS. A PHN-commissioned service commenced in April 2019.
Psychosocial support service gap: Between NDIS and community mental health services for people living with severe mental illness	The mental health services landscape is changing. Psychosocial support needs of people living with severe mental illness and psychosocial functional impairment who are not eligible for the NDIS and who are not known to other services will be unsupported and at high risk of escalation/exacerbation. Not all people living with severe mental illness access services or ongoing clinical intervention. Those experiencing moderate/severe mental illness and those not known to services are at risk of falling through service gaps.	**Data:** Nationally: • AIHW estimated that around 730,000 people live with a severe mental illness [84]. • Around 8.8% (64,000) will be eligible to access the NDIS under the psychosocial disability stream. In the PHN: • Approximately 490,000 adults were aged between 18-64 years. Of these, 16,900 adults (18-64) in the PHN live with severe mental illness [67]. • Within that we estimate 2,200 (0.45% population) had very high needs, 4,900 (1%) lived with severe persistent and 9,800 (2%) live with severe episodic mental illness. • Based on national rate we can estimate that 8.8% (1,500) will be eligible for NDIS and are likely to come from the severe and complex cohort. Of the remaining 15,400 we estimate that: • The population with severe persistent mental illness (4,900) is likely to be serviced by the hospital and health service's Continuity of Support (CoS) program. • The remaining 9,800 with severe episodic mental illness would need psychosocial support at some time. • The new national psychosocial support measure will provide funding for people with severe mental illness and psychosocial functional impairment who are not more appropriately supported through the NDIS or services provided through the HHS.

		This service landscape is changing. Essentially: • The NDIS is being rolled out in the PHN region. • National Psychosocial Support (NPS) services commenced in April 2019 and will continue recurrently. • Partners in Recovery (PIR), Personal Helpers and Mentors (PHaMs), and Day to Day Living (D2DL) services 'ended' June 30, 2019 and are now a part of the National Psychosocial Support Transition (NPS-T) which commenced 1 July 2019. As part of this, PHNs now fund the former PHaMs, D2DL and PIR providers to transition clients to NDIA, CoS or elsewhere. The end of this transition will vary depending on the client base, however ultimately transition will end 30 June 2020. • CoS services have started to commence from September 2019 and have varied commencement dates depending on the NPS-T activity in each area **Consultation:** Strategic meeting between the PHN, HHS and NGOs indicated some concerns such as: • Many services providing support were closing or scaling back their services during the uncertain transition to NDIS • Services were currently operating at full if not over capacity • Market failure/viability is of significant concern • Lack of linearity between the tertiary and primary health interface may cause people to go 'un-serviced' • People becoming 'stuck' in acute service settings (hospital) with no discharge point due to lack of referral fluidity and service options • Many services were currently providing support outside their funding parameters and it is feared this type of support will not be accounted for in the new service model It is imperative that we undertake a service mapping task and gain a situational analysis.
Service gaps: Suicide prevention and support services Primary Care Service data (Stream 5: Suicide Prevention Aftercare)	Limited coverage of suicide prevention services across the PHN.	**Data:** Previous service mapping identified 35 community organisations delivering suicide related services to approximately 1,160 clients per month [90]. However, it also highlighted that only a third of providers offering SPT – including those related to suicide prevention and treatment – operate outside standard business hours. This is in line with the high number of ED presentations discussed below. Also, of note was the lack of a coordinated approach and service integration across existing

		services, which further stretched existing capacity. The PHN is part of the National Suicide Prevention trial. The specific areas identified in the trial include Gympie, Maryborough and North Burnett. Aboriginal and Torres Strait Islander peoples will be targeted in North Burnett, and men will be targeted in Maryborough and Gympie. The PHN commissioned a suicide prevention aftercare service as part of the Stepped Care model, which focused on supporting those who had been admitted to hospital after an attempted suicide. This service saw 400 consumers for 2,745 service contacts in 2018. The average number of service contacts per consumer (6.9) was higher for this service stream than most other service streams (average 4.9 per consumer). Stream 5: Suicide aftercare was the second most utilised service stream in Noosa and Livingstone LGAs, which aligned with the higher proportion of suicide referral alert flags seen in these areas. LGAs in the SC area had the highest average consumer access rate (per 1,000) for S5: Suicide aftercare (SC 215.5; WB 96.9; CQ 77.6; PHN 126.4). Gladstone and Rockhampton LGAs had the lowest rates in the PHN 44.8 and 73.6 per 1,000 respectively). **Consultation:** Stakeholders noted that overall, there are limited suicide prevention programs available across the PHN, so existing counselling and acute care services provide much of the available care. The PHN has developed a joint regional plan (community through to acute settings) that covers mental health, alcohol and other drugs and suicide prevention activities. The PHN has also developed local level suicide action plans.
Suicide/intentional self-harm hospitalisations – Primary target population for after-care services	High and increasing rates of self-harm hospitalisations across the PHN, though large variability across LGAs. Low access in rural areas and disadvantaged populations, including those with high suicide prevalence. Similar to suicide numbers, the largest contributor to self-harm hospitalisations was the Sunshine Coast LGA, reflecting its large population base and higher access to services.	**Data:** In 2015-16 there were 2,018 self-harm hospitalisations across the PHN, with an ASR of 27 per 10,000 [83]. This was the second highest ASR across all PHNs in the country. This is an increase from 24 per 10,000 in 2013-14. Similar increases were observed nationally, with the ASR increasing from 15 to 17 per 10,000 during the same period [83]. There were variations across SA3s. Estimates for hospitalisation rates (ASR per 10,000) indicated they are highest in Burnett and Bundaberg (33 and 33 respectively), Hervey Bay (32), Buderim (31), followed by Nambour-Pomona (30), Gympie-Cooloola (30), and with the lowest in Central Highlands (20), however this was still above the national average of 17 per 10,000 [83]. The implementation of the stepped care model for mental health included a suicide aftercare

<table>
<tr><td></td><td></td><td>service for those who have been admitted to hospital after a suicide attempt and is provided on discharge. Those who present to the ED after an attempt or with suicide ideation but are not admitted are still a gap that has not been fully addressed.</td></tr>
<tr><td>Suicide/self-harm -related emergency department presentations</td><td>Very high ED presentation rates amongst disadvantaged areas and young people, possibly reflecting their relatively higher rates of suicide and limited access to services. Important for future targeting of services.

NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].</td><td>Data:

There were more than 5,300 suicide-related (suicidal ideation or intentional self-harm) ED presentations across the PHN in 2018-19 (ASR 729 per 100,000) [43].

Age-standardised rates per 100,000 were highest in CQ (1,080) and WB (886) areas; compared to SC area (446).

• The highest crude rates per 100,000 people were seen from patients living in Woorabinda (1,815 episodes), Rockhampton (1,275) and Gladstone (1,008) in CQ, Fraser Coast (759) in WB.

The 15 to 24-year age group consistently had the highest age specific rates of suicide-related episodes per 100,000 population across the PHN [43]:

<table><tr><th>Area</th><th>Rate of suicide-related emergency presentations (age 15-19 years)</th><th>Rate of suicide-related emergency presentations (age 20-24 years)</th></tr><tr><td>PHN</td><td>2,255 per 100,000</td><td>1,824 per 100,000</td></tr><tr><td>CQ</td><td>3,626 per 100,000</td><td>2,626 per 100,000</td></tr><tr><td>WB</td><td>2,787 per 100,000</td><td>2,267 per 100,000</td></tr><tr><td>SC</td><td>1,179 per 100,000</td><td>1,066 per 100,000</td></tr></table>
Age specific rates for young people continue to be very high in CQ area in 2018-19:

• 1,009 episodes per 100,000 age 10-14 years in CQ (WB 752; SC 339; PHN 627); highest rates seen in Rockhampton LGA (1,350), Gladstone (1,027), and Central Highlands (764) in CQ, and Fraser Coast (941) in WB.
• 3,626 per 100,000 age 15-19 in CQ (WB 2,787; SC 1,179; PHN 2,255); highest rates seen in Central Highlands (4,520), Rockhampton (4,199) and Gladstone (3,315) LGAs in CQ, and Fraser Coast (3,229) LGA in SC. [43]</td></tr>
<tr><td>Lack of integration and coordination of services</td><td>People with mental illness often experience that their problems are dealt with in isolation, with poorly integrated and coordinated care.</td><td>Data:

In 2014, the Report of the National Review of MH programs and services stressed that across Australia, services were poorly coordinated, delivered in isolation and characterised by dramatic funding inefficiencies [91].</td></tr>
</table>

		Results for the PHN from the 2016 Survey of Health Care for patients aged 45 and over who had visited a GP in the preceding 12 months show that: • Around 38.8% reported that their usual GP practice always seemed informed about care provided by an allied health professional for emotional or psychological health (AUS 48.0%) [60]. **Consultation:** Stakeholders and consumers across the PHN have noted the lack of integration and coordination of services. For example, some GPs have noted that after referring patients for SPT services, they do not receive further information on client's progress. Other treating clinicians have also stressed that information on their clients' physical health such as chronic disease prevalence and GP management plans was usually absent. Client journey mapping participants called for a holistic approach, with clinical and non-clinical interventions delivered in an integrated manner. Across the three areas, clients noted the lack of continuity of care and follow-up services in ED and the community support sectors. They also stressed that, notwithstanding the high levels of co-morbidity, AoD and MH services were not integrated, and support for dual diagnosis was often lacking.
Workforce development has been identified as a critical gap for effective scale-up of services	One of the most important constraints to effectively scale-up services in the PHN relate to workforce.	**Data:** Current best-practice in workforce development strategies emphasised a multi-faceted approach with a strong system focus targeting individual, organizational and structural factors impacting workforce in general. There was limited information available on the profile of our MH workforce, how they were addressing current challenges and what has been working/not working across various locations in the PHN. According to the Health Workforce Queensland report 2019 [56], the greatest workforce shortage for primary care in the PHN region was psychology, with GP shortages coming in third. This impacts not only the ability to provide mental health services, but also the ability for consumers to get a GP mental health plan – a key requirement for accessing services. This gap in services was reported to be particularly high in Emerald and surrounds; Gladstone and surrounds; Gympie and surround; and Bundaberg and surrounds. **Consultation:** The PHN is working with The National Centre for Education and Training on Addiction to undertake stakeholder consultations to inform a future workforce development needs assessment. Stakeholders have also commented on the lack of GPs in the Rockhampton area, highlighting issues with workforce retention and recruitment.

3.3 Priorities and Options (Primary Mental Health Care and Suicide Prevention)

This section summarises the priorities arising from the Needs Assessment and options for how they will be addressed.

Primary Mental Health Care and Suicide Prevention: Opportunities, priorities and options				
The following opportunities, priorities and options have been suggested based on the identified needs, however actual implementation of these depends on various factors such as available evidence base, ability to tailor it to local conditions, careful consideration of opportunity cost, and consultation/collaboration with PHN stakeholders.				
Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
Establish formalised integrated care activities, data sharing and co-commissioning as a next step to joint regional plan	In the context of the regional collaboratives for MH, SP and AoD, use the regional strategic plan to increase collaborative activities that lead to regional system reform To ensure a patient-centred care approach, the plan will draw on consumer/carer journey exercises undertaken in each region	A regional MH, SP and AoD Strategic Plan 2018-2023 developed and adopted by the Mental Health Drug and Alcohol Council Regional priorities and actions (aligned with Queensland Connecting to Recovery) are being executed	Regional MHAoD plan developed and adopted by the regional collaboratives Local communities and key stakeholders effectively engaged to support the plan implementation	PHN to lead in conjunction with HHSs, service providers, consumers and carers
Development of a coordinated and integrated system for suicide prevention	Adopt a systems community-based approach for suicide prevention across the PHN, targeting areas on their basis of need (i.e. criteria will include numbers and demographics of those affected by suicide, relative differences in suicide rates/attempts and access to MH services) Commission community-based and multi-tiered suicide prevention activities across the PHN. Services	Commissioned services are delivered to the identified priority target groups. Fewer suicidality-related ED presentations Improved transitions from hospital services to community or home care settings for people affected by suicidality Improved access to timely and appropriate suicide prevention	Proportion of people referred to PHN commissioned services due to a recent suicide attempt or because they are at risk of suicide followed up within seven days of referral.	PHN will lead commissioning of suicide prevention services PHN in conjunction with HHSs, service providers, consumers and carers will lead the development of a coordinated and integrated system for suicide prevention supported by the regional plan above

	will target those recently discharged from hospitals due to a suicide attempt (target group for after-care services), as well as others affected by suicidality (recent attempt that did not lead to hospital admission as well as those affected by suicide ideation)	services across the region Improved knowledge and confidence among service providers that consumers will receive continuity of care as they transition between services		
Undertake activities as part of the Suicide Prevention Trial site	The PHN is a trial site for the National Suicide Prevention trial. Sites are Gympie, Maryborough, North Burnett – focusing on men and Aboriginal and Torres Strait Islander communities	Improving emergency and follow up care for suicidal crisis Improved knowledge of evidence-based practices for suicidality and capacity to recognise and support those at risk of suicide across sectors – through training general practice and allied health • Improve the capacity of frontline workers • Improve mental health seeking behaviour and resilience through targeted training in schools • Training in the community to recognise and support those with suicidality • Encourage safe and purposeful media coverage • Improve safety and reduce means of suicide	Access/reach: Number of people trained/attended events; number of people in target groups; reach across key organisations; reach of promotional materials; number of collaborations and partnerships for continuity of care Care pathways: referral pathways established and used; aftercare services established and used Training delivery: correctly pitched to level of knowledge and cultural needs; student satisfaction, level of engagement, how they thought or felt about the training Learning transfer: increased knowledge/capacity; change in knowledge and attitudes; train the trainer type indicator Usage/behavior: number who have used new learning or enacted new behaviour; extent of change/ delivery of new system; on the job behaviour; identification of patients requiring support Results: result of the change/new behaviour on health and referral patterns	Local PHN leads under the National Suicide Prevention Trial

			System: partnerships/linkages; collaborative meetings; availability of services	
Ensure commissioned stepped care services across the PHN, supported by a central referral intake are effective	Ensure facilitation of clients accessing the right level / intensity of services according to their need Further strengthening the intake service and address key areas of underservice Improve the data collected by this service to enable assessment of local demand	Improved monitoring of unmet need across the PHN leads to innovative strategies to increase service access in priority locations Central referral intake services collaborate with HealthPathways to improve referrals within the PHN Central referral intake facilitates referrals for stepping-up/stepping-down clients Higher uptake of low intensity services	Improved referral pathways for clients of mental health services across the PHN Increasing numbers of clients with mild and moderate MH needs Awareness of and use low intensity services provided nationally and/or by commissioned services Improved outcomes for clients	PHN to lead in conjunction with service providers and other stakeholders
Commission MH services across the stepped care model with focus on identified priority populations	Mental health services across the stepped care model are delivered across the PHN to ensure more equitable access to rural, remote disadvantaged, and diverse populations identified in the needs assessment	Improved access to appropriate and effective primary MH services across the PHN by ensuring that commissioned services target people in rural/remote and disadvantaged locations not able to access other primary care services. Further, commission appropriate services for diverse populations including Aboriginal and Torres Strait Islander, CALD and LGBTIQ+ Services delivered are of good quality and delivered in an efficient way Rural and remote clients will have better access to primary care and will free up available tertiary resources for clients with high needs	Proportion or regional population receiving commissioned MH services. Average cost of commissioned MH services Clinical outcomes for regional population receiving commissioned MH services Reduced number of clients with low/moderate needs are treated in hospital settings in rural areas	PHN to lead planning in conjunction with HHSs, service providers, consumers and carers and commission services in accordance with plans

Capacity building	Build GP capacity and support to help expand the skills and resources for GPs to identify and care for patients who are suicidal or who may be at risk of suicide Provide volunteer peers support training Train families and carers in Suicide Intervention skills	Improved capacity and skills of GP, family and carers	Number of sessions delivered for GPs	PHN, relevant GPs, HHS
Commission services to improve the mental health of young people	In addition to commissioned services above, ensure continuity of existing headspace for children and young people in the region and explore opportunities to continue enhancing the geographic reach of existing services	Improved access to and utilisation of services and programs which address the mental health needs of young people	Increase availability and utilisation of services tailored to the needs of young people	PHN to lead in conjunction with service providers – including headspace, HHSs, consumers and carers
Build a strong monitoring and evaluation framework for MH, SP, AOD, social and emotional wellbeing (SEWB) and psychosocial services	Strengthen data management systems to improve monitoring and evaluation of services Develop a robust evaluation framework that promotes the use of evidence to inform decision-making by providers, stakeholders and the PHN	Monitoring and evaluation (M&E) is built into plans, projects and services M&E is used to unpack lessons of what works/does not work and has impact on services	A robust M&E framework for MH, SP, AOD, SEWB, and psychosocial services is developed and implemented M&E is supported by strong data management systems	PHN will lead in conjunction with service providers and other stakeholders in the region
Increase GP engagement in MH, with focus on rural and remote areas	Partner with providers, advocacy bodies, peak and professional bodies to increase participation Practice support campaign and support in general practice re implementation of stepped care model and recording of MH services	Improved recording of MH services by GPs Higher number of clients with GP MH plans in the PHN Increased rates of GP MH plans in rural and remote areas	Higher coverage of MBS mental health services across the PHN Higher rates of GP MH plans in rural and remote areas	PHN in conjunction with providers, advocacy bodies, peak and professional bodies
Workforce development	Develop a workforce development strategy with a strong system focus that is tailored to the PHN	A comprehensive workforce development needs assessment is undertaken for the PHN and each regional area to inform strategic	Workforce development needs assessment undertaken Consultations for the strategic	PHN to lead the development of the strategic framework in conjunction with other key

		planning A strategic workforce development framework is developed that aligns with the Queensland Health's MHAOD Workforce Development Framework	workforce development framework are undertaken A strategic workforce development framework is adopted and supported by key stakeholders	stakeholders
Increase consumer voice in planning and service design	Develop mental health networks and/ or collaborative committees with strong representation of lived experience consumers and carers, Aboriginal and Torres Strait Islander peoples, and other diverse population groups, to ensure greater inclusion of the consumer voice in design and planning of all MH, AOD, and SP services.	Network and/ or collaboratives in each sub-regional area to inform service planning Structured engagement strategy to ensure consumer voice is not only represented but is representative of diverse population groups.	Regular network meetings Consumer voice component is articulated as key process in PHN commissioning cycle planning documents	PHN to lead the development and ongoing management of networks and/ or collaborative

SECTION 4 – ALCOHOL AND OTHER DRUGS

This section summarises the findings of the health and service needs analysis in the tables below.

4.1 Health Needs (Alcohol and Other Drugs)

Alcohol and Other Drugs: Health Needs		
Identified Need	Key Issue	Description of Evidence
Risk of problematic AOD use and social determinants of health	Social determinants of health, including geographic and social isolation and higher rates of socio-economic disadvantage are linked to higher AOD use. The PHN is home to socioeconomically disadvantaged communities and rural and remote areas where prevalence of AOD use is likely to be higher.	**Data:** Findings from AIHW's report on AOD use in regional and remote Australia indicates that people living in remote and very remote areas continued to be more likely than people in major cities to drink alcohol at risky levels (8% vs 5% daily alcohol consumption; 21% vs 15.4% lifetime risk) [92]. Additionally: • In remote areas the burden of disease attributable to alcohol use was twice that of major cities • The rate of drug-induced deaths in regional and remote areas had increased 41% since 2008, compared to 16% for major cities [92]. According to the Australia's health (2016) [11], the disparity in illicit drug use compared with the general population was greatest amongst populations with socio-economic disadvantages, including Aboriginal and Torres Strait Islander people, people who were unemployed, single people with dependent children and people with a mental illness. For example, compared to the general population, methamphetamine use was 2.7 times higher among unemployed people, 6.1 times higher among people with a mental illness, and 2.4 times higher among single people with dependent children. The same report indicated that amphetamine-related treatment episodes had increased from 24% to 26% in regional and remote areas between 2003-04 and 2012-13. As discussed previously, the populations of WB, remote and rural areas in CQ, and Gympie in SC were affected by socio-economic disadvantage and higher prevalence of mental illness. Populations with higher prevalence of mental illness also tended to suffer from high prevalence of AOD misuse. Additionally: • Around one in ten clients of specialist homelessness services reported problematic drug or alcohol use [93]. • AOD consumption was more prevalent among people in contact with the criminal justice system; around two thirds of prison entrants smoke tobacco daily, and around two thirds report illicit drug use in 12 months prior to incarceration [93].

		• Limited data available on LGBTIQ+ populations suggested higher rates of substance use than heterosexual people [93]. • People in the lowest socio-economic group were 1.8 times as likely to have recently used opioids for illicit or non-medical purposes as those in the highest [94]. **Consultation:** Stakeholders in the region have identified people in rural and remote areas, youth, and Aboriginal and Torres Strait Islander people as the populations in most need of AOD services.
Risky alcohol consumption across the PHN catchment	The PHN has higher rates of risky alcohol consumption compared to Queensland, particularly for young people. While risky alcohol consumption lifetime rates for young people have decreased nationally and within the state, they have remained at previously recorded high levels across the PHN.	**Data:** The Queensland Government's Queensland Survey Analytics System (QSAS), regional detailed data, (2015-16) [95] showed: • The PHN catchment had a higher prevalence of alcohol lifetime risk (25%) than Queensland (22%). Regional rates were slightly higher in CQ and SC than WB. • Male rates were three times those of females (37% vs. 12%) across the PHN, with similar disparities across the three geographical areas. • In regard to demographics, people under 29 years of age showed the highest rates (30%) of all groups in the PHN. • The observed 2015-16 PHN rate of 30% for young people was substantially higher than the Queensland rate of 23%. • Of note, this rate has remained stagnant since 2011-12. This is in contrast with declining national trends, as reported in the latest National Drug Strategy Household Survey 2016, and a decrease of 7 percentage points in Queensland during the same period (30% in 2011-12 to 23% in 2015-16) [96]. **Consultation:** Concerns about alcohol consumption by young people in the PHN have been raised by stakeholders.
Prevalence of drug use – drugs of concern	Although commissioned service data is obviously affected by service access, it helps to gauge some patterns of drug use in the region when examined in the context of other available information. Main principle drug of concern is cannabinoids, followed by alcohol, then amphetamines within the PHN.	**Data:** The 2016 National Drug Strategy Household Survey showed declines in recent use of some illegal drugs, including meth/amphetamines (from 2.1% to 1.4%), hallucinogens (1.3% to 1.0%) and synthetic cannabinoids (1.2% to 0.3%). In contrast, Australians who had misused a pharmaceutical increased to 4.8% in 2016 (vs. 4.2% in 2010) [96]. The Queensland Network of Alcohol and Other Drug Agencies (QNADA) [97] report showed that alcohol and other drug related services were provided to 1,308 clients (1,403

	Methamphetamine (includes ice) accounts for a growing proportion of Alcohol and Other Drug Treatment Service (AODTS) episodes in the PHN.	episodes) across the PHN region in 2016-17. Of these episodes, males represented 62%, with females representing 38%. This is in line with statewide averages (males 64%; females 33%). Those accessing services in the PHN region were slightly younger, with the highest represented group being 20-29 years (30%), followed by 30-39 years (25%) and 10-19 years (18%), compared to statewide figures (30-39 years 31%, 20-29 years 26%, 40-49 years 22%). For those aged 10-19 across the PHN there has been a shift in access from 51% in 2014-15, down to 18% in 2016-17 [97]. The most preferred method of AOD use was smoking (38%) followed by ingestion (25%), which differs to statewide patterns (27% smoking, 45% ingestion) [97]. Over half of episodes (53%) involve clients who report injecting drug use at some point, compared to 36% across Queensland [97]. People who inject drugs are known to experience considerably poorer health outcomes than other drug users [93]. AIHW data on AOD treatment services (2017-18)[98] indicated that across the PHN: • 2,369 (43% of closed episodes) had cannabis as the principal drug of concern in 2017-18, the highest proportion of 31 PHNs nationally (AUS 24%). • Alcohol remained the second principal drug of concern for the PHN (1,515 or 25% of episodes; AUS 35%). • From 2013-14 to 2016-17, amphetamines as principal drug of concern saw a 3.5-fold increase, which has plateaued in 2017-18. • Amphetamines remained the third most common principal drug of concern, reported in 20% of closed treatment episodes (1,272 episodes; AUS 27%). • PHN clients accounted for more than 1 in 8 episodes for oxycodone nationally (92 closed episodes) [98]. Regional AODTS data for 2017-18[99] identified similar patterns: • **CQ:** Cannabinoids were the top principal drug (41% of closed episodes), followed by alcohol (24%) and amphetamines (22%) • **WB:** Cannabinoids were the top principal drug (36% of closed episodes), followed by alcohol (25%) and amphetamines (24%) • **SC:** Cannabinoids were the top principal drug (52% of closed episodes), followed by alcohol (20%) and amphetamines (16%) [99]. The high proportions of **cannabis** treatment episodes were largely influenced by police and illicit drug court diversion programs operating in the state of Queensland [100]. Police and court diversions accounted for 66% of PHN referrals for episodes where cannabis is the principal drug of concern (CQ 48%; WB 70%; SC 76%) [98].

		Methamphetamine was identified as principal drug of concern (2017-18) more frequently in the PHN (17% of closed treatment episodes) compared to QLD (15%), and most frequently in **WB** (21%, 359 episodes; CQ 17%, 275; SC 13%, 209). Growth in methamphetamine AODTS episodes across the PHN have been consistent with national trends [99]. Nationally, the proportion of people using **opioids** for non-medical purposes over their lifetime increased by 21% between 2001 and 2013. In the same period, lifetime use of heroin decreased by 25% [94]. While we cannot know the impact of upscheduling of OTC codeine in January 2018, the rate of opioid prescribing in the PHN was well above average in 2016-17 [101], a leading cause of drug-related deaths. Specifically: • More than 700,000 prescriptions for opioid medicines were dispensed in the PHN in 2016-17 • This translates to a crude rate of almost 87 scripts per 100 people, much higher than QLD (71) and Australia (64). Age-sex standardised rates are available for PHN SA3s; 11 of 14 SA3s had higher rates than QLD (ASR 67 per 100). The highest age-sex standardised rates of PBS/RPBS prescriptions dispensed for opioid medicines per 100 people in the PHN were observed in: • WB: **Maryborough** (98), **Hervey Bay** (92), Burnett (86) and Bundaberg (81) SA3s • SC: **Gympie-Cooloola** (91), Noosa Hinterland (84), Nambour (76), and Sunshine Coast Hinterland (72) SA3s • CQ: Rockhampton (73) SA3 • Compared to ASR 67 per 100 for Queensland, and ASR 59 per 100 nationally. Maryborough, Hervey Bay and Gympie-Cooloola were in the highest 10% of age-standardised dispense rates for opioids nationally [101]. Queensland police data on crime offences [102] indicate that AOD, domestic violence, and assault and rape offences in the PHN had increased from 23,054 in 2014-15 to 25,631 in 2016-17. This represented an average annual growth of 5.4%. The sharp decrease observed in alcohol related offences was offset by increases in drug related offences, domestic violence and assault and rape. Specifically, when looking at alcohol related offences, each LGA in the PHN experienced a decrease in rates over the two years. In 2016-17, the highest rates were observed in **Woorabinda** and **Banana**, both in CQ, while the lowest rates were recorded in Bundaberg WB [102].

		The highest rates for drug related offences were also observed in CQ (**Woorabinda** & **Rockhampton** LGAs), while the lowest rate was in Noosa (SC). Offences in Woorabinda remained high despite a substantial decrease in these crime rates between 2015-16 and 2016-17 [102]. **Consultation:** Methamphetamine use was raised as a growing concern in the PHN, particularly in regional areas. It is unclear if higher opioid prescribing rates reflect a higher number of consumers requiring pain management. However, concerns about the lack of available and financially accessible pain specialists have been expressed by stakeholders across WB and CQ areas.
Increasing AOD related deaths	For the PHN, total rates of drug related deaths have been higher with increase in accidental drug related death rate.	**Data:** In the PHN, total rates of drug related deaths increased to 11 per 100,000 (2012-2016), from 7.8 per 100,000 (2007-2011), with the accidental drug related death rate increasing to 8.1 per 100,000 (2012-2016), from 6.1 per 100,000 (2007-2011) [103]. Preliminary data for 2017 in Australia's annual overdose report 2019 [104] indicated: • Almost three quarters of drug-induced deaths in 2017 were unintentional. • Opioids continued to be the most commonly identified drug group in unintentional drug-induced deaths. • Unintentional overdose deaths in rural and regional Australia continued to rise and are now higher than rates in capital cities. • People aged 30-59 account for most (72%) unintentional drug-induced deaths. • A continuing trend of men dying of accidental overdose at higher numbers than women • A continuing trend of higher unintentional drug-induced deaths rates for Aboriginal peoples (19.2 per 100,000; non-Aboriginal 6.2). **Burnett** SA3 continues to show **very high (≥10 per 100,000) unintentional drug-induced deaths** in 2013-2017 [104]. The following SA3s show **high (7.5 ≤ 9.9 per 100,000)** unintentional drug-induced deaths in 2013-2017: • **WB**: Bundaberg, Hervey Bay • **CQ**: Rockhampton • **SC:** Gympie – Cooloola, Nambour, and Sunshine Coast Hinterland [104] Nationally, legal/prescription opioids cause many more opioid related deaths than illicit

		opioids [94].
High rates of ED presentations associated with AOD	In the absence of direct data, ED presentations related to AOD are used to capture relative differences in prevalence of AOD related harm in the community. There is marked regional variation with higher rates in CQ. The PHN and **particularly CQ** showed very high rates for young people 15-19, many of whom were under the legal drinking age. NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in Queensland Health data [43].	**Data:** In 2018-19, there were over 3,700 AOD- related ED presentations in the PHN (ASR 498 per 100,000) [43]. • **CQ** continues to show the highest age standardised rate per 100,000 (621) followed by WB (469) then SC (442)[43]. • The highest crude rates were seen from patients living in **Woorabinda** (2,419 episodes per 100,000 people), **Banana** (1,178), Rockhampton (539) and Gladstone (506) in CQ, and **Fraser Coast** (483) in WB. The highest age specific rates of ED presentations per 100,000 were observed in the 15-19 (939), 20-24 (900) and 35-39 (869) year age groups [43]. There was some variability in the age profile of presentations across the region. The age groups with the highest age specific rates of AOD related episodes per 100,000 population were: • **CQ** area: ages 45-49 years (1,440), 15-19 years (1,183) and 20-24 (1,140). Of note, the number of presentations in the **45-49 age group** more than doubled (229%) from 93 in 2017-18 to 213 in 2018-19, while total AOD related episodes in CQ only increased by 27%. • **WB** area: ages 20-24 years (870), 35-39 (832) and 15-19 (815). • **SC** area: ages 15-19 years (860) and 35-39 (836). Four of the **five highest rates for those aged 15-19** were in CQ area: **Gladstone** (1,568 episodes per 100,000 15-19 year-olds), **Central Highlands** (1,130), **Rockhampton** (927) and **Livingstone** (873) in CQ, and **Fraser Coast** (842) in WB [43]. Five of the six **highest rates for those aged 20-24** were in CQ area: **Banana** (1,679 episodes per 100,000 20-24 year-olds), **Gladstone** (1,099), **Central Highlands** (1,078), **Livingstone** (923) and **Rockhampton** (915) in CQ, and **Gympie** (912) in SC [43].

4.2 Service Needs (Alcohol and Other Drugs)

Alcohol and other drugs: Service Needs		
Identified Need	Key Issue	Description of Evidence
AOD hospitalisations – Low access to specialised care	High need across the PHN, there are low rates of overnight hospitalisations due to AOD misuse. A very low proportion of hospitalised clients receive care in specialised psychiatric units with many being treated in general hospitals. Local variations in hospitalisation rates across the PHN. Lowest in CQ and highest in WB and SC.	**Data:** For 2015-16, the ASR per 10,000 people of overnight hospitalisations due to AOD misuse across the PHN was 14 [83]. This is well below the observed national (ASR 20 per 10,000) and across regional areas (ASR 21 per 10,000). The ASR across the PHN remained similar to the previous year (2014-15), contrasting with the increasing national trend over the same period [83]. Of note, across the PHN around a third (32.2%) of all these hospitalisations took place in specialised care. This was lower than the national average (42.7%) and the regional rate of 39.2% [83]. This was in line with earlier findings in regard to the relatively large numbers of MH hospitalisations in general hospitals, particularly in rural areas [83]. When looking within the PHN, areas with high need like Gympie-Cooloola and Gladstone-Biloela SA3s show some of the lowest AOD hospitalisation rates in the region [83]. More recent (2017-18) admissions data supplied by Queensland Health showed similar patterns largely continued, with lowest AOD related admission rates per 10,000 population seen in the CQ area (11) followed by SC (16) and WB (17; PHN 15) [28]. Very high AOD admission rates were seen in Noosa (42 per 10,000 population), Sunshine Coast (37) and North Burnett (33), and Noosa has seen a 40% increase between 2015-16 and 2017-18 [28].
AOD treatment specialist services delivered by NGO and public providers – Low access particularly in rural areas	Lower population rates of AOD services delivery than those observed in Queensland. Lower rates in 2017-18 were observed despite a reasonably steady growth over the last four years. Mild growth in the NGO sector has been offset by significant declines in public service provision.	**Data:** **Volume and type of services** In 2017-18, according to AIHW, AOD treatment services were delivered at a rate of 803 episodes per 100,000 population across the PHN [98]. This is up from 727 in 2016-17, yet remains below the Queensland rate of 1,008 [98, 105]. AIHW data showed that there were almost 6,000 closed treatment episodes of care provided by 25 organisations in 2017-18

	Rural and remote areas were notably underserved. As detailed below there were considerable variations in regional availability of services that need to be further explored with local stakeholders.	[98, 100]. Counselling and information and education continued to form the majority of treatment types at 43% and 29% respectively [98]. With withdrawal management, rehabilitation, and case management continuing to account for fewer treatment episodes (4%, 7% and 3% respectively) [98]. According to QNADA, [106] approximately 45% of treatment episodes for AOD related services were provided in non-residential setting, followed by 33% in an outreach setting [106]. This was in contrast to the statewide figures, with 66% of episodes being delivered in a residential treatment facility, followed by 20% in outreach setting and 14% in non-residential settings. Queensland Health AODTS data indicated that the number of closed episodes in both CQ and SC areas had fallen between 2016-17 and 2017-18, while WB saw an increase over that period [99]. **Who accesses services?** Queensland Health AODTS data captured around 5,000 closed episodes of care delivered in the PHN in 2017-18. In terms of the rate of closed episodes per 100,000 population, only WB (815) was consistent with Queensland rate (802) while CQ (740) and SC (402) sat well below (PHN 688) [99]. Approximately two thirds of clients in the PHN were male, a pattern evident across areas and aligned to state ratio. Nearly half (48%) of clients in the PHN were aged 10 to 29 years (QLD 44%) [99]. A high proportion of older clients were seen in Wide Bay, with nearly half of clients aged 30-49 years (49%; CQ 41%; SC 33%; QLD 41%) [99]. The highest age-specific rates of closed treatment episodes per 100,000 population are seen in WB, in the 20-29 and 30-39 year age groups (2,121 and 2,321 closed episodes per 100,000 respectively, compares to 1,542 and 1,408 in QLD) [99]. **Who delivers services?** AIHW identified 16 non-government and 9 government agencies delivering publicly funded AOD services [100]. Overall, 45% of services across the PHN were delivered by private/NGOs and 55% were public. The PHN saw a sharp increase in the *proportion* of AODTS delivered by private sector, however this was reflective of a larger decrease in the number of services delivered by the public sector, falling nearly 20% from 3,395 in 2015-16 to 2,763 in 2017-18 [99]. Private sector service provision was greatest in WB (66%) - compared to CQ (35%), SC (31%) and QLD (43%) [99].

		Taking into consideration the differences in salaries, working conditions, recruitment, retention issues and organisational culture across both sectors, the growing share of the NGO sector had important implications for future workforce development in the region. **Consultation:** There was still limited availability of services to address population treatment needs, particularly in rural areas. This has been noted by stakeholders and supported by service mapping undertaken in 2016. This identified 14 AOD organisations delivering services across the PHN. However, the majority were small providers with less than 10 AOD treatment staff and operating from large population centres [90]. Regarding future expansion of primary care services, direct stakeholder engagement within the region indicated: • more could be done to encourage GP led ambulatory withdrawal • upskilling of mental health nurses to provide alcohol and other drug services • promotion of digital and telephone-based alcohol and other drug services for low intensity interventions.
Service gaps in brief intervention and screening services	Brief intervention and screening rates are consistently below those observed in Queensland.	**Data:** Service mapping indicated there were 11 (out of 14) AOD providers delivering screening/brief interventions across the PHN [90]. AIHW data for 2017-18 indicated that 11% of AODTS episodes (642 episodes) were for assessment only (compared to 16% nationally) [98]. Queensland Health AODTS (QHAODTS) 2017-18 data indicates that assessment only treatment episodes are delivered at much lower rates per 100,000 population in the PHN (37) than Queensland (140; CQ 61; WB 41; SC 22) [99]. **Consultation:** In the general practice setting, stakeholders identified that few GPs were willing to take on the care of patients with substance use disorders.
Service gaps in drug and alcohol counselling services	Service rates for counselling treatment are similar to those observed in Queensland.	**Data:** AIHW data for 2017-18 indicated that 43% of AODTS episodes (2,591 episodes) were for counselling (compares to 39% nationally) [98]. QHAODTS 2017-18 data highlighted that counselling treatment episodes were delivered at much higher rates per 100,000 population in CQ (424) and WB (389) compared to Queensland (276; PHN 282; SC 149). [99] This was similar to previous years.

Service gaps in withdrawal management services	In line with stakeholder's feedback and our service mapping, the AIHW data showed substantial gaps in withdrawal management services across the PHN. Available data also suggested large regional variabilities that need to be explored in more detail with local stakeholders.	**Data:** AIHW data for 2017-18 indicated that 4% of AODTS episodes (267 episodes) were for withdrawal management (compared to 12% nationally) [98]. QHAODTS 2017-18 data indicated that withdrawal management treatment episodes were delivered at much lower rates per 100,000 population in the PHN (11) than Queensland (75; CQ 5; WB 34; SC 3) [99]. The rate of withdrawal management services in WB had halved from 67.5 per 100,000 in 2015-16 to 34 in 2017-18, likely reflective of a realignment of AOD services in Fraser Coast [99]. A recent evaluation of a local withdrawal nurse program explored 450 clients over three years [107]. The report identified a growing proportion of clients citing their principal drug of concern as methamphetamine (ice) – greater than the state average – which aligns with state and national trends. They also highlight the protracted and complex nature of methamphetamine withdrawal, with symptoms lasting weeks to months, and a high prevalence of complications [108]. Queensland Health Clinical Practice Guidelines for Alcohol and Drug Withdrawal [108] notes that withdrawal from psychostimulants is not medically dangerous, and can often be managed in an ambulatory treatment setting, whilst more severe cases who experience psychosis, may need to be managed in a psychiatric inpatient setting. This difference in withdrawal management requirements will need to be factored into service planning in areas of high methamphetamine use. **Consultation:** Preliminary survey inputs from local stakeholders indicated there was a potential gap in withdrawal management services. Our service mapping indicated that out of the 14 AOD providers in the PHN catchment, only six delivered withdrawal management services. Four of them offered these services integrated with rehabilitation and other services and the remaining two delivered them as stand-alone services. The two providers of stand-alone withdrawal management services reported that on average every month they attended 20 clients in WB and 5 in CQ [90]. Inputs from local experts also indicate there were barriers to accessing withdrawal management (detox) services beyond GP services, with no 'day detox program' available in the catchment, and no withdrawal or rehabilitation facility available in Gympie.
Service gaps in AOD	Important gaps in rehabilitation services were observed across the PHN. Although some data suggested that the vast majority of services were	**Data:** AIHW data for 2017-18 indicated that 7% of AODTS episodes (401 episodes) were for rehabilitation (aligns to 6% nationally) [98]. This was around double the number of

rehabilitation services	concentrated in the SC area, other data sources suggest that services are also available in CQ.	rehabilitation services delivered in 2014-15 (203 closed episodes). QHAODTS 2017-18 data highlighted that rehabilitation treatment episodes were delivered at much lower rates per 100,000 population in the PHN (30) than Queensland (53) [99]. There was much regional variation however, with a higher rate seen in WB (78 closed episodes per 100,000 people), and a lower rate in SC (21) [99].In 2017-18, more than 2 in 5 rehabilitation episodes in WB and SC had methamphetamine listed as principal drug of concern (49% and 43% respectively) [99]. No closed rehabilitation episodes were reported in CQ (2017-18), despite rehabilitation service availability. This may be reflective of different reporting practices or service models. **Consultation:** Stakeholder inputs identified geographic barriers to accessing AOD treatment services for those in need, who may benefit from access to more localised options. Residential rehabilitation services were identified as a need by local experts, with one or two stakeholders also noting a need for short, medium and long stay options. We Help Ourselves is a statewide service based in the PHN catchment (at Nambour) providing residential rehabilitation. Gumbi Gumbi Aboriginal and Torres Strait Islanders Corporation was a second statewide residential rehabilitation service based in the PHN catchment area (Rockhampton), providing Aboriginal and Torres Strait Islander specific AOD services.
Service gaps – support and case management	The PHN was served at a rate substantially lower than the Queensland population, with marked differences across regional areas.	**Data:** AIHW data for 2017-18 indicated that 3% of AODTS episodes (192 episodes) were for support and case management (compared to 14% nationally) [98]. QHAODTS 2017-18 data indicated that support and case management treatment episodes were delivered at a similar rate per 100,000 population in the PHN (20) to Queensland (22)[99]. Most of these services continued to be delivered in CQ, reflected by a high rate seen in CQ (50 closed episodes per 100,000 people), and lower rates in SC (11) and WB (5) [99]. As noted earlier, we will need to assess these findings with our stakeholders. This will help us examine the validity of these estimates and understand the potential drivers of such variability. **Consultation:** Unfortunately, no other available data exists to validate these findings. Case management

		is usually a standard component of most AOD Counselling sessions delivered by commissioned NGOs, so it is possible that these episodes are captured under as counselling. AOD services in the PHN acknowledge variation in their capacity to report on NMDS.
Service gaps - After-hours and outreach AOD services	Limited availability of services, that need to be taken in the context of the overall lack of services across the PHN.	**Data:** Only two organisations – one in WB and one in CQ – were delivering AOD services 24/7 in 2016. Although there were 8 AOD providers offering outreach AOD services in the PHN catchment, the capacity to deliver services was rather constrained [90].
Youth and young adult AOD education, prevention and treatment services	Given the high prevalence of AOD misuse across young people important gaps in services have been noted. Particularly in CQ.	**Data:** Within the PHN, in 2018-19, nearly 4,500 young people used the headspace youth mental services (close to 18,000 episodes of care). From these, 67 young people visited an AOD worker (174 episodes of care) [109]. Similar to previous data from 2017-18. Service mapping results also suggested that only 5 out of 14 AOD providers in the PHN catchment received funding for delivering AOD services to young people [90]. QH data for 2016-17 suggested that close to half (46%) of AOD services across the PHN were delivered to people under 30 years of age – slightly higher than the 44% observed in Queensland. This was highest in SC (56%; CQ 49%; WB 38%) [99]. The PHN continued to show a larger proportion of clients under 20 years of age (20%) than Queensland (17%) [99]. The highest age specific rate for 10 to 19 years-olds was seen in CQ (1,055 closed episodes per 100,000 people aged 10-19) in line with the high prevalence of AOD misuse reported amongst very young people. This rate may also be reflective of additional access and service availability (co-located with headspace). **Consultation:** In CQ, stakeholders indicated concerns about insufficient services for young people whose homes were affected by drugs, alcohol misuse and domestic violence. In the SC area, lack of employment for young people was raised as an issue affecting mental health and wellbeing among young people. Previous consultations with Clinical and Community Advisory Councils in the PHN catchment identified similar concerns as stakeholders in the catchment.
Workforce development has been identified as a critical gap for effective scale-up of	One of the most important constraints to effectively scale-up services in the PHN related to workforce. However, limited evidence existed on current levels, gaps and best strategies to address those gaps.	**Data:** There was limited information available on the profile of our specialist AOD workforce and the implications of local issues such as the relative share of NGO vs. government sectors and changing patterns in AOD use.

services.		Current best-practice in workforce development strategies emphasises a multi-faceted approach with a strong system focus targeting individual, organisational and structural factors impacting workforce in general. **Consultation:** The PHN commissioned NCETA to undertake workforce development needs assessment consultations to inform our regional strategy and determine priority areas for future action, including assembling the required data. Key issues include: • Difficulty in sourcing local level MHAOD workforce data and information • Limited availability of suitable workforces in rural and remote areas • Ageing cohort of MH and AOD workforces • Short term funding arrangements • Rapid growth of the NGO sector in service provision.[110] Staff feedback from the PHN also highlighted the need for GPs to have more comprehensive education in AOD prevention, management and literacy.
Fragmented and poorly coordinated services	Fragmentation and poor coordination of the various services receiving AOD clients prevents achievement of better outcomes for clients in an efficient way.	**Data:** According to HWQ's 2019 survey, alcohol and other drug services had the greatest perceived primary care service gap rating (62.6), of all disciplines, in the PHN [56]. This service gap was reported to be particularly high in Sunshine Coast Hinterland (77.5), Gladstone and surrounds (72.4), Gympie and surrounds (72.2) and Emerald and surrounds (62.8) [56]. **Consultation:** Feedback to QNADA [106] from statewide NGO AOD service providers identified the need to: • Improve coordination of AOD and related services between sectors. • Coordinate with existing services to avoid overlap and expand capacity to accommodate all individuals in need of treatment. • Co-locate mental health and AOD services as a strategy to improve coordination. As noted under the MH section, participants at the consumer journey exercise also stressed barriers and challenges imposed by current fragmentation of services, including the lack of dual diagnosis for those clients affected by both mental health and AOD misuse.

4.3 Priorities and Options (Alcohol and Other Drugs)

This section summarises the priorities arising from the Needs Assessment and options for how they will be addressed.

Alcohol and Other Drugs: Opportunities, priorities and options				
The following opportunities, priorities and options have been suggested based on the identified needs , however actual implementation of these depends on various factors such as available evidence base, ability to tailor it to local conditions, careful consideration of opportunity cost, and consultation/collaboration with PHN stakeholders.				
Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
Sector engagement and strategy development in the context of the regional plan for MHAOD services described above.	Work collaboratively with HHSs, QNADA, specialist drug and alcohol treatment providers in the region, Aboriginal and Torres Strait Islander organisations and service providers, consumers, other government agencies and welfare organisations to further develop a comprehensive regional plan.	PHN secures access to AODTS data to further identify levels of services, gaps and priority populations and locations Regional plan developed, and broad support exists for priorities and strategies identified in the plan	Regional plan for AOD developed in the context of the regional collaboratives for MHAOD and supported by the best available evidence Formalised partnerships or collaborations established with local key stakeholders	PHN and HHS
Increase local availability of withdrawal management and support services	Engage further with local AOD service providers regarding opportunities and barriers to increasing local or home-based withdrawal management and support services Commission appropriate withdrawal management and support services within the PHN region	Increased delivery of withdrawal management services in the PHN catchment	Increased coverage of withdrawal management services in the PHN catchment	PHN, NGOs, HHS
Increase access to other AOD services with focus on rural/remote and other	Increase access to transitional rehabilitation to community services, particularly in rural/remote areas	Improved access to AOD services, especially in rural areas	Proportion of PHN population with access to AOD services	PHN

underserviced populations.				
Integration and coordination of care	Work with MHAOD providers to improve dual diagnosis and the delivery of integrated care. Identify GPs with an interest in AOD across the PHN and engage them as champions to facilitate GP education on AOD	Improved dual diagnosis rates for MHAOD clients More integrated and coordinated care for AOD clients	Referral into specialist treatment from other health services in the PHN catchment Improved rates of dual diagnosis	PHN, HHS
Workforce development	Develop a workforce development strategy with a strong system focus that is tailored to the PHN	A comprehensive workforce development needs assessment is undertaken for the PHN and each regional area to inform strategic planning A strategic workforce development framework is developed and aligned with the state framework. In line with the Department of Health's PHN Program Performance and Quality Framework, workforce development strategies include training and support for health professionals	Workforce development needs assessment undertaken Consultations for the strategic workforce development framework are undertaken. A strategic workforce development framework is adopted and supported by key stakeholders Quality improvement – evidence of support for health professionals, number of education/training modules delivered	PHN, HWQ

SECTION 5 – INDIGENOUS HEALTH

This section summarises the findings of the health and service needs analysis in the tables below.

5.1 Health Needs (Indigenous Health)

Indigenous Health: Health Needs		
Identified Need	Key Issue	Description of Evidence
The population distribution	Large Aboriginal and Torres Strait Islander populations in the PHN	The PHN is home to nearly 30,000 Aboriginal and Torres Strait Islander people, representing 3.6% of the total population (QLD 4.0%) [1]. The largest Indigenous populations are found in Rockhampton (5,900 people) and Gladstone (2,500) in CQ, Fraser Coast (4,200) and Bundaberg (3,700) in WB, and Sunshine Coast LGA (5,700) and Gympie (1,800) in SC [1]. The largest proportions of Aboriginal and Torres Strait Islander populations are seen in **Woorabinda** (94.4%), **Rockhampton** (7.4%) and **North Burnett** (6.5%) LGAs [1]. The Aboriginal and Torres Strait Islander Health Survey (2012-13) identified that 27.8% of Indigenous people in the PHN rated their health as 'fair' or 'poor' (AUS 24.2%) [111].
Disability among Aboriginal and Torres Strait Islander peoples	High proportions of Indigenous people in the catchment indicates that there might be a high proportion of people with a disability.	**Data:** In 2014–15, an estimated 45% of Indigenous Australians (almost 200,000 people) had a disability or a long-term health condition that restricted their everyday activities, at 1.7 times the rate of non-Indigenous Australians. Physical disability was the type most often reported in 2014–15, followed by sight/hearing/speech disability [112]. The Aboriginal and Torres Strait Islander Health Performance Framework (ATSIHPF) on 2014-15 Aboriginal and Torres Strait Islander Health Survey data, indicated that 45% of Indigenous people aged 15 and over in Queensland reported having a disability or long-term restrictive condition [113]. 8.3% of Aboriginal and Torres Strait Islander people in the PHN were living with profound or severe disability, compared to 6.4 % of Indigenous Queenslanders, and 6.9% of non-Indigenous people in the PHN [1]. Nationally, 6% of Aboriginal and Torres Strait Islander people were users of NDIS services between 2013-14 to 2017-18 and 84% of those who used the services were aged under 50 years [114].
Chronic disease risks among Aboriginal and Torres Strait	Aboriginal and Torres Strait Islander peoples have high rates of behavioural and biomedical risk factors that are associated with chronic illness.	**Data:** The 2011 Australian study included an analysis for Indigenous Australians with limited data currently available for Queensland, stating that risk factors accounted for 37% of the total

Islander peoples	Key issue pertaining to the PHN regarding the Indigenous populations were high rates of smoking in >15-year-old population (42% nationally). There was a total of 28,659 people of Aboriginal and Torres Strait Islander origin within the PHN, which means approximately 12,000 current smokers who are Indigenous. A high proportion of Indigenous population was obese (>40%) indicating that approximately 12,000 Indigenous people within the PHN were obese.	burden of disease for Indigenous Australians with tobacco, alcohol and high body mass the largest causes [31]. In 2012–13, 1 in 5 (20%) Indigenous adults had measured high blood pressure. Indigenous adults had 1.2 times the rate of measured high blood pressure compared to non-Indigenous adults (based on age-standardised rates). One in four (25%) Indigenous adults had abnormal total cholesterol levels [115]. According to the 2014-15 Aboriginal and Torres Strait Islander Health Survey, 40.5% of Indigenous Queenslanders were current daily smokers compared to 16.0% of non-Indigenous Queenslanders. However, the Queensland rate had decreased from 43.0% in 2012-13 to the current rate of 40.5% [116]. Nationally, in 2014-15, the rate for Indigenous Australians for tobacco smoking was 2.8 times that for non-Indigenous Australians. The ATSIHPF 2017 [116], reported that in 2014-15, Indigenous Australians: • Were 2.7 times more likely to be current smokers than non-Indigenous Australians. • Reported a stressor related to alcohol or drug-related problems at 3.6 times the rate of non-Indigenous Australians. • Reported inadequate daily fruit intake and daily vegetable intake at 1.4 times and 1.9 times, the rate of non-Indigenous Australians, respectively. Although positive changes were slowly noticed in smoking and alcohol related behaviours, the large gap between Indigenous and non-Indigenous populations still exists [116]. The report also indicated that Indigenous females are 1.7 times as likely to be obese as non-Indigenous females, while Indigenous males are 1.4 times as likely to be obese as non-Indigenous males [116]. **Consultation:** Stakeholders within the PHN have confirmed the need to address risk behaviours.
High rates of morbidity and mortality		
Social and emotional wellbeing	Higher social and emotional wellbeing is associated with better mental and physical health outcomes. A gap still exists between Indigenous and non-Indigenous populations.	**Data:** In 2014–15, more than two-thirds (68%) of Indigenous Australians had experienced one or more stressors in the last 12 months; the stressors reported most often were the death of a family member or close friend (28%), inability to get a job (18%), serious illness (12%), and mental illness (10%) [112].

		While the majority of Indigenous Australians reported low or very low levels of psychological distress (67%), one-third (30%) experienced high or very high levels of psychological distress (2014–15). These levels were 2.7 times as high as those for non-Indigenous Australians (11%, 2012–13 data). Indigenous Australians who had experienced at least one stressor were 1.9 times as likely to report high/very high levels of psychological distress as Indigenous Australians who had not experienced a stressor (36% compared with 19%) [112]. **Consultation:** Conventional therapies rarely take the holistic approach that is required to meet the social, emotional and spiritual needs of many Aboriginal and Torres Strait Islander people.
Chronic disease	Chronic diseases are main contributors to the mortality gap between Indigenous and non-Indigenous Australians. While there were improvements in mortality from cancer in the non-Indigenous population between 2001 and 2012, this did not occur in the Indigenous population, leading to a significant increase in the mortality gap due to cancer for both males and females. Indigenous Australians have poorer health outcomes and higher prevalence of chronic conditions compared to non-Indigenous Australians. The PHN includes locations with high proportions of Aboriginal and Torres Strait Islander people. The varied distribution of population within the PHN means management of chronic disease requires a focus on equitable distribution of resources. Consistently higher rates of chronic diseases and mortality associated with these among Aboriginal and Torres Strait Islander populations is a key issue of concern within the PHN catchment.	**Data:** Australian Indigenous HealthInfoNet 2018 [117], indicated that for Aboriginal and Torres Strait Islander people: • Cardiovascular disease was the leading cause of death in 2016 (24% of deaths 2011-2015). • Hospitalisations for cardiovascular disease was 1.7 times the age adjusted rate for non-Indigenous people. • Age adjusted incidence of end stage renal disease in 2011-2015 was 6.8 times higher than for non-Indigenous people. • Prevalence of self-reported diabetes was 13% in 2012-13, 3.5 times greater than that of non-Indigenous people. • Aboriginal and Torres Strait Islander people were 5.6 times more likely to die from diabetes than non-Indigenous people. • 2014-15 age adjusted hospitalisation rates were 5 times higher for COPD and 3.1 times higher for influenza than for non-Indigenous people. The AIHW report, Australia's health 2016, reported that [11]: • In 2012-13, two-thirds (67%) of Aboriginal and Torres Strait Australians aged 15 years and over reported at least one chronic health condition and 33% reported three or more. • In 2013-14, the most common chronic health conditions amongst Aboriginal and Torres Strait Australians were mental health conditions (29.3%), back pain or back problems (22.4%), problems with eyes or eyesight (19.3%) and asthma (19.2%). AIHW 2016 report [11], Incidence of end-stage kidney disease in Australia, indicates: • In 2009-2013, the incidence of kidney disease among Indigenous Australians was 5 times higher than for non-Indigenous Australians.

		• One-third (36%) of the total disease burden was due to the joint effect of 11 modifiable risk factors with high body mass the largest cause followed by tobacco use and physical inactivity. **Consultation:** Stakeholders in the catchment consistently acknowledged the poorer health status of Indigenous people. Stakeholders also highlighted the need for early intervention strategies, increased health promotion and more comprehensive support and maintenance for the affected populations, particularly in the Rockhampton LGA.
Psychological distress	Indigenous adults with high levels of psychological distress are significantly more likely than those with lower levels of psychological distress to assess their health as fair or poor, smoke daily or use illicit substances. Psychological distress is associated with risk taking behaviors and poor health outcomes.	**Data:** In 2012–13, almost one-third (30%) of Indigenous adults were assessed as having high or very high levels of psychological distress. They were 2.7 times as likely as non-Indigenous adults to have these levels of psychological distress (based on age-standardised rates) [115]. In 2012–13, almost half (48%) of Indigenous adults reported that either they or their relatives had been removed from their natural family. Levels of high or very high psychological distress were significantly more common among Indigenous adults who had been removed from their family (35% compared with 29% for those who had not been removed), and among those who had relatives removed (34% compared with 26% of those who had not had relatives removed [115].
Mortality	Indigenous Australians have a life expectancy of around 10 years less than non-Indigenous Australians and Indigenous Australians die at younger ages and at higher rates than non-Indigenous Australians.	**Data:** Due to the small numbers of Indigenous deaths in the PHN catchment, it is not possible to produce accurate life expectancy estimates for Indigenous people in the PHN catchment. The life expectancy at birth for Aboriginal and Torres Strait Islander Australians in 2015-2017 for people living in remote and very remote areas was 65.9 years for men and 69.6 years for women, while those living in major cities had the highest life expectancy (72.1 years and 76.5 years for men and women respectively) [118]. The life expectancy at birth of Aboriginal and Torres Strait Islander men in 2015-2017 was 8.6 years lower than for non-Indigenous men, while that of Aboriginal and Torres Strait Islander women was 7.8 years lower than that of non-Indigenous women [118]. Based on 2018 Causes of Death data report, in 2016, nearly three in four (71 per cent) Indigenous deaths were from chronic diseases (including circulatory disease, cancer, diabetes and respiratory disease). These diseases accounted for 79 per cent of the gap in mortality between Indigenous and non-Indigenous Australians. Diabetes was the second leading cause of death in Aboriginal and Torres Strait Islander people in 2016 [119]. The standardised death rate was 5.0 times the rate in non-Indigenous people (81.2 and 16.4 deaths per 100,000 people, respectively) [117] [78]. Overview of health status report, 2017 indicated that in 2016, the

		leading causes of death among Aboriginal and Torres Strait Islander people nationally were coronary heart disease, diabetes and chronic lower respiratory diseases [117]. According to the ATSIHPF (2017) [116]: • Between 2011-2015, the mortality rate for Aboriginal and Torres Strait Australians who died from potentially avoidable causes (could have been avoided with timely and effective health care) was more than 3.3 times the rate for non-Indigenous Australians. • Ischaemic heart disease, diabetes and COPD contributed the most to the avoidable mortality gap between Indigenous and non-Indigenous Australians, accounting for 26%, 19% and 11% of the gap respectively. • Circulatory disease was the leading cause of death among Indigenous Australians (24% of deaths) between 2011-2015, at 1.6 times the rate of non- Indigenous Australians. Of these, 55% were attributed to ischaemic heart disease. • Respiratory disease caused 888 deaths among Indigenous Australians between 2011-2015, twice the rate than non-Indigenous Australians. Of these, 63% were attributed to COPD. The hospitalisation rate for respiratory disease was 2.8 times higher for Indigenous Australians than non-Indigenous Australians. • Between 2013-2015, the Indigenous hospitalisation rate in Queensland was 1.2 times higher than non-Indigenous Queenslanders [116].
Maternal, reproductive and child health		
General	Infants from socio-economically disadvantaged backgrounds and those born to teenagers and Indigenous women. Many Queenslander mothers do not have healthy start to life. The family and community environment into which a child is born has an effect on that child's physical, social, and psychological growth and their future outcomes.	**Data:** A multivariate analysis of perinatal data for 2012–2014 indicated that (excluding preterm and multiple births) 51% of low birthweight births to Indigenous mothers were attributable to smoking, compared with 16% for non-Indigenous mothers. Another 21% were attributable to the socio-economic context of the areas in which Indigenous mothers lived (as measured by the Socio-Economic Indexes for Areas) [113].
Perinatal mortality/child mortality	There are significant disparities for child mortality and life-expectancy measures between Indigenous and non-Indigenous people.	**Data:** In QLD, Indigenous infants were 1.3 times more likely to be born preterm than non-Indigenous infants, leading to greater risk of perinatal death [120]. AIHW's report Australia's health 2016 [11], identifies that Indigenous child mortality rates have declined by 33% between 1998 and 2014, narrowing the gap by 34% with non-Indigenous child

		mortality. According to the ATSIHPF (2017) [116]: • The mortality rate for Indigenous children aged 0-4 years was 2.1 times the non-Indigenous rate between 2011-2015. • Queensland reported the highest number of Indigenous infant deaths between 2011-2015 (175 deaths), followed by NSW with 118 deaths [116]. The perinatal mortality rate for Indigenous Queenslanders was 9.9 compared to 9.3 for non-Indigenous Queenslanders, between 2011-2015 [116].
Smoking during pregnancy	High rates of smoking in pregnancy particularly in WB and CQ.	**Data:** Child and Maternal Health Indicators [7] indicated that between 2014-16 46.1%% of Aboriginal and Torres Strait Islander mothers in the PHN smoked during pregnancy (Indigenous mothers AUS 45.2%). This rate was particularly high in WB (52.5%) and CQ (48.6%). About 9% of preterm births were associated with smoking after 20 weeks gestation, social disadvantage or not attending the recommended antenatal care visits [121]. In 2014, Indigenous mothers were 3.6 times as likely to smoke during pregnancy compared to non- Aboriginal and Torres Strait Islander mothers • Based on 2012–2014 data, 51% of low birthweight births to Indigenous mothers can be attributed to smoking during pregnancy [113].
Low birthweight babies	Low birthweight among Indigenous mothers in the PHN catchment.	**Data:** Child and Maternal Health Indicators [7] indicated that between 2014-2016 : • 8.3% of births to Aboriginal and Torres Strait Islander mothers in the PHN were of low birthweight (less than 2500g; AUS 10.4%). This rate has reduced in CQ (from 9.5% in 2013-15 to 8.4% in 2014-16) and SC (from 5.6% to 4.5%), but WB has seen an increase from 8.2% to 9.1% over the same period. Preliminary data for 2017 [122] indicated that: • One in seven births to Indigenous mothers in the PHN were of low birthweight (14.2% compared to 6.5% of births to non-Indigenous mothers). WBHHS had the highest proportion of low birthweight babies among Aboriginal and Torres Strait Islander mothers of all Queensland HHSs in 2017 (18.4%; PHN 14.2%; QLD 13.0%) [122].
Immunisation	Although there was around 90% coverage, the PHN still has some room to improve towards reaching herd immunity for various vaccine	**Data:** Immunisation coverage for Indigenous children in 2016-17 [8]:

	preventable conditions.	• The PHN ranked 5th lowest of the 31 PHNs for 1-year-olds, with 91.1% coverage, compared to the PHN with highest coverage (95.5%). • The PHN ranked 16th of 31 for 2-year-olds (88.8%) compared to the PHN with highest coverage (94.0%). This was in alignment with the national rate 88.6%. • For Aboriginal and Torres Strait Islander children aged 5 years, the PHN ranked 12th lowest of 31 PHNs, though coverage is high at 95.2%.
Children and youth		
Promote understanding of how living environments impact health	The population age structure of Aboriginal and Torres Strait Islander peoples is younger than that of non-Indigenous Australians. High levels of socio-economic disadvantage mean that many Indigenous children and young people are growing up in disadvantaged environments which are known to negatively impact health outcomes.	**Data:** QGSO conservatively estimated that 8.5% of Indigenous households (almost 1,000 people) in the PHN catchment were overcrowded compared to 2.1% of non-Indigenous households [1]. This is likely to be higher; nationally 21% of Indigenous Australians lived in overcrowded housing, compared to 6% of non-Indigenous Australians [116]. Indigenous people aged 10–24 in remote areas (16% or 4,973) were more than 14 times as likely to be homeless as those in non-remote areas (1% or 1,706), with most of this related to severe overcrowding [123]. PHIDU's 2018' Aboriginal and Torres Strait Islander Social Health Atlas of Australia (2015 data) [124] showed: • 41.6% of Indigenous children in the PHN (45.5% for WB) were developmentally vulnerable on one or two domains of early childhood development, and • 39.6% of dependent children lived in jobless families.
Higher proportions of risk behaviors	The population age structure of Aboriginal and Torres Strait Islander peoples is younger than that of non-Indigenous Australians. High levels of socio-economic disadvantage mean that many Indigenous children and young people are growing up in disadvantaged environments, which are known to negatively impact health outcomes.	**Data:** According to the ATSIHPF (2017) [116], 2014-15 data from the Aboriginal and Torres Strait Islander Health Survey indicated that: • 43% of youth justice supervision orders involved Indigenous youth, indicating that they were significantly over-represented in the youth justice system. • Indigenous children were in child protection at 6.7 times the rate of non-Indigenous children.
Weight related issues		**Data:** • In 2012–13, Indigenous girls aged 2–14 were 2.0 times as likely to be underweight (7.9% versus 3.9%) and 1.6 times as likely to be obese (9.8% versus 6.1%) as non-

		Indigenous girls of the same age [23].
Morbidity/mortality		**Data:** Aboriginal and Torres Strait Islander adolescent and youth health and wellbeing 2018 report [123] indicated that Indigenous young people were far more likely to be disadvantaged across a broad range of health, community and socio-economic indicators. • More than 6 in 10 Indigenous youth considered themselves to be in excellent or very good health in 2012–13. The most prevalent long-term health conditions reported by young Indigenous people were respiratory diseases, such as asthma, and eye and vision problems [123]. • Burden of disease analyses show that for Indigenous people aged 10–24 the leading contributors to the disease burden were suicide and self-inflicted injuries (13%), anxiety disorders (8%), alcohol use disorders (7%) and road traffic accidents (6%) [123]. • The rate of potentially preventable hospitalisations for young Indigenous females (28 per 1,000) was almost twice that for males (15 per 1,000) (Figure 6.4.1). For both males and females of this age group, the Indigenous preventable hospitalisation rates were higher than the non-Indigenous rates (11 per 100,000) [123]. • The mortality rate for young Indigenous people declined, from 70 per 100,000 in 2005 to 67 per 100,000 in 2015. In the period, 2011–2015 there were 674 deaths recorded for Indigenous people aged 10–24. Injury and poisoning accounted for the majority of these deaths, including suicides, land transport accidents and assaults [123]. • Most of these deaths are potentially avoidable. Around 83% of the deaths of young Indigenous people in 2011–2015 were classified as avoidable deaths [123].

Mental health and suicide prevention

Aboriginal and Torres Strait Islander people in need of mental health and suicide prevention services	The PHN is home to nearly 20% of Queensland's Aboriginal and Torres Strait Islander population. Stakeholders have identified Aboriginal and Torres Strait Islander people as a key priority group for MH and suicide prevention services, but there is no local available data to quantify the number of people that would require appropriate and effective mental health interventions.	**Data:** The Burden of Disease study showed that the disease group causing the most burden among Aboriginal and Torres Strait Islander Australians was mental and substance use disorders (19% of their total disease burden) [123]. Nationally, one-third (33%) of Indigenous Australians aged 15 or over had experienced high or very high levels of psychological distress in the previous 4 weeks [125]. Indigenous adults were 2.6 times as likely as non-Indigenous adults to have high or very high levels of psychological distress. As well as, the proportion of Indigenous Australians with high or very high levels of

		psychological distress increased with the frequency of unfair treatment experienced in the previous 12 months – from 34% of people who felt unfairly treated once or rarely to 57% of people who always felt unfairly treated [125]. Most Indigenous people aged 15–24 reported low to moderate levels of psychological distress (67% or 90,900 nationally) [123]. However, a considerable proportion reported high to very high levels of psychological distress (33% or 44,700). A similar proportion of those aged 15–19 (34% or 24,100) and those aged 20–24 (32% or 20,500) reported high or very high psychological distress [123].
Young Aboriginal and Torres Strait Islander people in need of effective strategies to strengthen their mental health and wellbeing	Their relatively higher needs are due to a younger demographic structure of Aboriginal and Torres Strait Islander populations along with disproportionately high prevalence of risk factors and mental disorders.	**Data:** ABS demographic data for the PHN indicated that children and youth (0-24 years of age) represented 56% of the population who identified as Aboriginal and Torres Strait Islander peoples [1]. This equates to around 15,000 children and young people who identified as Aboriginal and Torres Strait Islander. No available data exists at local level; however, ABS data suggests that suicide is responsible for 40% of all deaths in Aboriginal and Torres Strait Islander children aged 5 to 17 years [78]. The ATSIHPF (2017) [116] highlighted that although some gains have been made in areas such as education, the relative disadvantage of Indigenous young people persists: • Indigenous children experience higher rates of high/very high levels of psychological stress, higher levels of concern about suicide and discrimination, and one in five reported bullying and emotional abuse as a concern. • In 2011-2015 for those aged 15 to 24 years, the Indigenous suicide rate was 3.9 times the rate of non-Indigenous people [116].
High rates of suicide	The ATSIHPF (2017) noted that, nationally, there has been a significant increase (32%) in Indigenous suicide rate between 1998 and 2015. Queensland data suggest a higher burden for both males and females (vs. non-Indigenous) and younger cohorts.	**Data:** Nationally in 2017, 165 Aboriginal and Torres Strait Islander persons died as a result of suicide, with a standardised death rate of 25.5 deaths per 100,000 persons (slight increase from 2016) [78]. Suicide was the 5th leading annual cause of death (2016) for Aboriginal and Torres Strait Islander peoples (statewide 4th for 2012-2016) compared to 10th leading cause for non-Indigenous Australians [78]. Suicide rates (2012-2016) for Aboriginal and Torres Strait Islander people (22.3 per 100,000) were considerably higher than non-Indigenous people (13.6 per 100,000). Furthermore, the Suicide in Queensland Report noted that for Indigenous males, the highest rates were observed in the 35-44 years age group (72.14 per 100,000) while in females, the highest rates were in the 25-34 years (25.2) [75]. Those under 35 represent 65.9% of Indigenous suicides,

		while only 5.6% were 55 years or older. **Consultation:** We do not have comparable data to examine levels and trends at local level, but stakeholders across the PHN identified suicide prevention as a priority issue for the Indigenous population.
Aboriginal and Torres Strait Islander people in need of mental health and suicide prevention services	The PHN is home to approximately 15% of Queensland's Aboriginal and Torres Strait Islander population. Stakeholders have identified Aboriginal and Torres Strait Islander people as a key priority group for mental health and suicide prevention services, but there is no local available data to quantify the number of people that would require appropriate and effective mental health interventions.	**Data:** The Burden of Disease study shows that the disease group causing the most burden among Aboriginal and Torres Strait Islander Australians was mental and substance use disorders (19% of their total disease burden) [126]. Nationally, high or very high levels of psychological distress among Aboriginal and Torres Strait Islander adults were nearly three times the rate of non-Indigenous adults.
Alcohol and other drugs		
Higher burden of substance use disorders	Aboriginal and Torres Strait Islander people experience disproportionate harm from drug and alcohol use and drug-related problems, which contribute significantly to disparities in health and life expectancy. Very limited evidence is available at a local level, so we used available national evidence.	**Data:** The Burden of Disease study shows that [126]: • Mental and substance use disorders accounted for 19% of total disease burden for the Aboriginal and Torres Strait Islander population. • The top two risk factors causing the most burden in Aboriginal and Torres Strait Islander Australians were tobacco use and alcohol use. • Alcohol use was the leading contributor to the burden in Aboriginal and Torres Strait Islander males aged 15-44 years and Aboriginal and Torres Strait Islander women aged 15-24 years. The National Aboriginal and Torres Strait Islander People' Drug Strategy 2014-2019 indicates that [127]: • Aboriginal and Torres Strait Islander males were hospitalised for conditions to which alcohol makes a significant contribution at rates between 1.2 and 6.2 times those of non-Indigenous males. • Aboriginal and Torres Strait Islander females were hospitalised for conditions to which alcohol makes a significant contribution at rates between 1.3 and 33.0 times greater compared to non-Indigenous females (including injuries related to assault).

		• Deaths from various alcohol-related causes are 5 to 19 times greater than among non-Aboriginal and Torres Strait Islander Australians. In Queensland, from 1998 to 2006, two-thirds of Aboriginal and Torres Strait Islander people who died by suicide had consumed alcohol, and more than one-third had used drugs such as cannabis, amphetamines, inhalants or opiates at the time of their deaths. **Consultation:** Stakeholders highlighted the need for GP education to help improve alcohol and other drug management as well as helping to improve the health literacy of the population, particularly in the CQ, WB and SC areas.
Dual diagnosis: Substance use and mental illness	Dual diagnosis is likely to be high amongst Aboriginal and Torres Strait Islander people, with prognosis poorer for both conditions together than for either condition alone.	**Data:** There is evidence of a high prevalence of comorbid harmful substance use and mental illness amongst the Australian population, with some estimates suggesting that among those with alcohol-dependence disorder, 20% have an anxiety disorder and 24% an affective disorder [128]. Indirect evidence suggested a substantially higher prevalence of dual diagnosis amongst the Aboriginal and Torres Strait Islander population compared to non-Indigenous populations. For example, Aboriginal and Torres Strait Islander men are 3.7 times more likely than non-Indigenous men to be hospitalised due to mental disorders attributable to psychoactive substance use [129]. For Aboriginal and Torres Strait Islander women the rate is 3.5 times higher than for non-Indigenous women [129].

5.2 Service Needs (Indigenous Health)

Indigenous Heath: Service Needs		
Identified Need	Key Issue	Description of Evidence
Uptake of preventative health checks	Uptake of preventative health checks has increased in recent years, however there is marked variation in the region.	**Data:** MBS data from 2017-18 shows approximately 11,772 of the Aboriginal and Torres Strait Islander population had an Indigenous Health Check (MBS item 715) in the PHN (33.5%) [130]. This ranks 8th highest rate of the 31 PHNs and compares to 29.8% nationally. This rate has increased steadily from 20% in 2012-13. Rate of use as a percentage of the Indigenous population was highest in Central Highlands SA3 (47.9%) while lowest in the Sunshine Coast area (between 13.1% to 27%, compared to Australia 29.8%) [130] . **Consultation:** Stakeholders identified health promotion and prevention activities as a priority for Indigenous populations
Access to health services	Lower access to specialist services Higher rates of PPHs Cultural appropriate service availability	**Data:** Australia's health 2018 [112] reported that nationally, the rate of GP attendances was 10% higher for Indigenous than non-Indigenous Australians, however specialist services attendances were 43% lower. Additionally, the rate of PPHs was 3 times higher for Indigenous than non-Indigenous Australians (69 and 23 per 1,000 respectively) [112]. **Consultation:** Stakeholders identified poor access to culturally appropriate health services, dislocation from cultural support systems, exposure to racism. Service providers have identified gaps in the pathways to patients accessing NDIS or Integrated Team Care (ITC) programs.
Maternal and child health services	Persistent disparities are evident in pregnancy and birth outcomes between Aboriginal and Torres Strait Islander and non-Indigenous Australians Fewer Indigenous mothers are accessing antenatal	**Data:** Reported rates of smoking during pregnancy are much higher amongst Aboriginal and Torres Strait Islander mothers than non-Indigenous mothers. Smoking rates (2014-2016) were steadily falling (from 53.8% to 52.5% for WB and from 51.2% to 48.6% in CQ) [7].

	care than non-Indigenous mothers	These rates increased in the SC area (37.1% to 39.4%) (Australia 45.2% in 2016-17). Child and Maternal Health Indicators in 2014-16 showed [7]: • A steady rise in the percentage of women who gave birth and had at least one antenatal visit in the first trimester within the PHN (In 2014-16: WB 50.8%, CQ 53.3%, SC 76.2%; Australia: 57.6%) • The percentage of live births that were of low birthweight in 2014-16 declined for the PHN region, with the exception of WB area. (WB 9.1%, CQ 8.4%, SC 4.5%; Australia 10.4%), which were however still lower compared to rates for Australia. **Consultation:** The above is likely to reflect multiple barriers such as insufficient culturally competent services, lack of service availability, or lack of knowledge regarding available services.
Workforce	Aboriginal and Torres Strait Islander people are more likely to live in remote and very remote areas than non-Indigenous Australians. These areas are known to experiences difficulties recruiting and retaining a skilled, culturally proficient workforce.	**Data:** Aboriginal and Torres Strait Islander people were more likely to live in remote areas. In the PHN, 10% of the Indigenous population in CQ lived in remote areas compared to 4.6% of non-Indigenous [1]. The AIHW developed a metric to estimate relative workforce supply (FTE rates) adjusted for land size, population density/dispersion and proximity to services (percent of population more than an hour's drive away). The Geographically-adjusted Index of Relative Supply (GIRS) was presented at SA2 level and within the PHN there were 25 (of 94 reported) with low GIRS scores for GPs, indicating high workforce supply challenge. Among these areas, some have high Aboriginal and Torres Strait Islander populations: **CQ area [23]:** • Central Highlands – East SA2, 1,350 Indigenous people (18.6% of population) • Mount Morgan SA2, 387 (13.2%) • Gracemere SA2, 982 (8.4%) • Bouldercombe SA2, 133 (7.1%) **WB area [23]:** • Monto – Eidsvold SA2, 278 (7.3%) • Gayndah – Mundubbera SA2, 404 (6.1%) • Burrum – Fraser SA2, 413 (4.3%) **SC area [23]:** • Gympie Region SA2, 538 (2.9%)

		An additional metric was available to summarise workforce supply GIRS scores across multiple disciplines (GPs, nurses, midwives, pharmacists, dentists, psychologists and optometrists). Central Highlands East and West SA2s had the highest values where 4 of the 7 disciplines had high workforce supply challenge (the lowest possible GIRS score) [23] **Consultation:** Feedback from CQ area highlighted insufficient opportunities for workforce development pertaining to cultural safety due to lack of training providers. Difficulty in finding culturally aware workforce in areas of both high and low workforce supply.
Over-representation in emergency department presentations	Aboriginal and Torres Strait Islander people were presenting to EDs at much higher rates than non-Indigenous people – particularly in CQ and WB. NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	**Data:** Aboriginal and Torres Strait Islander people were over-represented in ED presentations (2018-19), identified in over 28,000 episodes (7.1% of all presentations in the PHN vs 3.6% of PHN population). This was particularly evident in CQ (11.4% vs 5.7%) and WB (7.1% vs 4.2%).[43] Across the PHN, Indigenous emergency episodes occurred at a rate of around 96 episodes per 100 Indigenous people (compared to about 46 episodes per 100 non-Indigenous people).[43] • In the 3 sub-regions, CQ area saw the highest crude rate (113 episodes per 100 Indigenous people) followed by WB (104) then SC (65). • Within the areas, the highest emergency presentation rates were seen from Indigenous people living in Woorabinda (145 episodes per 100 people), Banana (138), Gladstone (125) and in CQ, and Fraser Coast (104) in WB (LGAs). • The highest proportions of Indigenous patients were seen for AoD (16.4%), suicide (14.3%), mental health (10.6%), asthma (10.8%) and diabetes (8.8%) related emergency presentations. • CQ area had the highest proportions in the PHN of Indigenous episodes for every diagnostic group explored [43]. **Consultation:** Stakeholders acknowledged the poorer health status of Aboriginal and Torres Strait Islander peoples in the catchment and noted the need for culturally appropriate services, employment of local Aboriginal and Torres Strait Islander staff and the need for support services – such as transport to medical appointments for clients.

Mental health and suicide prevention

Insufficient culturally appropriate services with a holistic approach to strengthen the mental health and wellbeing	Aboriginal and Torres Strait Islander culture takes a holistic view of health. Their traditions, values and health belief systems need to be considered in designing and delivering mental health programs and services.	**Data:** PHN service mapping identified 17 mental health community providers that received funding for delivering services targeting Aboriginal and Torres Strait Islander populations [90]. The survey was not able to capture the extent to which these services are culturally appropriate and adopt a holistic approach. **Consultation:** Previous stakeholder consultations noted the need for culturally appropriate services, employment of local Aboriginal and Torres Strait Islander staff, and the need for adequate support services. They also stressed that there appeared to be limited understanding of what holistic health is for Aboriginal and Torres Strait Islander people and acceptance of the importance of such a holistic approach in delivering services. Stakeholders also stressed the need for more Aboriginal and Torres Strait Islander specific mental health services embedded within the communities that they serve. They also noted that Aboriginal and Torres Strait Islander people face barriers in mainstream hospital systems. Stakeholders in Gympie and surrounds identified additional barriers to accessing culturally sensitive care included limited information on how to navigate service landscape and limited bulk-billing opportunities.
Insufficient models of suicide prevention services	Culturally appropriate suicide risk prevention models targeting the Aboriginal and Torres Strait Islander population are currently lacking.	**Consultation:** Stakeholder feedback suggests there are important gaps in suicide prevention services targeted at the Aboriginal and Torres Strait Islander population. This is particularly important for CQ, the PHN regional area with the highest proportion of Aboriginal and Torres Strait Islander people (5.7% vs. 3.6% across the PHN).
Suicide-related emergency department presentations.	Over-representation of Indigenous populations in suicide-related ED presentations across the PHN NB: PHN and HHS level rates were based on all presentations to hospitals within the PHN; LGA rates were based on presenting patient's usual residence (PHN residents only). NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the	**Data:** Of the 5,300 suicide-related ED presentations in 2018-19, more than 700 (14.3%) were Aboriginal and Torres Strait Islander peoples (vs 3.6% of PHN population). This was evident across all three sub-regional areas [43]: • CQ area (19.9% of episodes vs 5.7% of population) • WB area (13.4% vs 4.2%) • SC area (7.1% vs 2.1%) More than half of these episodes (449, 59%) occurred at emergency departments in CQ,

	increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	with 27% (204) in WB and the remaining 14% (111) in SC [43]. They occurred at an average rate of 2.6 episodes per 100 Indigenous population in the PHN. This rate was highest in CQ (3.5 per 100 Indigenous population; WB 2.5; SC 1.3). The highest rates per 100 Indigenous people were seen in Rockhampton (4.6), Gladstone (2.8) and Central Highlands (2.4) in CQ, Fraser Coast (2.4) and North Burnett (2.4) in WB [43]. The highest proportions for Indigenous patients were seen in Woorabinda (94% of suicide-related ED presentations), Rockhampton (26%) and Banana (19%) in CQ, and North Burnett (39%) in WB. The highest numbers of suicide-related presentations were seen from Indigenous people living in Rockhampton (270 episodes) in CQ, Fraser Coast (102) and Bundaberg (75) in WB [43].
Service gaps – commissioned services	Currently low levels of services will need to be expanded in a sustainable manner.	**Data:** Unfortunately, a limited number of clients disclosed their ethnicity. 246 Indigenous identified clients have been engaged with PHN commissioned mental health services since the inception of the stepped care model in January 2018 [131]. Of these, two thirds (164 clients) received culturally appropriate services [131]. These numbers are likely to be under-estimated due to missing commissioned service data at this time.
Indigenous workforce – workforce development needs, including of culturally safe strategies	A more effective sector requires higher numbers of Aboriginal and Torres Strait Islander staff underpinned by culturally safe workforce development strategies	**Consultation:** MHAOD workforce consultations provided the foundations for the PHN to undertake a comprehensive needs assessment and workforce development strategy that targets key issues facing Indigenous workers in the PHN [110]. The outcomes of this align with the state framework (Queensland Aboriginal and Torres Strait Islander Health Workforce Strategy Framework 2016-2026).
# Alcohol and other drugs		
Service gaps – AOD specialist treatment services delivered by NGO and public providers to the Indigenous population	In line with their higher need, Indigenous clients received 12.6% of episodes of care (vs. over 3% of the population). AOD services delivered to Indigenous clients have grown at a fast pace across the PHN, but given their low starting base, a large unmet need is expected.	**Data:** **Volume of services** Almost 14% of closed AOD episodes were for Aboriginal or Torres Strait Islander clients in 2017-18 [99]. This proportion has increased from 12% in 2015-16. This proportion was highest in WB (21.3%) followed by CQ (13.0%) and SC (6.9%) in 2017-18 [99].

		Trends 686 episodes of care were provided for Indigenous clients in 2017-18 (728 in 2016-17, 732 in 2015-16 and 401 in 2013-14) [99]. **Principal drug of concern** In 2017-18 , within the PHN, 319 closed episodes of care delivered to Indigenous clients had cannabinoids as the principal drug of concern (>45%), followed by amphetamines (n=147) and alcohol (n=137 episodes) [99]. **Who delivers services** In 2017-18, 55% of all AOD services were delivered by public providers vs. 45% by NGOs, up from 39% in 2015-16 [99]. A lower proportion of Indigenous clients in the PHN were serviced through public AODTS (51%) compared to non-Indigenous clients (56%). This ratio is in contrast to Queensland were 62% of Indigenous clients were serviced by public providers in 2017-18 [99]. This reliance on private sector service provision has important implications for future workforce development in the region, given workforce development differences across public and community sectors.
AOD related ED presentations	Indigenous populations were over-represented across the PHN and in each regional area in ED presentations due to AOD misuse. **Particularly seen in CQ**. NB: The addition of new ED facilities submitting data from CQ and WB will contribute to some of the increase in presentations seen between 2017-18 and 2018-19 in QH data [43].	**Data:** In 2018-19, 620 of the 3,700 (16.4%) AOD-related ED presentations identified as Aboriginal and Torres Strait Islander people (3.6% of population) [43]. This higher proportion of Indigenous presentations was evident across all 3 sub-regional areas: • CQ area (25.7% of episodes vs 5.7% of population) • WB area (17.0% vs 4.2%) • SC area (8.5% vs 2.1%) More than half of these episodes occurred at emergency departments in CQ (336, 54%) followed by WB (150, 24%) and the remaining 135 (22%) in SC area [43]. The average rate of AOD-related ED presentations was 2.1 episodes per 100 Indigenous population in the PHN. • Highest in CQ area (2.7 per 100 Indigenous people) • WB area (1.8 per 100 Indigenous people) • SC area (1.6 per 100 Indigenous people) The highest rates per 100 Indigenous population were seen in Banana (4.5 episodes per

		100 Indigenous people), Rockhampton (3.1) and Woorabinda (2.5) LGAs in CQ. The highest proportions for Indigenous patients were seen in Rockhampton (41% of AOD-related presentations) in CQ, and North Burnett (39%) in WB [43]. [In the discrete Aboriginal community of Woorabinda, 96% of AOD-related presentations were recorded as from Aboriginal or Torres Strait Islander people] The highest numbers of AOD-related presentations were seen from Indigenous people living in Rockhampton (180 people) in CQ, Fraser Coast (75) in WB and Sunshine Coast LGA (93) in SC area [43].
Lack of culturally appropriate services	Culturally competent services are required to ensure the engagement of Aboriginal and Torres Strait Islander people and successful reductions in alcohol and other drug related harm. The resource implications of providing culturally competent and effective AOD services for Indigenous populations should be given due consideration.	**Data:** The PHN provides face to face cultural awareness training and RACGP online accredited cultural awareness training is a requirement for practice accreditation – Criterion C2.1. Although local evidence is not available to examine the cost implications of delivering culturally competent and effective AOD services to Indigenous clients, previous work on the Drug and Alcohol Service Planning Model adaptation suggested that the additional costs of delivering the required care to Indigenous clients was about two to three times as much as for non-Indigenous clients [132]. These costs were greater because of the need to include additional elements such as specific care components (i.e. return to country/community), as well as other elements such as better engagement with families and more intensive assertive follow up. Queensland Health Aboriginal and Torres Strait Islander Mental Health Strategy 2016–2021 highlighted the need to develop culturally capable mental health services and committed to improve the effectiveness and accessibility of specialist drug and alcohol treatment services provided by Queensland Health for Aboriginal and Torres Strait Islander Queenslanders [133]. **Consultation:** Similar to mental health services, AOD services need to be grounded on a holistic concept of health and wellbeing, reinforce Aboriginal family systems of care, support and responsibility, place culture as a central core component of the service. Stakeholders in the PHN identified a lack of culturally responsive service provision, including lack of support services for Aboriginal and Torres Strait Islander families experiencing drug and alcohol misuse within their family.
Indigenous workforce – workforce development needs,	Insufficient Aboriginal and Torres Strait Islander AOD workers has been identified as a critical gap to be addressed.	**Data:** Service mapping conducted in 2016 showed that only 2 out of 14 AOD providers that participated in the service mapping reported Aboriginal and Torres Strait Islander health

including of culturally safe strategies	This is in addition to the above issue of overall constraints in AOD workforce across the PHN and the lack of a sound evidence base to inform effective strategy development.	workers amongst their AoD treatment staff. **Consultation:** A comprehensive MHAOD workforce development needs assessment will be needed to provide the evidence required for a workforce development strategy aligned with the state framework and which targets key issues facing Indigenous workers in the PHN, including the need for higher numbers.

5.3 Priorities and Options (Indigenous Health)

This section summarises the priorities arising from the Needs Assessment and options for how they will be addressed.

Opportunities, priorities and options				
The following opportunities, priorities and options have been suggested based on the identified needs , however actual implementation of these depends on various factors such as available evidence base, ability to tailor it to local conditions, careful consideration of opportunity cost, and consultation/collaboration with PHN stakeholders.				
Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
Prevention of risk behaviours				
Prevention of risk behaviours: Chronic disease AOD	Foster and support the development of strategies designed to increase the participation of Aboriginal and Torres Strait Islander men in addressing social and emotional health and wellbeing Facilitate co-design and implementation of strategies targeting the lifestyle behaviours of young Aboriginal and Torres Strait Islander people	Increased participation of Aboriginal and Torres Strait Islander men in addressing social and emotional health and wellbeing Reduction in risk behaviours among young Aboriginal and Torres Strait Islander people Improved knowledge and understanding of risk behaviours and implications for long term health outcomes	Reductions in risk factor indicators among Aboriginal and Torres Strait Islander populations (long term)	PHN in collaboration with Aboriginal Community Controlled Health Services
Co-design, collaboration and integration of services				
Improve collaborations, support integrated care practices and create culturally competent	Work with regional Aboriginal Community Controlled Health Organisations (ACCHOs), General Practice, allied health, peak bodies, CheckUP to identify opportunities to increase access to primary	Reduced potentially preventable hospitalisations and premature death from chronic disease amongst Aboriginal and Torres Strait Islander communities	Numbers of Aboriginal and Torres Strait Islander community members with, or at risk of, chronic disease accessing programs and/or allied health clinics	PHN, ACCHOs, HHS, primary care physicians, allied health professionals and other NGOs

workforce and practices	health services and participation in programs for Aboriginal and Torres Strait Islander community members Leverage the Integrated Team Care program delivery across the region to improve access to care coordination, specialist and supplementary services, through targeted marketing and promotional opportunities with general practice and community Encourage and support primary health care providers to utilise their data to identify cohorts of at-risk Aboriginal and Torres Strait Islander community members and develop the required screening, monitoring and care plans, utilising the appropriate MBS items and recall and reminder processes Support general practice, allied health and primary health care clinicians to provide culturally safe and appropriate environments for Aboriginal and Torres Strait Islander community members Support primary health care clinicians to work in a holistic manner with Aboriginal and Torres Strait Islander people, their families, carers and community to ensure more culturally appropriate provision of care Work with primary health care providers to improve health and disease literacy within Aboriginal and Torres Strait Islander	Improved participation in allied health clinics and programs in regional, rural and remote locations by Aboriginal and Torres Strait Islander community members with, or at risk of, chronic disease Improved collaboration between primary, secondary and tertiary health care providers for Aboriginal and Torres Strait Islander community members through effective care coordination services Greater levels of health and disease literacy in Aboriginal and Torres Strait Islander community members At risk Aboriginal and Torres Strait Islander community members are identified and their health monitored through their GP or AMS using the Closing the Gap 715 annual health check as a baseline Aboriginal and Torres Strait Islander community members experiencing chronic disease and comorbid conditions are encouraged to self-manage their health Culturally appropriate and safe environments are developed for Aboriginal and Torres Strait Islander community members More effective and patient-centred service delivery across the region to Aboriginal and Torres Strait Islander community members by	Numbers of Aboriginal and Torres Strait Islander community members accessing culturally appropriate health care services Number of Closing the Gap 715 annual health assessments Reduced numbers of potentially preventable hospitalisations Number of general practices accessing the Closing the Gap practice incentive payment Number of cultural awareness training programs delivered in the region by various trainers Number of ITC clients receiving care coordination and supplementary services Number of ITC clients in “self-management” mode indicating high levels of self-efficacy and health literacy	

	communities, increasing access to culturally appropriate resources including yarning circles, stories and art Support primary health care clinicians to promote and support self-management of chronic disease with identified and appropriate Aboriginal and Torres Strait Islander community members Work with identified care providers to improve death literacy within Aboriginal and Torres Strait Islander communities, encouraging family and community discussion about palliative care and increasing access to culturally appropriate resources including yarning circles, stories and art	culturally aware and safe clinicians		
Development of a coordinated and integrated system for suicide prevention to meeting the needs of Aboriginal and Torres Strait Islander populations.	Commission community-based suicide prevention activities based on identified needs – with a particular focus on Aboriginal and Torres Strait Islander populations Develop culturally appropriate referral pathways and systems between HHSs and community-based services to facilitate follow-up care for Aboriginal and Torres Strait Islander individuals following a suicide attempt	Establishment of a region-wide plan for suicide prevention that includes specific strategies to addresses the needs of the Aboriginal and Torres Strait Islander populations Improved access to culturally appropriate suicide prevention services across the region	Reduced rates of suicide amongst Aboriginal and Torres Strait Islander people in the region Other agreed measures to be developed as part of joint planning work with partner organisations	PHN to lead planning in conjunction with HHSs, ACCHOs, Aboriginal and Torres Strait Islander organisations, service providers, consumers and carers and commission services in accordance with plans
Co-create locally based solutions	Collaborate with Aboriginal and Torres Strait Islander organisations to Improve access to and delivery of high quality AOD services that effectively engage the Aboriginal	Established collaborations with Aboriginal and Torres Strait Islander organisations to deliver culturally appropriate and effective services	Continuous and sustainable growth of service utilisation by Aboriginal and Torres Strait Islander status Formalised partnerships/collaborations	PHN in collaboration with ACCHOs and commissioned service providers.

	and Torres Strait Islander population. Includes better identification of treatment pathways for Aboriginal and Torres Strait Islander population Collaborate with organisations to ensure that current growth in services for Indigenous people across the PHN continues in a sustainable manner	Improved access to AOD services across the PHN	established with local key stakeholders	
Improving access to culturally appropriate services				
Early identification of risk cohorts and ensuring better access to culturally appropriate services – maternal and child	Identification of at-risk pregnant women and new mothers and the proactive provision of ante- and post-natal care in convenient locations, supporting transient lifestyles Collaborate with HHSs, ACCHOs and primary health care clinicians to support the development of shared care services across the region and facilitate continuity of care Facilitate access to clinics for Aboriginal and Torres Strait Islander mothers and babies across the region and promote the use of My Health Record and child health records to support continuity of care Strategies could include the development of Indigenous specific HealthPathways for maternal and child health, opportunistic immunisation of mothers and	Greater opportunities for pregnant women and new mothers to access culturally appropriate ante- and post-natal care in the location of their choice Greater opportunities for pregnant Aboriginal and Torres Strait Islander women to access shared care pregnancy services	Number of pregnant women and new mothers accessing culturally appropriate ante- and post-natal care Number of shared care pregnancy arrangements involving Aboriginal and Torres Strait Islander women Number of pathways developed for maternal and child health	PHN, ACCHOs, HHS, primary care physicians, allied health professionals and other NGOs

	babies where appropriate Work with primary health care providers to improve child health and illness literacy for Aboriginal and Torres Strait Islander mothers, increasing access to culturally appropriate resources including yarning circles, stories and art			
Increase access to culturally appropriate mental health services for Aboriginal and Torres Strait Islander people – mental health and suicide prevention	Commission and co-design culturally appropriate, evidence based mental health services within a stepped care approach, that will complement existing services for Aboriginal and Torres Strait Islander people in the region Work with headspace to continue to provide and increase the availability services to Aboriginal and Torres Strait Islander young people Continue to invest in capacity building and cultural sensitivity training to service providers to enhance cultural competence and understanding of the historical, cultural and social factors that contribute to poorer mental health outcomes among Aboriginal and Torres Strait Islander populations	Effective engagement with Aboriginal and Torres Strait Islander mental health stakeholders to identify appropriate and effective service delivery options and settings Improved access to and utilisation of services and programs which address the mental health issues of Aboriginal and Torres Strait Islander people in culturally-specific ways Enhanced health outcomes for Aboriginal and Torres Strait Islander people	Increased acceptability and access to culturally appropriate mental health services by Aboriginal and Torres Strait Islander people Decreased rate of hospitalisations for mental and emotional disorders among Aboriginal and Torres Strait Islander populations	PHN to lead planning in conjunction with ACCHOs, Aboriginal and Torres Strait Islander organisations, HHSs, other local service providers, consumers and carers and commission services in accordance with plans
Workforce development				
Engage with training organisations and other NGOs to develop and engage	Work with organisations such as Health Workforce Queensland, ACCHOs, HHSs, Local and State Government to close the gap in workforce shortages across the	Improved access to culturally competent staff for employing organisations Greater numbers of qualified Aboriginal Health Workers and	Number of Aboriginal and Torres Strait Islander staff employed by health care services. Number of accessible training	PHN to lead the development of the strategic framework in conjunction with local training institutions and other stakeholders

Aboriginal and Torres Strait Islander peoples to become health workers	region Proactively develop partnerships with employing health care organisations, schools, local and state Government bodies to facilitate the building of education and career pathways into primary health care	clinicians within the region Availability of appropriate training courses e.g. Cert III, Cert IV and Diplomas in Aboriginal and Torres Strait Islander Primary Health Care, Aboriginal and Torres Strait Islander Health Worker, across the region Aboriginal and Torres Strait Islander community members more engaged with the continuum of health care services	courses in regional centres Number of graduates of accessible training courses in regional centres Number of graduates employed by health care services, particularly in regional, rural and remote areas	
Improve access to available services, increase culturally appropriate services and improve health literacy - AOD	Continue working with Aboriginal and Torres Strait Islander organisations and communities to identify specific AOD needs and service gaps for Aboriginal and Torres Strait Islander people Commission culturally appropriate, evidence-based services that will complement existing services for Aboriginal and Torres Strait Islander people in the region Dedicated, culturally appropriate Aboriginal and Torres Strait Islander community AOD services where indicated in the AOD Health Needs Assessment Integrated social and emotional wellbeing services available to regional Aboriginal and Torres Strait Islander community members at low or no cost, in a timeframe that is suitable to their needs Work with primary health care	Effective engagement with Aboriginal and Torres Strait Islander stakeholders to identify appropriate and effective service delivery options and settings Improved access to and utilisation of services and programs which address Aboriginal and Torres Strait Islander harmful substance use issues in culturally-specific ways Enhanced treatment outcomes for Aboriginal and Torres Strait Islander people Improved participation in allied health clinics and programs in regional, rural and remote locations by Aboriginal and Torres Strait Islander community members with alcohol and other drug related problems Reduced potentially preventable hospitalisations from alcohol and other drugs amongst Aboriginal and Torres Strait Islander	Numbers of Aboriginal and Torres Strait Islander community members with alcohol or other drug related problems accessing programs and/or allied health clinics Increased acceptability and access to culturally appropriate mental health services by Aboriginal and Torres Strait Islander people All commissioned services are culturally appropriate Reduced numbers of potentially preventable hospitalisations Number of cultural awareness training programs delivered in the region by various trainers Number of programs delivered to improve AOD health literacy	PHN and HHS PHN to lead planning in conjunction with ACCHOs, Aboriginal and Torres Strait Islander organisations, HHSs, other local service providers, consumers and carers and commission services in accordance with plans PHN to deliver cultural sensitivity training to service providers

	providers to improve AOD health literacy within Aboriginal and Torres Strait Islander communities, increasing access to culturally appropriate resources including yarning circles, stories and art Continue to invest in capacity building and cultural sensitivity training to service providers to enhance cultural competence and understanding of the historical, cultural and social factors that contribute to harmful substance use among Aboriginal and Torres Strait Islander populations	communities More effective and patient-centred service delivery across the region to Aboriginal and Torres Strait Islander community members by culturally aware and safe clinicians		
Provide ongoing workforce development of current Aboriginal and Torres Strait Islander health workers – both within mainstream and Indigenous controlled services	Work with organisations such as Health Workforce Queensland, ACCHOs, HHSs, Local and State Government to close the gap in workforce shortages across the region Work with training organisations and employers to provide access to suitable training opportunities for current Indigenous health workers to develop their skills/professional development (including on the job, virtual, mentoring, and traditional training opportunities) In the needs assessment and strategy outlined above, address workforce development issues for Indigenous workers and ensure strategies adopted are culturally safe	Specific needs and strategies tailored to the Indigenous workforce are identified and adopted, while ensuring alignment with the Queensland Aboriginal and Torres Strait Islander Health Workforce Strategic Framework Increased Aboriginal and Torres Strait Islander mental health workforce in the region. Further advancement of Aboriginal and Torres Strait Islander workers through to senior clinical and management positions	Workforce development needs assessment undertaken Consultations for the strategic workforce development framework are undertaken and relevant strategies adopted	PHN to lead the development of the strategic framework in conjunction with local training institutions and other stakeholders
Improve engagement and	Dedicated, culturally appropriate Aboriginal and Torres Strait	Reduced potentially preventable hospitalisations from mental health	Numbers of Aboriginal and Torres Strait Islander community	PHN and HHS

participation through provision of a broader range and availability of culturally appropriate health services	Islander community mental health services where indicated in the Mental Health Needs Assessment and in accordance with the Stepped Care model of mental health services Accessible mental health services across the region for Aboriginal and Torres Strait Islander community members in formats and locations that encourage participation Integrated social and emotional wellbeing services available to regional Aboriginal and Torres Strait Islander community members at low or no cost, in a timeframe that meets their needs Work with primary health care providers to improve mental health and illness literacy within Aboriginal and Torres Strait Islander communities, increasing access to culturally appropriate resources including yarning circles, stories and art	related conditions amongst Aboriginal and Torres Strait Islander communities Improved participation in allied health clinics and programs in regional, rural and remote locations by Aboriginal and Torres Strait Islander community members with, or at risk of, mental health conditions Improved collaboration between primary, secondary and tertiary health care providers for Aboriginal and Torres Strait Islander community members through effective care coordination services More effective and patient-centred service delivery across the region to Aboriginal and Torres Strait Islander community members by culturally aware and safe clinicians	members with, or at risk of, mental health conditions accessing programs and/or allied health clinics Numbers of Aboriginal and Torres Strait Islander community members accessing culturally appropriate health care services Reduced numbers of potentially preventable hospitalisations associated with mental illness Reduction in suicide attempts Number of general practices accessing the Closing the Gap practice incentive payment Number of cultural awareness training programs delivered in the region by various trainers	
Increased cultural competency (through to proficiency) of mainstream services	Increase cultural competency training, including options to move from competency through to proficiency with immersion or other advanced training Collect regular stakeholder feedback on cultural competency and the appropriateness of services and providers Conduct regular audits for providers that wish to become	Improved participation in cultural training and ability for all those who work in health services to improve their current level of cultural competency Regular improvements made to mainstream services based on stakeholder feedback and audit data Through culturally safe workplaces, an increase in Aboriginal and Torres Strait Islander employment,	A culturally safe strategic workforce development framework is adopted and supported by key stakeholders	PHN and HHS

	more culturally competent Ensure provision of culturally safe mainstream workplaces for Aboriginal and Torres Strait Islander health professionals	and subsequent potential for future provision of culturally appropriate services		

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