Northern Queensland Primary Health Network

Health Needs Assessment

Northern Queensland Primary Health Network acknowledges the traditional Custodians of the lands and seas on which we live and work, and pay our respects to Elders past and present.

phn NORTHERN QUEENSLAND

An Australian Government Initiative

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Acknowledgement

The updated Health Needs Assessment report for the Northern Queensland Primary Health Network (NQPHN) was conducted in late 2018 in collaboration between the NQPHN and its Regional Partners, Stakeholders, Health Care Services Providers, Community Organisations and Residents.

NQPHN wishes to acknowledge the contribution of its Board, Clinical Councils, and Staff, Regional Partners, Health Care Service Providers and the residents of Northern Queensland. We recognise the contributions of our four Hospital and Health Services (HHS) and 14 Aboriginal Medical Services within our PHN region, and we thank them for their input and support.

SECTION 1- INTRODUCTION

The Health Needs Assessment (HNA) is a working document, that evolves as new and more relevant information becomes available. It provides an overview of the Northern Queensland PHN demographic profile identifying the greatest health needs within our footprint. This information is then used to identify our key priority areas which in turn inform effective commissioning of services for Northern Queensland PHN. The purpose of this Health Needs Assessment (HNA) is to commence discussion about the health needs of the population within the Northern Queensland Primary Health Network (NQPHN) region. This needs assessment incorporates the needs of consumers as well as the health workforce, as they are essential to the delivery of health services to consumers.

By combining consumer need and service need, the HNA identifies the key priority areas specific to the NQPHN. The identification of these key priority areas informs the strategic plans for the entire organisation. The HNA is not an exhaustive list of all services and consumer needs; rather, it is an essential process in identifying key areas specific to our community. Within each key area, various strategies may then be applied, with a variety of measurable outcomes.

This updated assessment of health needs will provide a basis for addressing the health needs of NQPHN residents and will act as a reference for commissioning organisations implement plans to ensure it aligns with the local health needs. This Needs Assessment report will for a three period and cover 1 July 2019 to 30 June 2022. It can be reviewed and updated as needed during this period.

Our Organisation

Northern Queensland Primary Health Network (PHN) is one of 31 PHNs across Australia. It is an independent not-for-profit organisation, funded by the Commonwealth Department of Health.

Across Northern Queensland, from Sarina in the south to the Torres Strait in the north, NQPHN co-ordinates and commissions primary and preventive healthcare— that is, the healthcare that is undertaken outside of a hospital, such as GPs, allied health, chronic disease management, aged care, mental health, and Aboriginal and Torres Strait Islander health.

Primary health care is recognised as the most effective way to keep communities and individuals healthy and well. NQPHN identifies where there are areas of need, such as lack of health care services, difficulty in accessing these services, or regions with particularly high health needs, and works closely with GPs, allied health care providers, hospitals, and the broader community to ensure that patients can receive the right care, in the right place, at the right time.

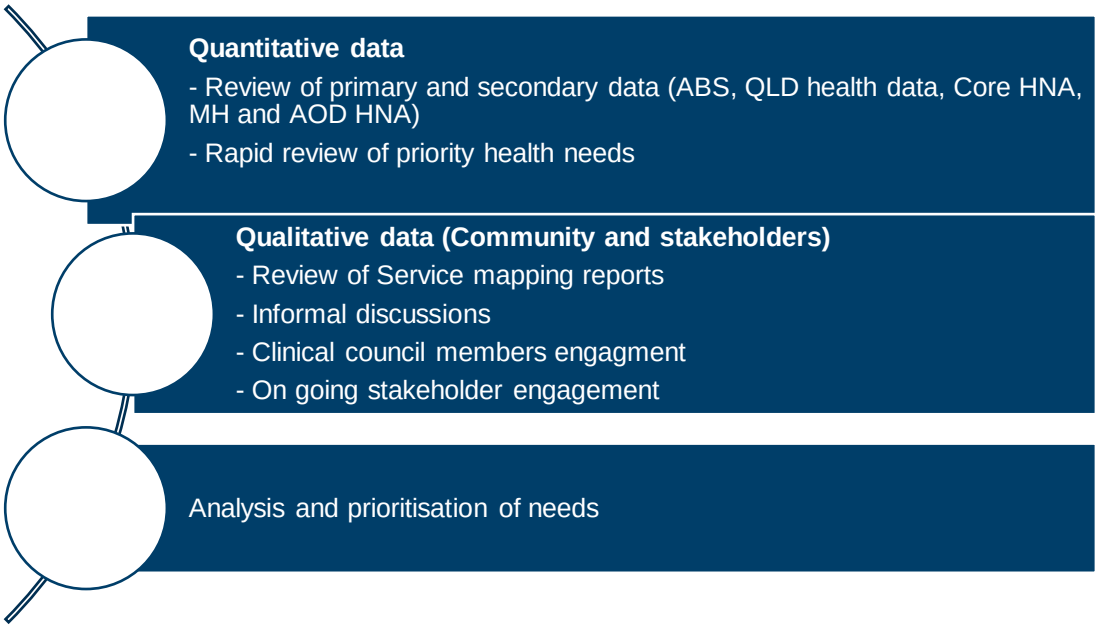
The Federal Government has set seven key priority areas that underpin all our planning and activities:

- Mental health
- Alcohol and other drugs (AOD)
- Aboriginal and Torres Strait Islander health
- Population health
- Health workforce
- e-health
- Aged care.

Our Community

Northern Queensland PHN region is unique. Spanning an area of 510,000km^2, approximately twice the land size of the UK, this tropical environment is home to almost 700,000 people. The majority of the population are located within the outer regional centres of Cairns, Townsville, and Mackay, but almost 8.0% live outside cities in remote and very remote areas.

NQPHN covers an area of northern Queensland from Sarina up to the northernmost point of the Torres Strait Islands—a distance of around 1,500km as the crow flies. This area includes the Cairns, Townsville, and Mackay regions, as well as very remote Indigenous communities in Cape York Peninsula and the Torres Strait Islands. In terms of geographical size, we're the fourth largest PHN in Australia, covering 30 per cent of Queensland.



This refresh single HNA considered the needs of the QNPHN residents under the following sections:

- General population health needs;
- Primary Mental Health care needs;
- Indigenous Health needs (including Indigenous chronic disease); and
- Alcohol and Other Drug Treatment needs.

Limitations

The objective of the Health Needs Assessment was to provide a comprehensive overview of the health needs of NQPHN region. However, there were limitations acknowledged during the conduct of this HNA update.

It is difficult to meaningfully assess the many aspects affecting the health and wellbeing of the NQPHN population. This was due to the lack of access to outcome measures available through the secondary data analysis and the broad focus of the health needs assessment. In some cases, there were measurement definition differences between the data sources and lack of comparable benchmarking.

There were concerns around the limited access and availability of primary health care data to support decision making for NQPHN and inform service development activities. The most significant limitation is the availability of timely quantitative data. NQPHN had limited success in capturing general practice data (PENCAT) from Aboriginal and Torres Strait Islander Medical Services in the region. The collection of this data would improve the ability to make informed decisions. State, HHS and SA3 level data do not always provide an accurate picture of the situation at a community level and additional

data is required. This is particularly important when working with rural communities This is particularly important when working with marginalised, and remote and very remote communities.

NQPHN is currently developing its health needs information system as part of its ongoing ICT review to enable residents and organisations to connect, analyse health information and respond to community health issues. Furthermore, NQPHN is developing a more inclusive stakeholder engagement framework for use in the community. Through this structured and cohesive approach, our community engagement will foster sustained relationships with service providers and consumer groups within the region.

NQPHN will continue to work with its regional partners, other PHNs, local stakeholders, it's Clinical Councils, Communities Councils and consumers to collect and analyse both qualitative and quantitative data, in order to inform its commissioning services in the region. It is anticipated that this process will continue to increase NQPHN's engagement with its communities and stakeholders. We acknowledge our ongoing progress to drive change based on our health needs.

SECTION 2 – OUTCOMES OF THE HEALTH NEEDS ANALYSIS

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

General Population Health

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
Social Determinants of Health		
Socio-economic factors	Higher proportion of socio-economic disadvantaged population in the region	NQPHN region has a higher proportion of people (53.5%) in the two most disadvantaged quintiles compared to Queensland state (40.0%) of the Index of Relative Socio-economic Disadvantage (SEIFA) in 2016. This is an increase of 4.5% from the 2011 SEIFA. This data indicates pockets of high proportions of socially disadvantaged populations in the region. Within the region, Torres and Cape HHS area has the largest percentage of the population within the two most disadvantaged quintiles (81.9%). Mackay HHS area had the lowest (48.5%) proportion of people in the two most disadvantaged quintiles. The following LGAs; Palm Island, Croydon, Yarrabah, Etheridge, Aurukun, Hope Vale, Kowanyama, Lockhart River, Mapoon, Napranum, Northern Peninsula Area, Torres Strait Island, Wujal Wujal have 100% of their population in the most disadvantaged quintile. This indicated a higher proportion of low income, low educational attainment, high unemployment, jobs in relatively unskilled occupations, and residents of dwellings without motor vehicles. Resources should be directed to addressing the upstream factors (such as socio-economic policies and income inequality) as it has strong influence on the downstream factors (individual behaviour and practices), (Lawless, Lane, Lewis, Baum, & Harris, 2017; World Health Organisation, 2014).
	"Poor quality employment" and higher unemployment rate	The unemployment rate in NQPHN region had reduced from 8.5% in March 2017 to 6.7% as of March 2018. However, within the region about 65.0% (20/31) of LGAs have higher unemployment rates compared to the state average (6.0%). More than half residents in Pormpuraaw (52.3%) and Kowanyama (52.1%) LGAs were unemployed during the first quarter of 2018, while Isaac LGA has the lowest unemployment rate (1.6%), (Queensland Government Statistician's Office, 2018a). Studies have indicated that unemployment and poor quality employment (low wage, no or short term contract, control at work) are significantly associated with mental disorders (Allen, Balfour, Bell, & Marmot, 2014; World Health Organization, 2014).
	Early childhood care and provision of education	On average the NQPHN region had a slightly higher percentage (6.1% vs 5.4%) of people who did not go to school or have completed year 8 in 2016. The percentage of people completing year 11 or 12 is slightly lower (53.0% vs 58.9%) compared to Queensland state.

Within the region, Aurukun has the largest proportion (26.5%), whose highest level of education was 8 or below or did not go school, followed by Pormpuraaw (19.3%) and Kowanyama (14.6%). Northern Peninsula Area has the largest proportion of whose highest level of schooling was year 11 or 12 (or equivalent) with 61.0%(Queensland Government Statistician's Office., 2017).

As of February 2017, the number of early childhood and care services for the NQPHN region was 541. The majority of the early childhood and care services are located in regional centres such as Townsville, Cairns, Mackay, Whitsunday, Cassowary Coast, Mareeba and Tablelands. Adverse early life experiences have long lasting effects later in life and are strongly associated with high risk, socially unacceptable behaviours and preventable illness and disorders. The Australian Early Development Census (2015) indicated that children within the following LGAs; Cooks, Douglas, Northern Peninsula Area, Palm Island, Torres and Torres Strait Island are developmentally vulnerable to two or more of the following; physical health and well-being, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge compared to the state (14.0%). Family conditions and quality of parenting are significantly associated with child mental health and physical health(World Health Organization, 2014).

Table1.1 Proportion of developmentally vulnerable children by domain and NQPHN HHS Areas, 2015

	Mackay	Townsville	Cairns	QLD	Australia
Physical health and wellbeing	10.3%	13.3%	13.0%	12.4%	9.7%
Social competence	11.4%	14.7%	13.6%	12.4%	9.9%
Emotional maturity	7.7%	10.2%	16.4%	10.1%	8.4%
Language and cognitive	4.9%	10.0%	10.8%	8.0%	6.5%
Communication skills and general knowledge	7.1%	12.7%	8.3%	10.5%	8.5%

A review of early childhood development services in NQPHN region by KBC Health (2018) indicated children in Townsville and Cairns areas are more vulnerable to early developmental issues (physical health and wellbeing, social competence, emotional maturity, language and cognitive and communication skills and general knowledge) compared to Mackay area, (KBC Australia, 2018d).

Outcomes of the health needs analysis		
	Community and cultural determinants	Cultural beliefs and behaviour and their interaction with economic and social capital can influence a community's behaviour. For example, cultural nutrition and eating patterns, social gatherings are potential pathways to mediate better health behaviour and practices(Shepherd, Li, Mitrou, & Zubrick, 2012). The population served by and the area across which NQPHN operates is diverse and challenging with small pockets of high advantage, with areas of extreme disadvantage. The region has the largest population of Aboriginal and Torres Strait Islander Queenslanders (67,752 people), (Queensland Government Statistician's Office., 2017). The distribution of these populations reflects both cultural association, as well as Queensland's policy history of isolation, concentration, and segregation. This being so, the discrete Aboriginal communities across the region can represent many different clan groups and histories. Current studies show that strong cultural links and practices improve outcomes across the social determinants of health. [1]
Marginalised communities	Increased number of marginalised/vulnerable (homeless, LGBTIQ, migrants) communities in the region	There are also increasing refugee and migrant groups from non-speaking English background countries (52,072 people) in the region that have their own distinct needs. These groups include Pacific Islanders, Papua New Guinea, India, Italy and migrants from the Mediterranean who have been a major part of the rural workforce for generations, and refugee groups more recently arrived, some of whom live in isolated settings. There is evidence that refugee and migrant groups are vulnerable to depression, suicide, and post-traumatic stress disorder. Other vulnerable populations include the homeless, LGBTIQ and Aboriginal and Torres Strait Islander people. There are also strong indications of significant associations between homelessness, unemployment, offending, family breakdown and AOD use (refer to AOD and MH section).
Natural Environmental factors	The environment in which people live influences the choices and resources they need.	It is well established that social and environmental determinants of health have larger impact on health outcomes than health care (Page-Reeves et al., 2016). A review of communicable diseases in rural and remote Australia reported geographical isolation of communities, household overcrowding, poor housing, occupational exposure, and climate seasonality as environmental factors influencing the spread of communicable diseases in the rural and remotes communities in Australia (Quinn, Massey, & Speare, 2015). Within the region, Flinders and Richmond areas were recently drought declared. About 90.3% of Isaac, 90.0% of Whitsunday and 45.7% of Charter Towers are drought declared. NQPHN region has a higher proportion of people living in the remote and very remote areas (7.8%) compare to Queensland (2.6%) (Queensland Government Statistician's Office, 2018b).
Sexual assault and domestic violence	Higher rates of sexual and domestic violence in NPQHN region than Queensland	In Australia, 1 in 6 women have experienced physical and/or sexual violence by their current partner or previous partner compared to 1 in 16 men(Australian Institute of Health and Welfare 2018, 2018). Moreover, 1 in 2 (54%) women who had experienced current partner violence, have experienced repeated domestic and sexual violence. Young women (aged 15 years) are more likely to have experienced sexual harassment compare to men (1 in 2 women-53% vs 1 in 4 men-25%). In Queensland, it is estimated that almost 16.9% women had experienced sexual violence in the past 12 months (2016). In addition, about 14.1% of these women had experienced physical and/or sexual intimate partner violence (Australia Bureau of Statistics, 2016).

[1] Brown, N. (2014) Exploring Cultural Determinants of Health and Wellbeing. Lowitja Institute Roundtable

Outcomes of the health needs analysis		
		The finding is consistent with an earlier study among women in Bowen and Mackay region, which noted that 11.5% of women had experienced either physical and/or sexual intimate partner violence in the previous 12 months (Heather Nancarrow, Stewart Lockie, & Sanjay Sharma, 2008). A review by KBC Australia (2018a), citing Queensland Police Service data for Mackay, Townsville, Cairns and Far North areas noted higher rates of sexual assault and domestic violence in throughout NQPHN region compared to the Queensland state. Children aged 0-14 years were four times more likely to experience sexual offences compared to children aged 15 years and above in 2016-17 (KBC Australia, 2018a, 2018b, 2018d).
Behavioural Risk Factors In 2015-16, an estimated 85.8% of NQPHN residents aged 15+ years self-rated their health as excellent, very good, or good (Australian Institute of Health and Welfare, 2018b). Risk factors such as tobacco smoking, risky alcohol consumption, illicit drug use, not having enough exercise, and poor eating practice can adversely affect a persons health and wellbeing.		
Overweight and obesity	Higher overall proportion of overweight and obese adults	Data from the 2015-16 Queensland Preventive Health survey estimated the following: • NQPHN has the third highest rate (61.1%) of overweight and obesity in Queensland behind West Queensland (66.2%) and Darling Downs and West Moreton (67.0%) PHNs. • Within the region, Torres and Cape HHS has the highest (67.8%) prevalence of overweight and obese adults, followed by Mackay (62.5%), Townsville (61.7%) and Cairns and Hinterland HHS (58.9%). • Townsville HHS has the highest rate for overweight and obesity within NQPHN and across all Queensland HHS in children aged 5 to 17 years (30.7%) At the LGA level, the following have higher overweight and obesity rates than the NQPHN average (61.1%); Hinchinbrook – 73.0%, Burdekin – 69.3%, Isaac – 69.0%), Cassowary Coast – 68.3%, Whitsunday – 68.0%, Charters Tower – 62.9% and Mareeba – 62.1% (Queensland Government (Queensland Health), 2016). Approximately 7.0% of the total of burden of disease and injury in Queensland were attributed to overweight and obesity. More specifically, 30% of coronary heart disease, 20% of diabetes and 9% of osteoarthritis disease burden were attributed to overweight and obesity (Queensland Health, 2017b).
Healthy eating and exercise	Though the intake of fruit and vegetables and level of exercise of people in the NQPHN region is on par with State indicators, the overall levels are poor.	Overall, NQPHN's population reports that 55% eat the recommended daily fruit intake (compared to 57% for Queensland), and 7.2% eat the recommended vegetable intake which is almost the same as Queensland(Queensland Government (Queensland Health), 2016). At the HHS level, Townsville HHS vegetable intake is (6.8%) slight lower compared to Mackay, Cairns and Hinterland, and Torres and Cape HHS. The Australian Guide to Healthy Eating (AGHE) recommends that on average adults should consume at least five serves of vegetables and two serves of fruit every day (Commonwealth Department of Health and Family Services, 1998). Within the region, there are pockets of LGAs that have rates lower than the NQPHN average (7.2%): Burdekin – (4.8%), Douglas (6.1%), Cairns (6.5%) and Whitsunday (6.8%)

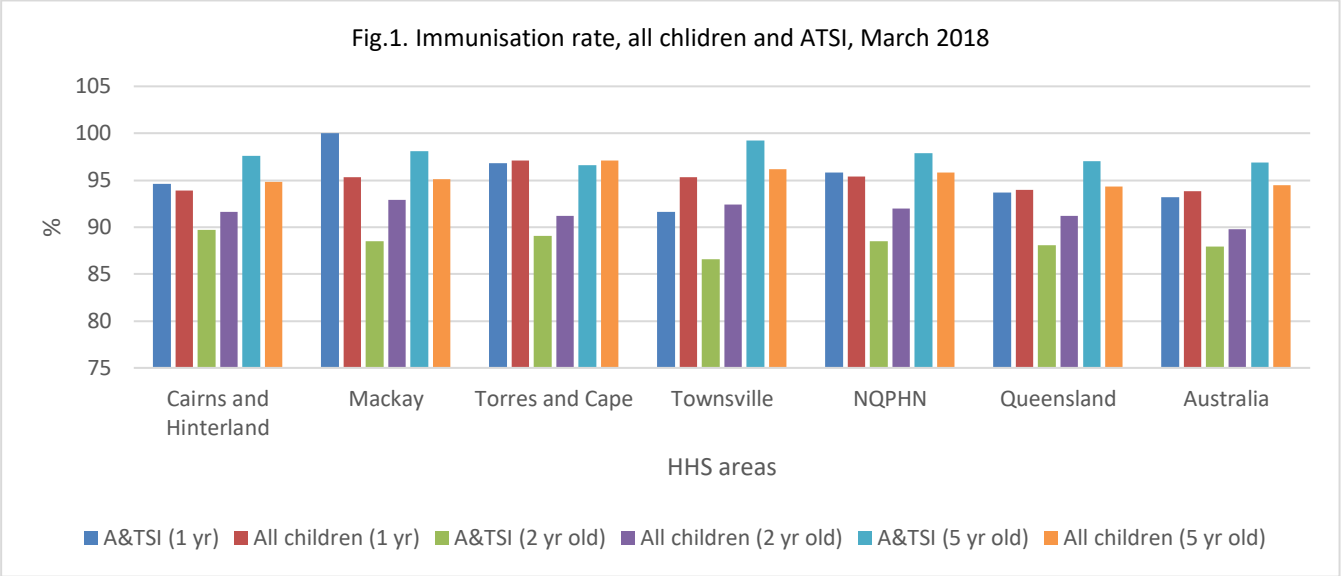
Outcomes of the health needs analysis		
		Regular physical activity can be protective against the development of health conditions such as obesity, diabetes, heart disease and hypertension, and mental health conditions such as depression and anxiety. It is also important for maintaining a healthy weight and preventing and reducing obesity. Sufficient physical activity is reported as achieving 30 minutes or more of at least moderate physical activity on five or more days a week[2]. 59% of adults met the recommendation for physical activity, 41% did not(Queensland Government (Queensland Health), 2016). Higher proportions of Males aged 18+ years reported sufficient physical activity compared to females (61.9% vs 55.5%). Overall, the NQPHN region reports level of physical activity compared to the State (58.8% vs 59.6%) is almost equal. Persons aged 18+ in the Torres and Cape HHS are found to be significantly more physically active compared to the state average, (69.6% vs 59.6%).
Smoking	Higher daily smoking rates in NQPHN compared to QLD state.	The NQPHN region has a higher proportion of daily smokers than the rest of the State (15.2% vs 12.1%, 2015-16). Torres Strait and Cape York has a much higher rate of smoking than the rest of NQPHN's region, with over a quarter of all men estimated to be daily smokers. Women in our PHN region smoke much more than the State average. The following LGAs have higher rates of smoking compared to the to the state average: Burdekin (13.8%), Cairns (14.4%), Cassowary Coast (17.9%), Charters Towers (16.6%), Douglas (16.5%), Isaac (16.1%), Mackay (13.4%), Mareeba (18.0%), Tablelands (14.4%), Townsville (15.6%), and Whitsunday (14.9%). (Queensland Government (Queensland Health), 2016) Tobacco smoking (including second-hand smoking) was the second highest risk factor contributing to the total burden of disease and injury in the inner/outer regional (11.2%) and remote/very remote areas (12.1%) in Queensland (Queensland Health., 2017) .
Alcohol Consumption	Higher risky lifetime alcohol consumption in NQPHN region.	Risky consumption of alcohol (daily drinking >2 standard drinks and binge drinking) is strongly associated with liver disease (cirrhosis of the liver), weight gain (overweight/obesity), and mental health disease. In the NQPHN region, the risky lifetime drinking rate is higher than the state (27.1% vs 21.8%) among persons aged 18+ in 2015-16. Further analysis revealed that risky lifetime drinking is generally higher across the region. The following are noted at the LGA level: Burdekin (30.0%), Cairns (30.8%), Charters Towers (25.1%), Douglas (34.9%), Hinchinbrook (24.7%), Isaac (34.4%), Mackay (28.4%), Mareeba (25.5%), Tablelands (21.8%), Townsville (23.8%), Whitsunday (28.2%). In a number of outer regional and rural/remote LGAs in NQPHN the estimated number of people aged 18 years and over consuming more than two standard alcoholic drinks per day on average is higher compared to Queensland (17.2%)(Public Health Information Development Unit, 2017): Burdekin (18.7%), Cassowary Coast (18.4%),Charters Towers (20.2%), Isaac (22.7%), Palm Islands (20.2%), Tablelands (19.8%), Whitsunday (20.4%)

[2] Egger, G., et al., *Physical activity guidelines for Australians: Scientific background report*.1999, The University of Western Australia and The Centre for Health Promotion and Research: Sydney.

Outcomes of the health needs analysis		
		Feedback from key informants also noted high excessive alcohol consumption among individuals in the rural and remote communities within Cape York. Even though, there are prohibition approach to alcohol management in some of the communities. Similarly, Robertson and co-authors (2017), also noted increased drinking and availability of illicit alcohol use in indigenous communities in the Far Northern Queensland(Robertson, Fitts, & Clough, 2017).
Chronic diseases	Higher burden of chronic diseases	Across the Northern Queensland PHN region, we report higher rates of diabetes, chronic obstructive pulmonary disorder (COPD), coronary heart disease, and stroke than Queensland averages. Diabetes is a precursor to other chronic diseases such as End Stage Renal Disease (ESRD), which requires ongoing dialysis or kidney transplant for survival. Similarly, CVD leads to heart attacks and strokes, which again lower life expectancy. Both conditions are highly associated with obesity and sedentary lifestyles (CVD is also linked with smoking and excessive alcohol consumption) and are largely preventable with changes that improve healthy behaviours. NQPHN had higher rate of PPH for chronic conditions in 2015/16 compared to the national average (1,385 vs 1,205 per 100,000). The rate is most likely to remain high as the total number of PPH chronic conditions continued to increase in the region. The three most common chronic diseases in the region are chronic obstructive disease (319/100,000), diabetes complications (234/100,000), and chronic heart failure (224/100,00), (KP Health., 2017). In 2015/16, the rate of potentially preventable hospitalisation/100,000 people for these chronic conditions at SA3 areas indicated: • **Congestive Heart Failure**: NQPHN average hospitalisation is generally higher than the National average (224/100,000 vs 211/100,000). Data for the following regions indicated higher hospitalisation; Port Douglas-Daintree (347/100,000), Charters Towers-Ayr-Ingham (320/100,000), Innisfail-Cassowary Coast (309/100,000), Tablelands (East)-Kuranda (296/100,000), Whitsunday (224/100,000), Mackay (219/100,000). • **Chronic obstructive pulmonary disease**: NQPHN's average hospitalisation is higher than the national (319 vs 260/100,000). The rate of hospitalisation for chronic obstructive pulmonary disease is generally higher across the region except for Whitsunday region (SA3), (171/100,000). • **Diabetes Complications:** NQPHN's average diabetes preventable hospitalisation is higher than the Australian average (234 vs 183/100,000). Far North (510) has the highest rate followed by Tablelands (East)-Kuranda (410), Port Douglas-Daintree (330), Townsville (255) and Cairns-South (245) and Charter Towers-Ayr-Ingham (220). • **Hypertension:** NQPHN's potentially preventable hypertension hospitalisation is also higher the national average (50 vs 37/100,000). Data indicated that Cairns-North (59), Cairns-South (52), Port Douglas-Daintree (72), and Tablelands (East)-Daintree (86) had higher rates compared to the NQPHN average. The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) reported the following chronic diseases amongst the top 5 contributors to the overall burden of disease in NQPHN region in the non-indigenous population, (Queensland Health, 2017a); • Cairns and Hinterland HHS Area

Outcomes of the health needs analysis		
		○ Cardiovascular disease – 16.0% ○ Diabetes mellitus – 6.8% ○ Chronic respiratory disease – 6.4% • Mackay HHS Area ○ Cardiovascular disease – 14.5% ○ Diabetes mellitus – 6.5% ○ Chronic respiratory disease – 5.9% • Torres and Cape HHS Area ○ Cardiovascular disease – 15.7% ○ Diabetes mellitus – 14.4% ○ Chronic respiratory disease – 8.1% • Townsville HHS Area ○ Cardiovascular disease – 15.5% ○ Diabetes mellitus – 6.5% ○ Chronic respiratory disease – 6.2% The burden of chronic conditions continued to produce most health loss. The burden of disease is concentrated among the aged population, Aboriginal and Torres Strait Islander people, socio-economic disadvantaged and in remote and very remote communities (KP Health., 2017; Queensland Health, 2017a).
Preventive Care		
Vaccinations	Lower immunisation coverage in children aged two years in NQPHN region	Immunisation programs help to protect the community against the spread of potentially serious illness and disease, but their success depends on maintaining high rates of the population immunised, known as 'herd immunity'. The Department of Health has a target of 95% of the population to be immunised[3]. Children who are not fully immunised are spread unevenly across the country and illnesses like measles and whooping cough can more easily spread in areas of low coverage. The NQPHN regional immunisation (94.4%) coverage is approaching the Australian national coverage target of 95.0% in the first quarter of 2018. However, the immunisation coverage in the two years of age group was generally lower across the region among Aboriginal and Torres Strait Islander children in the first quarter of

[3] National Health Performance Authority. *Medicare Benefits Schedule GP and specialist attendances and expenditure in 2013–14.* Healthy Communities 2015; Available from: http://www.myhealthycommunities.gov.au/our-reports/gp-and-specialists-attendances-and-expenditure/november-2015.

Outcomes of the health needs analysis		
		2018. Furthermore, data on hospital admissions for potentially preventable hospitalisations indicate that presentations to NQPHN HHSs continue to occur for vaccine preventable illnesses.  Source: Australian immunisation coverage report, June 2018.
Cancers rates	Higher burden of cancers in NQPHN region	Cancer remained the leading broad cause of the total burden of disease and injury in Queensland (Queensland Health, 2017b). Within the region, the burden of cancer is higher among the non-indigenous population compared to the Aboriginal and Torres Strait Islander population. NQPHN non-indigenous residents lost 19,377 disability-adjusted life years (DALYs) due to premature death from cancer in 2011 (Queensland Health., 2017). Cancer was the overall leading (22.0%) contributor to the total burden of disease among non-indigenous population in NQPHN region (CHHS- 22.7%, TCHHS-21.9%, MHHS-21.3%, THHS-21.7%).
Screening	Lower rates of bowel cancer screening	A major intervention in Australia to avoid premature death due to cancer is to access the cancer screening and early detection services (Australian Institute of Health and Welfare 2017) . The cancer screening programmes if organised properly can potentially reduce the burden of cancer in the NQPHN region.

Outcomes of the health needs analysis

- The overall breast screening participation rate in NQPHN remained high compared to the Queensland state average (61.5% vs 54.6% respectively). The overall cervical cancer screening participation rate for NQPHN is also higher than the state average (54.7% vs 53.4%), (see table below).

SA3 name	2015–2016 Participation (%) NCSP	2015–2016 Participation (%) BCSP	2015–2016 Participation (%) NBCSP
Cairns - North	58.1	59.2	40.1
Cairns - South	56.7	59.2	37.7
Innisfail - Cassowary Coast	52.9	58.9	43.5
Port Douglas - Daintree	53.9	52.1	38.5
Tablelands (East) - Kuranda	60.5	58.8	44.0
Bowen Basin - North	45.7	61.0	39.1
Mackay	57.3	63.1	44.8
Whitsunday	54.3	59.1	41.4
Far North	49.9	44.8	26.5
Outback - North	49.4	59.8	25.8
Charters Towers - Ayr - Ingham	53.4	68.0	36.6
Townsville	53.0	65.9	35.7
Northern Queensland	54.7	61.5	39.3
Australia	**55.4**	**55.1**	**40.9**

The bowel cancer screening participation rate for NQPHN residents (39.3%) was slightly lower compared to the state rate (40.2%) in 2015-16 screening period. Kuipers and Lansdorp-Vogelaar (2017) suggested that if the NBCS participation increased to 60% over the period 2015-2040; an estimated 24,800 deaths can be prevented in Australia. Therefore, higher participation in cancer screening is required to achieve the greatest benefits in relation to reducing the cancer burden.

Outcomes of the health needs analysis		
Health and Ageing		
Increasing aged population	The distribution of age can have a profound effect on the health services required by a population. Many diseases are typical only at certain ages especially amongst the older residents of NQPHN region.	The estimated population of people aged 65+ years in NQPHN region as at June 2016 was 90,539 (13.1%), (Queensland Government Statistician's Office, 2018a). By 2035, the projected population for people over the age of 65 years will be approximately 176,826 based on the 2011 projection (18.6% of the total population as opposed to 13.1% in 2016). Consistent with State and National trends, the evidence suggests that NQPHN will have a greater number of elderly residents in future years, assuming that these populations do not move to other locations outside of the region for retirement. Across NQPHN there were 147 aged care services (30 June 2016) with 6,492 aged care operational places (beds). Townsville LGA had the largest number of aged care service operational places (1,643), (Queensland Government Statistician's Office, 2018a). Flexible care services have been identified as one of the care options to support aged people leaving hospital to help them improve their quality of life especially in small rural and remote areas (GNARTN, 2017). The discussion paper on aged care workforce in Northern Australia noted that an increasing need for additional facilities for Aboriginal and Torres Strait Islander aged population as existing facilities are at capacity(GNARTN, 2017).
	High rates of potentially preventable hospitalisation in aged population.	NQPHN recorded 61/100,000 overnight hospitalisations related to dementia compared to 50/100,000 nationally in 2014-15. Data at SA3 level revealed Townsville (79/100,000), Cairns-North (74/100,000), Cairns-South (54/100,000), and Innisfail-Cassowary (78/100,000) recorded high over-night hospitalisations attributable to dementia(Australian Institute of Health and Welfare, 2016c).
	Lack of awareness and promotion of Advance Care Planning in the communities and Residential Aged Care Facilities (RACFs)	The following themes emerged from key stakeholder consultations and engagements across the region; • Lack of consumer understanding about the importance of advance care planning • Lack of understanding by hospital staff about transition procedures into community services • Lack of funding for staff training • Lack of access to GP support for residents within RACFs
Oral Health	Higher rates of potentially preventable hospitalisation acute dental conditions	At the national level, the following has been noted: • Aboriginal and Torres Strait Islander 15-year-olds have 50% more tooth decay than the rest of the population • Children in the lowest socio-economic areas experience 50% to 70% more decay-affected teeth than children in the most advantaged areas • Untreated decay was more prevalent in the lowest socioeconomic status (SES) group, between 18% - 27% of the two highest SES groups also had untreated tooth decay (Australian Health Ministers' Advisory Council, 2015)

Outcomes of the health needs analysis		
		Within the region: • Potentially preventable acute hospitalisation attributable to dental conditions in NQPHN is slightly higher than the national average in 2015-16 (286/100,000 vs 284/100,000). At SA3 level; • Tablelands (East)-Kuranda (351/100,000) • Whitsunday (316/1000,000) • Far North (676/100,000) • Charter Towers-Ary-Ingham (299/100,000) In 2015-16, an estimated 23.0% of adults in NQPHN region delayed seeing a dentist, hygienist or dental specialist due to cost compared to 19.0% nationally.

Primary Mental Health Care (including Suicide Prevention)

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
Vulnerable population groups The region serviced through the NQPHN contains the most decentralised population in Australia. Within this are subpopulations characterised by elevated risk of negative mental health outcomes. These groups are identifiable either by features of identity and personal characteristics (e.g. Aboriginal and/or Torres Strait Islander peoples, lesbian, gay, bisexual, trans, and/or intersex (LGBTIQ), migrant/refugee) or as a consequence of social settings and circumstances (rural and remote, homeless, detained populations). The elevated risk to wellbeing and mental health of these groups may relate to processes/issues associated with that identity (for example racism and stigma impacting Aboriginal and Torres Strait Islander people, migrant/refugee groups and LGBTI) or to social settings (homeless, rural and remote residents and detained populations). There is, of course, overlapping and compounding risk (for example remote Indigenous populations) and some groups are at elevated risk in part because these groups concentrate people with mental disorders as a consequence of poor mental health and wellbeing (detained populations, homeless).		
Prison populations on release – Youth and Adult	Within the NQPHN region, there is over-representation of the homeless, Indigenous people, those with mental disorders, and those with intellectual disability in the correctional system. Release and return to community has been identified as a major period of vulnerability. Release from prison is associated with a range of poor health outcomes including homelessness, risky patterns of substance use, drug overdose and death. Among the leading causes of death among recently released prisoners is suicide, highlighting the pivotal role of mental health in shaping post-release outcomes for vulnerable ex-prisoners. Drug-related deaths are also common, particularly in the weeks immediately following release from custody.[4]	There is limited Australian data available on the health outcomes of Aboriginal and Torres Strait Islander people with a mental disorder following release from custody.[5] Stakeholder consultations and responses to the online survey identified a significant need in relation to the engagement of released prisoners with primary care to prevent relapse. This included follow up in remote communities as well. Queensland research demonstrates extremely elevated rates of mental health disorders in the incarcerated population [6] [7] and of psychotic disorders in the remote Aboriginal communities in Cape York.[8] Most recently, a qualitative study on how prison-to-community transition risk environment influences the experience of men with co-occurring mental health and substance use disorder in Queensland concluded that; there is a shared

[4] Dudgeon, P., Milroy, H. and Walker, R. (2014) Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice

[5] Dudgeon, P., Milroy, H. and Walker, R. (2014) Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice

[6] Heffernan, E., K. Andersen, and A. Dev, Inside out - The mental health of Aboriginal and Torres Strait Islander people in custody. 2012, Queensland Forensic Mental Health Service: Brisbane.

[7] Heffernan, E.B., et al., Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons. Med J Aust, 2012. 197(1): p. 37-41.

[8] Hunter, E., et al., Psychosis in Indigenous populations of Cape York and the Torres Strait. Medical Journal of Australia, 2012. 196(2): p. 133-135.

Outcomes of the health needs analysis		
		responsibility between individuals, the criminal justice, and mental health systems to support ex-inmates during the transition. This should include a comprehensive integrated, evidence based support and treatment services during the transition(Denton, Foster, & Bland, 2017).
Individuals and families living in rural and remote areas	In rural and remote areas there is an identified lack of appropriate access to the spectrum of mental health services. Whilst this issue was identified across the region the Torres Strait was identified as a key area of need. In rural areas, the regional economy is a key influence on mental health. Events such as drought, flood and bushfire can have a heavy impact, especially in agricultural areas. The mental health consequences of regional economic recession can be long-lasting. Social isolation as a result of distance is an important factor in the mental health and well-being of rural people. Geographic isolation can also affect access to mental health services: the closest mental health service may be several hours' drive away. A culture of self-reliance in rural areas can also make people reluctant to seek help. Additionally, there can be considerable stigma attached to mental illness, even more so than in cities. Therefore, patients in rural areas are often less likely to report mental health problems.[9]	There are a range of rural communities within the NQPHN with existing health facilities who identified an interest in looking at innovative models for their mental health services e.g.: rooming in models to enable services at a local level. Information obtained through stakeholder consultations identified: • People in rural and remote areas as the group most in need of mental health services across the NQPHN • Access to ATAPS services is not available in most rural and remote areas • Although access to internet services can be challenging and very expensive in many rural and remote sites across the region, a recent qualitative study among stakeholders working in Indigenous communities in Northern Territory indicated e-mental health interventions could potentially be effective in supporting or extending existing mental health services(Puszka, Dingwall, Sweet, & Nagel, 2016). Recent Clinical Council consultations also expressed a similar view as stated by one of the members: *'e-mental health has a growing body of evidence for its use, inexpensive and under utilised'*. The 2016 census data indicated that about 80% of private dwellings in the NQPHN footprint had internet access. However, Napranum (53%) had the largest percentage of dwellings without internet access, following by Yarrabah and Lockhart River (50%) and Palm Island (40%)(Queensland Government Statistician's Office., 2017). A study commissioned by The Royal Flying Doctors Service of Australia early this year reported; mental health was the second highest important health issue affecting rural and remote communities in Australia(Lara B, Andy R, & Martin L, 2017).

[9] https://www.ranzcp.org/Publications/Rural-psychiatry/Mental-health-in-rural-areas.aspx

Outcomes of the health needs analysis		
Consideration to needs of children in out-of-home care	Within the NQPHN region, with high rates of unemployment and of social disadvantage, and a large Indigenous population of which a large proportion live in remote settings in which disadvantage is concentrated, children in care represent a population with dramatically elevated risk of mental and behaviour disorder.	Between 2009-10 and 2013-14, intakes for child protection and Child Protection Orders in Queensland increased by 22% and 11% respectively.[10] As the Carmody report[11] demonstrates, over the decade to 2013, the number of children in out of home care in the state doubled, with the over-representation of Indigenous children in the Commissioner's overview of particular note: "…they are now five times more likely than their non-Indigenous counterparts to be notified, six times more likely to have harm substantiated and nine times more likely to be living in out-of-home care. More than 50% of the Aboriginal and Torres Strait Islander children in the state are expected to have contact with the child protection system in 2012-13." Within the NQPHN region, children are in out-of-home care not only because of safety concerns. Northern Queensland has a high proportion of children in boarding school, of whom a significant number come from remote Indigenous communities. This is a population identified as confronting emotional challenges. Recent data indicated among other health needs; 30% of children placed in out-of-home care need behavioural management and counseling , while 15% need formal mental referral among Aboriginal children in regional Queensland(Arora, Kaltner, & Williams, 2014). The trend in children aged 0-17 years in out-of-home care in Queensland had increased from 7.1% from 2011 to 7.5% in 2015. In 2016, the rate ratio of indigenous/non-indigenous children in out-of-home care was 8.5:1 (40.6% vs 4.8%) respectively(Lucy Ockenden & Kathryn Goldsworthy, 2016).
Homelessness population	Within the NQPHN region, service provision to this population has been significantly compromised with the	In 2016, there were 5,657 homeless persons in NQPHN region. Cairns and Hinterland HHS area had 2,440, Mackay HHS – 692, Townsville HHS – 1,500 and

[10] Department of Communities Child Safety and Disability Services, 2012-14 Child Protection Partnership Report: Report on the operations of Queensland Government agencies relevant to child protection. 2015, Queensland Government: Brisbane.

[11] Queensland Child Protection Commission of Inquiry, Discussion paper, February 2013. 2013, Queensland Child Protection Commission of Inquiry: Brisbane.

Outcomes of the health needs analysis		
	decision to reduce funding to homeless health outreach teams. The gap between homeless populations and mainstream services remains unfilled. There is a dynamic relationship between homelessness and compromised mental health, with particular groups at elevated risk including those with existing mental illness, CALD populations, youth – and others.[12] Returning mental health services to the community also requires another consideration as the current process is creating homelessness through the process of transition	Torres and Cape – 1,025 homeless persons, (Queensland Government Statistic's Office, 2018). The Torres and Cape HHS (360/10,000) and Cairns and Hinterland HHS (91/10,000) areas had higher homeless persons per 10,000 compared to Townsville and Mackay HHS areas. Within the FNQ statistical division (from Ingham north) the rates were also roughly equivalent, with rates for non-Indigenous residents being twice as high as state non-Indigenous rates, and rates for Indigenous residents being approximately three-quarters of Statewide rates. The highest rates in that area are for Indigenous people in Cairns and non-Indigenous people in non-urban settings (presumably regional towns, which is likely to have been increased with the downturn in employment in the mining industry). These elevated rates are correlated with levels of social and economic disadvantage.[13] These figures confirm concerns about Indigenous homelessness, particularly in urban settings, but also emphasize the importance in this area of non-Indigenous homelessness. Data from the AIHW (2016) study on exploring drug treatment and homelessness in Australia identified the following cohorts of people as more vulnerable to homelessness; • Have a current mental health issue • Experiencing domestic and family violence • Young aged 15-24 • Older, aged 50+ (Australian Institute of Health and Welfare, 2016b) The Guddi project (2017) reported that the rate of indigenous homelessness in Cairns is higher than in Brisbane and Gold Coast. The participants from the study revealed in-depth problematic cyclical homelessness, poor levels of health and psychosocial well-being, imprisonment, loss of children and lack of physical and emotional safety(Townsend, Cullen J., & White, 2017). Stakeholder consultations identified:

[12] Costello, L., M. Thomson, and K. Jones, Mental health and homelessness. Final report for the Mental Health Commission of NSW. 2013, Mental Health Commission of New South Wales: Sydney.

[13] Queensland Council of Social Services, QCOSS regional homelessness profile: Far North Statistical Division. 2011, Queensland Council of Social Services: Brisbane.

Outcomes of the health needs analysis		
		• A lack of mental health support services for the homeless (and a need to support and expand current services) associated with increased risk behaviour such as reoffending, drug and alcohol use. • Indigenous people often become dislocated when they travel to Cairns from rural and remote communities for treatment, experiencing isolation, risk of homelessness and mental health issues. • Health and wellbeing of transient population of Indigenous people moving between communities and regional centres often for health services and have been raised by some key informants and stakeholders. Further research, consultation and analysis across the NQPHN is required.
Individuals with psychological distress (mild-moderate)	As identified in the needs assessment, in an area such as North Queensland access to the full continuum of services is not always possible due to limited availability in rural and remote areas. This creates great challenges in establishing cost effective and efficient services to ensure a system of delivering and monitoring treatments so that the most effective yet least resource-intensive treatment is delivered to individuals first. As identified in the needs assessment, the region's urban areas have access to a greater range of services, whereas the rural and remote areas are less well serviced. Access to internet for e-mental health services is also limited due to the limited availability and high cost of internet access in rural and remote areas.	In a survey of service providers in the NQPHN region, 64% of respondents indicated that the mental health needs of the population in the region are being met 'somewhat'. As identified earlier, access to ATAPS services in rural and remote areas is limited and practitioners in the region are reporting increasing presentations regarding mild/moderate MH issues in older people, particularly in rural areas. NQPHN is seeking to source additional data in this area. Though some in-roads have already been made with the development of VC hubs in Bamaga, Cooktown, Weipa and Thursday Island. A recent survey assessing psychological resilience, risk for self-harm and service use among primary and secondary school students from 11 Cape York Communities and Palm Island reported high level (72.9%) psychological distress and high exposure to risk factors for self-harm among Aboriginal primary and secondary students(Redman-Maclaren et al., 2017).
Inequitable access to treatment and support services for individuals with severe illness and complex needs	Within the NQPHN region, the needs assessment highlighted the inadequate and often inaccessible mental health services for individuals and families living in rural and remote locations with severe illness and complex needs. The Mental Health Nurse Incentive Program coverage is limited across the region and care	In a survey of service providers and communities in the NQPHN region in 2016, 64% of respondents indicated that the mental health needs of the population in the region are being met 'somewhat'. Partners in Recovery Cairns (only PIR program in the region) data indicates that for the period 1 June 2013 – 30 June 2016: • 59% (n=406) of referrals were accepted

Outcomes of the health needs analysis		
	coordination is made difficult with the transient population. With the exception of long-stay facilities and subspecialty services (such as for high secure treatment setting or for residential eating disorders programs) all levels of the service pyramid are only present in the three urban centres. Townsville does, however, have a medium secure forensic mental health unit. Access to those highly specialised services are only available in Brisbane. Outside urban settings and larger towns, specialist service access is largely reliant on visiting teams from Queensland Health and a small group of other providers. Townsville and Mackay areas do not have access to a Partners in Recovery program.	• mood disorders (43%) and schizophrenia spectrum disorders (29%) were the principal mental health diagnoses • 30% of patients accepted by PIR were involuntary patients at some time during their engagement. • 56% of accepted patients were aged 35-54 years of age • 27% identified as being of Aboriginal and/or Torres Strait Islander origin Overnight hospitalisation for all mental conditions in NQPHN region (102/10,000) was in line with the national (102/10,000) average in 2015-16, however, there were areas in the region with higher rates compared to both the national and NQPHN average rates for specific mental conditions. • Schizophrenia and delusional disorders were higher in the following (SA3 level) areas compared to the NQPHN regional average (22/10,000) in 2015-16: • Cairns-South (27/10,000) • Innisfail-Cassowary Coast (23/10,000) • Tablelands (East)-Kuranda (32/10,000) • Charters Towers-Ayr-Ingham (31/10,000) • Townsville (28/10,000) Overnight hospitalisation for bipolar and mood disorders were higher (or matched the rate) in the following SA3 areas compared to the NQPHN regional average (10/10,000): • Cairns-North (15/10,000) • Cairn-South (11/10,000) • Tableland (East)-Kuranda (14/10,000) • Charters Towers-Ayr-Ingham (10/10,000) • Townsville (10/10,000) Overnight hospitalisation for anxiety and stress episodes were higher in the following SA3 areas compared to the regional average (12/10,000) in 2015-16: • Cairns-North (15/10,000) • Tablelands (East)-Kuranda (22/10,000) • Whitsunday (24/10,000) • Charters Towers-Ayr-Ingham (14/10,000)

Outcomes of the health needs analysis		
		• Townsville (14/10,000) Overnight hospitalisation for depressive episodes was higher in the following SA3 areas compared to the NQPHN regional average (12/10,000) in 2015-16: • Tablelands (East)-Kuranda (15/10,000) • Bowen Basin-North (17/10,000) • Whitsunday (15/10,000) • Far North (13/10,000) • Charters Towers-Ayr-Ingham (17/10,000) (Source: AIHW database) Additional data includes: • burden of mental health illness on the health system has increased as reflected by hospitalisations associated with mental health and substance use • ED presentations for Mental Health issues constitute 3.7% of all ED presentations • 3% of all in patient care was for primary diagnosis mental health disorder • consumer transfers for hanging, overdose, self-harm or psychiatric episodes accounted for 3% of all transfers to hospitals and as high as 5% for the Cairns region(Health, 2015) • residents of Cairns – South SA3 are responsible for 1,508 Mental health-related inpatient separations for FY2013-14, with the next highest number falling in Townsville at 1,005 Mental health-related inpatient separations across NQPHN are forecast to increase from 5,595 in FY2013-14 to 8,002 in FY 2026-27, if current trends continue.
Mental health of LGBTIQ people	As identified by the National LGBTIQ Health Alliance, the mental health of LGBTI people is among the poorest in Australia, with at least 36.2% of trans and 24.4% of gay, lesbian and bisexual Australians met the criteria for	In a survey of service providers in the NQPHN region, respondents identified LGBTIQ people as a group in need of mental health services. Information from the Mental Health Commission (2013) identifies that “LGBTIQ Queenslanders have poorer mental health outcomes and higher rates of suicidality and self-harm than the rest of the population, and that in the previous 12 months, 41% of homosexual/bisexual people had a mental disorder compared to 20% of heterosexual people.”

Outcomes of the health needs analysis		
	experiencing a major depressive episode in 2005, compared with 6.8% of the general population.[14] The elevated risk of mental ill-health and suicidality among LGBTI people is not due to sexuality, sex or gender identity in and of themselves but rather due to discrimination and exclusion as key determinants of health.	Data on mental health and wellbeing of LGBTI communities across Australia indicated that the proportion of mental health disorders and suicide attempts are higher compared to non-LGBTI: • 16% of LGBTI (aged 16-27) attempted suicide compare to 3.2% non-LGBTI (age 16+) • 33% (LGBTI aged 16-27) compared to 8.1% (non-LGBTI aged 16+) engaged in self-injury in their lifetime. • 37.2% of LGBTI compared to 20% of non-LGBTI aged 16+ were diagnosed for mental disorder and had symptoms in the past 12 months • 24.4% of LGBTI compared to 11.6% non-LGBTI aged 16+ have experienced a depressive episode in the past 12 months • LGBTI aged 16+ scored a higher average on the Kessler Psychological Distress (K10) score of 19.6 vs 14.6 non-LGBTI (national average), indicating moderate levels of psychological distress among LGBTI communities. (Sally Morris, 2016) Further research, consultation and analysis across the NQPHN is required.
Limited access to perinatal and infant mental health in primary health care.	Within the NQPHN region, there are no dedicated mother/infant mental health beds. Families need to travel to Brisbane for multidisciplinary tertiary level residential care. The mental health and wellbeing of parents is critically important to the emotional and physical development of the infant. If left untreated, parental mental health issues can have negative impacts on the parents, the infant and the whole family. It is important to identify parents at risk of mental health issues, and support them, as early as possible. There is evidence to suggest that early	Studies have demonstrated significant associations between mental health problems experienced during pregnancy and postnatal on the physical, cognitive, social, behavioural, and emotional well-being of a child and also on the mothers health(Geia, West, & Power, 2013; Jongen, McCalman, Bainbridge, & Tsey, 2014; Patel et al., 2016; Raine, Cockshaw, Boyce, & Thorpe, 2016; Simcock et al., 2017). For example, perinatal depression is strongly associated with insecure maternal attachment and personality style(Raine et al., 2016). In a survey of service providers in the NQPHN region, respondents identified women in the perinatal period as a group in need of mental health services. As identified by Queensland Health,[16] in Queensland in the period 2009-2011, suicide was the leading cause of

[14] Rosenstreich, G. (2013) LGBTI People Mental Health and Suicide. Revised 2nd Edition. National LGBTI Health Alliance. Sydney

[16] Children's Health Hospital and Health Service (2014) Discussion Paper Perinatal and Infant Mental Health Service Enhancement for Queensland Mental Health Commission

Outcomes of the health needs analysis		
	intervention programs can assist in reducing family violence, substance misuse and child protection cases. Infants and young children may require secondary and tertiary mental health services in their own right. Studies show that difficult temperament; non-compliance; and aggression in infancy and toddlerhood (age 0 to 3 years) predict internalising and externalising psychiatric disorders at 5 years of age (Keenan et al 1998). Left untreated, up to 50% of these problems escalate throughout childhood and result in poorer outcomes emotionally, socially and scholastically (Bayer et al 2009).[15]	maternal deaths, accounting for as many maternal deaths as all obstetric causes combined. Data from service mapping activities within the region indicated a need to enhance access and identify vulnerable mothers for early interventions, especially in the rural and remote communities in NQPHN. This figure does not include antenatal mental health problems, mental health problems other than postnatal depression (such as postpartum psychosis), or postpartum issues in the context of pre-existing mental illness. In line with other developed countries, the prevalence rate for clinically significant maternal perinatal mental health issues in Queensland is around 15%. There is a disconnect between the prevalence of maternal perinatal mental health problems and the number of women receiving appropriate treatment. Nearly 10,000 Queensland women require primary care for perinatal mental health issues, nearly 3000 require specialist psychiatric treatment, and over 200 require hospitalisation each year. Disorders of the perinatal period are among the most preventable and treatable of all mental illness (Oates 2000; Salmon et al 2003), yet Queensland has no dedicated public beds for perinatal mental health admissions and provides specialist community perinatal mental health services in only four of 17 Hospital and Health Services.
Mental health services, suicide prevention and wellbeing services for children and young people	Higher rates of mental health disorders among children and young people in NQPHN.	The age and gender distribution of Northern Queensland mostly follows that of Queensland in the middle years; however, Northern Queensland has a greater percentage of infants and children (0-14 years) than the State and a smaller proportion of people over 60 years old. In a survey of service providers in the NQPHN region, respondents identified young people as a group most in need of mental health services. In FY 2015 there were 12,144 occasions of service at headspace centres in NQPHN (43% at Cairns centre, 37.5% Townsville centre, 19.5% Mackay centre). 73% of these were for mental health. The average visit frequency was 3.9. Some centres

[15] Children's Health Hospital and Health Service (2014) Discussion Paper Perinatal and Infant Mental Health Service Enhancement for Queensland Mental Health Commission

Outcomes of the health needs analysis		
		have indicated that the percentage of Aboriginal and Torres Strait Islander young people utilising the service is very small. Higher prevalence of mental health disorders among children and young people (aged 4-17 years) in NQPHN (19.6%) compared to national average (16.3%). The Young Minds Matter estimated the prevalence of mental health disorders among children and young people aged 4-17-year-old at SA3 level with the NQPHN: Cairns – North (15.9%), Cairns – South (19.0%), Innisfail - Cassowary Coast (17.5%), Port Douglas – Daintree (16.1%), Tablelands (East) – Kuranda (17.4%), Bowen Basin – North (17.1%), Mackay (14.1%), Whitsunday (16.1%), Far North (20.1%), Charters Towers - Ayr – Ingham (16.0%), Townsville (17.6%). The data also revealed about 8.7% (aged 4-17 year) experience internalising disorders (anxiety disorders and major depressive disorder), while 7.1% experienced externalizing disorders (Attention-deficit/hyperactivity disorder and conductor disorder).
Military and ex-military	As home to Lavarack Barracks in Townsville and other military facilities. North Queensland has, within its population, a high proportion of military personnel with experience of active service in areas of conflict and exposure to peacetime incidents such as the Blackhawk tragedy in 1996 that resulted in 18 deaths. Therefore, there are opportunities to work with the military to address transition-related stress, with veteran groups who already have organised networks and meetings, such as Pandanus Park on the banks of the Normanby River in Cape York.	Of veterans receiving medical treatment, Queensland has the highest proportion of the national population of veterans receiving treatment for males, and the second highest proportion for females and has, relatively, a higher proportion of younger veterans receiving treatment. Suicide within the military has received significant attention in the public domain and has been identified as an issue in the veteran population.[17] [18] An important role of stress and disturbances in the mechanisms modulating allostatic load have been reviewed specifically in relation to veterans.[19] Recent data by AIHW (2017) indicated the following between 2001 - 2015: • 325 deaths by suicide with at least I day of service with ADF • Men accounted 303 deaths (93%) • Women accounted for 22 deaths (7%) • 51% (166) were ex-serving at the time of death

[17] McEwen, B., et al., *Allostatic load: A review of the literature*. 2012, Australian Government, Department of Veterans' Affairs: Canberra.

[18] Australian Institute for Suicide Research and Prevention, *Suicidal behaviour and ideation among mlitary personnel: Australian and international trends Summary report prepared for the Department of Veterans' Affairs*. 2015, Australian Institute for Suicide Research and Prevention: Brisbane.

[19] Dunt, D., *Independent study into suicide in the ex-service community*. 2009, Department of Veterans' Affairs: Canberra.

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- 28% (90) serving fulltime at the time of death
- 21% (69) were of people serving in the active and inactive reserves at the time of death
- Ex-serving men are two times more likely to be suicidal compared to those serving fulltime or in the reserve (26 suicide deaths/100,000 vs 11and 12 suicide deaths/100,000)
- Ex-serving men aged 18-24 are two times more likely to die from suicide than Australian in the same age group.

There is a large community of Ex-Australia Defense Force employees (ADF) in the NQPHN footprint. The Townsville region, in particular, houses the largest veteran's community in Australia due to the presence both a military and air base. Ex-ADF members can be divided into two groups, those that are Department of Veterans Affairs (DVA) clients and those who are not. Statistics for DVA clients in the footprint can be found below.

SA3 Name	Clients	Avg Age
Townsville	7,089	52
Cairns - South	1,553	61
Mackay	1,153	68
Cairns - North	852	59
Tablelands (East) - Kuranda	639	67
Charters Towers - Ayr - Ingham	545	70
Innisfail - Cassowary Coast	403	68
Bowen Basin - North	268	69
Whitsunday	244	65
Far North	164	64
Port Douglas - Daintree	105	68
Outback - North	17	69
Total	**13,032**	

<table>
<tr><th colspan="3">Outcomes of the health needs analysis</th></tr>
<tr><td></td><td></td><td>Over 80% of the claims made under the “Safety Rehabilitation and Compensation Act 1998” and “Military Rehabilitation and Compensation Act 2004” are accepted with the average number of claims being 0.9 and 0.8 per veteran. When comparing the total claims against the total number of clients claiming however, the number increases to between 3-3.25 claims per client respectively. This implies that each veteran that signals assistance with health and mental health needs has multiple comorbidities that are potentially complex. The top 6 most claimed conditions are described below.
<table>
<tr><th>Medical condition as defined in “statement of principles”</th><th>% of total Claims</th></tr>
<tr><td>Sensori-neural hearing loss</td><td>12%</td></tr>
<tr><td>Osteoarthritis</td><td>10%</td></tr>
<tr><td>Sprain and strain</td><td>9%</td></tr>
<tr><td>Tinnitus</td><td>8%</td></tr>
<tr><td>Lumbar spondylosis</td><td>7%</td></tr>
<tr><td>Post-traumatic stress disorder</td><td>6%</td></tr>
</table>
The statistics displayed in this section do not capture the estimated proportion of ex-ADF in the community that are not DVA clients. There is currently no register of ex-ADF that are not DVA clients. As such, identification of this group and effective analysis of their needs is not easily possible at this current time.

Further research, consultation and analysis across the NQPHN is required</td></tr>
<tr><td>Ageing population and mental health</td><td>In NQPHN’s region, the increasing needs of the aging population were identified in some areas. Older adults are among the fastest growing age groups, and the first “baby boomers” (adults born between 1946 and 1964) reached 65 in 2011. Poor mental health is not a normal part of aging, however older people can be vulnerable to mental health conditions.</td><td>In a survey of service providers in the NQPHN region, respondents identified older people as a group in need of mental health services.

Consistent with State and National trends, the evidence suggests that NQPHN will have a greater number of elderly in future years, assuming that elderly populations do not move to other locations outside of the region for retirement.

The ABS 2016 census indicated that the ageing population (65+ years) within the NQPHN increased from 12.5% in 2015 to 13.7% in 2016. Within the region, Hinchinbrook had the highest proportion of aged 65+ (24.1%), followed by</td></tr>
</table>

Outcomes of the health needs analysis		
	Older Aboriginal and Torres Strait Islander people have poorer health and higher rates of disability than other Australians in the same age group. For example, older Aboriginal and Torres Strait Islander people were reported at the Census to be almost 3 times as likely as non-Indigenous people to need help with self-care, mobility or communication tasks. Age related stigma, multiple chronic conditions and social isolation can exacerbate feelings of exclusion, poor self-esteem, helplessness and fear. Because many Aboriginal and Torres Strait Islander people live in remote areas, providing appropriate and accessible services presents a major challenge. This is particularly the case for those with a diagnosis of dementia, which is an emerging problem for this population group, especially in the 50–79 year age range.	Tableland (21.3%) and Flinders (21.1%)(Queensland Government Statistician's Office., 2017). The Overnight hospitalisation for dementia was higher in the following SA3 areas compared to the NQPHN regional average (7/10,000) in 2015-16: • Cairns-North (10/10,000) • Cairns-South (9/10,000) • Tablelands (East)-Kuranda (10/10,000) • Townsville (9/10,000) Further research, consultation, and analysis across the NQPHN is required.
Culturally and linguistically diverse groups	The needs assessment identified particular mental health service needs for the growing migrant and refugee communities across the region. Queensland is also home to refugees, who have a unique and often traumatic experience of migration.	The needs assessment identified particular mental health service needs for the growing migrant and refugee communities across the region. Queensland is also home to refugees, who have a unique and often traumatic experience of migration. The NQPHN region has two sites for the resettlement of refugees, Cairns and Townsville. Year to date intakes for refugee (June 2018) were 90 for the Cairns region and 140 for Townsville. Most refugees were settled in the second quarter of 2018. Age distributions generally balanced across the groups with a notable exception in the 5-11 group for Townsville containing the most arrivals (26%) and ages 66-80+ having less than 3%. Age groups in Cairns were more evenly distributed although there were low numbers of teenagers (7%) and young adults (9%) and 80+ (4%). 95% of arrivals at Cairns were on refugee visas with the remaining 5% issued “women at risk visas”. Townsville had 69% “women at risk visas”, 28% refugee “visas” and 3% “global special humanitarian visas”. 96% of arrivals in Townsville were from the Democratic Republic of Congo (DRC). All arrivals to Cairns were from DRC. Potential arrivals to Townsville will mostly hail from DRC while Cairns

Outcomes of the health needs analysis		
		may receive 49 Bhutanese refugees within the next year as 52% of its expected refugee intake followed by refugees from DRC (36%). No specific health requirements have been formally identified for these groups for the NQPHN. However, given the large number of "women at risk" visas and refugees from conflict zones, mental health support services have been recommended. Collaboration with social services to target potential mental health issues targeting youths should also be explored. There is a marked reluctance among many people from culturally and linguistically diverse backgrounds to voluntarily access both hospital and community-based mental health services. This lower level of service use is not related to lower levels of need, but rather to difficulties in understanding and accessing mainstream systems of care and lack of access to services that are culturally safe and appropriate. Stigma, lack of information about mental illness and mental health services in appropriate and accessible formats, and poor communication and cultural differences between clients and clinicians have been reported as major barriers to timely access to mental health services.[20]
Links between substance abuse and mental health	The needs assessment identified links between high harmful alcohol consumption levels and service and persistent mental illness. Stakeholder feedback identified within the region the need to focus on the high level of co-morbidities that are under diagnosed and under treated, and develop targeted multi-disciplinary responses.	Community consultations in all areas within the region identified concerns about the lack of coordination and collaboration between AOD and mental health services and the difficulties experienced by individuals with comorbid conditions accessing coordinated care and support 35% of people who use drugs also have a co-occurring mental illness. Although people with mental illness benefit from alcohol, tobacco and other drug treatment, they have poorer physical and mental health and poorer social functioning following treatment than other people. National data; • 17.5% of people aged 18+ who reported using illicit drugs also experienced high/very high levels of psychological distress; compared to those (8.6%) who had not use illicit drug

[20] http://health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-p-mono-toc~mental-pubs-p-mono-pop~mental-pubs-p-mono-pop-cul

Outcomes of the health needs analysis		
		• 26.5% of those who had reported using Meth/amphetamine also experienced high/very high level of psychological distress • 20.7% of illicit drug users had been diagnosed or treated for a mental illness (Queensland Mental Health Commission, 2015)
Suicide Prevention		
Higher rates of suicide	Average rate of suicide in NQPHN region is higher than both the state and national.	For the three years 2011 to 2013, data prepared by AISRAP for NQPHN provides analysis of 328 suicides in the region, of which 225 (69%) were male, and 49 of 321 (15%) for whom Indigenous status was identified as of Aboriginal and/or Torres Strait Islander heritage. Of these deaths 122 (37%) occurred within the Cairns and Hinterland HHS, 98 (30%) within Townsville HHS, 89 (27%) within Mackay HHS, and 16 or 17 (5%) within Torres and Cape HHS (2 or 3 were identified as being "North West"). The age distribution followed a bimodal distribution with peaks among youths and young adults (25 to 24 years, 68 deaths) and those aged between 35 and 54 (67 and 62 deaths for each decade). The overall age-standardised rate for suicide in NQPHN (16.4/100,000) was higher than the state (14.4/100,000) and national (10.9/100,000) rates. Similarly, within the region the suicide rates in Cairns and Cape (17.6), Mackay area (17.5) and Townsville (14.2) were higher than the national average of 10.9/100,000 in 2013, (B. Potts, K. Kõlves, J. O'Gorman, & D. De Leo, 2016) Common suicide methods used within the region: • Cairns & Hinterland HHS and Torres & Cape HHS ➢ Hanging (56.8%) ➢ Poisoning (15.1%) ➢ Other methods (14.4%), (cutting with sharp objects and crashing a motor vehicle) ➢ Fire arms (10.1%) higher than QLD overall (6.7%) • Townsville HHS ➢ Hanging (59.2%) ➢ Poisoning (15.3%) ➢ Firearm (4.7%) • Mackay HHS ➢ Hanging (49.4%)

Outcomes of the health needs analysis		
		➢ Other (22.5%) ➢ Firearms (11.2%) ➢ Carbon monoxide (10.1%) (B. Potts, K. Kõlves, J. O'Gorman, & D. De Leo, . 2016).
	Higher rate of potentially preventable hospitalisation due to intentional self-harm in NQPHN region.	The rate of hospitalisation due to intentional-self harm within the NQPHN had increased from 20/10,000 in 2013/14 to 26/10,000 in 2015-16 reporting period (an increase of 30%). This is generally higher than the national (17/10,000). The following SA3 areas recorded higher overnight intentional-self harm hospitalisation rates than the NQPHN Regional (26/10,000): • Cairns-North (32/10,000) • Innisfail-Cassowary Coast (29/10,000) • Port Douglas-Daintree (40/10,000) • Tablelands(East)-Kuranda (32/10,000) • Bowen Basin-North (28/10,000) • Whitsunday (35/10,000) • Townsville (31/10,000) (Data Source: AIHW). Consumer transfers for hanging, overdose, self-harm or psychiatric episodes accounted for 3% of all transfers to hospitals and as high as 5% for the Cairns region as the receiving hospital. 5.1% of all referrals from Torres and Cape HHS were due to mental health/substance misuse illnesses, higher than any other HHS in the NQPHN region (Health 2015a).

Alcohol and Other Drug Treatment Needs

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
The Alcohol and Other Drugs (AOD) Needs Assessment highlighted increased consumption of alcohol and other drugs in the remote and rural communities, high risky alcohol consumption, and alcohol/drugs misuse among deprived/marginalised communities (Culturally Diverse and Linguistic Communities and Aboriginal and Torres Strait Islander). There are also strong indications of significant associations between homelessness, unemployment, offending, family breakdown and AOD use. The Needs Assessment indicated a need for early prevention and early intervention to promote and reduce the number of people becoming AOD dependent within the NQPHN region.		
Social determinants of AOD	Socioeconomic and social acceptance of alcohol	People with lower socioeconomic status (socially disadvantaged population) tends to consume large quantities of alcohol per occasion (Roche et al., 2015). However, socioeconomic status may interact with other demographic factors (gender and age) to influence alcohol consumption. About 39.0% (12) of LGAs within NQPHN fall in the two most disadvantage index (IRSD score), (National Mental Health Commission, 2017). The prevalence of alcohol consumption within the region (at each LGA) is generally higher than the state average(Public Health Information Development Unit, 2017). A qualitative study amongst community leaders and service providers in 15 Aboriginal communities in the footprint consistently reported illicit alcohol supply and consumption as an issue(Fitts et al., 2017). This may be attributed to the high percentage of disadvantaged communities, availability and social acceptance of alcohol within the communities.
Social impacts and determinants of drug use	Harmful AOD use causes significant harm to individuals, families and communities.	Harmful AOD use in any community is not considered in isolation, as there are many contributing factors that often vary with the type of drug. For example, harmful AOD use is linked with poorer health outcomes, including increased risk of disease and injury and shortened life expectancy, which then lead to increased costs to the health and hospital systems, and also the deterioration of family and community. Harmful AOD use can also adversely affect a person's education, employment, health and involvement with the criminal justice system, which can have a whole-of-life and, in many cases, intergenerational impact. [21] Drug use can have a significant impact on disadvantaged groups and lead to intergenerational patterns of disadvantage. There is strong evidence of an association between social determinants—such as unemployment, homelessness,

[21] National Aboriginal and Torres Strait Islander Peoples' Drug Strategy 2014 - 2019

Outcomes of the health needs analysis		
		poverty, and family breakdown, and drug use. Socio-economic status has been associated with drug related harms such as fetal alcohol syndrome, alcohol and other drug disorders, hospital admissions due to diagnoses related to alcoholism, lung cancer, drug overdoses and alcohol-related assault. [22] Managers of facilities reported that they sometimes felt the services were used as a 'dumping ground' for people with mental health issues and those being released from prison or on parole. They stated that there is no specific funding available to facilitate meaningful transition from mental health and corrective facilities for people with AOD issues. All Managers thought that there is a need for 'step-out' facilities for people to go when they are in transition to rehabilitation facilities. In 2015-16 there was an increase in drug related offences in the Queensland Police Service regions that align with the NQPHN catchment: 8% increase in Northern region and 6% in Central region(Queensland Police Service, 2016). There is strong evidence to suggest that our population is subject to increased rates of domestic and family violence, family breakdown and child neglect as a result of high rates of substance misuse.
Increased consumption of alcohol and other drugs in rural and remote communities	Rural people experience disproportionately high levels of alcohol misuse and its associated burden of disease and injury. This is due to a range of factors characteristic of rural areas including lack of venues for recreation, stoic attitudes about help-seeking, economic and employment disadvantage, and less access to healthcare professionals and alcohol treatment services. [23]	Australian Institute of Health and Welfare (2014). 2013 National Drug Strategy Household Survey detailed report indicates that people living in remote and very remote areas were twice as likely as people in major cities to smoke tobacco daily, drink alcohol in risky quantities, and use meth/amphetamines in the previous 12 months. The proportion of those drinking at risky levels increases with increasing remoteness. In a number of outer regional and rural/remote LGAs in NQPHN, the estimated number of people aged 18 years and over consuming more than two standard alcoholic drinks per day on average compared to Queensland (17.2%)(Public Health Information Development Unit, 2017); Burdekin (18.7%), Cassowary Coast (18.4%), Charters Towers (20.2%), Isaac (22.7%), Palm Islands (20.2%), Tablelands (19.8%), and Whitsunday (20.4%).

[22] Wilkinson RG and Marmot M (eds) 2003. Social determinants of health: the solid facts. 2Nd edition. Copenhagen: World Health Organisation, Regional Office for Europe.

[23] National Rural Health Alliance (2014) Fact Sheet: Alcohol Use in Rural Australia March 2014

Outcomes of the health needs analysis		
		Compared to non-Indigenous people, Aboriginal and Torres Strait Islander people (two-thirds of whom live in rural and remote areas) are 1.5 times more likely to drink at risky levels for both lifetime and single-occasion harm. This is despite the fact that Aboriginal and Torres Strait Islander Australians are also 1.4 times more likely to abstain from drinking alcohol. Stakeholder consultations and responses to the online survey in 2016 identified a significant need in relation to the engagement of released prisoners with primary care. This included follow up in all communities within the region including remote communities. Suggestions included the need for services that provide an alternate 'step out'/community reintegration facility for prison release including care-coordination. This link between drug and alcohol use and risk-taking behaviours leads to increased contact with the criminal justice system. Evidence suggests a strong link between drug use and offending. Between 37 and 52% of adult offenders report their criminal activity is directly attributable to their drug problem. Studies identified by Corrective Services Queensland include: • 51% of men and 35% of women identified alcohol and/or drugs as the cause of their lifetime offending career • 29% of offenders attributed their most serious current offence to drug and/or alcohol intoxication and 24% of offenders causally attributed their offending to drug and alcohol dependency • 70% of juvenile detainees were intoxicated at the time of their offence • homicide and assault offences were more likely to be attributed to alcohol intoxication while property, fraud and multiple offences were likely to be attributed to reported illegal drugs • alcohol is involved in approximately half of all violent crime.

Outcomes of the health needs analysis		
		• there is a high level of illicit drug use among offenders prior to their entry to the correctional system. 71% of prison entrants had used illicit drugs during the 12 months prior to their incarceration, with 60% reporting a history of injecting drug use. For male offenders, the most commonly used drugs in the community include cannabis, heroin, amphetamines, ecstasy and hallucinogens. However, female offenders tend to use harder drugs like heroin, amphetamines and cocaine and abuse prescription medications. [24] Cairns has one of the highest proportions of chronic and recidivist young offenders in Qld. From 2004 and 2012, juvenile property offences had increased from 33% to 54% while sexual offences by Aboriginal and Torres Strait Islander juveniles increased from 9% to 16% (QPS 2013). [25]
Higher rates of risky alcohol consumption	The Needs Assessment identified in some areas in the NQPHN region that there is a high rate of people consuming alcohol and other drugs at harmful levels, which results in some people displaying risky behaviours. Alcohol-related harm is not limited to individual drinkers but impacts families and the broader community.	Levels of risky drinking vary across HHS (Health of Queenslanders 2014). Based on those exceeding Guideline 1 (two or less standard drinks on any one day) and Guideline 2 (four or less standard drinks on any one occasion), in 2011–12 compared to the state prevalence: • Guideline 1—three HHS in the NQPHN had higher rates (Cairns and Hinterland was 23% higher, Mackay 31% higher and Cape York and Torres Strait 34% higher) • Guideline 2 (weekly)—Cairns and Hinterland, and Mackay were 35% higher. As identified in the community consultations within the NQPHN region, alcohol is the most commonly cited (65%) principal drug of concern. Rates of risky consumption of alcohol and other drugs (AOD) and related harms among Aboriginal and Torres Strait Islander Australians are generally twice those in the non-Indigenous population. [26]

[24] Queensland Corrective Services: Alcohol and Drug Policy

[25] Cairns Alliance of Social Services: Position Paper 2016

[26] Gray, D. and Wilkes, E. (2010) Reducing alcohol and other drug related harm: Resource sheet no. 3 produced for the Closing the Gap Clearinghouse

Outcomes of the health needs analysis		
		The Chief Health Officer report (2016) reported higher rates of life time risky drinking in the NQPHN region compared to the Queensland average (21.8%) in 2015/16 local regional level among persons 18+ years: • Cairns & Hinterland (28.3%), Mackay (29.1%); Torres and Cape (27.8%) and Townsville (24.2%) Higher rated were also noted for single occasion risky drinking at least monthly among persons 18+ years (31.8%, Queensland); • Cairns & Hinterlands (37.4%), Mackay (35.7%), Torres and Cape (40.5%), Townville (34.5%) • The alcohol attributable hospitalisation rate was higher in the Cairns & Hinterland (10.8%) and Torres & Cape (16.4%) compared to Queensland (9.4%). The rates in Mackay (6.3%) and Townsville (7.7%) were lower. Overnight hospitalisation for AOD use was higher within the NQPHN region compared to the national average (180/100,000) at SA3 level (2014-15); • Cairns-North (218/100,000) • Cairns South (212/100,000) • Innisfail-Cassowary Coast (181/100,000) • Tablelands (East)-Kuranda (258/100,000) • Whitsunday (234/100,000) • Far North (327/100,000) (Australian Institute of Health and Welfare, 2016c) Within the reform communities in Cape York, the evaluation of the Wellbeing Centres identified that they are having a clinically and statistically significant effect on their clients in reducing the level of risky drinking and the level of cannabis dependency. Ninety-five% of respondents to the online survey identified that alcohol is the main consumer substance of concern within the region. Risky alcohol consumption remained the highest principal AOD of concern in NQ PHN region. In 2016-17, an estimated 37.6% of closed treatment episodes in

Outcomes of the health needs analysis		
		NQPHN region were alcohol related. This is an increase of 6.1% from 31.5% in 2015-16. Cairns South (37.4%), Townsville (23.9%), Innisfail-Cassowary Coast (8.3%), Tablelands (East)-Kuranda (7.4%) SA3 areas reported higher numbers of alcohol related episodes compared to other SA3 areas in the region. The largest proportion of people treated was in the aged 20-39 year bracket (30.2%).
Needs of marginalised groups within the region	Some culturally and linguistically diverse (CALD) populations may have higher rates of, or are at higher risk of, drug use. For example, some members of new migrant populations from countries where alcohol is not commonly used may be at greater risk when they come into contact with Australia's more liberal drinking culture. Some types of drugs specific to cultural groups, such as kava and khat, can also contribute to problems in the Australian setting. People from disadvantaged or marginalised groups, such as gay, lesbian, bisexual, transgender and intersex populations, may also experience more difficulty in accessing drug treatment and achieving successful outcomes from that treatment unless it is appropriate for their particular needs. Those who are most at risk are people with multiple and complex needs. This may involve a combination of drug use, mental illness, disability and injury, family breakdown, unemployment, homelessness and/or have spent time in prison. [27] Generally, Australia-wide rates of homelessness for Aboriginal and Torres Strait Islander Australians significantly outweighs that of the non-Indigenous population. The fastest growing group of homeless people are those living in severely overcrowded accommodation and at least 75% of Indigenous homeless people live in severely	The patterns of alcohol and other drug use in gay, lesbian, bisexual, transgender and intersex populations communities differ when compared to the broader population, based on the limited data available that collect transgender, intersex, and sexuality indicators and non-LGBTQI comparison groups. Risky alcohol use is higher among lesbian, gay, and bisexual (LGB) people than heterosexuals. The 2010 National Drug Strategy Household Survey (NDSHS) found that 26.5% of homosexual/bisexual people, compared with 15.8% of heterosexual people, reported weekly risky drinking, defined as more than four drinks on a single occasion. [29] In 2011, the Far North region (including Cape York and remote communities) experienced the seventh highest rate of homelessness in Australia. However, ABS data does not accurately reflect hidden homelessness such as overcrowding, couch sleeping and rough sleeping. The National Drug Strategy Household survey reported that LGBTI in Australia were: • 5.8 times likely to use ecstasy • 4.5 times more likely to use Methamphetamines • 2.9 times more likely to use cannabis • 2.8 times more likely to use cocaine compared to non-LGBTI in the previous 12 months • Higher proportion of smoking daily (21.4% vs 12.6%) compared to non-LGBTI

[27] Ministerial Council on Drug Strategy, National Drug Strategy 2010-2015. Canberra.
[29] ACON, Health Outcome Strategy 2013 – 2018 – Alcohol and Other Drugs

Outcomes of the health needs analysis		
	overcrowded dwellings - more than double the figure for non-Indigenous people. [28] Within the NQPHN region the needs of the homeless population in relation to drug and alcohol were identified as needing further exploration in collaboration with other government departments.	(Australian Institute of Health and Welfare, 2014). A priority area for Cairns Regional Council is addressing the needs of homeless people, in particular, Cape York residents unable to return home (refer to page 19 for homeless population). Headspace Centre report for the NQPHN catchment for FY 2015/16 (YTD to 31/12/15) indicates 9.5% of young people accessing centres within the region were homeless or at risk of homelessness.
Impact of alcohol and other drugs on infants and children	Fetal alcohol spectrum disorder (FASD) is the most common, preventable cause of disabilities and brain damage in children; it is triggered by exposure to alcohol during pregnancy. Fetal alcohol spectrum disorder causes lifelong disability due to intellectual impairment. FASD is the most common non-genetic cause of intellectual impairment in the western world. More children are born each year with FASD than with autism, spina bifida, cerebral palsy and Down syndrome combined. Between 17 and 42 children are born in Australia each day with FASD, between 3 and 9 of these in Queensland. (Total births ABS 2013). (QH statement) Alcohol is one of many substances that can result in damage to the unborn child if used during pregnancy. Others include some prescription medications and tobacco, marijuana, cocaine and other recreational drugs. To date the NQPHN has no access to specific data relating to effects of mothers drug use on unborn children.	Accurate data on the prevalence of FASD is needed to inform prevention strategies. At present there is no requirement to count or report FASD nationally. Stakeholder consultations identified that among Aboriginal and Torres Strait Islander children in North Queensland fetal alcohol spectrum disorder has been identified as a major cause of impairment to normal physical and intellectual development. The also highlighted that is may be under-diagnosed because clinicians are reluctant to ask about prenatal alcohol exposure or to pursue potential diagnoses of FASD if positive. It has been estimated that child fetal alcohol spectrum disorder affects 1.5% of Aboriginal and Torres Strait Islander babies born in Far North Queensland and in some cases as high as 3.6%. At a national level in the Aboriginal population, 23% of birth mothers of Aboriginal children reported drinking alcohol in pregnancy. Whilst the rates of reported alcohol consumption in pregnancy are higher for non-Aboriginal women, Aboriginal women are more likely to consume alcohol at harmful levels. A Western Australian (WA) study of women who had given birth over a 10-year period, found that Aboriginal women were 10 times more likely to be diagnosed

[28] Cairns Alliance of Social Services: Position Paper 2016

Outcomes of the health needs analysis		
		with an alcohol diagnosis when compared with non-Aboriginal women—23% and 2.3% respectively. [30]
Higher rates of cannabis use	Cannabis was identified across the NQPHN region as a major drug of concern.	A number of short and long-term health effects have been associated with cannabis use. These include increased heart rate; a decrease in motivation, memory and attention; decreased motor skills; respiratory issues; anxiety, paranoia, depression, psychosis and addiction as well as the increased risk of developing more severe mental health disorders such as schizophrenia. Qualitative insights from participants in a study on the unintended impacts of alcohol restrictions on AOD use in Indigenous communities in Queensland (10 LGAs in NQPHN) acknowledged that Cannabis is readily available in their communities. Many participants perceived that the restriction of alcohol consumption in some of the communities has resulted in an increase in gunja (cannabis)(Robertson et al., 2017). Of the 8,298 AOD closed treatment episodes across NQPHN region in 2016-17, cannabis recorded the second highest episodes accounting for about 32.3% of all AOD treatments. This is a slight reduction of 2.7% from 35.0% in 2015-16. Almost three quarters (72.7%) of all cannabis related treatments were for males. Cairns South (39.8%), Townsville (23.2%), Mackay (13.8%), Tablelands (East)-Kuranda (7.4%) and Whitsunday (4.2%) SA3 areas recorded higher rates of cannabis treatment episodes in 2016-17 compared to other SA3 areas.
methamphetamine use	Increased use of methamphetamines (ICE) by people in the region is impacting on families, friends and the broader community.	During the stakeholder consultations across the region, the most commonly cited principal drug of concern is alcohol (65%) followed by cannabis (28%), and volatile solvents and amphetamines (2%). This is consistent with the cumulative data which shows alcohol as the most commonly cited principal drug of concern (42%),

[30] Gray, D.and Wilkes, E. (2010) Reducing alcohol and other drug related harm, Resource sheet no. 3 produced for the Closing the Gap Clearinghouse

Outcomes of the health needs analysis		
		followed by amphetamines (24%) and cannabis (23%) (Queensland Network of Alcohol and Other Drug Agencies 2015). More than half the people entering treatment for their AOD use identified poly-drug use, with 63% of people who identified amphetamines as their primary drug of concern also identifying other drugs of concern, most often cannabis (31%) and alcohol (22%). [31] Community feedback identified the need for early support to families of people who have AOD issues to prevent breakdown of families and potentially child safety issues. 81% of respondents to the online survey identified that amphetamines/methamphetamines are a main substance of concern within the region in 2016. Of the 8,298 AOD closed treatment episodes across NQPHN region in 2016-17, amphetamines recorded the third highest episodes accounting for about 18.6% of all AOD treatments. This is an increase of 4.0% from 14.6% in 2015-16. Cairns South (36.7%), Mackay (13.5%) and Townsville (35.0%) SA3 areas recorded the highest rates of people treated for amphetamine use. More than three-quarters (77.1%) of persons treated for amphetamines in 2016-17 were aged 20 – 39 years.
Strengthen capacity of primary health care sector	Community consultations across the AOD sector in NQPHN identified the need to strengthen the capacity of the primary health care sector to effectively manage a range of AOD issues. This was particularly highlighted in the Aboriginal community controlled health sector. Capacity development activities included screening, brief intervention, counselling and case coordination.	Evidence suggest that AOD should be embedded across primary health care in line with a multidimensional concept of health that includes AOD and mental health, but which also encompasses domains of health and wellbeing such as connection to land or 'country', culture, spirituality, ancestry, family and community. [32] Furthermore, the National Aboriginal and Torres Strait Islander Peoples' Drug Strategy 2014 – 2019 identifies as its Priority One: 'to build capacity and capability of the AOD service system, particularly Aboriginal and Torres Strait Islander controlled services and its workforce…' [33]

[31] Queensland Network of Alcohol and Other Drug Agencies. NGO AOD Services – Northern Queensland

[32] Dudgeon, P., Milroy, H. and Walker, R. (2014) Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice

[33] National Aboriginal and Torres Strait Islander Peoples' Drug Strategy 2014 - 2019

Outcomes of the health needs analysis		
		Although very little evidence is available locally on strategies for ice in Aboriginal and Torres Strait Islander communities, exploratory research funded by the Department of Health and Ageing highlighted the need for more training and development of staff in primary care health services and AOD services (DOH, 2008). The National Ice Strategy 2015 also highlighted the need to build workforce capacity as a key strategy by aiming to 'ensure early intervention and treatment services are better equipped to respond to ice and meet the needs of the populations they serve'
Co-occurrence of AOD use disorder with a mental health condition (dual diagnosis)	A mental illness concurrent with substance use tends to exacerbate both the mental illness and harmful substance use.	Community consultations in all areas within the region identified concerns about the lack of coordination and collaboration between AOD and mental health services and the difficulties experienced by individuals with comorbid conditions accessing coordinated care and support Nationally, 35% of people (31% men and 44% women) who use drugs also have a co-occurring mental illness(Marel C et al., 2016). Although people with mental illness benefit from alcohol, tobacco and other drug treatment, they have poorer physical and mental health. Consultations within the region raised concerns that in some communities the mental health services do not always adequately assess substance use well, as alcohol and other drug services do not assess mental illness.
Harmful use of alcohol and other drugs by young people	Increased harmful use of alcohol and other drugs by young people in NQPHN region.	Young people aged 10-29 years recorded the largest proportion (40.5%) of all AOD treatment episodes in 2016-17 across the NQPHN region. • Cannabis was the most commonly reported closed treatment episodes (63.0%), followed by amphetamines (41.8%) and alcohol (23.3%). • Tablelands (East)-Kuranda (65.0%), Townsville (67.4%) and Whitsunday (67.0%) SA3 areas recorded higher cannabis treatment episodes compared to other SA3 areas in NQPHN region. • More young people in Mackay (45.9%), Cairns South (43.4%), Townsville (42.1%) and Tablelands (East)-Kuranda (40.3%) SA3 areas were treated for amphetamines. • Charters Towers-Ayr-Ingham (45.0%), Bowens Basin-North (34.6%), Far North (28.6%) and Tablelands (East)-Kuranda (28.6%) reported higher alcohol treatment episodes in young people aged 10-19 years in 2016-17 compared to other SA3 areas.

Outcomes of the health needs analysis		
		Consultation feedback identified the concerns as: • serious issues in relation to poly drug use amongst groups of vulnerable young people in the region • significant issues with community safety and public amenity relating to young people and drinking alcohol and inhalant use • lack of programs for young people to reduce risks associated with drug and alcohol misuse • lack of treatment and rehabilitation services for youth and in particular services that meet the needs of Aboriginal and Torres Strait Islander youth from rural and remote locations. Escalation in methamphetamine use and dual diagnosis issues was reported across the region.
Insufficient monitoring and evaluation systems and processes	At this stage, there is insufficient systems and processes across the region to ensure that sufficient data is being collected and collated to measure impact of the service provision across the NQPHN footprint. Relationships, partnerships and collaborative arrangements are being established across the NQPHN region. As these further develop, systems will improve	There is a need for the NQPHN to further develop links at both a state and local level to capture data and information to further understand the responsiveness, effectiveness and overall performance of the mental health service system within the region. Initial dialogue between NQPHN and partners in the region are continuing. Data is important in assessing the impact of programs implemented.

Indigenous Health (including Indigenous chronic disease)

Outcomes of the health needs analysis

Aboriginal and Torres Strait Islander people

Aboriginal and Torres Strait Islander people are identified as a separate priority population not only because of the universality of their disadvantage but also their intransigence to significant change across the nation. Queensland is home to over 186,482 (4.0%) people of Aboriginal and /or Torres Strait Islander descent of whom over 67,752 live within the area serviced by NQPHN; 4.9% in the Mackay region, 7.9% in Townsville, 10.2% in Cairns and Hinterland and 64.5% in the Torres Strait and Cape region, (Queensland Government Statistician's Office., 2017). This includes a disproportionate number of remote Indigenous communities, greater levels of socially disadvantaged Indigenous people, and a significant majority of the nation's Torres Strait Islander population.

Identified Need	Key Issue	Description of Evidence
Poorer health outcomes	The Aboriginal and Torres Strait Islander population is among the most vulnerable within the NQPHN region. They require additional services to improve their life expectancy, and lifetime health is a key focus across all activities within NQPHN.	On average, a healthy Queensland Aboriginal and Torres Strait Islander person can live up to 62 years compared to 73 years in a non- Aboriginal and Torres Strait Islander person (Queensland Health., 2017). The burden of disease and injury in Queensland Aboriginal and Torres Strait Islander people 2017 (2011 reference year) noted the following: • 11.8-year gap in health adjusted life expectancy between Aboriginal and Torres Strait Islander in Cairns and Hinterland, and Mackay HHS areas and the general Queensland population • 12.3-year gap in health adjusted life expectancy between Aboriginal and Torres Strait Islander in Townsville HHS area and Queensland general population • 15-year gap in adjusted life expectancy between Aboriginal and Torres Strait Islander in Torres and Cape residents and the Queensland general Queensland population.
Social and Cultural determinants	A 'social and cultural determinants' approach recognises that there are many drivers of ill-health that lie outside the direct responsibility of the health sector and which therefore require a collaborative, inter-sectoral approach.	Amongst the Aboriginal and Torres Strait Islander population, good health is more than just the absence of disease and infirmity. It is a holistic connectedness of the social, physical, emotional, cultural, spiritual and ecological wellbeing of an individual and their community (Australian Institute of Health and Welfare, 2018a). For Aboriginal and Torres Strait Islander people, there is an increasing body of evidence demonstrating that protection and promotion of traditional knowledge, family, culture and kinship contribute to community cohesion and personal resilience. Current studies show that strong cultural links and practices improve

Outcomes of the health needs analysis		
		outcomes across the social determinants of health. [34] Other reports have also indicated strong associations between key social factors such as education, housing, income and employment with health outcome and health behaviours among Aboriginal and Torres Strait Islander peoples (Australian Health Ministers Advisory Council, 2017; Bainbridge, McCalman, Clifford, & Tsey, 2015; The Department of Prime Minister and Cabinet, 2017). As noted earlier, most Aboriginal and Torres Strait Islander communities within NQPHN are in the most disadvantage quantiles, with high unemployment rates, low income earners and higher rates people whose highest level of education was year 8 or below or did not go to school (Queensland Government Statistician's Office., 2017). The Australia's health 2018 reported the following: • Aboriginal and Torres Strait Islander people who lived in the highest socio-economic areas, were employed, completed year 12 or higher education, and felt safe or very safe alone in their homes after dark were most likely to report very good or excellent health in 2014–15 • Aboriginal and Torres Strait Islander women with higher levels of socio-economic resources and social capital were more likely to have better pre-pregnancy health, more like to access and make use of health services, have better access to nutritious foods during pregnancy, more social support, better housing, and to face less income-related stress • Aboriginal and Torres Strait Islander persons who were employed in 2014-15, were less likely to smoke, use illicit drug and more likely to have adequate fruit intake compared to Aboriginal and Torres Strait Islander persons who were unemployed • Aboriginal and Torres Strait Islander persons who participated (32% versus 47%) in organised sports were less likely to smoke compared to those who did not. (Australian Institute of Health and Welfare, 2018a).
Health behaviour of Aboriginal and Torres Strait Islander people	Higher prevalence of health risk behavioural practice in Aboriginal and Torres Strait Islander population	At a national level, the prevalence of health risks in Aboriginal and Torres Strait Islander population is higher than non- Aboriginal and Torres Strait Islander population (Australian Institute of Health and Welfare, 2018a). These health risks include; smoking – 45% versus 15% in non- Aboriginal and Torres Strait Islander aged 15+ years, risky alcohol consumption (single occasion) – 55% vs 46%, inadequate fruit intake (57% vs 55%), physical

[34] Brown, N. (2014) Exploring Cultural Determinants of Health and Wellbeing. Lowitja Institute Roundtable

Outcomes of the health needs analysis		
		inactive for health (67% vs 58%), overweight or obese (70% vs 60%) and inadequate vegetable intake (90% vs 89%). Within Queensland, overweight and obesity (13.0%), tobacco smoking (10.8%), and physical inactivity (7.8%) were the largest single factors contributing to the total burden of disease and injury in the Aboriginal and Torres Strait Islander population in 2011 (Queensland Health., 2017). Tobacco smoking (13.0%) was the highest single factor contributing to disease burden in Aboriginal and Torres Strait Islander males, while in Aboriginal and Torres Strait Islander females, overweight and obesity (14.0%) was largest single contributing factor.
Remote and very remote Aboriginal and Torres Strait Islander communities	The NQPHN region has a higher proportion of Aboriginal and Torres Strait Islander residents than the State and in 13 of 31 LGAs, the majority of the population are from an Indigenous Australian background. LGAs with a majority of Indigenous Australian residents are located in remote areas. Additionally, NQPHN region comprises approximately 11% of the total Australian Indigenous population. Northern Queensland PHN region is comprised of some very remote areas with a diverse range of health needs.	The Northern Queensland PHN covers 4 HHS areas: The following are the estimated population of each HHS area and the proportion of Aboriginal and Torres Strait Islander people as of June 2017; 1. Torres and Cape HHS area – 26,753 people (64.5% Aboriginal and/or Torres Strait Islander people) 2. Cairns and Hinterland HHS area – 257,111 people (10.2% Aboriginal and/or Torres Strait Islander people) 3. Townsville HHS area – 238,004 people (7.8% Aboriginal and/or Torres Strait Islander people) 4. Mackay HHS area – 172,587 people (4.9% Aboriginal and/or Torres Strait Islander people). LGAs in NQPHN region with higher proportion of Aboriginal and Torres Strait Islander population include: Aurukun, Hope Vale, Kowanyama, Lockhart River, Mapoon, Napranum, Northern Peninsula Area, Palm Island, Prompuraaw, Torres, Torres Strait Islands, Wujal Wujal, and Yarrabah (Queensland Government Statistic's Office, 2018).

Chronic diseases in Aboriginal and Torres Strait Islander people	Higher burden of chronic diseases and prevalence in NQPHN Aboriginal and Torres Strait Islander population.	The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) reported the following chronic diseases amongst the top 5 contributors to the overall burden of disease in the NQPHN region (Queensland Health, 2017a);
		
		• Cairns and Hinterland HHS Area
		  ○ Cardiovascular disease – 14.0% (Aboriginal and Torres Strait Islander) vs 16.2% (non-indigenous)
		  ○ Diabetes mellitus – 9.6% (Aboriginal and Torres Strait Islander) vs 6.4% (non-indigenous)
		  ○ Chronic respiratory disease – 8.2% (Aboriginal and Torres Strait Islander) vs 6.1% (non-indigenous)
		• Mackay HHS Area
		  ○ Cardiovascular disease – 13.9% (Aboriginal and Torres Strait Islander) vs 14.5% (non-indigenous)
		  ○ Diabetes mellitus – 9.4% (Aboriginal and Torres Strait Islander) vs 6.3% (non-indigenous)
		  ○ Chronic respiratory disease – 8.2% (Aboriginal and Torres Strait Islander) vs 5.8% (non-indigenous)

Outcomes of the health needs analysis		

		• Torres and Cape HHS Area
		  ○ Cardiovascular disease – 17.6% (Aboriginal and Torres Strait Islander) vs 11.0% (non-indigenous)
		  ○ Diabetes mellitus – 15.4% (Aboriginal and Torres Strait Islander) vs 11.4% (non-indigenous)
		  ○ Chronic respiratory disease – 8.9% Aboriginal and Torres Strait Islander) vs 6.1% (non-indigenous)
		• Townsville HHS Area
		  ○ Cardiovascular disease – 13.9% (Aboriginal and Torres Strait Islander) vs 15.6% (non-indigenous)
		  ○ Diabetes mellitus – 10.4% (Aboriginal and Torres Strait Islander) vs 6.1% (non-indigenous)
		  ○ Chronic respiratory disease – 8.2% (Aboriginal and Torres Strait Islander) vs 6.0% (non-indigenous)
		The burden of chronic conditions continued to produce most health loss. The burden of disease is concentrated among the aged population, Aboriginal and Torres Strait Islander, socio-economic disadvantaged and in remote and very remote communities (KP Health., 2017; Queensland Health, 2017a).

Infectious diseases	There is an ongoing syphilis outbreak in the Northern Queensland region since declared in September 2015.	The rate of notifications for infectious syphilis in Aboriginal and Torres Strait Islander people in the NQPHN region has increased since the syphilis outbreak was declared in 2013. The following are observed across the HHS areas in the region: • Cairns and Hinterland HHS has increased from 9.8/100,000 population in 2013 to 427.2 per 100,000 population per year in 2017-18. • Townsville HHS was 40.5 per 100,000 population per year at the beginning of the outbreak in January 2013, increasing to 391.9 per 100,000 population per year in 2016-17 before decreasing to 291.5 per 100,000 population per year in 2017-18. • Torres and Cape HHS has increased from 71.1 per 100,000 population per year at the beginning of the outbreak in December 2012, to 215.7 per 100,000 population per year in 2017-18. • Notification rates are not shown for Mackay HHS because of small numbers • About 53% of all infectious syphilis were in males compared to 47% in females • An estimated 67% of infections were in people aged 15-29 years (Health Surveillance Tropical Public Health Services Cairns, 2018; The Department of Health, 2018b)
	Increased new diagnosed HIV cases in the region (especially in Cairns HHS area).	• There has been a downward trend in the rate of new HIV diagnoses in Queensland in the non-Indigenous population between 2010 and 2017 (4.7 cases per 100,000 population to 3.8 cases per 100,000 population) • However, notification rates have increased in Aboriginal and Torres Strait Islander Queenslanders, from 3.8 cases per 100,000 population in 2010 to 5.2 cases per 100,000 population in 2017 • In recent years the proportion of newly diagnosed HIV notifications among Aboriginal and Torres Strait Islander people has been higher in Far North Queensland compared to Aboriginal and Torres Strait Islander people across the rest of the state. In 2016, Cairns and Hinterland HHS (10.7%) reported the largest number

<table>
<tr><th colspan="3">Outcomes of the health needs analysis</th></tr>
<tr><td></td><td></td><td>of new diagnosed HIV in the region (second highest in Queensland) compared to Mackay (3.5%), Torres and Cape (0.0%) and Townsville (1.7%) HHS (Queensland Government (Queensland Health), 2017).</td></tr>
<tr><td>Aboriginal and Torres Strait Islander people mental health status</td><td>Higher rates of hospitalisation and burden of mental illness among Aboriginal and Torres Strait Islander people.</td><td>Within the NQPHN region, 10.1% of the population identifies as Aboriginal and/or Torres Strait Islander, 4.9% in the Mackay region, 7.9% in Townsville, 10.2% in Cairns and Hinterland and 79.2% in the Torres Strait and Cape York. This is compared to 4% across Queensland.
A landmark report on the burden of disease estimates for Aboriginal and Torres Strait Islander population noted;
• Two-thirds of years lost among Indigenous Australians were due to poor health caused by mental health and substance use disorder, especially alcohol use disorder, anxiety and depression (39%)
• Tobacco use (12%) and Alcohol use (8%) were 2 leading preventable risk factors causing the most burden among Indigenous Australians
• Over 50% of the disease burden attributed to alcohol use disorders for ages 15-44
• At the state level, mental & substance use disorders were leading cause to total disease burden (21%) for Aboriginal and Torres Strait Islander people in Queensland
(Australian Institute of Health and Welfare, 2016a).
• 7.7% individuals hospitalised with mental disorder were Aboriginal Queenslanders
• Higher rates of Aboriginal and Torres Strait Islander hospitalised for schizophrenia and other psychotic disorders (2.2:1) than other Queenslanders (The State of Queensland (Queensland Health), 2016).
The admitted patient episodes of care for mental and behavioural disorders (ICD10AM F00-F99 as principal diagnosis) indicated a general increase in the number of episodes at the HHS between 2014-15 and 2015-16 for Aboriginal and Torres Strait Islander people:
<table>
<tr><td>HHS</td><td>2014-15 episodes</td><td>2015-16 episodes</td></tr>
<tr><td>Cairns & Hinterland</td><td>669</td><td>803</td></tr>
<tr><td>Mackay</td><td>147</td><td>142</td></tr>
<tr><td>Torres & Cape</td><td>160</td><td>186</td></tr>
<tr><td>Townsville</td><td>400</td><td>578</td></tr>
</table>
Although existing reliable local information is wanting, existing community surveys demonstrate inequality between the mental health status of Indigenous Australians and the wider society[35] and that while data on</td></tr>
</table>

[35] Jorm, A., et al., Mental health of Indigenous Australians: a review of findings from community surveys. Medical Journal of Australia, 2012. 196(2): p. 118-123.

		prevalence rates are very limited, it is clear from available data that rates of major mental disorders are high[36]. Based on existing data sources (published and service activity collections) and expert input, the Australian Institute of Health and Welfare (AIHW) is currently generating prevalence rates for Indigenous mental health diagnoses based on estimated rate ratios by comparison to the national population for adult males and females respectively. Preliminary findings suggest that rates are nearly double for most major mental disorders and substantially higher for substance use disorders (Australian Institute of Health and Welfare, Australian Burden of Disease Study: Technical Methods Report 2011, in press). There is also recent research demonstrating that the leading cause of non-fatal burden of disease in the Indigenous population, constituting some 27% of the non-fatal burden, with the largest contributions being from anxiety disorders and depression, and alcohol misuse.[37] There is evidence for increased service use, not only in terms of public hospital admissions but also of outpatient services such as the Access to Allied Psychological Services (ATAPS)[38]. All the more surprising, then, that – regardless of assertions in relation to 'what works' – that there is a dearth of reliable evidence for effective interventions – mainstream or culturally adapted – as demonstrated in a systematic review of interventions for Indigenous adults with mental and substance use disorders in Australia, Canada, New Zealand and the United States (Leske et al., 2016). In a survey of service providers in the NQPHN region, respondents identified Aboriginal and Torres Strait Islander people as a group most in need of mental health services. Key barriers to accessing mental and wellbeing in Aboriginal and Torres Strait Islander communities include (Matthews V, Bailie J, Laycock A, Nagel T, & Bailie R, 2016); • Systems and approaches for recruitment and retainment of Aboriginal and Torres Strait Health Workers • Mentoring and support systems for Aboriginal and Torres Strait Islander health workers • Lack of mental health training and development programs for Aboriginal and Torres Strait Islander mental health workers at all levels from certificate through to tertiary • Limited finance and resources for mental health and wellbeing care

[36] Black, E.B., et al., A systematic review: Identifying the prevalence rates of psychiatric disorder in Australia's Indigenous populations. Australian and New Zealand Journal of Psychiatry, 2015. 49(5): p. 412-429

[37] Begg, S., et al., The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people. 2014, Queensland Health: Brisbane.

[38] Reifels, L., et al., Improving access to primary mental health care for Indigenous Australians. Australian and New Zealand Journal of Psychiatry, 2015. 49(2): p. 118-128.

Outcomes of the health needs analysis		
Integrated Social and Emotional Wellbeing responses for Aboriginal and Torres Strait Islander people across primary health care.	As identified by Dudgeon et al (2014) Indigenous views of mental health and social and emotional wellbeing are very different to those of non-Indigenous Australians. This affects the way in which policies, programs, early prevention and intervention initiatives need to be framed, formulated, implemented, measured and evaluated. Indigenous Australians experience persistently poorer health outcomes for their entire lives than non-Indigenous Australians.[39]	In consultations with communities across the region the following feedback was identified: • A need to expand Social and Emotional Wellbeing (SEWB) teams delivering evidence-based services in outer regional, rural and remote communities to at-risk groups including disengaged youth, migrant and refugee populations, Aboriginal and Torres Strait Islander people, homeless and dislocated people. • A need to expand SEWB Services and Programs for Aboriginal and Torres Strait Islander people and rural and remote locations. A study on SEWB screening for Aboriginal and Torres Strait Islander people in primary health care concluded that 'there is a need for the development of national best practice guidelines for SEWB screening and management, accompanied by dedicated SEWB funding, and training for health service providers as well as ongoing monitoring of adherence with the guidelines'(Langham et al., 2017). A recent critical review on SEWB for use by Aboriginal and Torres Strait Islander communities in Australia also noted similar findings, stating that most western developed health and well-being frameworks failed to address issues that directly associated with indigenous health and wellbeing such as connectedness, loss, resilience, empowerment, and control (Le Grande et al., 2017). This was also recognised in the Prime Minister's report 2017: Closing the Gap(The Department of Prime Minister and Cabinet, 2017). Indigenous people also experience poorer social and emotional wellbeing outcomes than non-Indigenous Australians. For instance, among Indigenous adults high or very high levels of psychological distress are nearly 3 times the rate of non-Indigenous adults. Rates of intentional self-harm among young Indigenous people aged 15–24 years are 5.2 times the rate of non-Indigenous young people. 10% of the health gap between Indigenous and non-Indigenous Australians in 2003 has been linked to mental health conditions, and another 4% of the gap is attributable to suicide.[40]

[39] Dudgeon P, Walker R, Scrine C, Shepherd CCJ, Calma T and Ring I 2014. Effective strategies to strengthen the mental health and wellbeing of Aboriginal and Torres Strait Islander people. Issues paper no. 12. Produced for the Closing the Gap Clearinghouse. Canberra: Australian Institute of Health and Welfare and Melbourne: Australian Institute of Family Studies.

[40] Dudgeon P, Walker R, Scrine C, Shepherd CCJ, Calma T and Ring I 2014. Effective strategies to strengthen the mental health and wellbeing of Aboriginal and Torres Strait Islander people. Issues paper no. 12. Produced for the Closing the Gap Clearinghouse. Canberra: Australian Institute of Health and Welfare and Melbourne: Australian Institute of Family Studies.

Outcomes of the health needs analysis		
		Key priorities identified by Aboriginal and Torres Strait Islander communities were for services to be embedded within a SEWB framework that address: welfare; grief, loss and trauma; alcohol and substance misuse; tobacco use; gambling; and the social determinants of health. Aboriginal and Torres Strait Islander people have experienced significant levels of loss, grief, disempowerment and cultural alienation as a result of colonisation and policy contexts of isolation, concentration and segregation (Hunter, 1993; Purdie et al., 2010). These policies have profoundly impacted upon many Indigenous people's sense of identity, spiritual and physical wellbeing, and general psychological adjustment (Human Rights and Equal Opportunity Commission, 1997; Berry et al., 2012). Social and emotional well-being problems are seen as being distinct from mental illness. This is based on differences in severity, duration, and whether the presenting problems meet the criteria and threshold for a diagnosable condition, etc. However, it is recognised that the two can be mutually constituted and reinforcing (Social and Emotional Wellbeing Framework).
Health disparities for Aboriginal and Torres Strait Islander people related to alcohol and other drugs use	Aboriginal and Torres Strait Islander issues around AOD misuse are complex and multi causal, and addressing these issues requires a comprehensive approach that considers social determinants, prevention, culturally safe care and treatment and support to clients, families and communities. [41] The Needs Assessment highlighted the correlation of suicide and self-harm with excessive substance use, specifically alcohol. Studies show that suicide was the most common cause of alcohol-related deaths among Aboriginal males and the fourth most common cause among Aboriginal females. Intentional injury is not the most common	Surveys of AOD use are of varying quality and consistency and always underestimate actual consumption, however, they indicate that levels of harmful use among Aboriginal and Torres Strait Islander Australians are about twice those in the non-Indigenous population. [43] At a National level: • illicit drugs are estimated to cause 3.4% of the burden of disease and 2.8% of deaths, compared to 2.0% and 1.3% among the non-Indigenous population nationally • Aboriginal and/or Torres Strait Islander males are 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/or Torres Strait Islander females are 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-Indigenous Australians

[41] Queensland Alcohol and Other Drugs Treatment Service Delivery Framework (March 2015)

[43] Gray, D.and Wilkes, E. (2010) Reducing alcohol and other drug related harm, Resource sheet no. 3 produced for the Closing the Gap Clearinghouse

Outcomes of the health needs analysis		
	cause of alcohol-related death in non-Aboriginal population. [42] Consultations through the NQPHN communities identified need at a community level for a holistic integrated approach to AOD treatment when the same staff treat both disorders in the same setting. This was particularly highlighted in communities that had Community Controlled Health Services. Other feedback around needs included: • more education for schools, youth groups needed for prevention and early intervention, including building resilience and coping strategies • culturally appropriate detoxification and residential rehabilitation services to effectively meet the needs of young people from rural and remote locations • opportunities for Aboriginal and Torres Strait Islander communities and services to develop their own AOD local area plans and strategies.	• 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 [44] • Aboriginal community controlled health sector's national report, as part of the online services report, identified amphetamines as a common substance-use issue which increased from 45% in 2013–14 to 70% in 2014–15 • In 2014–15, 57 organisations providing non-residential, follow up and after care services reported around 19,900 clients. This was similar to 2013–14 (around 20,100). • Most non-residential and after care clients were Indigenous (81%). More than half of all Indigenous clients (57%) were male and 39% were female. Forty-three% of all Indigenous clients were aged 19 to 35 and a similar proportion (43%), were aged 36 and over. Clients aged 18 and under made up a smaller proportion (14%) of Indigenous clients. [45] A landmark report on the burden of disease estimates for Aboriginal and Torres Strait Islander population noted; • Two-thirds of years lost among Indigenous Australians were due to poor health caused by mental health and substance use disorder, especially alcohol use disorder, anxiety and depression (39%) • Tobacco use (12%) and Alcohol use (8%) were 2 leading preventable risk factors causing the most burden among Indigenous Australians • Over 50% of the disease burden attributed to alcohol use disorders for ages 15-44 • At the state level, mental & substance use disorders were leading cause to total disease burden (21%) for Aboriginal and Torres Strait Islander people in Queensland (Australian Institute of Health and Welfare, 2016a). Data for the FNQ population indicates that Aboriginal and Torres Strait Islander people are over-represented in the criminal justice and child protection systems, with 55.9% of children in out-of-home care and with 71% of prisoners at Lotus Glen prison being of Aboriginal and Torres Strait Islander background. [46] As noted earlier, a qualitative study amongst community leaders and service providers in 15 Aboriginal communities in the footprint consistently reported illicit alcohol supply and consumption as an issue(Fitts et al., 2017).

[42] Dudgeon, P., Milroy, H. and Walker, R. (2014) Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice

[44] National Aboriginal and Torres Strait Islander Peoples' Drug Strategy 2014 - 2019

[45] Australian Institute of Health and Welfare (2015) Aboriginal and Torres Strait Islander health organisations Online Services Report—key results 2014–15

[46] Cairns Alliance of Social Services: Position Paper 2016

Outcomes of the health needs analysis		
Maternal Child Health and Youth Health		
High percentage of infants and children	Higher rates of low birth weight and increasing prevalence of smoking during pregnancy in Aboriginal and Torres Strait Islander women	• The 2017 data on low birth weight in NQPHN region remained high compared to the state average (7.4%): Cairns and Hinterland (8.7%), Torres and Cape (10.7%) and Townsville (7.8%). • Majority of women in the Cairns and Hinterland HHS (18.9%) and Torres and Cape HHS (46.8%) regions continued smoking during pregnancy compared to the QLD average (11.9%). There are higher proportions of Aboriginal and Torres Strait Islander women smoking compared to non-Aboriginal and Torres Strait Islander (Department of Health Queensland, 2017). • Data from the Mental Health and Suicide Needs Assessment report indicated a need for the mental wellbeing of pregnant mothers, as there is a strong association between perinatal depression, mother-infant relationship and child outcomes(Raine et al., 2016). • As noted earlier, the Australian Early Development Census (2016) indicated that children within the following LGAs; Cook, Douglas, Northern Peninsula Area, Palm Island, Torres and Torres Strait Island, are developmentally vulnerable to two or more of the following; physical health and well-being, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge compared to the state (14.0%). Family conditions and quality of parenting are significantly associated with child mental health and physical health (KBC Australia, 2018d; World Health Organization, 2014). • Community members also noted lack of mandatory key visits, health promotion and lack awareness of Maternal and Child health services in the rural and remote communities(Northern Queensland Primary Health Network, 2017a).

SECTION 3 – OUTCOMES OF THE SERVICE NEEDS ANALYSIS

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

General Population Health

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
Primary Health Care		
Primary Health Service Use and Access	Higher proportion of NQPHN residents not accessing primary health care services	The GP attendances and associated MBS expenses in NQPHN region continued to increase since 2013-14. The GP attendances per person rate (5.6%) in the region was almost equivalent to the national average (5.9%) in 2016-17. On the other hand, the MBS data claims per patient/doctor encounters ($245.22) was lower than the national average ($295.32) in 2016-17. A slightly higher proportion (13.6%) of NQPHN residents did not claim a GP attendance in 2016-17 compared to the national average (12.5%). Despite these favourable rates, there are areas (SA3) in NQPHN with lower GP attendance per person rates including, Innisfail-Cassowary Coast (4.8%), Bowen Basin-North (4.6%), Tablelands (East)-Kuranda (4.6%) and Far North (4.0%)(Australian Institute of Health and Welfare, 2018b). Further review of the patient experiences data noted about 11.7% adults who needed to see a GP but did not, in 2015-16. 4.7%# of NQPHN residents aged 15+ years did not see or delayed seeing a GP due to cost, compared to 4.1% nationally in 2015-16. However, a high percentage (92.3%#) of NQPHN adult residents felt that their GP always or often spent enough time with them during patient/GP encounters. (#-interpret with caution).
Chronic conditions		

Outcomes of the health needs analysis		
Focus on enhancing positive determinants of health	The development of chronic conditions is strongly associated with the behavioural risk factors of smoking, physical inactivity, poor diet and the harmful use of alcohol. These behaviours can contribute to the development of biomedical risk factors, such as high blood pressure, obesity and high cholesterol. A key service need is to focus on enhancing positive determinants of health (protective factors) such as good nutrition, and safe sexual behaviours, as well as addressing negative health determinants (risk factors) that can increase the likelihood of developing chronic conditions.	The outcomes from the health needs analysis (section 2) indicate social, cultural and economic factors influenced the general health and wellbeing of the residents in NQPHN. The World Health Organisation(WHO) had termed these factors as 'Social Determinants of Health' and they are defined as the conditions in which people are born, grow, work, live and age, and the wider sets of forces and systems shaping the conditions of their life (economic policies, systems, development agenda, social norms, social policies and political systems), (World Health Organization, 2011). Feedback from stakeholder/community consultations and online survey in 2016 identified: • Physical activity and nutrition initiatives such as exercise programs and community gardens were common themes within the submissions • Forming partnerships to encourage behaviour change, promote health, and provide public health services • Maintain efforts in health promotion in the areas of obesity, mental health and wellbeing, smoking, and alcohol • Maintain efforts in social marketing to maximise participation in screening programs • Support a skilled and sustainable primary health care workforce, including cultural capability of mainstream health services • Build community ownership and capacity • Leveraging from the North Queensland lifestyle to build an active and healthy community. Analysis of NQPHN local data indicated a similar trend among the most disadvantaged communities in the region. The Aboriginal and Torres Strait Islander performance framework 2017 report also noted the importance of addressing the social determinants (education, employment, housing, risk factors, low income) in reducing the prevalence of NCDs and improving the general wellbeing among Aboriginal and Torres Strait Islander people (Australian Health Ministers Advisory Council, 2017). There is potential for NQPHN to commission actions on the social determinants of health within the region.

Outcomes of the health needs analysis		
Community chronic condition management	Current models of care especially allied health care are fragmented, episodic and poorly coordinated (KP Health, 2018; KP Health., 2017).	In 2017, NQPHN contracted KP Health to undertake a comprehensive review of Chronic Care services in North Queensland. The following were common themes/issues identified in relation to the NQPHN region chronic care delivery system:(KP Health, 2018; KP Health., 2017). • Competitive, not collaborative service arrangements • Fragmented and poorly coordinated • Complex for providers and consumers to navigate • Problems with workforce recruitment, retention and capability-building • Barriers to access services and poor cultural awareness • Poor role delineation, governance, monitoring and evaluation of existing services
Oral Health	Limited access to dental health services in rural and remote areas and high cost associated with oral health care.	Key informants including clinical council members and stakeholders also indicated similar concerns especially among the Aboriginal and Torres Strait Islander population in the region. For example; a key informant mentioned, there is no dental provision now with the Aboriginal health clinics.
Health workforce capacity, innovation, expansion and retention		
Shortage of General Practitioners	NQPHN region has a much lower GP rate per 100,000 population than Queensland. Providing effective primary health care is challenging in rural and remote locations.	NQPHN had an estimated 692 GPs in 2015-16. The proportion of the GPs working in each HHS areas was Cairns – 40.9%, Townsville – 32.8%, and Mackay – 20.8%. Only 5.5% of GPs worked in Torres and Cape HHS area. The GPs ratio per 100,000 people based on the 2015-16 national health workforce dataset and the 2016 NQPHN population census projection indicated an estimated rate of 97 per 100,000 people in NQPHN region compared to the national average of 143/100,000 and Queensland state average of 154/100,000 in 2015-16 (The Department of Health, 2018a). Participants in a service provider mapping survey in NQPHN region in 2017 indicated higher mean GP workforce gap in the following areas; Cape communities (51.1), (Cape York, Kowanyama – Pompuraaw, Torres), Ayr (56.8), Innisfail (60.3) and Proserpine (59.2), (Health Workforce Queensland., 2018).
Allied health workers	Low levels of allied health workers in NQPHN region	Overall, the allied health professionals with the highest proportion in NQPHN region were pharmacists (11.7%), physiotherapists (10.3%) and psychologists

Outcomes of the health needs analysis		
		(10.0%). However, the following allied health professions were identified as workforce gaps across NQPHN region especially in the remote and very remote areas; social work, palliative care, speech pathology and physiotherapy (Health Workforce Queensland., 2018). A review on the current delivery of allied health services for people with chronic diseases in NQPHN region recommended a reorientation of the allied health services delivery to enhance continuity of allied health care and leverage the capacity of the generalist workforce to deliver services (KP Health., 2017). The report recommended the stepped models of allied health care for people with chronic diseases need to be adopted and as close to home as possible. The stepped models of allied health care is a system of clinical care delivery to ensure the most available but least resource intensive care is given to the patient first and only 'stepping up' when specialist services as clinically required (KP Health., 2017). The report further noted, that 18/30 local government areas in the region have allied health service deficit in the following professions; diabetes education, dietetics education, podiatry, physiotherapy, exercise physiotherapy, occupational therapy and social work.
Nurses	Low level of nurses and midwives	The estimated number of registered nurses and midwives working in the NQPHN region was 1023 in 2015-16. An estimated 38.7% worked in Cairns and Hinterland, 34.2% worked in Townsville, a further 19.4% worked in Mackay HHS area and 7.8% worked in the Torres and Cape area. The workforce gap rating across NQPHN region indicates the following areas with higher mean (>50) workforce gap in nursing; Cairns and Suburbs, Ayr, Ingham, Mareeba and Proserpine(Health Workforce Queensland., 2018). Key informants also indicated a potential to use more nurse practitioners in remote and very remote areas, where there are limited general practice services.
Dental Practitioners	High cost associated with dental services in the region	In 2015-16, there were 571 dental practitioners working in the NQPHN region. A large proportion of the dentists are located in the regional cities of Mackay, Townsville, and Cairns areas. Based on the 2015-16 dental practitioner's workforce data; NQPHN had an estimated average rate of 80/100,000 population. This is higher than the national benchmark of 50 dental practitioners/100,000 people (Rural Health West, 2014). However, a 2017 survey among allied health workers in

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		the region indicated lack of access to dental services in the public health sector in most remote areas in NQPHN region (Health Workforce Queensland., 2018). Furthermore, less than half (45.5%) of adults saw a dentist, hygienist or dental specialist in the 12 months prior to 2015-16. Almost a quarter (23%) of NQPHN residents did not see or delayed seeing a dental practitioner due to cost (Australia Institute of Health and Welfare, 2017).
After hours workforce	Lower GP and allied health care after-hour services	Accessing after hours services is a challenge especially amongst many communities in rural and remote areas due to the inadequate numbers of GP and allied health workforce in NQPHN region. For example; Key stakeholder consultations and service mapping workshops held in regional centres and rural areas within the NQPHN region in 2016 (Townsville, Mackay, Charter Towers and Weipa) identified. • an inadequate afterhours GP workforce in some of the rural communities in the region(Armstrong, Amoyal, Jacups, & Verhoeven, 2016). • some members in the Aboriginal and Torres Strait Islands communities reported that accessing after hours care services is a challenge, especially when transportation, financial resources and knowledge about after-hours service pathways are limited. • there are issues relating to the ageing of the GPs and lack of allied health workers population, (especially within the Aboriginal and Torres Strait Islander health services),(KP Health., 2017)
Hospital and Health Service Use		
Emergency Department presentations	High rates of lower acuity triage categories (4 & 5) at the emergency departments.	All three major public hospitals within NQPHN's region meet the NEAT targets more than 50% of the time, but none >90% of the time. NEAT targets are an indicator or access block for each HHS.

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		The counts of ED presentations in NQPHN region had increased from 320,730 in 2016 to 325,537 in 2017 (an increase of 1.5%). Such numbers would be equivalent to 47% of the population (if each visit was a different person), and 87% of the Torres and Cape population in 2017. These can be compared to the national ED presentation rate of 25%. Many are presenting with lower acuity triage categories (4 and 5). A proportion of these lower acuity presentations may be treatable within the community by GPs, community nurse practitioners or allied health professionals, thereby reducing access block to ED and supporting the access targets.
In-patient hospitalisation	In-patient hospitalised care provides around-the-clock care from nurses, medical practitioners and allied health professionals, who are employed by the hospital. All meals, bedding and cleaning are provided by the hospital. Ideally, hospital employed staff work with community primary health care providers to transition patients back to their care upon discharge. Well-coordinated care is associated with a shorter average length of stay (LoS) and improved health care management when returned to community primary health care services.	In-patient episodes of care of HHS indicate high numbers of patients requiring hospitalisation with the higher mean LoS reported from Cairns and Hinterland HHS and Townsville HHS. Many patients present for diagnostic tests and outpatient appointments. Outpatient clinics are utilised for pre-admission planning (elective surgery) and specialist medical clinics. These presentation counts provide an indication of access to these services and this data can be used to monitor improvements to access due to partnerships between the PHN and HHS.
Aged care health care use	Aged care services often provide the first point of care for elderly people. Information on aged care services are provided by the Commonwealth Department of Health and Ageing. Information is based on the location of the service, rather than the region in which the service is delivered. In some instances, aged care services may have provided the address information of their approved provider in place of the address information of the individual aged care service. Users should be aware of this limitation when using this data.	Across NQPHN there were 147 aged care services (30 June 2016) with 6,492 aged care operational places (beds). Townsville LGA had the largest number of aged care service operational places (1,643). This figure included Multi-purpose Health Centres within the HHS who have aged care funding, (Queensland Government Statistician's Office, 2018a). **Feedback from stakeholder/community consultations and survey identified:** • Lack of respite beds available, this includes remote areas and Indigenous patients who may have additional needs • Lack of staged care facilities across Cape and Torres, imposing on acute care services • Patients with early onset dementia will need to have a positive diagnosis before eligible for the NDIS. Aged care services, community and residential

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		will have an increased demand for programs, day respite and secure accommodation for people with early onset dementia. The remote regions including the Cape and Torres already have lack of aged care services which will impact upon the care of the person with dementia and their families. There are old people in the region that prefer to remain home in their communities and wanted to be part of their cultural world when they passed. This may be an indication for culturally appropriate aged care facilities in the communities. • 52% facilities surveyed indicated difficulty accessing after hours health services • Poorer access reported outside metropolitan areas • 48% facilities surveyed indicated difficulty accessing allied health services • Rural areas had poorer access to allied health services • Training gaps include: palliative care, dementia management, wound management, and falls prevention • Technology training and up-skilling has been identified as a huge gap in aged care workforce development. This is evident in the Cape and Torres regions where there is a lack of registered nurses and skilled staff, and the impact of the aged care reforms has resulted in barriers for Cape and Torres accessing and providing services using the (MY aged Care) MAC Portal. Health workers in this region require face to face training in the use of electronic technology and how to register for MAC. An ABN is required in order to receive an AUSKEY which permits users to use My Aged Care • My Health Record training sessions needed for RACF • Aged care access to MH - 79% of practices had access to mental health practitioner and 21% did not • 96% of facilities had advanced care plan processes in place • Over 54% of respondents requested telehealth as supported by NQPHN • Need for more Indigenous staff within RACF • Need for Advanced Care Directives for Indigenous persons with upload onto My Health Record.

Outcomes of the health needs analysis		
After hours access		

After hours access to health services across the region	After hours primary care (after hours) has traditionally been viewed as non-life threatening care that requires attention within 12 hours, and is provided outside usual business hours: 8am to 6pm weekdays, 8am to 12noon Saturdays. After hours primary care is an emerging issue of importance in many western countries, as it forms an integral component of health service provision. Within NQPHN there is a need to gather more location specific data to understand the needs better across the region, particularly the difference between model in regional areas versus rural and remote communities.	The MBS biller item claims for GP after hours/Emergency attendance in NQPHN region increased by 10.3% from 135, 402 patients in 2013-14 to 149, 382 in 2015-16. However, a decrease of 4.8% had been experienced in 2016-17 from the previous year. The following SA3 areas have recorded falls in the number GP afterhours/Emergency in 2016-17; Cairns-South, Mackay, Whitsunday, and Townsville. While the following SA3 areas have seen GP afterhours/Emergency patients increases in 2016-17; Cairns-North, Innisfail-Cassowary Coast, Port Douglas-Daintree, Bowen Basin-North, Tablelands-and Far North, (AIWH dataset, 2018).
		
		Feedback from stakeholder/community consultations and online survey identified:
		
		• The majority of people interviewed (76%) reported having a preferred GP, although one-fifth reported a longer than acceptable wait time to get an appointment and ~30% reported they could not get a suitable appointment with their preferred GP in the last 12 months. One in 12 people (9%) saw an after hours GP in the previous 12 months. A greater proportion (~20%) reported attending ED for a condition they felt could have been seen by their GP.
		• After hours survey of GPs (rapid review) n=80 respondents - NQPHN region, identified:
		  ○ 84% respondents were applying for PIP after hours, the majority (52%) at level 5
		  ○ 64% were willing to provide after hours services without PIP
		  ○ 73% of surveyed practices provided AH care to RACFs
		  ○ 37% were interested in expanding their AH services in the future
		  ○ 87% staff interested in upskilling in emergency medicine
		  ○ 96% interested in upskilling in triage medicine.
		
		Gaps identified:
		
		• Not enough Australian trained doctors or nurses in region

Outcomes of the health needs analysis		
		• Regular doctors unwilling to attend homeless hostel or rehab after hours • No weekend radiology/radiography services • No weekend allied health services • No AH pharmacy • Need triage services prior to doctor arrival or call out • No dental AH services • Need health service access for mental health and drug dependent patients • Workshops (Townsville n=12) and face to face stakeholder (deputising services) engagement in Cairns(n=20), Mackay (n=9), Townsville (n=28), Tablelands (n=32), Moranbah (n=10), Charters Towers (n=8) • Inability to compete with practices obtaining PIPs • Access reduced with increased distance from metropolitan areas • Poor consumer awareness of AH services available • Personal safety concerns for staff, DV risk and low lighting around houses • Need pharmacy/X-ray support during AH period • Refugees no Medicare health care card • Provider fatigue an issue with hours worked • Mental health patients may require police escort, huge drain on resources and time wasted • No electronic record links • Lacking adequate communication channels between AH services and HHS • Space limited, no procedure room at home residencies • Workforce development • Palliative care management • Upskilling clinically i.e. suturing • Some medical practitioners lack GP skills (registrars in training for specialty area) • Mental health patient management • Indigenous communication skills and cultural awareness • Pain management upskilling. **Analysis of local service planning reports and initial service mapping activities:**

Outcomes of the health needs analysis		
		• Patient surveys indicate that many people presented to ED due to an inability to access to their preferred GP [47] • Transport identified as a key barrier to health care access during the AH period for Indigenous persons.[48]
After hours access to health services across the region	Improve access to after hours care services (high risk/disadvantaged groups)	Within NQPHN there is increasing need for after hours support services for the vulnerable and high-risk populations. Several sources of information indicate that specific groups of vulnerable populations such as the elderly, Aboriginal and Torres Strait Islander people, disengaged youths and people from culturally and linguistically diverse background have difficulty. Families with young and children and those living with disabilities are in significant need to access after hours care services. For example; • The NQPHN Mental Health Needs Assessment Report (2017) identified that there is need for more after hour service support for mental health within the footprint, especially in the rural and remote communities(Northern Queensland Primary Health Network, 2017b). • Further analysis of data from the recent mental health service mapping report indicated that there are limited mental health and alcohol and other drugs (AOD) after hour street services in Cairns, Townsville, Mackay and in the rural and remote communities. • Consultations held with stakeholders in some of the remote and rural (Moranbah, Charter Towers, Weipa) areas within the footprint also indicated the need for mental health and alcohol and other drugs after hour services especially for disengaged youths. More than one-third of the local government Areas (LGAs) in the NQPHN region have a higher proportion of Aboriginal and Torres Islander residents, (about 80%). A significant proportion of this population live outside of the regional centres in the rural and remote areas. Information gathered from key Aboriginal

[47] (Australian Bureau of Statistics 2015a, National Health Performance Authority 2015a)
[48] Ware 2013

Outcomes of the health needs analysis		
		stakeholders suggests that rural and remote Aboriginal Communities do not have access to GP after hours services and other allied health services. For example, community consultations held in Moranbah and Weipa noted the need for after hours services for aged care, drug abuse, mental health and perinatal services. • There were also suggestions for the need to increase nursing services, particularly aged care and paediatric nursing, as well as stronger links between nursing and ambulance services to reduce ambulance call-outs. • Some key informants also noted a lack of vigorous consumer campaigns to increase consumer awareness about options for urgent (non-emergency or life threatening) after- hours medical help in their community. NQPHN and its after hours service team program will provide organisation and accountability to after hours service providers within its footprint to reach out to those in need, to improve the quality of life in the communities and enhance access to after hours services.
	Systems Evaluation and Strategic Partnership Engagement	Initial high-level needs analysis, including the review of all available materials and resources, identified significant areas of development which have been partially addressed to date. The need for a more in-depth analysis of systems and provision at a regional and local level to better determine areas for investment and redesign moving forward, to effectively address gaps in provision. It is intended to include the evaluation of the effectiveness of the current commissioned provision as part of this process to inform the models required to deliver the required outcomes going forward and to progress using a collaborative approach across the strategic partnership.
Health transport infrastructure	Health transport infrastructure and service is particularly important for NQPHN due to the large geographical area. They provide an indication of consumer access to health services (primary, secondary and tertiary). An example of distances faced includes over 815km between Cairns and Weipa, equating to a 16-hour drive.	To service the area, aerial flights (fixed and rotary wing) are required to transport patients to and from very remote areas, as road access is poor and distances too great when patients are in critical condition. Furthermore, transport has been flagged by consumers as a significant issue reducing access to health services across regional, rural and remote areas. Occasions of service by Queensland Ambulance Service indicate lower use by the Torres and Cape HHS with a lower proportion of emergency call outs (29%)

Outcomes of the health needs analysis		
	Transport is more important for NQPHN than for other PHNs due to our large geographical areas. Access to health services can be improved with appropriate transport infrastructure and services. This will enable equitable health service delivery to populations residing in regional centres and those residing in very remote areas.	compared to the other HHS (~40%). The higher use of non-emergency responses to Torres and Cape HHS indicates that the ambulance service may be the only transport service option in this remote setting, leading to use for lower acuity transfers in addition to emergency and urgent responses. **Feedback from stakeholder/community consultations and online survey identified:** • Patient transport continually flagged as a significant issue, with huge distances, expenses and difficulties coordinating services and the people who receive them - a more integrated and coordinated model of care is required. Analysis of service mapping report revealed transportation to appointments a significant barrier to accessing services across the footprint(Northern Queensland Primary Health Network, 2017a).
Improve health system efficiencies		
HealthPathways	The health system is complex to navigate. There is a need to achieve integrated patient pathways across the system and improvements to the patient journey by addressing service gaps. A model of care is required that ensures a consistent approach on health planning around patient's care; the right treatment at the right time and with the most appropriate resources.	**Analysis of local service planning reports and initial service mapping activities:** HealthPathways is a web-based information portal supporting primary care clinicians to plan patient care through primary, community and secondary health care systems. This solution has been developed within NQPHN region to respond to the evidence of need. Three hospitals within the region are actively implementing Healthpathways. These are constantly updated and reviewed in the light of changing evidence, technology and local circumstances. Latest progress demonstrates the following: **HealthPathways FNQ** • As of June 2018, there are 163 live pathways available for use, with a further 48 in progress. • For the period July 2017-June 2018, 1,231 users accessed the FNQ HealthPathways with 4,806 sessions (an average of 340 sessions per month) • 23,746 pageviews during the same time period (an average of 1,978 page views per month), an increase of over 400% from 4,639 in 2016-17.

Outcomes of the health needs analysis		
		• Average Users per month have increased from 11 in 2016-17 to 102 in 2017-18 • The bounce rate (number of people who open a page and leave quickly) has increased from .3% (2016-17) to 0.4% in 2017-18 • Sessions increased from 659 to 4,806 in 2017-18 • Health service providers top 10 requests for FNQ HealthPathways in 2017-18 include: Surgical, Medical, Acute Services, Non-Acute Orthopaedics, Mental Health, Medical Imaging, Monoclonal gammopathy (MGUS) non-localised, Acute Diabetes, End of life, Urology, Palpitations. **HealthPathways Mackay** • As of June 2018, there are 526 live pathways available for use, with a further 151 in progress and 510 awaiting localisation • Of the 526 live pathways, 160 are due for review • For the period July 2017-June 2018, 2,929 users accessed the Mackay HealthPathways with 17,065 sessions (an average of 1,422 sessions per month) • 74,313 pageviews during the same time period (an average of 6,193 page views per month), a decrease of about 10.0% from 82,579 in 2016-17. • Average Users per month have increased from 223 in 2016-17 to 244 in 2017-18 • The bounce rate (number of people who open a page and leave quickly) has reduced from 0.41% (2016-17) to 0.39% in 2017-18 • Sessions increased from 14,826 to 17,065 in 2017-18 • Health service providers top 10 requests for Mackay HealthPathways in 2017-18 include: general surgical, paediatric, gynaecology, orthopaedic, cardiology, ENT, emergency, mental health, gastroenterology and respiratory assessments. **HealthPathways Townsville** • Complete and live plans in use, as at July 2018 there are 585, with a further 207 in progress • 174 GPs registered for viewer as of July 2018 • 5,041-page views during July 2018-decrease of 27% from previous month (June 2018). • Users per month continued to increase from estimated 220 users in January 2017 to 255 in January 2018 • The average bounce rate was at 3.47%.

Outcomes of the health needs analysis		
		As at July 2018 • 585 completed and live • 17 new pathways completed and on the live site during July 2018 • 11 existing pathways reviewed and update in July 2018 • Page view per month increased from February 2018 (4,100) to June 2018 (5,000)
My Health Record	There is a need for a secure online summary of health information, which allows consumers and their health care providers, doctors, hospitals and other healthcare providers to view and share their health information to provide individuals with the best possible care. It would be used by health care providers to assist the communication of vital health information between services. This is especially important when a patient can no longer communicate their health needs and next-of-kin have limited knowledge of their health history or current needs.	My Health Record has been identified as a nation-wide solution to this issue. NQPHN will implement the My Health Record Expansion project until June 2019. NQPHN needs to deliver awareness and increased adoption of the My Health Record. Further assistance is required to support key provider groups including General Practitioners and their Practices, Pharmacy, Specialists, Allied Health and Residential Aged Care Facilities (RACF's) to implement the adoption. There is also a need to ensure consumers within the NQPHN region are fully informed about My Health Record and the level of control they have on individual aspects of their record.
Telehealth	Service delivery to remote and rural areas is recognised as challenging and gaps in access to health services due to remoteness and poor transport are complex to resolve. Telehealth is recognised as one of the most important recent innovations which has the potential to improve delivery of health services to small, widespread populations. Where connectivity permits, it enables patients in rural and remote locations to use videoconferencing facilities (TV screen and digital video camera) to speak to and see a health professional from hospitals in Queensland without the need to travel great distances. It improves patient access to health care; reduces stress and inconvenience for patients, families, carers and health professionals; and provides health professionals with access to peer support and education.	Use of telehealth, as reported by MBS biller item claims indicates growth since 2014-15. Services provided across the NQPHN region have increased by 6.4% from 251,057 (2014-15) to 268,156 (2015-16). However, there was a 7.6% reduction in the services provided in 2016-17 compared to 2015-16. The following telehealth MBS items 2126 and 2143 have been commonly used in the following SA3 areas in 2016-17, Charter Towers-Ayr-Ingham (338), Mackay (981), Bowen Basin-North (347), Innisfail-Cassowary Coast (162) and Far North (108). The most commonly claimed telehealth MBS items for Townsville SA3 area were 99 and 112 in 2016-17. http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-MBS_Data (date accessed: 25/10/2018).

Primary Mental Health Care (including Suicide Prevention)

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
The NQPHN mental health and suicide prevention service needs assessment 2016-17 identified lack of systematic coordination between primary health care services and related MH services in the region. There are difficulties in accessing AOD and MH services in the rural and remote communities especially in the Aboriginal and Torres Strait Islander communities. There is a need to enhance the capacity of MH health workers across the NQPHN. There are emerging MH service needs for specific groups within the region, (Aboriginal and Torres Strait Islander, young people, homeless people, LGBTI) and MH after hours services. The current MH service needs outcome indicated that it aligns well with the National and the NQPHN mental health and suicide prevention strategic framework. The update in this section is very limited as it appears that the region is still faced with the identified service needs and where applicable additional data are incorporated.		
Planning and Coordination		
Stronger integration and coordination between services and sectors across the whole region	Fragmented service systems - weak links between hospitals, GPs, MH services, AOD services, and other related sectors (e.g. corrections, housing, social support, employment support) - resulting in poor coordination of care. Service planning and coordination needs to include the full range of support responses from self- help, prevention, early intervention to psycho-social support such as housing and employment to community mental health sectors services. While some of these responses may be out of scope for the NQPHN commissioning, these are an integral part of community supports and systemic advocacy.	Feedback from stakeholder/community consultations and online survey identified: • poor coordination of care noted as particularly concerning for those transitioning across the spectrum of treatment acuity, people with severe needs, the aged, people exiting prison or rehab, people with dual diagnoses, and people in rural areas • services operating in silos, resistance to shared clients, competitive tendering inhibits cooperation/collaboration • identified need for navigator and care coordinator roles; cross-sector training; networking opportunities; co-design of services (across services, sectors and consumers); well planned, culturally appropriate and integrated local service systems • highlights that integrated service models - through collaboration and coordination, and recognition that complex needs require services from multiple agencies - are key to improving outcomes • consistency in practices and approaches to MH is needed as a person receiving support from multiple services can sometimes find the conflicting information they are receiving very challenging. Analysis of local service planning reports and initial service mapping activities highlighted:

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		• need for increased collaboration between support services in some areas of the region. This was particularly highlighted in the Torres Strait region • need for greater collaboration between state and federal governments in service planning service mapping did not include details re existing coordination and collaborative mechanisms.
	Lack of understanding of mental health service systems within local areas	Feedback from stakeholder/community consultations and online survey identified: • widely noted that not all GPs are adequately linking people in with appropriate community and/or mental health services. GPs, service providers, and community members reported as being unaware of what services are out there and appropriate referral options. • need for localised service mapping identified in many communities and better communication of services.
	Referral and other system-wide administrative processes are complex and time-consuming – acting as barriers to access.	Feedback from stakeholder/community consultations and online survey identified: • the bureaucracy surrounding the Access to Allied Psychology Services limits access and flexibility. The current suicide assessment tool is culturally inappropriate, onerous, not useful or validated and doesn't comply with accreditation requirements.
Service enhancements		
Improve accessibility into/within the mental health system	Accessibility can be affected by remoteness, isolation, feelings of discrimination or stigma and lack of understanding from GPs and other services regarding the complexities of mental illness. Programs and services across the region are not always designed and implemented in ways that are engaging for young people or other hard to reach populations such as farmers and men.	Feedback from stakeholder/community consultations and online survey identified: • stigma is a broadly noted issue across the region, particularly in smaller towns, and particularly for men, farmers, and older people. Stigma issue is furthered in rural areas by lack of continuity of GPs • feedback from stakeholders indicated that there are limited GPs with an interest in mental health issues and in some cases they fail or are unaware how to link people into the mental health service system • living in a rural or remote community provides limited choice of provider.

Outcomes of the health needs analysis		
		• accessibility is limited by the lack of culturally competent services – communities can distrust services and service provision. However, there are indications that responsibility for sustaining relationships does not rest solely with Aboriginal and Torres Strait Islander patients. Rather, healthcare providers need to commit to the process of building and maintaining relationships(Davy et al., 2016). Analysis of local service planning reports and initial service mapping activities: • accessibility concerns regarding the digital gateway were consistently highlighted. Accessibility noted to be limited by/for: rural and remote, Aboriginal and Torres Strait Islander populations, social disadvantage, the aged, internet connectivity/costs, limited internet/computer literacy, unwillingness to use online services. Digital gateway needs to account for: culturally/age appropriate content and useability; need for community champions to promote use and access; need for computer/internet literacy education; potential to situate points of digital access within existing public spaces (e.g. the library), and for up-skilling community members within those places (e.g. librarians, community legal centres, other community leaders) in MH literacy. However, digital gateway identified as a good way of engaging young people. In some rural areas though – high usage of telehealth • reported lack of continuity for young people accessing helplines. Need to expand options re phone supports - i.e. has to be no cost to callers (including from mobiles), no call-backs (by then, moment has passed) • need for technology in mental health services to increase service access and availability – yet support required for providers to utilise telehealth and online gateway across the lesser populated rural and remote areas, there are very limited mental health or other social support services. This was also noted in a recent qualitative study among stakeholders working in Indigenous communities in Northern Territory (a nearby PHN) that indicated e-mental health interventions could potentially be effective in supporting or extending existing mental health services(Puszka et al., 2016). Recent Clinical Council consultations also expressed similar view as stated by one of the

Outcomes of the health needs analysis		
		members: '*e-mental health has a growing body of evidence for its use, inexpensive and under utilised*'.
Improve access to affordable primary mental healthcare in rural and remote areas	Limited availability and accessibility of affordable mental health services in rural and remote areas. Access to mental health nurses in general practices in the region were limited and community feedback indicated that this was a great need in the rural areas. Additionally, an increase in the number of bulk billing practices is required.	Feedback from stakeholder/community consultations and online survey identified: • respondents to the online survey identified people in rural and remote areas as the group most in need of mental health services • barriers to access include: limited availability of bulk-billing GPs, limited and inconsistent availability of mental health and support services, long wait times, transport, small-town stigma, Queensland Health services at capacity, resources wasted on travel, lack of culturally appropriate services (particularly highlighted in Ingham), inability to claim MBS for MH and allied health practitioners providing telehealth • difficult to attract and retain staff (psychologists, GPs, youth workers etc.). Expensive to get practitioners to outreach • target groups noted as: youth, children with parents with MH issues, veterans, older people • rural mental health services are not equipped to provide appropriate care for consumers experiencing psychotic episodes and so they are often transported out of their community and estranged from family supports • peer support is needed; need for more group work. Feedback from peak state-wide agencies, local experts and NQPHN Clinical Councils identified: • number of sessions available through ATAPS is not always sufficient for complexity of some mental health issues e.g. trauma related or personality disorders. Analysis of local service planning reports and initial service mapping activities: in the lesser populated towns and more remote areas, there are very limited to no private psychologists. The regularity of primary mental health and QH mental health outreach visits to rural, remote and remote Indigenous areas is unknown as feedback indicated that scheduled visits did not always occur due a range of reasons.

Outcomes of the health needs analysis		
Early intervention and prevention services for individuals and families at risk	Limited early intervention and prevention services across the region.	Feedback from stakeholder/community consultations and online survey identified: • respondents to the online survey identified early intervention as the services that are most required to meet the needs of people who are missing out on services • inadequate resources for early intervention. Social services are increasingly required to provide MH support in rural areas - absence of specialised MH services • need to refocus resources on early intervention (EI). Need EI services for: children in out-of-home care (do not meet criteria for CYMHS); families; children and young people; programs supporting culturally strong parenting. Need for expanding school-based mental health literacy, and early intervention and prevention • MHFA needs investment on a broader scale so that it is accessible to families • early intervention support for children and young people and their families on each island in the Torres Strait is limited – resources limit the ability to provide equity of services to all islands. Analysis of local service planning reports and initial service mapping activities: • need for early intervention services noted in Townsville the service mapping indicates very limited early intervention services across the region. However, more detailed and localised service mapping is required to better understand the localised service systems and individual service capacity.
Increased services for mild-moderate mental illness	There is limited access to services for mild to moderate mental illness across the region by particularly for rural and remote communities. The existing ATAPS service model does not enable access in rural, remote and remote Indigenous communities. Travel costs as well as providers willing to provide the services are the biggest barriers.	Feedback from stakeholder/community consultations and online survey identified: • it is a widely noted issue that there are gaps in services addressing mild-moderate needs for youth and adults (including for older people), and this can be a particular issue within rural/remote/remote Indigenous areas. Mild conditions are not getting the adequate attention/treatment in a timely manner that would likely prevent escalation • the mental health needs of the CALD population also need to be addressed – this was a particular concern within the Townsville HHS • there is no systematic support for non-crisis mental health needs in remote Indigenous communities. Non-crisis MH needs can be hidden within families until acute episodes occur. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified:

Outcomes of the health needs analysis		
		• feedback highlighted the lack of access to available services within the region for individuals with eating disorders. The lack of services makes it very difficult to access the level of care required to prevent hospital admissions. Analysis of local service planning reports and initial service mapping activities: • there are limited numbers of psychologists in rural/remote areas. There are some NGOs providing counselling services in the more populated rural areas, but no such services are apparent in the more remote and lesser populated areas.
Ensure effective carer supports are in place	Across the region the support services for carers varied depending on the NGO services available.	Feedback from stakeholder/community consultations and online survey identified: • need for primary health care organisations to better understand the supports required for carers • limited carer supports – particularly noted in rural areas and across Cape York and Torres Strait.
Suicide prevention programs and develop suicide prevention response protocols in rural areas	Lack of suicide prevention programs and services across the region.	Feedback from stakeholder/community consultations and online survey identified: • many respondents from the online survey identified that current models of suicide prevention in their area are limited in their effectiveness. This is due to suicide prevention models being culturally ineffective, a lack of services, lack of sector coordination, lack of awareness of evidence-based interventions, difficulty accessing services, and the need to develop greater capacity within services • there is an identified need for programs that address stigma, target those most at risk, and, for holistic programs of early intervention and prevention (including within schools), appropriate intervention and post-vention • our large Aboriginal and Torres Strait Islander populations have specific suicide prevention needs. Youth, the elderly and drought affected farming communities are also at risk groups • sometimes delays between seeing GP and psychologist receiving referral • lack of knowledge regarding developing suicide prevention plans • suicide prevention needs a regional approach; need for good community protocols around suicide within Aboriginal and Torres Strait Islander communities; need for hospital and PC staff training in suicide risk

Outcomes of the health needs analysis		
		assessment and screening for social and emotional wellbeing issues; culturally appropriate responses. Analysis of local service planning reports and initial service mapping activities: very limited suicide prevention activities – especially in rural/remote areas
Stronger support with transitions from prison/rehab back into communities	There are no systematic linkages to primary care or other services for prisoners or those exiting rehab returning to communities.	Feedback from stakeholder/community consultations and online survey identified: • problems widely noted across the whole region with people returning from custody to the community or to rehab facilities. Within the region there are very limited specific programs to address this issue, particularly in the adult population • stakeholder feedback also identified the lack of diversionary programs for young people as an alternative to detention • problems widely noted with people being released from planning with no discharge planning and no linkages to primary care or any support for ongoing mental health issues. There are limited specific programs to address this issue. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • QAIHC identified this as a significant service gap. • NQPHN Clinical Council also expressed the need for evidence-based programs for transition prisoners to prevent relapse.
Increased family support services	Increase in flexible programs that work with families and address the mental health and support needs of families.	Feedback from stakeholder/community consultations and online survey identified: • current headspace funding does not include provision for family support; Better Access does not always accommodate family therapy • high rates of children in out of home care, and there is lack of support for postnatal and perinatal mental health • need for: parenting programs; family support; family therapy, early childhood services (Torres Strait); need funding models that are inclusive of families; focus on social and emotional wellbeing versus clinical language; services addressing family violence (Cape York and Torres Strait).
Mental health promotion	Stigma is a key issue impacting access.	Feedback from stakeholder/community consultations and online survey identified:

Outcomes of the health needs analysis		
		• address mental health stigma and improve mental health literacy • need to refocus resources on mental health promotion and early intervention; need investment in community development and community hubs to prevent social isolation and MH issues, and as soft entry point to the MH system • lack of community education around MH and wellbeing for communities • education information needs to be culturally accessible and appropriate. • Clinical Council highlighted the need for mental health promotion targeting school pupils.
Workforce		
Increase the capacity of GPs to identify and support people with mental health issues	GPs are most often the first contact point for people experiencing mental health issues, as it is the closest and easiest form of care available, located near to peoples' homes and communities. Therefore, GPs need to be supported to have the necessary skills to identify and support people with mental health issues. There are less GPs per capita in Cairns, Mackay and Cape/Torres HHS region. GP shortfalls can have impacts on capacity of GPs to adequately identify and coordinate care for individuals with mental health issues.	Feedback from stakeholder/community consultations and online survey identified: • the training and support needs to be increased to GPs particularly around mental health screening and assessment, understanding of referral options/pathways; program guidelines such as ATAPs and MH care plans • need for MHNIPs in more GP practices across the region • need for upskilling GPs in suicide risk assessment and developing a collaborative management plan. Training priorities identified from consultations and online survey included: • advanced training in suicide prevention • advanced mental health care plans • understanding ATAPS guidelines; MHNIP • managing mental and physical health comorbidity, particularly for aging population. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified key reasons for ensuring GPs have capacity to identify and support people with mental health issues include: • ensures that the population as a whole has access to the mental healthcare that they need early in the course of disorders and without disruption • when people receive treatment in GP practices the likelihood of better health outcomes, and even full recovery, as well as maintained social integration, is increased.

Outcomes of the health needs analysis		
		Analysis of local service planning reports and initial service mapping activities: Cairns, Mackay and Cape/Torres HHS have lower than Queensland average for GPS per 100,000 (especially Cape/Torres).[49] The AIHW mental health workforce report also revealed the need for more mental health workers in the remote and very remote areas across Australia(Australian Institute of Health and Welfare, 2017).
Develop and support the primary health care mental health workforce	Potential future shortfalls in mental health nurses, psychiatrists, key allied health professionals and need for task shifting and building a local workforce due to the ageing workforce and low proportion of mental health professionals working in rural and remote areas.	Feedback from stakeholder/community consultations and online survey identified: The following training priorities were highlighted: • screening and assessment, substance use and dual diagnosis, trauma therapy, suicide prevention and better understanding, utilising Aboriginal and Torres Strait Islander MH workers, utilising peer workers/consumer focused care, how to work in a recovery oriented framework, culturally appropriate techniques/resources and approaches, supporting individuals with complex mental health needs. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • national and state data indicating shortfalls in mental health nurses; psychiatrists and Aboriginal and Torres Strait Islander mental health workers. Analysis of local service planning reports and initial service mapping activities: • attraction and retention of mental health professionals to Mackay and other regional areas is a key issue and impacts on continuity of services[50] very limited investment in peer support activities across the region.
Increase the capacity of the primary healthcare workforce (and other workers in education, emergency and welfare sector) to support people with mental health issues	Many primary health care workers (and workers in education and welfare) are frontline staff who come in contact with people experiencing mental health issues but they have limited skills/training to screen, assess, provide brief interventions and appropriately refer.	Feedback from stakeholder/community consultations and online survey identified: • the need to build capacity of primary health care worker to support people with mental health issues was also identified • need to support initiatives that enhance access to appropriate vocational education and training and higher education programs for Aboriginal and

[49] Medical Practice in Remote, Rural and Regional Queensland Minimum Data Set Report at 30 November 2014 www.healthworkforce.com.au

[50] Mackay Regional Mental Health Network, Identified Gaps in Services across the Mackay Region

Outcomes of the health needs analysis		
	Upskilling primary health care, education and welfare workers in mental health is key to addressing issues of undersupply of mental health professionals.	Torres Strait Islander people that are supported by block release times and backfilling for education and training purposes • need to provide training in screening and assessment, brief intervention • cert IV in Mental Health to be available for all staff. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • the need for the 'mental health workforce to be redefined and expanded to include not only medical and health professionals but also workers in the welfare, community and education sectors and the growing peer workforce' was identified by the National Mental Health Commissions.[51] Analysis of local service planning reports and initial service mapping activities: initial mapping on upskilling needs indicated that a suite of training was occurring though there continued to be a need for more to meet changing needs, stay updated and address staff turnover. See above list of training priorities.
Need for primary health care organisations to develop/implement structures, policies and programs that build cultural capability of workforce	Many mainstream primary health care organisations need to strengthen the cultural competence of their mental health and social and emotional wellbeing services.	Feedback from stakeholder/community consultations and online survey identified: • need for more Aboriginal and Torres Strait Islander workers in mental health need to move the workforce along the continuum from Aboriginal and Torres Strait Islander cultural awareness, to cultural sensitivity, ultimately to cultural safety.

[51] Fact Sheet 12 – What this means for workforce and research capacity

Alcohol and Other Drug Treatment needs

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
The NQPHN AOD service needs assessment 2016-17 identified lack of systematic coordination between AOD primary health care services and related services in the region. There are difficulties in accessing and lack of AOD services in the rural and remote communities especially in the Aboriginal and Torres Strait Islander communities. There is a need to enhance the capacity of AOD health workers in the region and additional rehabilitation facilities across the NQPHN. There are emerging AOD service needs for specific groups within the region, (Aboriginal and Torres Strait Islander, young people, homeless people, LGBTI, 'Fly in and Fly out' workers and transitional ex-inmates) and AOD after hours services. The current AOD service needs outcome indicated that it aligns well the with National and the NQPHN alcohol and other drugs strategic framework. The update in this section is very limited as the qualitative data presented remain valid and where applicable quantitative data are incorporated.		
Better integration and coordination between sectors and services	Lack of coordination and communication between services and sectors that is impacting on continuity of care.	Feedback from stakeholder/community consultations and online survey identified: • increase service delivery planning and integration at a local level • lack of cross-sector structures and support mechanisms – e.g. AOD treatment needs to link with employment support to jointly support transitions to employment • recent consultations with Clinical Councils in the NQPHN identified similar concerns as stakeholders in the region. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • identify and promote referral pathways that enhance access to wrap-around services that support individuals, families and communities; engage in local level AOD/ice planning • 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 • need for a central organisation to co-ordinate regular communication between all AOD services. Currently state-based organisations do not necessarily communicate to all stakeholders e.g. government and NGOs • improve integration and collaboration between health services and other services e.g. housing, health, employment, education

Outcomes of the health needs analysis		
		• adequate funding and resources required to provide evidence-based, sufficient and timely initiatives with a focus on the provision of resources to the AOD treatment sector. Analysis of local service planning reports and initial service mapping activities: • need for increased opportunities for Aboriginal and Torres Strait Islander communities to develop their own AOD local area plans and strategies • service mapping did not include details regarding existing coordination and collaborative mechanisms • Consumers finding it difficult to navigate between different service providers
Need for additional treatment capacity and equitable distribution within the specialist AOD sector across the region, in particular rural and remote areas.	Demand for AOD services exceeds supply throughout the region. There are only a few non-government organisations currently operating services within the region in addition to the region-specific services provided by the HHS. In some rural and remote sites there are isolated workers with minimal support structures.	Feedback from stakeholder/community consultations and online survey identified: • increase the range and accessibility of AOD treatment services across all areas within the region. Universally cited issue across all HHS regions • ice is an emerging issue – it is accessible and cheap; alcohol, marijuana, tobacco are other problem drugs. Areas within Mackay and Townsville regions in particular identified a rise in ice-related issues • FASD is still a big issue and not being addressed across the region • in general across the NQPHN region, it was identified a need for: increased capacity in residential rehabilitation services; increased availability of diversionary, case management and assertive outreach programs – particularly for young people and people from Aboriginal and Torres Strait Islander backgrounds; increased availability of residential detox facilities; AOD health promotion; AOD services in rural areas • need for services targeting women including maternal and child health services. This was particularly noted as a need for Aboriginal and Torres Strait Islander women within the Cairns, Cape York and Torres Strait regions • recent consultations with Clinical Councils in the NQPHN identified similar concerns as stakeholders in the region • 28% of respondents to the online survey identified that drug and alcohol treatment needs in their region are being met 'not at all'. 53% of respondents identified that these treatment needs are being met 'somewhat'. Respondents identified youth, Aboriginal and Torres Strait Islander people, and people in rural and remote areas as those most in need of AOD services.

Outcomes of the health needs analysis		
		Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • an increase in demand of clients with more complex issues including co-morbidities (mental health and chronic disease) and poly drug addiction • a lack of residential rehabilitation services across Queensland and lack of dedicated AOD positions within the Aboriginal community controlled health sector (specifically for ice) • demand for residential detox facilities to ensure a transition pathway to rehab facilities • enhance health professionals' skills to deliver AOD intervention – in both the primary health care and emergency settings • increase workforce development for the AOD sector and create a sustainable AOD workforce that is capable of meeting future challenges. Analysis of local service planning reports and initial service mapping activities: • an underinvestment in the specialist AOD treatment sector across the NQPHN region with a particular need for additional services in the rural areas. • as identified by QNADA, there are a few non-government organisations currently operating services within the region in addition to the region-specific services provided by the HHS. The service mapping indicates limited specialist AOD services within the region, especially outside of the major regional centres. The regularity of QH AOD services to rural, remote and remote Aboriginal and Torres Strait Islander communities in unknown, as is the extent to which they provide support to youth. The service mapping indicates that there are only a handful of community-based AOD counselling and support services across the NQ region, and none in the rural towns and remote and remote Aboriginal and Torres Strait Islander communities. The rate of overnight hospitalization for AOD misuse in the rural and remote at SA3 level is higher the outer regional centers within NQPHN (180/100,000): • Far North – 327/100,000 (Australian Institute of Health and Welfare, 2014)
Additional capacity within rehab facilities – including additional capacity to support	Limited available rehab facilities with the region and the existing facilities do not have capacity to cater to the particular needs of individuals and families needing treatment	Feedback from stakeholder and community consultations identified:

Outcomes of the health needs analysis		
the particular needs of individuals and families		• a need to increase the access and availability of rehab facilities. These issues were of concern across the whole NQPHN footprint. There are often waiting lists, so critical opportunities for engagement are missed • concerns were expressed about the cultural competency of some services – with low Aboriginal and Torres Strait Islander client numbers at some facilities • feedback and discussion around the existing facilities identified that some of the existing facilities may not be utilised in a way that currently meet the needs of the communities • a need to increase access to primary health on-site for residential rehabilitation services; address physical health, child and maternal health, and SEWB in addition to substance use. • a need for residential rehab facilities to support specific groups (e.g. youth, women, families, Aboriginal and Torres Strait Islander people) • a need to work with families to support people through the rehab journey – all programs need to be holistic • 75% of respondents to the online survey identified rehab services as being required locally to address the needs of those who are missing out on services. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • lack of residential rehabilitation services across Queensland • demand for residential detox facilities – too problematic with day detox process • facilities where there are large numbers of Aboriginal and Torres Strait Islander clients that are not accessing service – funding bodies support culturally effective inclusive strategies • current family-centred facility requires Indigenous governance to ensure culturally safe and effective strategies are implemented. Analysis of local service planning reports and initial service mapping activities: • need increased capacity in residential rehabilitation services - including peer support and after-care support services • need culturally appropriate residential rehabilitation services to effectively meet the needs of young people from rural and remote locations as people do not want to leave their community. • there are limited rehab facilities in the region and no facilities for youth.

Outcomes of the health needs analysis		
Need for additional detox facilities in the region that provide services for specific population groups such as youth and women	Very limited in-patient detox facilities in the region	Feedback from stakeholder/community consultations and online survey identified: • across the region, the need for additional detox facilities was identified. Whilst some feedback from individuals was around the suitability of day detox, others identified that the need was in relation to residential detox facilities as it was hard to do day detox then go home to same situation at night • the Torres Strait identified a need to have local access to detox and well as rehab facilities • respondents to the online survey identified that withdrawal management services are the principally needed services to address the needs of people who are missing out on services in the region – closely followed by rehab services and counselling. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • funding to support detox beds are made available for specific facilities to trial with a long term focus on further investment • increase access to AOD treatment and support services for young people • funding to support integrated service provision to vulnerable young people. Analysis of local service planning reports and initial service mapping activities: • need increased availability of residential detox facilities. • culturally appropriate detoxification services to effectively meet the needs of young people from rural and remote locations.
Need for AOD services for young people	Not enough AOD services and workers to support young people - especially in rural and remote communities.	Feedback from stakeholder/community consultations and online survey identified: • across the whole region, the need for additional services and service capacity was identified • there are no rehab services for young people within the region. • serious issues in relation to poly drug use amongst groups of vulnerable young people in the region; significant issues with community safety and public amenity relating to young people and drinking alcohol and inhalant use; escalation in methamphetamine use and dual diagnosis issues in Cairns, Townsville and Mackay • long waiting lists exist for QH youth AODs • no specialised AOD services in Cape York for young people

Outcomes of the health needs analysis		
		• difficult to access AOD counselling in rural areas • need increased access to AOD services for young people; more education in schools; youth groups; prevention and early intervention; culturally appropriate ways to connect with Aboriginal and Torres Strait Islander young people; in conjunction with AOD treatment, young people often also require support with rebuilding their relationships with family and community • respondents to the online survey identified youth as the group most in need of AOD services. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • a clear need to increase youth related AOD services within the NQPHN with a focus on afterhours care/programs. • research into a successful model for outstation/ homeland programs for at risk young people. • support AOD youth focused workforce to deliver family responsive information/resources. Analysis of local service planning reports and initial service mapping activities: • need for diversionary programs for young people aimed at supporting young people to reduce risks associated with drug and alcohol misuse; treatment and rehabilitation - including culturally appropriate detoxification and residential rehabilitation services to effectively meet the needs of Aboriginal and Torres Strait Islander youth from rural and remote locations; case management and assertive outreach programs. • Within the NQPHN region, there is one Queensland Health youth Aboriginal and Torres Strait Islander specific AOD service located in Cairns, however aside from this, as mentioned above, the extent to which QH AODs provide support to youth is unknown. This is particularly so within the less populated rural areas, and the remote and remote Indigenous areas where all AOD services are provided through outreach. The service mapping indicates that there are only two community-based youth AOD services (one in Cairns and one in Mackay) across the NQPHN region. As highlighted elsewhere, there are no youth rehab facilities in the region.

Outcomes of the health needs analysis		
Establishment of services and stronger support mechanisms for individuals transitioning from prison to rehab/community (both adult and youth)	There are no systematic linkages to primary care or other services for individuals transitioning from prison to rehab or back to community	Feedback from stakeholder/community consultations and online survey identified: • this key service need was identified across the region. This included the need for post release programs (from rehab and prison) – including care-coordination and a step out'/community reintegration facilities for individuals on release from prison • support for prisoners needs to include provision of AOD treatment within the prison setting as also identified. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • a coordinated approach between QCS, rehab facilities and other government and NGOs to transition across AOD services • provide greater support to clients transitioning from prison, including provision of AOD treatment within the prison setting e.g. step in – step out facilities and programs. Analysis of local service planning reports and initial service mapping activities: • build and strengthen partnerships with key agencies to advise and provide support to address AOD harm among offenders. The service mapping indicates that there are no specific services targeting this issue. However, more detailed and localised service mapping is required to better understand the localised service systems.
Additional service capacity required within the region to respond to ice	Many services within the region feel unequipped to effectively support people using ice. This included primary health care services as well as NGOs and rehab services.	Feedback from stakeholder/community consultations and online survey identified: • whilst this issue was raised across the region, the Mackay area identified the greatest concerns. The lack of services, information and support in dealing with the impacts of ice addiction was identified. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • ice information for family/community members is available in plain language statements. • organisations offer advice and referral to support both clients and family/community – people do not know what to do if they do not know where to go to seek help • the use of localised information about ice support is needed – flyers/education/helplines. • school-based education about ice.

Outcomes of the health needs analysis		
		• use of existing/emerging local networks to support information delivery e.g. sport clubs/PCYC/art and culture activities. Analysis of local service planning reports and initial service mapping activities: • the service mapping indicates that there are no services providing these services • however, more detailed and localised service mapping is required to better understand the localised service systems.
Additional services and support for families and carers of AOD users – particularly ice	The need for increased services and support for families/carers for ice users was identified as a key area of service need. Consultations identified that approaches that would meet the needs included support groups, counselling and also peer support.	Feedback from stakeholder/community consultations and online survey identified: • families identified that they were struggling with what to do and how best to support their loved ones. This was particularly highlighted in the Townsville and Mackay region. They identified the need for the establishment of family support groups in major northern centres as well as services to the families of people who have AOD issues - to avoid the breakdown of families and/or intervention by Child Safety. Analysis of local service planning reports and initial service mapping activities: the initial service mapping identified that most NGOs provide what they can as part of their service, however, there are no organisations specifically funded to provide this.
Additional services and increased service capacity in relation to health promotion, early intervention and prevention	A need to increase the availability and services around alcohol and other drugs information and educational sessions was identified across the region. This was highlighted as a need to increase services and groups for men across Cape York and the Torres Strait.	Feedback from stakeholder/community consultations and online survey identified: • ice education/training or training is required around re-emerging drug issues – community members wanting to form AOD groups to learn more • need for localised resources to provide health education about AOD issues • need for health promotion/early intervention services, including educational programs (e.g. men's groups). • AOD health promotion programs in Schools (especially in rural and remote communities) Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • funding opportunities for health promotion and health education programs with localised content needed • frontline workers require regular upskilling in areas of emerging AOD issues. Analysis of local service planning reports and initial service mapping activities: • need for additional AOD health promotion across the region but in particular rural and remote areas.

Outcomes of the health needs analysis		
		The service mapping indicates that there are very few AOD services providing AOD health promotion and early intervention and prevention. However, more detailed and localised service mapping is required to better understand the localised service systems, as this may be part of the general primary health care health education program.
Increase the supply of AOD workers	The needs assessment identified a lack of specific alcohol and other drug workers across the region particularly in rural and remote areas and the Torres Strait.	Feedback from stakeholder/community consultations and online survey identified: • consistent message from consultations and online survey was the lack of specific AOD workers in many areas within regions. This was particularly noted as a priority for rural/remote communities and the Torres Strait. • QH AOD teams in some HHS regions had reduced capacity over recent years (e.g. Mackay, Cape/Torres, Townsville). • survey results indicated that 50% of providers specifically identified the need for psychology services and 50% for Aboriginal and Torres Strait Islander mental health workers to address workforce gaps in AOD • 72% of respondents to the online survey identified AOD counselling as being required locally to address the needs of those who are missing out on services. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • Queensland Aboriginal and Islander Health Council and the Queensland Indigenous Substance Misuse Council as the respective peaks for Aboriginal and Torres Strait Islander community controlled health and AOD services identified the need to 'lobby for resources to meet current and emerging service demand' as a key sector priority • local experts including QAIHC supported the need to grow a local workforce, in particular Aboriginal and Torres Strait Islander AOD workers • experts locally and from peak bodies believe that this unmet need is accurate for the NQPHN region. • the need to build the capacity of Aboriginal and Torres Strait Islander mental health workers and further develop more effective models to meet the needs of the community is required. Analysis of local service planning reports and initial service mapping activities:

Outcomes of the health needs analysis		
		• the New Horizons Report, a national review of alcohol and other drug treatment services in Australia identified a 'substantial unmet demand' (p. 183). The research estimated that approximately 200,000 people receive AOD treatment in any one year in Australia. At the same time, modelled projections of the unmet demand for AOD treatment (that is the number of people in any one year who need and would seek treatment) are conservatively estimated to be between 200,000 and 500,000 people over and above those in treatment in any one year.
Increase the capacity of the existing AOD workforce to better support people experiencing AOD issues	NGO AOD workers across the region identified the need to increase their skills and capacity to effectively treat and support people experiencing AOD issues. On-site training for residential rehab facilities should be considered as staff often have difficulty in being released to attend training due to backfilling.	Feedback from stakeholder/community consultations and online survey identified the following key training priorities: • working with complex trauma • cultural competence - culturally appropriate responses and approaches to AOD treatment and harm minimisation as traditional approaches are not always very useful • ensuring all staff have formal qualifications – several organisations would like to support all staff to complete Cert IV or higher in AOD qualifications • ice and other emerging drug issues • withdrawal support • training for pharmacists (e.g. mental health first aid) and identification of at-risk patients to refer to AODs • dual diagnosis. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • need for a coordinated approach to AOD workforce support and development • training and professional development for front line staff is critical • there is a range of training being delivered by key agencies including INSIGHT Training and Education Unit, Queensland State Government and Dovetail, however, one of the challenges lies with staff shortages not enabling staff to be released for training; or high staff turnover resulting in a constant need for upskilling • on-site training/upskilling for AOD workforce e.g. digital/RTO on-site – addresses issues of staff attendance

Outcomes of the health needs analysis		
		• front line staff require information/skilling/debrief/supervision/mentoring about emerging AOD issues on a regular basis. Analysis of local service planning reports and initial service mapping activities: • workforce mapping indicated that there is a need for improved training pathways including developing strategies and pathways into the VET and university sector.
Increase the capacity of GPs and other primary care and community sector workers to better support people experiencing AOD issues	GPs and other primary care and community sector workers lack capacity to effectively support those with AOD issues. Currently there are no primary healthcare guidelines for working with Aboriginal and Torres Strait Islander communities around drug and alcohol issues that are followed across the region. The AOD workforce comes from a wide variety of backgrounds and the health care services require support around service delivery and service delivery models to embed drug and alcohol services within their primary healthcare services.	Feedback from stakeholder/community consultations and online survey identified: • widely noted issue across the region. GPs, psychologists usually have limited training in AOD • feedback from service providers in the primary healthcare sector indicated staff felt they had a lack of skills and confidence in addressing drug and alcohol issues with individuals and families • training priorities included: use of screening and assessment tools; brief interventions; motivational interviewing; stages of change model; and understanding referral options • other service needs included ensuring more GPs and pharmacists are qualified to run opioid programs need to embed AOD workers in GP practices and the need to upskill workers in new/emerging drugs (ice). Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • AOD intervention training for all frontline staff including administration, primary health care, general practice and allied health staff • increase AOD workforce in primary health care and general practice facilities. Analysis of local service planning reports and initial workforce mapping activities: • the need to increase opportunities for student placements in AOD settings during vocational, undergraduate and postgraduate education by supporting local universities to establish AOD student placement options.
Sustainable AOD workforce	Difficulties with retention of staff – which impacts on continuity of care and provision of services was identified as a key service issue. There is a need for strategies to retain workers in AOD workforce including ensuring; support for to debriefing and ensure wellbeing; ensure staff have access to professional development, supervision and mentoring.	Feedback from stakeholder/community consultations and online survey identified: • across the whole region issues with retention of staff were identified. These included high workload, lots of staff burn out, limited access to debriefing, counselling, lack of clear training pathways and career pathways as well limited structured continuing professional development

Outcomes of the health needs analysis		
	There is a need to support: • systems to provide adequate supervision and support; including policy and procedure for staff to access debriefing, counselling and employee assistance programs. • systems to ensure adequate continuing professional development. Organisation have structures, policies, and programs that move the workforce along the continuum from Aboriginal and Torres Strait Islander cultural awareness, to cultural sensitivity, ultimately to cultural safety. A percentage of PHN funds would be allocated to enable this to occur	• another issue identified as contributing to staff turnover for Aboriginal and Torres Strait Islander staff was a lack of cultural safety within organisations they were employed in. Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • QAIHC identified high burn out rates as a key issue and suggested wage parity based on qualification and skill levels was required; along with more opportunities to access VET training (Diploma Level Qualifications) to meet the complex needs of presenting clientele • need for a clear career pathway for AOD workers. Analysis of local service planning reports and initial service mapping activities: • need a sustainable AOD workforce in the NQPHN region that is capable of meeting future challenges, innovation and reform. • a key service need identified locally was the need to ensure all organisations had structured continuing professional development systems in place for their staff. • Improving quality of employment for rural and remote workers
Insufficient monitoring and evaluation systems and processes	At this stage, there are insufficient systems and processes across the region to ensure that sufficient data is being collected and collated to measure impact of the service provision across the NQPHN footprint. Relationships, partnerships and collaborative arrangements are being established across the NQPHN region. As these further develop, systems will improve.	There is a need for NQPHN to further develop links at both a state and local level to capture data and information to further understand the responsiveness, effectiveness and overall performance of the regional AOD service system.

Indigenous Health (including Indigenous chronic disease)

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
Chronic conditions		
Integrated Team Care	The need within NQPHN to further expand and enhance Integrated Team Care to achieve better treatment and management of chronic conditions for Aboriginal and Torres Strait Islander people, through better access to the required services and better care coordination and provision of supplementary services.	**Feedback from stakeholder/community consultations and online survey identified:** • Across the NQPHN region, feedback on type of service use indicated that 57% of respondents utilised ITC for an Indigenous health issue, 26% for counselling, 18% for diabetes education, 13% for physiotherapy services and 9% for dietetics services • Respondents rated the service they received as 'excellent' 26%, 'very good' 39%, "good' 26%, and poor 8% • 43% received the service from a GP clinic, the remaining from an NACCHO and one (4%) from Health Reimagined • Very good service • Waiting times should be shorter • Conduct more community-wide programs (free) regularly • Employment of more Indigenous staff would improve service • More culture awareness in GP • Easier access to see a specialist • Access over weekends (after hours) required • Longer patient visits: Condense many items into one visit so do not need to return • Offer more physiotherapy services in communities • Need culturally appropriate gyms and personal trainers to assist Indigenous people to lose weight and improve their physical health • Sought no treatment if payment was mandatory – struggled. Analysis of recent service mapping report in Cape York (Aurukun, Coen, Laura, Hopevale, Lockhart River, Kowanyama, Mapoon, Napranum, Pormpuraaw and Wujal Wujal):

Outcomes of the health needs analysis		
		• Major services gaps in the Cape York region; Exercise Physiology, Occupational Therapy and Physiotherapy Issues affecting primary health service delivery: • Lack of integrated service planning amongst partner agencies • Community specific data to inform service planning and delivery not readily available • Unclear defined roles and responsibilities of different service providers • Workforce training issues • Risk management and processes/procedures • Lack of knowledge about the local referral pathways within the region • High costs associated transportation and accommodation to accessing services.
Mental health - Service enhancements		
Increase availability of services for mild-moderate mental illness through Aboriginal community controlled and primary health care sectors with focus on social and emotional wellbeing and healing	Some existing services and programs within the NQPHN region are not culturally appropriate service models and reduce access and treatment outcomes for Aboriginal and Torres Strait Islander people.	Feedback from stakeholder/community consultations and online survey identified: • social and emotional wellbeing is a better way; mental health is seen as labelling. Social determinants and wellbeing models need to be addressed overall in programs • culturally inappropriate services - particularly noted several rural communities where choice of provider is limited. • need for: culturally grounded service frameworks (e.g. in Hopevale this was noted as basing services around place, person, passages, processes; men's/women's groups; social and emotional wellbeing, AMHFA; using music, performance and creative therapies; building on existing capacities; financial counselling (budgeting is a major issue and leads to conflict, stress). • in a survey of service providers in the NQPHN region, 76% of respondents identified Aboriginal and Torres Islander people as a group most in need of mental health services. Similarly, as noted earlier in the needs analysis outcome, SEWB for use by ASTI communities must address issues that directly associated with indigenous health

Outcomes of the health needs analysis		
		and wellbeing such as connectedness, loss, resilience, empowerment and control (Le Grande et al., 2017). Analysis of local service planning reports and initial service mapping activities: • Aboriginal and Torres Strait Islander people in FNQ should be engaged in meaningful and genuine dialogue with all levels of government about their needs, and empowered by government to solve their own problems, their way. Service delivery should be culturally appropriate ensuring Aboriginal and Torres Strait Islander people feel secure and welcome accessing mainstream services. • strengthen pathways for individual and community healing. • culturally insensitive communication by some services creates tension. Some services lack understanding about Torres Strait cultural and healing practices. Need to re-instate cultural values and implement education promoting understanding of the spiritual and healing practices of the Torres Strait to strengthen the cultural competence of government and NGOs. Specific details around cultural appropriateness was not explored in the initial service mapping apart from community feedback. More detailed and localised service mapping is required to identify cultural appropriateness and capacities of locally-based organisations.
Increased access to the range of mental health and wellbeing services for Torres Strait Islander people.	Within the Torres Strait there are very limited mental health and wellbeing services, particularly on the outer islands.	Feedback from stakeholder/community consultations and online survey identified: • lack of services to support people living in the Torres Strait with mental health needs; limited services to the outer islands • some telephone counselling and support works well for outer islands. Analysis of local service planning reports and initial service mapping activities: • limited understanding of approaches to promote mental health and wellbeing by some service providers • men have little opportunity for healing; need healing programs/services for young people (aged 13–26) who have experienced violence, abuse and are dealing with trauma • support the development of community-led healing teams. Support healing teams to co-design methodologies with community members to ensure healing processes fit community needs and address wellbeing needs. Build local capacity to respond to trauma.

Outcomes of the health needs analysis		
		The service mapping indicates that there is only very limited Queensland Health mental health and wellbeing services supporting the remote islands. There are very limited counselling and other support services within the Torres Strait region. There is a community controlled health service in the Northern Peninsula region, but none on Thursday Island or outer islands.
Mental health - Workforce		
Sustainable primary mental health care workforce that can meet growing demand with an increase supply and utilisation of Aboriginal and Torres Strait Islander primary health care workers	Difficulties with retention of staff – which impacts on continuity of care and provision of services was identified as a key service issue. These is a need for strategies to retain workers in primary mental health care workforce including: • systems to provide adequate supervision and support; including policy and procedure for staff to access debriefing, counselling and employee assistance programs • systems to ensure adequate continuing professional development • organisation has structures, policies, and programs that move the workforce along the continuum from Aboriginal and Torres Strait Islander cultural awareness, to cultural sensitivity, ultimately to cultural safety • heavy work demands and a lack of clearly defined roles and boundaries reflecting high community need and a shortfall of Aboriginal and Torres Strait Islander workers.	Feedback from stakeholder/community consultations and online survey identified: • high staff turnover; staff feeling overwhelmed with lack of skills and training in mental health; need for more formalised structures for professional development and supervision • primary health care workers report higher caseloads of people who have mental health issues in recent years • need to support training and development that enhances the capacity of Aboriginal and Torres Strait Islander primary health care workers to provide screening, assessment, brief intervention and referral services for Indigenous clients. Feedback from peak state-wide agencies, local experts and NQPHN Clinical Councils identified: • the Indigenous Doctors Association report that causes of staff turn over from Aboriginal and Torres Strait Islander staff are feelings of isolation; high workloads; lack of cultural capability[52] • the need to ensure primary health care workers are supported by mental health specialist was identified by Human Capital Alliance in their report to the National Mental Health Commission.[53] • The need for training for Aboriginal and Torres Strait Islander people to be extended beyond Certificate level to include diploma and higher tertiary
Support and expand appropriate services for	There is a need to improve access for Aboriginal and Torres Strait Islander people experiencing mental health issues by supporting	Feedback from stakeholder/community consultations and online survey identified:

[52] Indigenous Doctors Association, 2013

[53] Ridoutt, L; Pilbeam, V. Perkins, D. (2014) Final report of workforce requirements in support of national review of mental health programs and services. National Mental Health Commission

Outcomes of the health needs analysis		
Aboriginal and Torres Strait Islander people	and expanding services for Aboriginal and Torres Strait Islander people. Within this, there is a need to build capacity and capability of the mental health service system, particularly Aboriginal and Torres Strait Islander community-controlled services and its workforce. Integral to building the supply of an Aboriginal and Torres Strait Islander AOD workforce is the need to ensure staff are suitably trained and supported. Furthermore, in order to improve access to mental health services for Aboriginal and Torres Strait Islander people there is a need for organisations to have structures, policies, and programs that move the workforce along the continuum from Aboriginal and Torres Strait Islander cultural awareness, to cultural sensitivity, ultimately to cultural safety.	• a need for more Aboriginal and Torres Strait Islander workers in mental health, especially in Aboriginal community controlled health services within the region. • there is need for strategies that grow a local Aboriginal and Torres Strait Islander mental health workforce, as currently there is a labour skills shortage • need to move the workforce along the continuum from Aboriginal and Torres Strait Islander cultural awareness, to cultural sensitivity, ultimately to cultural safety • the need for more Aboriginal and Torres Strait Islander primary health care staff with mental health skills to improve access for Aboriginal and Torres Strait Islander people. Very limited specified positions for Aboriginal and Torres Strait Islander people locally. Indigenous staff employed can feel isolated and experience burn out due to high workloads. It was suggested that more Aboriginal and Torres Strait Islander staff would support more culturally appropriate responses and approaches to mental health treatment • consistent need for primary health care and mental health workers to better understand the significant contribution an Aboriginal and Torres Strait Islander primary health care worker can make to supporting people with mental health issues • need to ensure formalised training and career pathways for Aboriginal and Torres Strait Islander people. Feedback from peak state-wide agencies, local experts and NQPHN Clinical Councils identified: • the need for more Aboriginal and Torres Strait Islander mental health workers (identified by National Mental Health Commission and by QAIHC) QAIHC also identified the need for formalised training and career pathways.
Alcohol and other drugs		
Support and expand appropriate services for Aboriginal and Torres Strait Islander people	There is a need to improve access for Aboriginal and Torres Strait Islander people experiencing AOD harm by supporting, enhancing and expanding service options for Aboriginal and Torres Strait Islander people	Feedback from stakeholder and community consultations identified the need to: • the need for more Aboriginal and Torres Strait Islander staff with AOD skills to improve access for Aboriginal and Torres Strait Islander people • very limited specified positions for Aboriginal and Torres Strait Islander people locally particularly in general practice

Outcomes of the health needs analysis		
	There is a need to build capacity and capability of the AOD service system, particularly Aboriginal and Torres Strait Islander community-controlled services and its workforce to manage individuals and families with AOD issues. Integral to building the supply of an Aboriginal and Torres Strait Islander AOD workforce is the need to ensure staff are suitably trained and supported.	• Aboriginal and Torres Strait Islander staff employed can feel isolated and experience burn out due to high workloads. It was suggested that more Aboriginal and Torres Strait Islander staff would support more culturally appropriate responses and approaches to AOD treatment and harm minimisation. A recent draft report on service gaps in the Cape York region has identified AOD as one of the top 10 service needs in the Aboriginal communities(Regional Health Partners, 2017). Feedback from peak statewide agencies, local experts and NQPHN Clinical Councils identified: • lack of dedicated AOD positions within the Aboriginal community controlled health sector • there is need for strategies that grow an Aboriginal and Torres Strait Islander AOD workforce (QAIHC) as currently there is a labour skills shortage • the National Aboriginal and Torres Strait Islander Peoples' Drug Strategy 2014-2019 identified the need to 'build capacity and capability of the AOD service system, particularly Aboriginal and Torres Strait Islander community-controlled services and its workforce services' as a key priority area • need for a clear career pathway for Aboriginal and Torres Strait Islander AOD workers • need for skilled Aboriginal and Torres Strait Islander primary health care workforce with confidence to deliver AOD support. • High turnover of professional staff
Maternal and Child Health	Poor coordination between general practice and other parts of the child and youth health service system (KBC Australia, 2018d).	Findings from a 2016 service mapping and the KBC, Early Development Service Review, 2018 conducted within NQPHN region revealed the following as common maternal and child health service delivery gaps and barriers: • Transport to appointment • Lack of health promotion and outreach services to remote communities • Lack of communication between health care providers • Limited allied health services or affordable allied health services • Lack of knowledge of other programs and services • Lack of staff upskilling and professional development

Outcomes of the health needs analysis		
		• Skill gaps and lack of parents knowledge about early childhood development Within the HHS regions, the following are the top five service related gaps: Cairns and Hinterland HHS • Low level of communications between health care providers • Lack of knowledge of other service providers • Limited capacity to network and link in with other services • Challenges in recruiting and retaining health professionals • Poor access to allied health services Mackay HHS • Lack of health promotion services to remote and rural communities • Lack of linking of services • Limited knowledge about the services • Decreasing access to bulk billing primary care in MHHS area • Shortage of specialist and allied health services Torres and Cape HHS • Lack of suitably qualified Aboriginal and Torres Strait Islander health workers • Limited capacity to network and link with other service providers • Lack of communication between health care providers Townsville HHS • Lack of transport to appointments • Service not culturally appropriate • Low literacy level and promotion of services • Difficulties accessing specialist children services (therapy, GPs and medical specialists) (KBC Australia, 2018a, 2018b, 2018c, 2018d; Northern Queensland Primary Health Network, 2017a).

Outcomes of the health needs analysis		
Sexual Health	A key service need identified is the need to improve the coordination of the public health management of syphilis with a focus on syphilis outbreaks in the region.	Stakeholders/community consultations and online survey identified that the STIs are going undiagnosed because there is no formal screening being carried out and there are no culturally appropriate staff for the role in some of the Cape and Torres communities (e.g. Northern Peninsula LGA). The continued increase in notifiable STIs in the region (see section 2 – STIs) indicates a need for more health promotion activities targeting different settings within NQPHN. The third National Sexually Transmissible Infections Strategy 2014-2017 and the Queensland Sexual Health Strategy 2016-2021 recommended primary prevention strategies (building communication skills, workshops, community events, school sex education, training of teachers, community leaders, peer educator and social marketing) combined with early treatment and voluntary testing as most effective response to reduce the prevalence of STIs and BBV, (Department of Health, 2014; Queensland Health, 2016).

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