Western Queensland Primary Health Network

Technical Paper
2017 Health Needs Assessment

November 2017

Kristine Battye Consulting (KBC) conducted a full health needs analysis for Western Queensland Primary Health Network in 2016 including stakeholder consultation. This report builds on the work undertaken by KBC and includes updated census data, recent releases of data from sources such as My Healthy Communities and PHIDU, unpublished data provided by partners (such as emergency department data), information on after hours services and mapping of service changes and programs. Healthy Futures Australia has worked with WQPHN to review and update the report which has been used to inform the 2017 Health Needs Assessment refresh.

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LIST OF ACRONYMS

ABS	Australian Bureau of Statistics
AICCHO	Aboriginal and Islander Community Controlled Health Organisation
AICCHS	Aboriginal and Islander Community Controlled Health Service
AEDC	Australian Early Development Census
AIHW	Australian Institute of Health and Welfare
APHRA	Australian Health Practitioner Regulation Agency
ASR	Age standardised rate
ATAPS	Access to Allied Psychological Services
BAP	Better Access Program
COPD	Chronic Obstructive Pulmonary Disease
CWHHS	Central West Hospital and Health Service
EPC	Enhanced primary care
FTE	Full time equivalent
GP	General Practitioner
HNA	Health Needs Assessment
HACC	Home and community care
HHS	Hospital and Health Service
IRSD	Index of Relative Social-Economic Disadvantage
LGA	Local Government Area
MBS	Medicare Benefits Scheme
MHNIP	Mental Health Nurse Incentive Program
MICRRH	Mount Isa Centre for Rural and Remote Health
NDSS	National Diabetes Services scheme
NGO	Non-government organisation
NHPA	National Health Performance Authority
NMHSS	Nukal Murra Health Support Service
NWHHS	North West Hospital and Health Service
NWRM	New Ways Real Health
PBS	Pharmaceutical and Benefits Scheme
PHIDU	Public Health Information Development Unit
PHN	Primary Health Network
RACFs	Residential aged care facilities
RFDS	Royal Flying Doctor Service
SA2	ABS geographical Statistical Area Level 2
SD	Statistical division
SEIFA	Socio-Economic Indexes for Areas
SWHHS	South West Hospital and Health Service
WQPHN	Western Queensland Primary Health Network
QLD	Queensland

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1 INTRODUCTION

The Western Queensland Primary Health Network (WQPHN) is an independent not-for-profit company formed by the three Western Queensland Hospital and Health Services (HHSs) to create an entity to foster partnerships with funders and providers to improve primary health care service delivery to the people of Western Queensland. Under this Commonwealth initiative, a major goal is to work to improve the integration of primary care services and support more seamless health care in communities across Western Queensland with the key objectives being to:

- Increase the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes and
- Improve coordination of care to ensure patients receive the right care in the right place at the right time.

1.1 Overview of the Region

The WQPHN has a footprint that extends from the western side of the Gulf of Carpentaria, south along the length of the Northern Territory border to the South Australian and New South Wales borders. The eastern border runs from Normanton in the Lower Gulf and follows an east-southeast trajectory through Julia Creek, Tambo and Roma.

Western Queensland Primary Health Network covers a land area of 956,438km^2, which is 55% of total land area in Queensland. There are twenty Local Government Areas (LGAs) and three Hospital and Health Services (HHS) within Western Queensland. The table below lists the LGAs that define each of the HHSs.

Central West	North West	South West
Barcaldine	Burke	Balonne
Barcoo	Carpentaria	Bulloo
Blackall-Tambo	Cloncurry	Maranoa
Boulia	Doomadgee	Murweh
Diamantina	McKinlay	Paroo
Longreach	Mornington	Quilpie
Winton	Mount Isa	

WQPHN

North West:

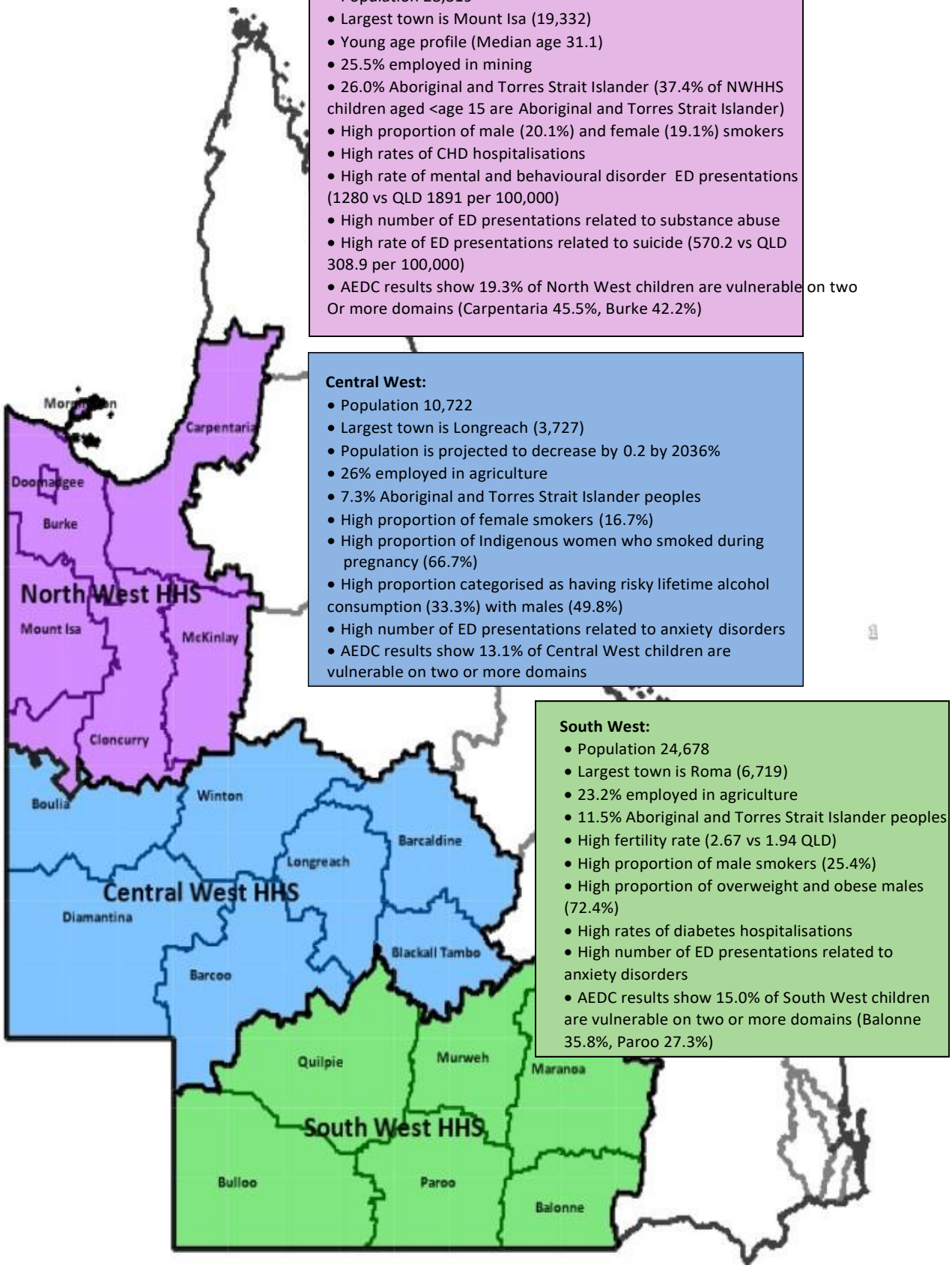
- Population 28,319
- Largest town is Mount Isa (19,332)
- Young age profile (Median age 31.1)
- 25.5% employed in mining
- 26.0% Aboriginal and Torres Strait Islander (37.4% of NWHHS children aged <age 15 are Aboriginal and Torres Strait Islander)
- High proportion of male (20.1%) and female (19.1%) smokers
- High rates of CHD hospitalisations
- High rate of mental and behavioural disorder ED presentations (1280 vs QLD 1891 per 100,000)
- High number of ED presentations related to substance abuse
- High rate of ED presentations related to suicide (570.2 vs QLD 308.9 per 100,000)
- AEDC results show 19.3% of North West children are vulnerable on two Or more domains (Carpentaria 45.5%, Burke 42.2%)

Central West:

- Population 10,722
- Largest town is Longreach (3,727)
- Population is projected to decrease by 0.2 by 2036%
- 26% employed in agriculture
- 7.3% Aboriginal and Torres Strait Islander peoples
- High proportion of female smokers (16.7%)
- High proportion of Indigenous women who smoked during pregnancy (66.7%)
- High proportion categorised as having risky lifetime alcohol consumption (33.3%) with males (49.8%)
- High number of ED presentations related to anxiety disorders
- AEDC results show 13.1% of Central West children are vulnerable on two or more domains

South West:

- Population 24,678
- Largest town is Roma (6,719)
- 23.2% employed in agriculture
- 11.5% Aboriginal and Torres Strait Islander peoples
- High fertility rate (2.67 vs 1.94 QLD)
- High proportion of male smokers (25.4%)
- High proportion of overweight and obese males (72.4%)
- High rates of diabetes hospitalisations
- High number of ED presentations related to anxiety disorders
- AEDC results show 15.0% of South West children are vulnerable on two or more domains (Balonne 35.8%, Paroo 27.3%)



2. SUMMARY OF WQPHN

Demographic and socio-economic characteristics	
Low population density	1.5% of Queensland's population is geographically distributed over 55% of the total land mass of Queensland. 49% of the region's population reside in the NWHHS (CWHSS 15% & SWHHS 36%).
Small population growth projections	The estimated resident population of Western Queensland as at 30 June 2016 was 63,719, which is 1.5% of the total Queensland population. The region's population is expected to grow to 77,209 by 2036 (growth rate of 0.4%). The growth of Western Queensland is comparatively slower than Queensland and in the CWHHS, the population is expected to decrease by 3.8% by 2036.
High Indigenous population	17.2% of the region's population are Aboriginal or Torres Strait Islander (CWHHS 7.3%, NWHHS 26%, SWHHS 11.5%) which is far higher than for Queensland (4%). 43% of the region's Aboriginal and Torres Strait Islander peoples live in the NWHHS and within this HHS, Doomadgee LGA has 93.4% and Mornington LGA has 86% Aboriginal and Torres Strait Islander population. Within the WQPHN over half (51%) of the Aboriginal and Torres Strait Islander population is under the age of 24 years, compared to around one-third (35%) for the total population. *Note-Figures are estimates only based on the Queensland Government Statistical Officer figures from the 2016 ABS Census.*
Younger population profile	The region has younger population profile (%< age 15,22%; %< age 24, 35%; %65+, 12%) compared to Queensland (%< age 15, 20%; %< age 24, 33%; %65+, 15%). Doomadgee LGA had the largest percentage of persons aged 0–14 with 38%, followed by Mornington LGA with 31%.
A higher proportion of males	Nearly 53% of the region's population is male, compared to 50% for Queensland.
High levels of socio-economic disadvantage with sub regional variations	17 of the 20 LGAs in the region have a Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Disadvantage (IRSD) below the Australian average. 53% of the region's population are classified in the two most disadvantaged quintiles nationally and six of the 20 LGAs in the WQPHN (Barcoo, Boulia, Burke, Diamantina, Doomadgee & Mornington) have 100% of their population located in the two most disadvantaged quintiles nationally. Socio-economic disadvantage will drive poorer health outcomes, earlier deaths and greater service needs.
Similar unemployment rates to Queensland, with sub regional variation in North West region	The unemployment rate across the region is similar to that for Queensland (6.6% vs 6.2%) with 11 out of 20 LGAs below the state average. Maranoa (R) LGA had the lowest unemployment rate of 2.3% and Burke, Carpentaria, Doomadgee and Mornington LGA's had the highest unemployment rate of 27%.

Small proportion of CALD residents	The region has a smaller proportion of residents born overseas (9.3%) compared with Queensland (21.6%). Mount Isa LGA had the highest proportion of residents born overseas (16.1%) within the region.
Low disability population	The proportion of people aged 0-64 with a profound or severe disability and living in the community is 3.6%, which is lower than the proportion in Queensland (5.2%).
Long distances to access health care	Nearly 89% of the region's population reside in remote or very remote areas. The distance and travel times between communities are significant and pose substantial challenges delivering health care to residents in the region. Large areas within the region also have limited or no mobile phone and emergency services radio coverage which can severely limit access to some health services.
Health status of our residents	
Lower life expectancy	Life expectancy estimates in the region is lower than for Queensland (CWHHS 78.05, NWHHS 78.05, SWHHS 80.2, & Queensland 82.35). For Indigenous Queenslanders, the life expectancy decreases as remoteness increases (Queensland 61.2, Major cities 65.3, Regional 61.0 & Remote 57.8)
Lower median age of death	The median age of death is lower for all HHSs in the WQPHN however the difference is most stark for NWHHS (Queensland 80 years, CWHHS 79, SWHHS 76 & NWHHS 61). The median age of death for Indigenous people in NWHHS is lower than for Queensland (53 vs 58 years), however it is higher in SWHHS (66 years) and CWHHS (56.5 years).
Higher rates of chronic disease risk factors	High proportion of daily smokers (SWHHS worst out of 15 HHSs, NWHHS 13th, CWHHS ranked 11th), high proportion of adults who are obese (BMI ≥30) (NWHHS worst, CWHHS 13th, SWHHS 11th), and high proportion of adults classified as having a lifetime of risky alcohol consumption (CWHHS 15th worst, NWHHS 14th worst, SWHHS 12th)
Higher rates of avoidable deaths	From 2016 Queensland Health Chief Health Officer Report: NWHHS ranked 14th worst out of 15 HHSs for avoidable death rates, SWHHS 13th & CWHHS 8th.
Higher rates of potentially preventable hospitalisations	From Queensland Hospital Admitted Patient Data Collection (QHAPDS) Financial Year (FY) 2016-2017 PPH Total is 2,228 compared to Queensland 1,350. This is over one third higher rate of potentially preventable hospitalisations when compared to Queensland. When comparing HHS in the PHN, NWHHS ranked 12th worst out of 15 HHSs for potentially preventable hospitalisations, SWHHS 13th & CWHHS 14th (CHO Report, 2016). Compared to all Australian PHNs, WQPHN has the second highest rate of potentially preventable hospitalisations (all, chronic and acute & vaccine preventable) behind Northern Territory PHN.
Higher hospitalisations rates	NWHHS ranked worst out of 15 HHSs for cardiovascular related hospitalisation rates, SWHHS 11th and CWHHS 10th. NWHHS ranked worst for asthma related hospitalisation rates, CWHHS 14th and SWHHS 11th. SWHHS ranked 14th

	worst for COPD related hospitalisation rates, NWHHS 13th and CWHHS 10th. CWHHS ranked worst for road transport injury related hospitalisation rates, SWHHS 14th and NWHHS 12th.
Higher rates of premature mortality	Premature mortality rate for WQPHN residents is 391.5 per 100,000 ASR compared to 260.2 per 100,000 ASR for Queensland. Western Queensland has particularly higher rates of premature morality for: respiratory diseases, circulatory system diseases, cancer, endocrine disorders, and suicide and self-inflicted injuries.
Higher rates of cancer	Compared with all PHNs in Australia, WQPHN had the highest rate of cancers diagnosed between 2006 to 2010 and was ranked worst for all cancers combined and lung cancers.
Mental illness	The majority of mental illness Emergency Department presentations in NWHHS related to substance misuse (48%). In CWHHS and SWHHS majority of mental illness presentations related to anxiety disorders (45% and 40% respectively).
High rates of immunisation	HPV vaccination rates in WQPHN are higher than for Queensland (89% compared with 71%). The rates of childhood immunisation for Indigenous and non-Indigenous children across the three HHSs are higher than for Queensland.
Health of special population groups	
Mothers and babies	WQPHN residents have a higher fertility rate compared to Queensland, a higher proportion of low birth weight babies in the NWHHS, higher rates of infant and children mortality and worse Australian Early Development Census (AEDC) results. Carpentaria and Burke Local Government Areas show the worst AEDC results across the five domains.
Aboriginal and Torres Strait Islanders peoples	Compared with non-Indigenous residents, Aboriginal and Torres Strait Islander peoples in CWHHS are much more likely to be admitted for a potentially preventable hospitalisation, be discharged against medical advice, have a baby of low birth weight and smoke during pregnancy. The burden of disease for Indigenous Australians living in remote areas of Queensland was 1.47 times that of Indigenous Australians living in major cities in Queensland. Cardiovascular disease caused the largest proportion of burden followed by diabetes, cancer and chronic respiratory diseases.
Health services and service utilisation	
Service demand not reflected in official estimates	Large numbers of tourists seek help from health services within the region, whilst mining developments can add significant pressure. In 2013, visitors to the outback region of Queensland numbered 378,000 people.
High dependence of health care outside the region	There are a large number of patient transfers out of the region for acute and specialist care (NWHHS 57%, CWHHS 48%). Injury, poisoning and other consequences of external causes, diseases of the circulatory system, and diseases of the respiratory system accounted for almost half (45.0%) of all RFDS aeromedical retrievals of Indigenous Australians.

Limited patient access and accommodation services	CWHHS 'The health of the west' community consultation identified the need for more affordable and appropriate transport and accommodation services.
Poor access to specialist services	Out of all PHNs in Australia, WQPHN was ranked 2nd worst for seeing a specialist (0.41 specialist attendances).
Complex array of outreach services from multiple providers and funding programs	There is a heavy reliance on outreach and visiting services. CheckUP data from 2016/2017 shows 59 contracted providers in WQPHN delivering outreach services to 44 locations. Consultations indicated that some visiting specialists are not linked to local referral processes, general practices and hospital services and there is an absence of information back to local medical practitioners.
Poor access to GP services	There are lower numbers of GPs in WQPHN, a heavy reliance on locums, a low proportion of residents who have a preferred GP, and a low number of GP attendances per person (3.9) compared to other PHNs in Australia. RFDS provides GP clinics in the Burketown, Camooweal, Dajarra, Urandagi, Gregory Downs, Adels Grove, Birdsville, Bedourie and Bolia and has difficulty maintaining reliable GP clinics and providing proactive chronic care management.
Cost barriers to prescribed medications	Compared with other Queensland PHNs, WQPHN had the highest patient contribution ($9.68, lowest $8.14) and lowest government benefit ($26.50, highest $32.55) per filled prescription (PBS data).
Poor integrated care and system level issues creating inefficient and fragmented care	Care is disconnected and there is poor communication and collaboration between providers. Issues include; multiple patient information systems; a need for referrals to be electronic and compatible with GP software; poor awareness of available services by provider and patient and the need for collaborative planning, design and delivery; a lack of integration of GP services with other services resulting in poorly coordinated and duplicated care; and multiple funding streams/sources resulting in duplicating services.
High turnover of health professionals impacting on service capacity and continuity	The turnover of allied health can be as high as 65%. A loss of 2 or 3 staff in a small team has a significant impact on service capacity. Short term contracts or uncertainty of funding has led to difficulties recruiting.
Access to culturally appropriate health services for Indigenous Australians is variable	NWHHS has one AICCHS in Mount Isa. There is no AICCHS in the CWHHS and three in the SWHHS (Charleville, Roma and Mitchell).

Absence of designated inpatient mental health beds	None of the regional hospitals in the WQPHN have designated mental health beds resulting in all patients transferred to hospitals outside the region for inpatient care.
Limited alcohol and other drug counselling treatment services	There is no access to detox services in CWHHS or SWHHS. GPs require better support from addiction specialists to manage detox in regional hospitals.
There are adequate RACF and home care places based on population ratios	Overall, each HHS has a higher ratio of aged care residential and home care places compared with Queensland. However, this data needs to be placed in context. Many of the residential care places are located in Multi-purpose Health Services and these facilities are challenged to provide dementia care, from the perspective of a secure environment and appropriately skilled staff. The provision of home care packages in small remote communities is challenged by the viability of providing home care services to several residents.

3. METHODOLOGY

The development of this technical report involved extensive analysis of quantitative demographic, health and health service data. Where possible data was presented at the Local Government Area (LGA) level, followed by HHS to provide more detailed picture of the region. Throughout the report, data for the Western Queensland region has been compared to Queensland and national rates and where available WQPHN has been ranked in comparison to other PHNs of Australia.

The demographic and socio-economic data presented in the report relies mainly on data at the LGA level. LGA define the Hospital and Health Service (HHS) boundaries of Western Queensland, which enabled data to be grouped under each HHS where appropriate. SA2 level boundaries provide a close fit apart from the Northern Highlands area, of which 71.4% is not in Western Queensland.

Due to Australian Statistical Geography Standards changing in 2011, life expectancy and fertility rates are based on statistical division level data. WQPHN fits closely with the three statistical divisions - North West, Central West and South West. However, Richmond and Flinders LGA are included in the statistical division of North West and Barcaldine LGA is excluded in the Central West statistical division.

3.1 Data sources and limitations

Data has been drawn from multiple data sources, which can vary from source to source. This can generate differences between data sets, which can result is slight variations in data outcomes. All sources have been referenced so that it is clear which source have been used.

Data sources included:

- Australian Bureau of Statistics (ABS), 2011 and 2016 Census
- Queensland Regional profiles: Resident profile, Government Statistician, Queensland Treasury and Trade
- National Health Performance Authority (NHPA), Healthy Communities
- Australia Health Practitioner Regulation Agency (APHRA)
- Public Health Information Unit (PHIDU), Social Atlas of Australia (data by PHN, data by LGA)
- Chief Health Officer Report, Queensland, 2016
- Queensland Health: self- reported health surveys and hospitalisation data
- Australian Institute of Health and Welfare
- Australian Government Department of Health PHN data
- Queensland Cancer Control Analysis Team

Data Limitations

Survey derived data is of poor reliability due to small sample sizes and relatively high sampling error. This is evident in the Australian Health Survey where estimates of self-assessed health, chronic disease and psychological distress for Western Queensland have been unable to be published due to the high proportion of the population in:

- very remote areas
- discrete Aboriginal communities and
- non-private dwellings such as hospitals, jails and nursing homes.

MBS data is commonly used to report service activity. However, services provided by Royal Flying Doctor Service (RFDS) and other non-Government organisations that are in receipt of Commonwealth grants, are unable to bill Medicare hence these services are not captured in MBS data. In addition, some of the hospitals in the small towns have 19(2) exemption, but there is variability in the rigor of systems to utilise the MBS in these facilities. Therefore, MBS data is not a good reflection of the full extent of service activity.

4. DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

4.1 Population by LGA

Table 4.1 Lists the population of each Local Government Area (LGA) within Western Queensland and the proportion of the population who identify as Aboriginal and Torres Strait Islander peoples. Mount Isa LGA has the largest population, followed by Maranoa LGA. The top five LGAs with a highest proportion of the population who Identify as Aboriginal and Torres Strait Islander peoples include;

- Doomadgee (93.4%)
- Mornington (86%)
- Carpentaria (41.3%)
- Burke (40.5%)
- Paroo (27.9%)

Table 4.1 Population of WQPHN and proportion who identify as Aboriginal and Torres Strait Islander peoples, 2016

HHS	LGA	ERP 2016	% Aboriginal and Torres Strait Islander peoples
Central West	Barcaldine	2909	5.9%
	Barcoo	272	12.4%
	Blackall-Tambo	1924	5.6%
	Boulia	437	27%
	Diamantina	297	14.8%
	Longreach	3727	5.3%
	Winton	1156	9.5%
Central West Total		**10722**	**7.3%**
North West	Burke	342	40.5%
	Carpentaria	2051	41.3%
	Cloncurry	3114	22.8%
	Doomadgee	1474	93.4%
	McKinlay	810	4.9%
	Mornington	1196	86%
	Mount Isa	19332	16.9%
North West Total		**28319**	**26%**
South West	Balonne	4480	15.9%
	Bulloo	360	11.6%
	Maranoa	12928	7.2%
	Murweh	4391	12.7%
	Paroo	1686	27.9%
	Quilpie	833	16.5%
South West Total		**24678**	**11.5%**
WQPHN Total		**63719**	**17.2%**

4.2 Population growth

The estimated resident population of Western Queensland as at 30 June 2016 was 63,719, which is 1.5% of the total Queensland population.[1] The region's population is expected to grow to 77,209 by 2036 (growth rate of 0.4%). The growth of Western Queensland is comparatively slower than Queensland and in the CWHHS, the population is expected to decrease by 0.2% by 2036.

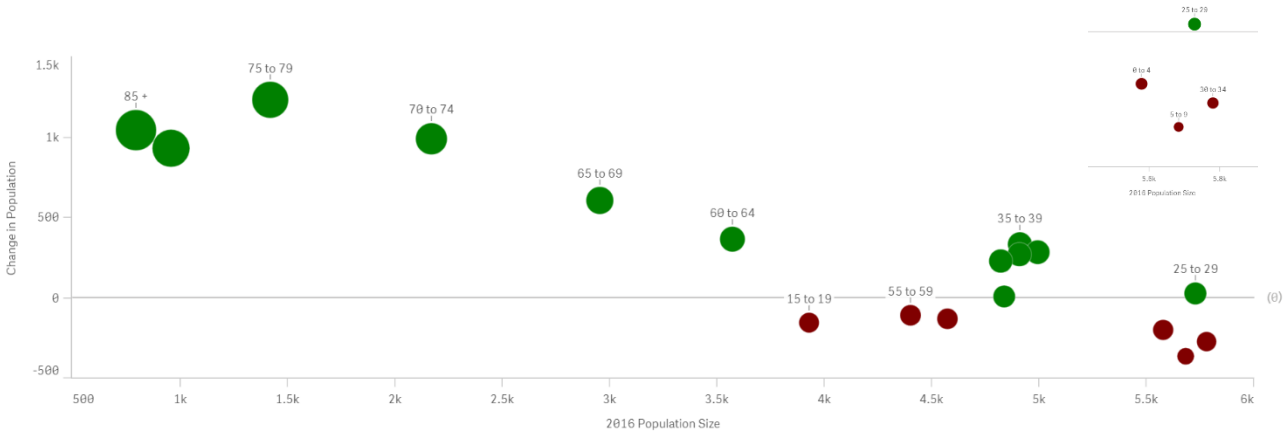
Table 4.2 Population percentage change, 2011 to 2036

	ERP 2011	Projected ERP 2036	% change
Central West	12373	11834	-0.2%
North West	31854	37411	0.6%
South West	26392	27964	0.2%
WQPHN	**70619**	**77209**	**0.4%**
Queensland	4722447	6763153	1.7%

Source: Queensland Regional Profiles, Queensland Government Statisticians Office

The scatter plot figure 4.1 shows the age group projections which highlight the projected increase change in the number of elderly people 75 years and older. Demand for services for children under 15 will remain high as they will continue to be a large segment of the population despite the overall numbers decreasing.

Figure 4.1 Population change from 2016 to 2036 by Age Group and 2016 Population size



Source: QGSO Regional Profiles, Queensland Government Statistics Office, Published at LGA

4.3 Age and gender

Based on 2016 ERP, 53% of the population are male and 47% female. The median age of Western Queenslanders in 34.7 which is lower than the Queensland median age of 37 years. The NWHHS has 39% of its population less than age 24, whereas the SWHHS and CWHHS have around one-third of the population under age 24.

[1] Queensland Government Statisticians Office. *Queensland Regional Profiles*. Queensland Treasury, Retrieved from http://statistics.qgso.qld.gov.au/qld-regional-profiles (accessed Oct 22 2017)

Table 4.3 2016 Age proportions, Western PHN compared with QLD			
HHS	**%<age 15**	**%<age 24**	**%65+**
Central West	19%	30%	17%
North West	25%	39%	7%
South West	22%	33%	14%
WQPHN	**22%**	**34%**	**12%**

Source: Australian Bureau of Statistics, Population by Age and Sex, Regions of Australia[2]

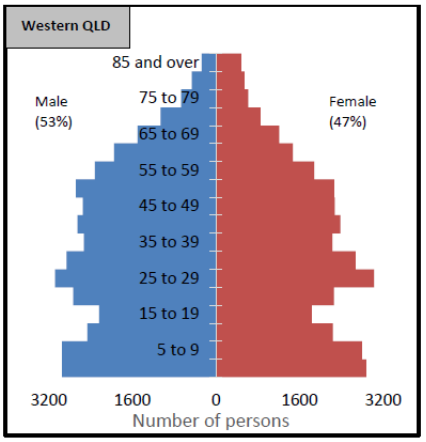
Table 4.4 Median Age, Western Queensland, 30 June 2014					
	Central West	**North West**	**South West**	**WQPHN**	**QLD**
Median Age	37.6	31.1	41.2	**34.7**	37

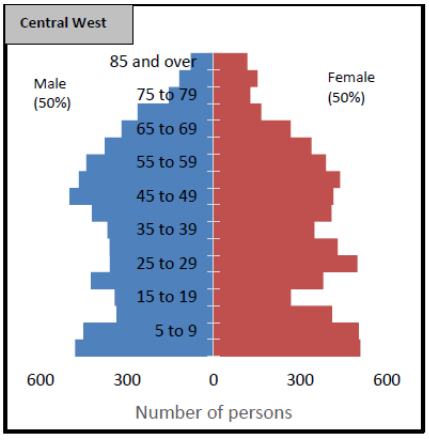
Source: Queensland Regional Profiles, Queensland Government Statisticians Office

Figure 4.2 Age Pyramids

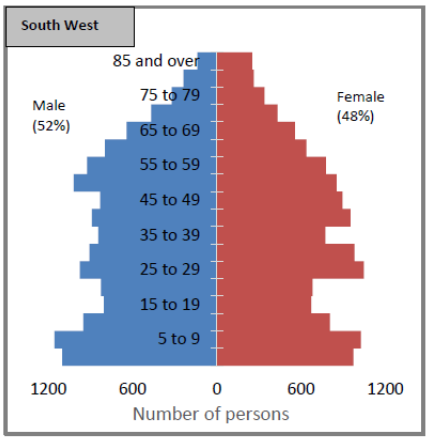
Age pyramids

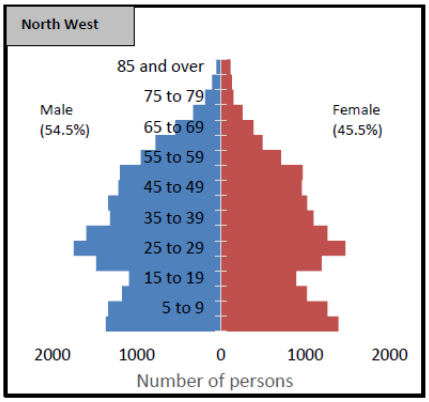
Figure 4.2 Age Pyramids

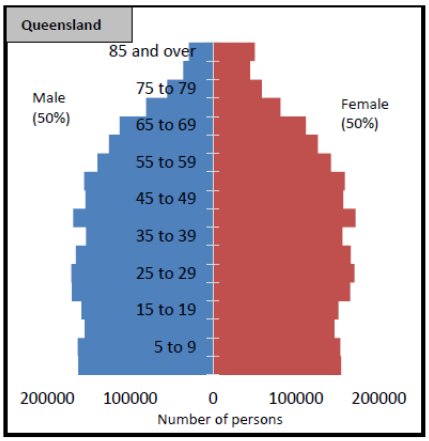




Source: Australian Bureau of Statistics, Population by Age and Sex, Regions of Australia







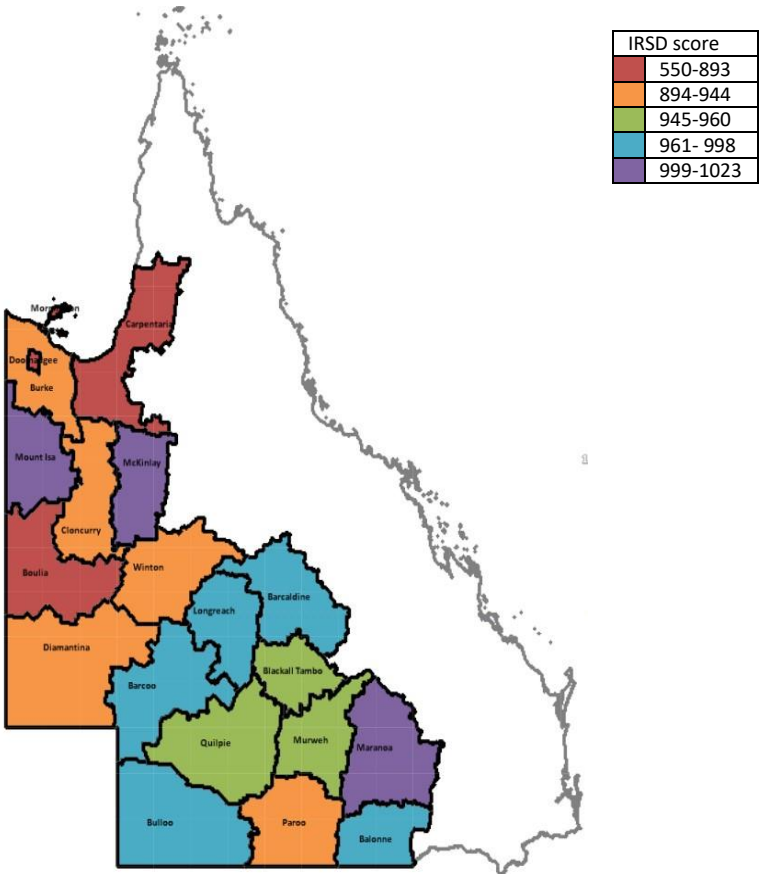
[2] Australian Bureau of Statistics. (2014). Population by Age and Sex, Regions of Australia. Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3235.02014?OpenDocument (accessed Feb 1 2016)

4.4 Socio-economic disadvantage

Socio-Economic Indexes for Areas (SEIFA) is a summary measure of the social and economic conditions of geographic areas of Australia. The Index of Relative Socio-Economic Disadvantage (IRSD) ranks geographical areas in terms of their relative socio-economic disadvantage in Australia. The index focuses on low-income earners, relatively lower educational attainment, high unemployment and dwellings without motor vehicles. Low index values represent areas of most disadvantage and high values represent areas of least disadvantage. The mean score for Australia is 1000.

Table 4.5 Most disadvantaged to Least disadvantaged LGAs in the WQPHN

LGA	IRSD score
Doomadgee	550
Mornington	604
Carpentaria	869
Boulia	890
Paroo	905
Burke	931
Diamantina	932
Winton	943
Cloncurry	944
Quilpie	949
Blackall Tambo	953
Murweh	959
Barcoo	961
Balonne	961
Barcaldine	992
Longreach	995
Bulloo	998
Mount Isa	1001
Maranoa	1008
McKinlay	1023
WQPHN	**964**
Queensland	1002



Source: PHIDU, PHN data, SEIFA Index of Relative Socio-economic Disadvantage

Across Queensland, 20% of the population are found in each quintile. Over 50% of Western Queensland population are in the two most disadvantaged quintiles and six out of the 20 LGAs within Western Queensland have 100% of their population located in the two most disadvantaged quintiles (**Table *4.6***). Overall 6.7% of Western Queensland's population are located in the least disadvantaged quintile.

Table 4.6 Socio-economic disadvantaged by HSS in WQPHN by quintiles, 2011			
	Quintile 1 (most disadvantaged) (%)	**Quintile 2 (%)**	**Total (%)**
WQPHN	**28**	**25**	**53**
Queensland	20	20	40
LGA			
Barcoo	0	100	100
Boulia	48	52	100
Burke	39	61	100
Diamantina	100	0	100
Doomadgee	98	2	100
Mornington	100	0	100

Source: Queensland Regional Profiles, Queensland Government Statisticians Office

4.5 Social determinants of health

Education

Educational attainment is an important determinant of health because it can influence income, employment, access to care and the capability to understand information as well as participation in social networks. Western Queensland has a lower proportion (60%) of children aged 16 participating in full time secondary school compared to Queensland (77.6%), and a lower proportion (65.8%) of children aged 15 to 19 either earning or learning compared to Queensland (75.7%) and Australia (80.1%).[3]

The proportion of Western Queensland residents completing year 11 or 12 or the equivalent is shown in **Table *4.7***. LGAs with the lowest proportions of people completing year 11 or 12 are Doomadgee, Carpentaria, Boulia and Mornington.

Table 4.7 LGAs with a low proportion of people completing Year 11 or 12 or equivalent (2016)	
Region	**Proportion completing year 11 or 12 or equivalent (%)**
WQPHN	47.3%
Australia	55.3%
LGAs of low proportions	
Doomadgee	27.3%
Boulia	35.6%
Carpentaria	36.4%
Mornington	36.6%
Paroo	40.4%
Blackall-Tambo	41.1%
Winton	41.9%

Source: Queensland Regional Profiles, Queensland Government Statisticians Office

[3] Public Health Information Development Unit. (2011). *Social Health Atlas of Australia: Primary Health Networks: Education*. The University of Adelaide. Retrieved from http://www.publichealth.gov.au/phidu/maps-data/data/ (accessed Oct 15 2017)

Industry and employment

The top five industries of employment are shown in **Table *4.8***. The Central West and South West are dominated by the agricultural industry, whereas the North West is dominated by the mining industry.

Table 4.8 Proportion Western Queensland employees in the top six industries, 2016				
	Central West	**North West**	**South West**	**WQPHN**
Agriculture, forestry and fishing	26%	5.4%	23.2%	**18.2%**
Mining	0.9%	25.5%	2.7%	**9.7%**
Health care and social assistance	9.7%	10%	10.8%	**10.2%**
Public administration and safety	11.9%	8.4%	9.2%	**9.8%**
Retail Trade	7.5%	7.5%	7.9%	**7.6%**
Education and Training	7.9%	8.6%	7.9%	**8.1%**

Source: Queensland Regional Profiles, Queensland Government Statisticians Office

The unemployment rate in Western Queensland was 6.6% in the 2017 March quarter, which was similar to both the state and national unemployment rates. Interestingly, the unemployment rate has doubled since the release of the 2011 Census data. Of the 20 LGAs within Western Queensland, three LGAs have an unemployment rate over four times the state rate. Nine other LGAs are below the state average and three have an unemployment rate of less than 4% **Table *4.9***.

Table 4.9 Local Government Areas of Western Queensland with the top three highest and lowest unemployment rates, Sept 2017	
Highest Unemployment Rates	**Lowest Unemployment Rates**
• Doomadgee 27% • Mornington 27% • Carpentaria 27.1%	• Maranoa 2.3% • Barcaldine 3.4% • Blackall-Tambo 3.4%
Western Queensland=6.6%, March 2017 Queensland=6.6%, March 2017 Australia=5.7%, March 2017	

Source: Australian Government Department of Employment. (2017). Small Area Labour Markets Australia. Retrieved from https://www.employment.gov.au/employment-research-and-statistics (accessed Oct 12 2017)

Income

The median total personal income in Western Queensland was $39,140 per year, which is comparatively higher than the Queensland median total personal income of $34,320.[4] Mount Isa LGA had the highest median total personal income with $51,844 per year and Doomadgee LGA had the lowest median total personal income with $15,496.

The median total family income in Western Queensland was $92,862 per year. 1586 (10.7%) families had an income of less than $33,800 per year.

[4] Queensland Government Statisticians Office.(2016). *Queensland Regional Profiles*. Queensland Treasury, Retrieved from http://statistics.qgso.qld.gov.au/qld-regional-profiles (accessed Oct 15 2017)

Income support

Table *4.10* shows the proportion of people in the region receiving the aged care pension, disability support pension, holding a health concession card and on unemployment benefits for more than six months. The proportions of each of these groups in Western Queensland is lower than the proportion in Queensland apart from those on unemployment benefits which is slightly higher.

Table 4.10 Proportion of residents receiving age pension, disability support pension and unemployment benefits long term and holding concession health cards, 2016

	WQPHN (%)	QLD (%)
Persons aged 65 years and over on an aged pension	**59.6%**	69.5%
Persons aged 16 to 64 years on a disability support pension	**3.7%**	5.1%
Persons aged 0 to 64 holding health concession cards	**7.7%**	7.7%
Persons aged 16 to 64 years on unemployment benefits long-term	**5.3%**	4.9%

Source: PHIDU, PHN data, Income support

Transport

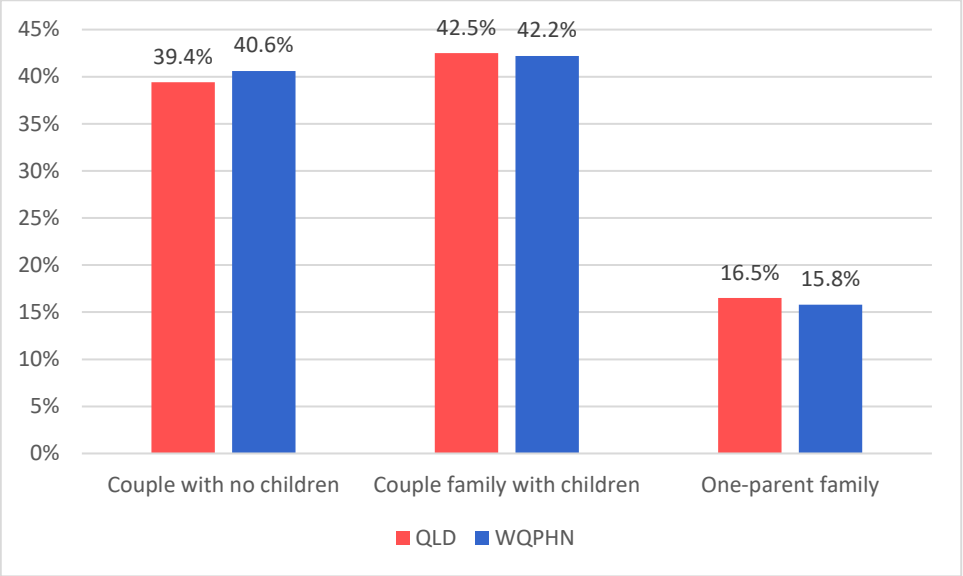
Overall, 7.4% of occupied private dwellings in Western Queensland have no motor vehicles, compared to 6% in Queensland. Around half of the dwellings in Doomadgee and Mornington LGA and one fifth of the dwellings in Diamantina, Burke and Boulia had no motorvehicle.[5]

Families and households

According to the 2016 census of Population and Housing, there were 14,883 families within Western Queensland. **Figure *4.3*** shows the majority of families were couple families with children (42.2%). The proportion of one-parent families (15.8%) is slightly lower than the proportion for Queensland (16.5%). Within Western Queensland, Mornington LGA had the highest proportion of one-parent families with 37.7%.

[5] Queensland Government Statisticians Office. (2016). *Queensland Regional Profiles*. Queensland Treasury, Retrieved from http://statistics.qgso.qld.gov.au/qld-regional-profiles (accessed Oct 14 2017)

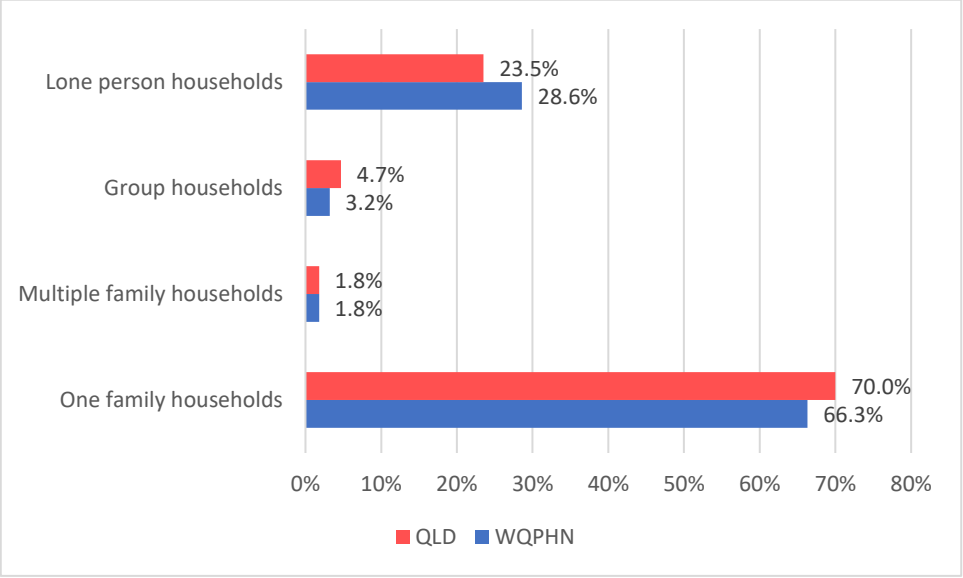
Figure 4.3 Composition of families in Western Queensland, 2016



Source: Queensland Regional Profiles, Queensland Government Statisticians Office

Figure *4.4* shows that the majority of households in the region are one-family households (66. 3%).This is slightly lower than Queensland (70%). The proportion of lone person households (28.6%) is higher in Western Queensland than the state (23.5%).

Figure 4.4 Household composition, Western Queensland, 2016



Source: Queensland Regional Profiles, Queensland Government Statisticians Office

The majority of occupied private dwellings in Western Queensland were rented (40.7%), rather than being purchased (25.7%) or fully owned (28.3%). This differs from Queensland where most occupied private dwellings are being rented (34.2%). Mornington LGA has the highest proportion of rented dwellings (93.9%).

Families with children

Of the 14,883 families with children under the age of 15 years, 15.8% (2,351) are single parent families and 16.1% (2,237).[6] Over fifty percent of families with children under the age of 15 years in the Mornington and Doomadgee LGAs are jobless. A total of 2,237 children (16.1%) under 15 years live in jobless families.

4.6 Life expectancy

Life expectancy is the estimated number of years a person is expected to live at birth. As **Table *4.11*** shows the life expectancy for each of the Central West, North West and South West statistical divisions is lower than Queensland. Life expectancy data is not available for WQPHN however, the table 4.11 provides estimates derived from ABS life expectancy data.[7]

Table 4.11 life expectancy of WQPHN, 2010-2012

	Central West SD	North West SD	South West SD	WQPHN PHN	QLD
Estimated number of years a person is expected to live at birth	78.05	78.05	80.2	78.7	82.35

Source: ABS, 3105.0.65.001 - *Australian Historical Population Statistics, 2014* (for years 1881–90 to 2010–2012); ABS, 3302.0.55.001, *Life Tables, States, Territories and Australia, 2013-2015*

Table *4.12* shows the median age of death for Non-Indigenous population is lower in each of the HHS in WQPHN, compared to Queensland. The NWHHS median age of death is 27 years lower than the overall Queensland median age of death.

Table 4.12 Median age of death (years) by HHS, 2008-2010

	Central West	North West	South West	WQPHN	QLD
Non-Indigenous population	80	70.5	78	n.a	81
Indigenous population	65	54	66	n.a	58

Source: Queensland Health. (2016). The health of Queenslanders 2014. Fifth Chief Health Officer Report. Queensland Government. Brisbane.

4.7 Population Groups

Aboriginal and Torres Strait Islander Peoples

Western Queensland has 10,671 residents (17.2%) who identify as and Aboriginal and Torres Strait Islander peoples. The proportion of Aboriginal and Torres Strait Islander residents is far higher than the proportion for Queensland (4%). As **Table *4.13*** shows, 62% of the total number of Aboriginal and Torres Strait Islander people in Western Queensland reside in the NWHHS. Within the NWHHS, there are two LGAs (Mornington and Doomadgee) with over 90% of the population identifying as Aboriginal and Torres Strait Islander peoples.

[6] Public Health Information Development Unit. (2011). *Social Health Atlas of Australia: Primary Health Networks: Families*. The University of Adelaide. Retrieved from http://www.publichealth.gov.au/phidu/maps-data/data/ (accessed Feb 1 2016)

[7] ABS, 3105.0.65.001 - *Australian Historical Population Statistics, 2014* (for years 1881–90 to 2010–2012); ABS, 3302.0.55.001, *Life Tables, States, Territories and Australia, 2013-2015*

Table 4.13 Aboriginal and Torres Strait Islander peoples Estimated Resident Population and Percentage by HHS		
HSS	**2016 ERP ATSI**	**% of pop ATSI**
Central West	670	7.3%
North West	6773	26%
South West	2689	11.5%
WQPHN	**10671**	**17.2%**

Source: Queensland Government Statisticians Office, Population estimates by Indigenous status

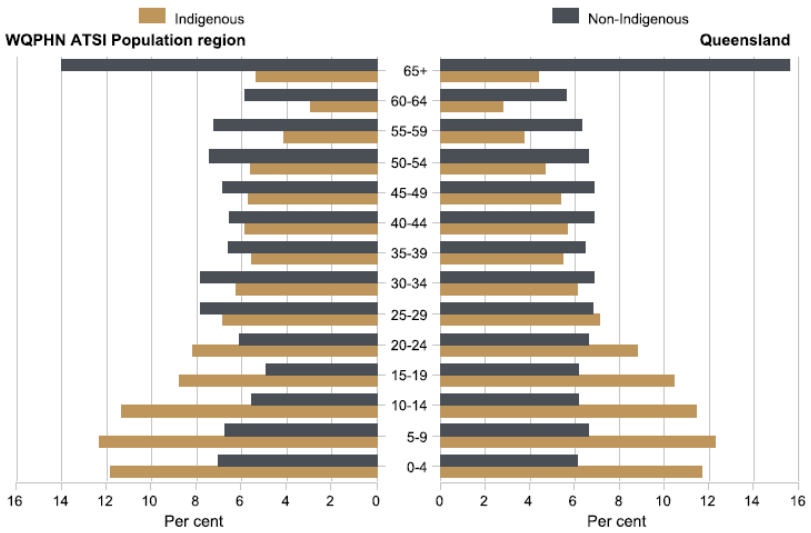
The Aboriginal and Torres Strait Islander population is distinctly younger than the overall population. Over half of the Aboriginal and Torres Strait Islander population is under the age of 24 years, compared to around one-third for the total population. There is also a sharp contrast in the proportion aged 65 years and over (4% compared with 11%). Table 7.13 also shows that 30% of all children aged under 15 years in Western Queensland identify as an Aboriginal or Torres Strait Islander person.

Table 4.14 Proportions of Aboriginal and Torres Strait Islander peoples by age, 2016 ERP			
HSS	**Indigenous population**		
	%<age 15	**%<age 24**	**%65+**
Central West	36%	52%	6%
North West	35%	53%	5%
South West	36%	52%	6%
WQPHN	**35%**	**52%**	**5%**
QLD	35%	55%	4%

Source: Queensland Government Statisticians Office, Population estimates by Indigenous status

The population data in Figure 4.5 shows that 35.3% of Aboriginal and Torres Strait Islander peoples were aged 0 to 14 years compared to 19.2% of non-Indigenous persons, and 5.3% of Aboriginal and Torres Strait Islander peoples were aged 65 years and over compared to 14% of non-Indigenous persons.

Figure 4.5 Persons by age and Indigenous status, WQPHN Aboriginal and Torres Strait Islander Population region and Queensland, 2016



Source: ABS, *Census of Population and Housing, 2016, Aboriginal and Torres Strait Islander Peoples Profile - I0*

People from Culturally and Linguistically Diverse (CALD) Backgrounds

Western Queensland has a smaller proportion of residents (9.36% or 5,765) born overseas compared to Queensland (21.6%). Within the LGAs of Western Queensland, Mount Isa LGA had the largest number of residents born overseas with 3,015 (16.1%). Most residents born overseas were from New Zealand (2.3) followed by the United Kingdom (1.2).[8]

Table 4.15 Top five English and non English speaking backgrounds			
English Speaking		**Non-English Speaking**	
Country	**Proportion (%)**	**Country**	**Proportion (%)**
New Zealand	2.3	Philippines	1.2
United Kingdom	1.2	India	0.5
Ireland	0.1	Vietnam	0.2
Scotland	0.1	Germany	0.2
South Africa	0.5	Papua New Guinea	0.2

Source: Queensland Regional Profiles, Queensland Government Statisticians Office

The top five non-English languages spoken at home are shown in **Table *4.16***. Australian Indigenous Languages featured quite high on the table, which differs to most other PHNs in Australia. Mount Isa LGA and Mornington LGA had the highest proportion of residents speaking Australian Indigenous Languages in Western Queensland (8.7% and 9.3% respectively). The number of overseas-born residents who speak English not well or not at all is 244, which is 0.4% of the Western Queensland population.

Table 4.16 Top five non English languages spoken at home for the total population of the PHN, 2016	
Language	**%**
Southeast Asian Austronesian	0.9
Australian Indigenous Languages	0.4
Indo-Aryan	0.2
Vietnamese	0.2
Chinese	0.2

Source: Queensland Regional Profiles, Queensland Government Statisticians Office

People living with a disability

The proportion of people aged 0-64 with a profound or severe disability and living in the community is 1.4%, which is lower than the proportion in Queensland (5.2%). Paroo LGA has the highest proportion (5.9%) of residents of all ages with a severe or profound disability living in the community within Western Queensland, which is slightly lower than the proportion in Queensland overall (5.2%).

[8] Australian Bureau of Statistics. B09 country of birth of person by sex (LGA). Retrieved from http://stat.abs.gov.au/Index.aspx?DataSetCode=ABS_CENSUS2011_B13_LGA (accessed Oct 15 2017)

Table 4.17 the number of residents all ages with a severe or profound disability and living in the community, 2016		
	Number of residents living with a severe or profound disability	**Proportion (%)**
Central West	479	4.5
North West	670	2.5
South West	1054	4.4
WQPHN	**2203**	**5.9**
Queensland	243267	5.2

Source: PHIDU, PHN data, Disability

Disability data has been compiled by PHIDU based on the 2016 Census. A person with a profound or severe limitation is defined as a person who needs help or supervision always (profound) or sometimes (severe) to perform activities of daily living such as self-care, mobility and/or communication as the result of a disability, long term health condition (lasting six months or more) and/or older age.

There is a lower proportion of people having a profound or severe disability compared to the ABS Survey of Disability, Ageing and Carers (SDAC). This is because the Census data relies on self- reporting, whereas SDAC used a filtering approach to determine if the respondent had a disability or not.

5. HEALTH STATUS OF OUR RESIDENTS

This section describes the health status of the residents of the region. It includes the prevalence of risk factors such as smoking, physical inactivity, poor nutrition, obesity and harmful alcohol consumption as well as the associated health outcomes. This section also considers the health and wellbeing of infants and young children and the health of Aboriginal and Torres Strait Islander peoples.

5.1 Risk factors and outcomes

Highlighted areas indicate data where rates in WQPHN are higher than in Queensland.

The rate of premature mortality (aged 0 to 74) is higher for both males and females in Western Queensland compared to the rates for Queensland and Australia (**Table *5.1***).[9] To explore why this is so, the prevalence of risk factors and associated outcomes in Western Queensland are presented below.

Table 5.1 Average annual age-standardised rates of premature mortality per 100000, 2010 to 2014

	WQPHN	QLD	Australia
Total deaths 0-74 years	390.1	249.0	238.2
Deaths of males 0-74 years	459.7	323.3	309.1
Deaths of females 0-74 years	302.5	195.6	181.8

Source: PHIDU, PHN data, Premature mortality

Smoking

WQPHN has the highest proportion of daily smokers, compared to every other PHN in Queensland (**Figure *5.1***). **Table *5.2*** shows smoking rates for males are higher than females, in NWHHS and SWHHS. The NWHHS has the highest proportion of female smokers and South West has the highest proportion of male smokers. There is a higher proportion of younger smokers when compared to Queensland (**Figure *5.2***).[10]

Table 5.2 Daily smoking, 2015-16

	Central West	North West	South West	WQPHN	QLD
Risk Factor (% Proportion of adults 18+)					
Daily smoking for adults	16.5	19.6	12.2	**19.8**	12.1
Daily smoking for males	16.4	20.1	25.4	**21.3**	13.2
Daily smoking for females	16.7	19.1	13.6	**18.1**	11.1

Source: Queensland Health. Preventative health survey.

[9] Public Health Information Development Unit. (2016). *Social Health Atlas of Australia: Primary Health Networks: Premature mortality*. The University of Adelaide. Retrieved from http://www.publichealth.gov.au/phidu/maps-data/data/ (accessed Oct 14 2017)

[10] Queensland Health. *Preventative health survey results.* Queensland Government. Retrieved from www.health.qld.gov.au/research-reports/population-health/preventive/data/preventive-health-surveys/results (accessed Oct 15 2017)

Figure 5.1 Proportion of daily smoking for persons 18+ by PHN, 2015-16

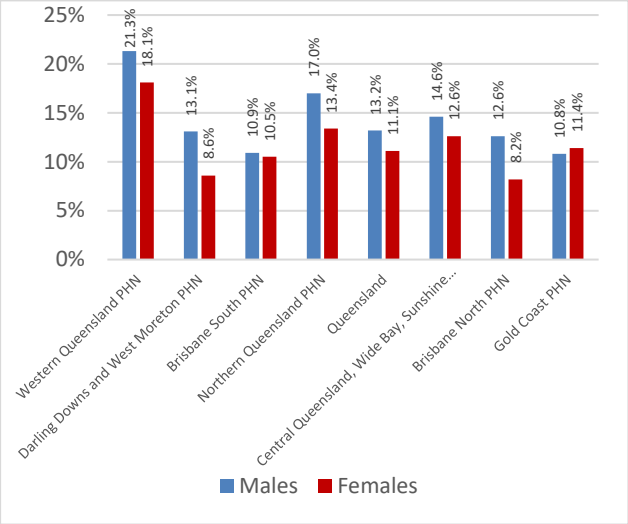
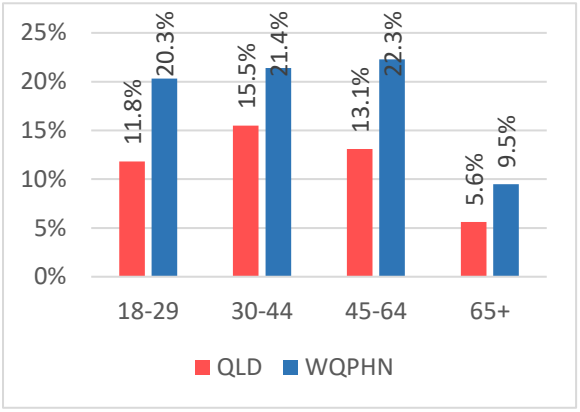


Figure 5.2 Proportion of daily smoking for persons 18+ by age, 2015-2016



Source: Queensland Health. Preventative health survey

The Health of Queenslanders 2016 Report[11] found higher rates of adult daily smokers in the WQPHN region compared with Queensland. The report also noted:

- rates of daily smoking are about 3 times higher among adults living in socio-economically disadvantaged areas than those in advantaged areas in 2016 (17% compared with 6%)
- rates of daily smoking are higher outside major cities. Children living in remote areas were 30% more likely to be living in a household with a smoker than those in cities
- tobacco smoking is still a leading cause of preventable health and disease in Queensland.

The association between smoking and lung cancer is well documented in the literature. Lung cancer is a leading cause of premature mortality in Western Queensland. In the NWHHS, the premature mortality per annum is double the Queensland rate (36.1 vs 23.1 per 100,000) (Table 5.3).[12] WQPHN has the highest lung cancer incidence rate of all PHNs in Australia as well as all cancers. Premature death caused by Chronic Obstructive Pulmonary Disease (COPD) is also higher in Western Queensland, compared to both Queensland and Australia, as is circulatory system disease, ischemic heart disease and respiratory system diseases which are twice as high when compared to Queensland and Australia (**Table *5.3***).

Table 5.3 Outcomes of smoking, 2010 to 2014

	WQPHN	QLD	Australia
Outcomes (Average annual ASR of premature mortality per 100,000 persons by cause)			
Lung cancer	**36.1**	23.1	21.1
Circulatory system diseases	**89.1**	47.3	45.6
Ischemic heart disease	**58.5**	25.9	24.1
Cerebrovascular diseases	**10.6**	8.7	8.3
Respiratory system diseases	**29**	15.6	14.8
COPD	**23.2**	9.8	8.5

Source: PHIDU, PHN data, Premature mortality

[11] Chief Health Officers Report (2016) The *Health of Queenslanders 2016* Report.

[12] PHIDU, PHN data, Premature mortality by cause 2010-2014. (accessed Oct 18 2017)

Poor Diet, Exercise and Obesity

The proportion of adults in Western Queensland categorised as having insufficient physical activity is higher than for Queensland. Half the females in the SWHHS have been categorised as undertaking insufficient exercise (49.5 % compared to 43.9%). Western Queensland has a higher proportion of those not eating sufficient fruit and vegetables and proportion of residents in Western Queensland who are overweight and obese is also higher than Queensland. Over three quarters of males in the NWHHS are classified as being either overweight or obese.[13]

Table 5.4 Poor diet, exercise and obesity, 2015-16

	Central West	North West	South West	WQPHN	QLD
Risk Factors (% Proportion of adults 18+)					
Exercise					
Adults categorised as having insufficient physical activity	42.4	40.4	46.8	**43**	40.4
Males categorised as having insufficient physical activity	36.8	36.4	44.2	**39.1**	36.8
Females categorised as having insufficient physical activity	48.1	45.5	49.5	**47.4**	43.9
Diet					
Adults categorised as having insufficient fruit intake (<2 serves/day)	48.7	50.9	48.2	**49.6**	43
Adults categorised as having insufficient vegetable intake (<5 serves/day)	90.7	93.2	90.7	**91.9**	92.9
Body Mass Index					
Overweight and obese	62.9	69.9	65.1	**67**	58
Overweight and obese males	70.2	74	72.4	**72.8**	66.8
Overweight and obese females	54.9	64.6	57.3	**60.2**	49.2

Source: Queensland Health. Preventative health survey.

Outcomes of poor diet, exercise and obesity is listed in **Table *5.5***. The rate of endocrine, nutritional and metabolic disease, which includes diabetes, is higher in WQPHN region than Queensland and Australia. The rate of circulatory system disease is also nearly double that of Queensland and Australia. The rate of ischemic heart disease is over double that of Queensland.

[13] Queensland Health. *Preventative health survey results.* Queensland Government. Retrieved from www.health.qld.gov.au/research-reports/population-health/preventive/data/preventive-health-surveys/results (accessed Oct 16 2017)

Table 5.5 Outcomes of poor diet, exercise and obesity, 2010-2014			
	WQPHN	**QLD**	**Australia**
Outcomes (Average annual ASR of premature mortality per 100,000 persons by cause)			
Colorectal cancer	**8.7**	9.3	9.0
Endocrine, nutritional and metabolic diseases	**22.3**	6.8	5.9
Circulatory system diseases	**89.1**	47.3	45.6
Ischemic heart disease	**58.5**	25.9	24.1
Cerebrovascular diseases	**10.6**	8.7	8.3

Source: PHIDU, PHN data, Premature mortality

Prevalence data on chronic conditions for Western Queensland is not available in the Australian Health Survey due to the small sample size. However, diabetes hospitalisation rates in Western Queensland are significantly higher than Queensland, as are hospitalisations for coronary heart disease, diabetes, COPD and asthma (**Table *5.6***). It is interesting that hospitalisation rates for mental and behavioural disorders are lower for Western Queensland compared to the state rates. This may be a reflection of the absence of designated mental health beds in the regional hospitals in Western Queensland.

Table 5.6 Hospitalisation ASR rates per 100,000 persons for specific conditions, 2012-13 to 2013 2014					
Condition	Central West	North West	South West	**WQPHN**	Queensland
COPD	370	457	567	**343**	276
Diabetes	352	306	378	**549**	187
Coronary heart disease	840	1263	884	**1013**	667
Stroke	471	407	293	**213**	248
Pneumonia and influenza	456	958	635	**374**	346
Asthma	213	266	164	**488**	163
Mental and behavioural disorders	1377	1280	1199	**1275**	1891
Falls (65+ years)	3621	2292	3724	**3335**	3159

Source: Queensland Health. (2016). The health of Queenslanders 2014. Fifth Chief Health Officer Report. Queensland Government. Brisbane.

Alcohol Use

The proportion of Western Queensland residents categorised as having a risky lifetime of alcohol consumption is higher than Queensland (**Table *5.7***). This is higher for males than females and the CWHHS has the highest prevalence of excessive alcohol consumption, out of the three HHSs in Western Queensland.

Table 5.7 Excessive alcohol consumption, 2015-16					
	Central West	**North West**	**South West**	**WQPHN**	**QLD**
Risk factor (% Proportion of adults 18+)					
Adults categorised as having a risky lifetime of alcohol consumption	33.3	29.9	28.7	**30.1**	21.8
Males categorised as having a risky lifetime of alcohol consumption	49.8	41.2	41.2	**42.6**	32.4
Females categorised as having a risky lifetime of alcohol consumption	16.1	16.0	15.7	**15.9**	11.4

Source: Queensland Health. Preventative health survey

In 2016, adults living in outer regional and remote and very remote areas were more likely to exceed the lifetime risky guidelines than those in major cities (about 40% higher prevalence).[14] In 50% of Alcohol and Other Drugs (AOD) treatment episodes, for individuals from postcodes within the WQPHN region, the principal drug of concern was alcohol. This is almost double the rate of episodes for all of Queensland (27%) (AODTS-NMDS data 2015-16).[15]

Youth of remote Queensland rated equity and discrimination (28%) as the most important issue in Australia today, followed by alcohol and drugs (27%). Males of remote Queensland rated alcohol and drugs as a much higher issue in Australia than females of remote Queensland (33.3% vs 18.8%).[16]

Stakeholder consultation in the Lower Gulf identified high prevalence of co-occurring mental health and drug and alcohol disorders. Estimates of the scale of dual diagnosis in Australia ranges from 5-70% in mental health settings, and up to 80% of people in alcohol and other drug treatment settings who may also have a mental illness.[17]

Table *5.8* lists the causes of premature mortality in Western Queensland that are associated with excessive alcohol consumption. Suicide and self-inflicted injuries in Western Queensland are nearly twice as high compared to the Queensland and Australian rate.

Table 5.8 Outcomes of excessive alcohol consumption, 2012 to 2014			
	WQPHN	**QLD**	**Australia**
Outcomes (Average annual ASR of premature mortality per 100,000 persons by cause)			
External causes	**57.1**	33.1	29.3
Road traffic injuries	**9.6**	5.8	5.2
Suicide and self –inflicted injuries	**24.1**	13.6	11.2

Source: PHIDU, PHN data, Premature mortality

[14] Chief Health Officers Report (2016). The *Health of Queenslanders 2016* Report.
[15] AIHW (2016) AODTS-National Minimum Data Set data 2015-16. Available at: https://www.aihw.gov.au/reports/alcohol-other-drug-treatment-services/alcohol-and-other-drug-treatment-national-minimum-data-set-aodts-nmds-2015-16/contents/dynamic-data-displays (accessed Oct 22 2017)
[16] Mission Australia (2105) Mission Australia Youth Survey Report. Available at: https://www.missionaustralia.com.au/publications (accessed Oct 22 2017)
[17] KBC (2016) Lower Gulf Case for Change, Technical Paper.

Review of Alcohol Management Plan on Mornington Island

A strategic review of the effects of prohibition on Mornington Island[18] was undertaken in 2017, motivated by the awareness of continually increasing community issues caused by homebrew. The objectives of the review were to i) understand the perceived impacts of the Alcohol Management Plan (AMP) on alcohol supply, consumption violence, injury, school attendance, and community health and ii) to understand the impact of the AMP on service providers and their staff iii) to document community opinion about the future of the AMP and iv) to identify strategies to manage alcohol misuse and reduce alcohol-related harm.

Mornington Island hospital is equipped with an Emergency Department (ED), GP clinic and Community Health unit. Community members can access acute inpatient care 24 hours a day. In 2016, there were a total of 2,245 presentations to the ED. **Table *5.9*** refers to the number of patients with new problems, excluding re-presentations. Of these presentations, patient intoxication was recorded on 794 occasions (35.4%). This proportion is likely to be an underestimation, with minor degrees of intoxication not recorded and staff reluctance to record patient intoxication. Of the 794 presentations, two in three (n=499; 63%) patients were female.

Table 5.9 - Types of Hospital Separations on Mornington Island, 2016

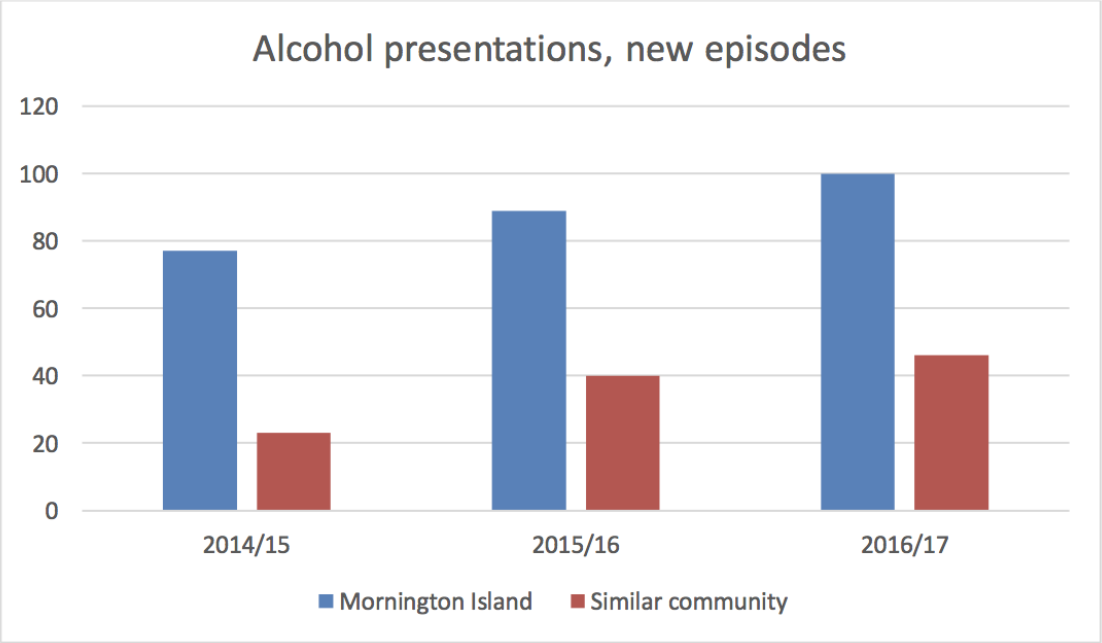
	Intoxicated	Not Intoxicated	Total	Percent Intoxicated
Presentations	794	1451	2245	35.4
Admitted	78	115	193	40.4
Transferred	10	80	90	40.4
Victim	198	120	318	62.3
Perpetrator	16	34	50	32.0
Other trauma	19	51	70	27.1
EEO	36	17	53	67.9

Source: Mornington Island Shire Council (2017) Alcohol Management Plan Strategic Review, September 2017 (page 28)

Figure *5.3* presents the number of alcohol-related presentations between 2014 and 2017 at Mornington Island hospital and the comparator community. Overall, Mornington Island has a higher number of alcohol-related presentations for the total period compared to the comparator community (266 presentations compared to 109 presentations respectively). Both communities experienced an increase in alcohol-related presentations from 2014/15 to 2016.17.

[18] Mornington Island Shire Council (2017) Alcohol Management Plan Strategic Review, September 2017.

Figure 5.3 Alcohol-related presentations, 2014-2017 in Mornington Island and comparator community



Source: Mornington Island Shire Council (2017) Alcohol Management Plan Strategic Review, September 2017 (page 32)

Outcomes from the report highlight the need for more urgent and proactive action to address the identified health and related outcomes from excessive consumption of illicit alcohol. Five key recommendations have been handed down in the report, however, it was noted that a multi-level approach, including a whole of community action plan needs to be implemented to address the issue around homebrew in the community of Mornington Island.

Illicit drug use

There is no data available on the prevalence of illicit drug use throughout the whole of Western Queensland. However, in response to concerns voiced by Indigenous communities in north Queensland regarding the appearance of 'new drugs', an investigation was conducted by James Cook University in 2015.[19]

Of key service providers who were surveyed, 60% in remote and outer regional communities believed there had been in increase in their workload as a result of methamphetamine/amphetamine over the past six months compared with 2014, whereas 40% in very remote localities reported an increase. This indicates that relative isolation is currently providing some protection from access and uptake of new drugs.[20]

There was strong agreement amongst key service providers that much of their drug related workload was mainly caused by alcohol, a combination of alcohol and drugs, or cannabis, rather than amphetamine type stimulants.

Stakeholder feedback across SEWB Teams, AICCHS, mental health teams and rehabilitation services also

[19] Clough A, Robertson J, Fitts M, Lawson K, Bird K, Hunter E et al. (2015). *Impacts of meth/amphetamine, other drugs and alcohol in rural and remote areas in Northern and north-east Queensland: as environmental scan*. James Cook University. ISBN 978-0-9942333-6-3.
[20] James Cook University (2015) *Impacts of meth/amphetamine, other drugs and alcohol in rural and remote areas in northern and north-east Queensland: An environmental scan December 2015.*

identified that methamphetamine use is present in most Western Queensland communities at a low level. However, stakeholders also noted that resources are not sufficient to deal with the current AOD load, let alone a potential increase in methamphetamine. Any surge in amphetamine type stimulant use is likely to have a significant impact.

There were 1619 presentations to hospitals in Queensland related to methamphetamine in 2014-15. This is a five-fold increase from 333 presentations in 2009-10. 68% of these presentations were males in 2014-15 and a third of those were admitted to hospital. There were 1968 hospitalisations in Queensland related to methamphetamine in 2014-15, a 15-fold increase from 133 in 2009-10.[21]

5.2 Mental illness

Mental health is fundamental to the wellbeing of individuals, their families and the population. Mental disorders can vary in severity and be episodic or persistent in nature. A recent review estimated that 2–3% of Australians (about 720,000 people based on the estimated 2015 population) have a severe mental disorder, 4–6% of the population (about 1.2 million people) are estimated to have a moderate disorder and a further 9–12% (about 2.5 million people) a mild disorder.[22]

Anxiety, depressive and substance use disorders account for three quarters of the disability attributed to mental disorders. The peak of this disability occurs in those 15-24 years old and corresponds with the typical period of onset of these problems. NHMRC Centre of Research Excellence in Mental Health and Substance Use identify that to reduce the occurrence and cost of such disorders, preventative interventions need to begin early before the problems begin to cause disability and vocational, educational and social harm. [23]

According to the Australian Burden of Disease Study 2011 which examined the health loss due to disease and injury that is not improved by current treatment, rehabilitative and preventative efforts of the health system and society, *Mental & substance use disorders* were estimated to be responsible for 12.1% of the total burden of disease nationally in 2011, placing it 3rd as a broad disease group after *Cancer* (18.5%) and *Cardiovascular diseases* (14.6%).[24]

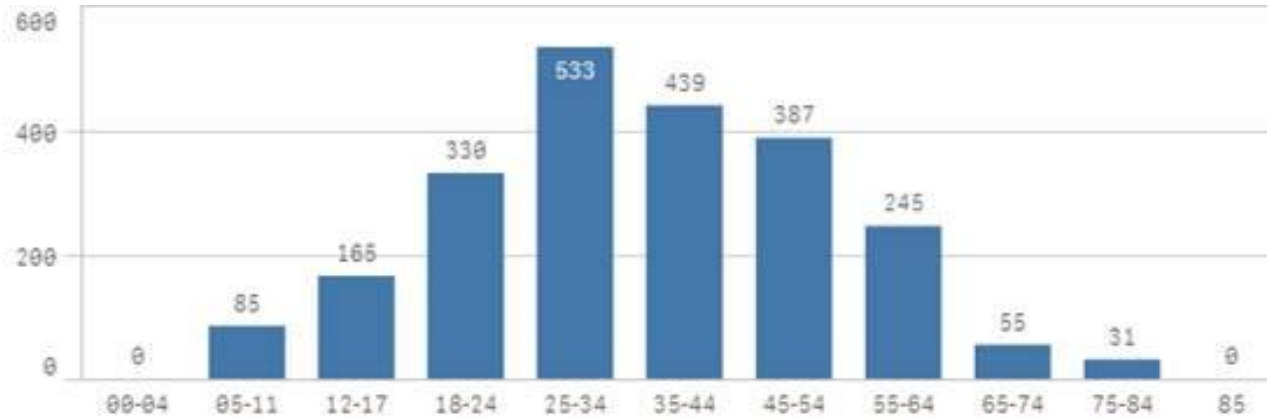
Based on the ABS 2007 Survey of Mental Health and Wellbeing it is estimated that 7 million Australians (45% of the population aged 16–85 years) will experience a mental disorder over their lifetime and an estimated 3 million (20% of the population aged 16–85 years) will experience symptoms of a mental disorder each year.[25] This suggests that one in 5 Australians will experience a mental health condition in a given year and almost one in two people will experience a mental health condition at some point in their lifetime. The survey also showed that 8.3% of people aged 16-85 years who lived outside Major Cities had high or very high levels of psychological distress which was not significantly different to those living in Major Cities. However, people who lived outside Major Cities were 34% *less* likely than those who lived in

[21] Chief Health Officers (2016) The Health of Queenslanders, 2016.
[22] DoHA 2013. National Mental Health Report 2013: tracking progress of mental health reform in Australia 1993–2011. Canberra: Commonwealth of Australia.
[23] NHMRC (2017) Centre of Research Excellence in Mental Health and Substance Use. Available at: https://comorbidity.edu.au/project/prevention accessed Oct 28 2017.
[24] AIHW (2016) Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2011. Australian Burden of Disease Study series no. 3. BOD 4. Canberra: AIHW.
[25] Australian Bureau of Statistics. *1301.0 Year Book Australia, 2009-10.* Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1301.0Chapter11082009%E2%80%9310 (accessed March 23 2016)

Major Cities to have high or very high levels of psychological distress.[26]

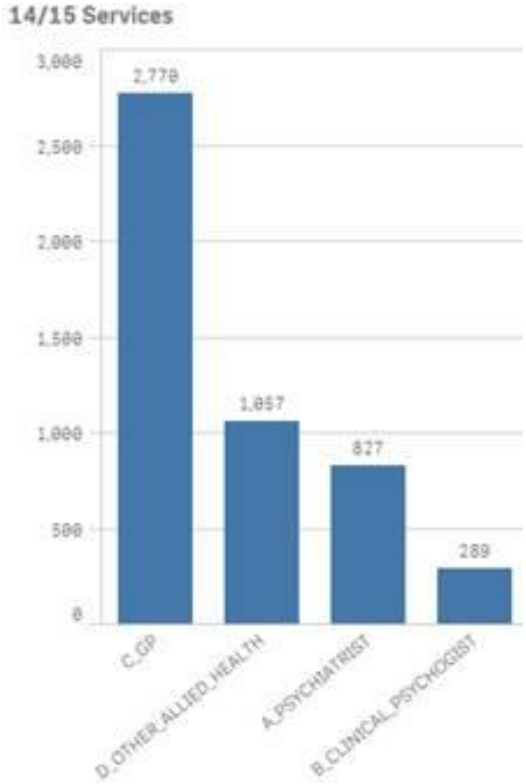
According to MBS Mental Health usage data, 2,271 patients in 2014/15 (Figure 5.4) received mental health services, with the 25 to 35 age group the highest users (533 patients). 4,943 Mental Health services were provided by mental health professionals in 2014/15 (Figure 5.5) with over half provided by general practitioners (2770 services).

Figure 5.4 – Overview of MBS Mental Health Patients in WQPHN, 2014/15



Source: Queensland Hospital Admitted Patient Data Collection (QHAPDS) Data, unpublished data

Figure 5.5 – Overview of MBS Mental Health Services in WQPHN, 2014/15



Source: Queensland Hospital Admitted Patient Data Collection (QHAPDS) Data, unpublished data

[26] Australian Bureau of Statistics. *4102.0 Australian Social Trends, March 2011*. Retrieved from http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features30Mar+2011 (accessed March 23 2016)

Mental and behavioural disorders accounted for 2% of the total emergency presentations in Western Queensland in 2014. NWHHS had the highest rate of mental illness presentations compared to the South West and CWHHS (**Table *5.10***).

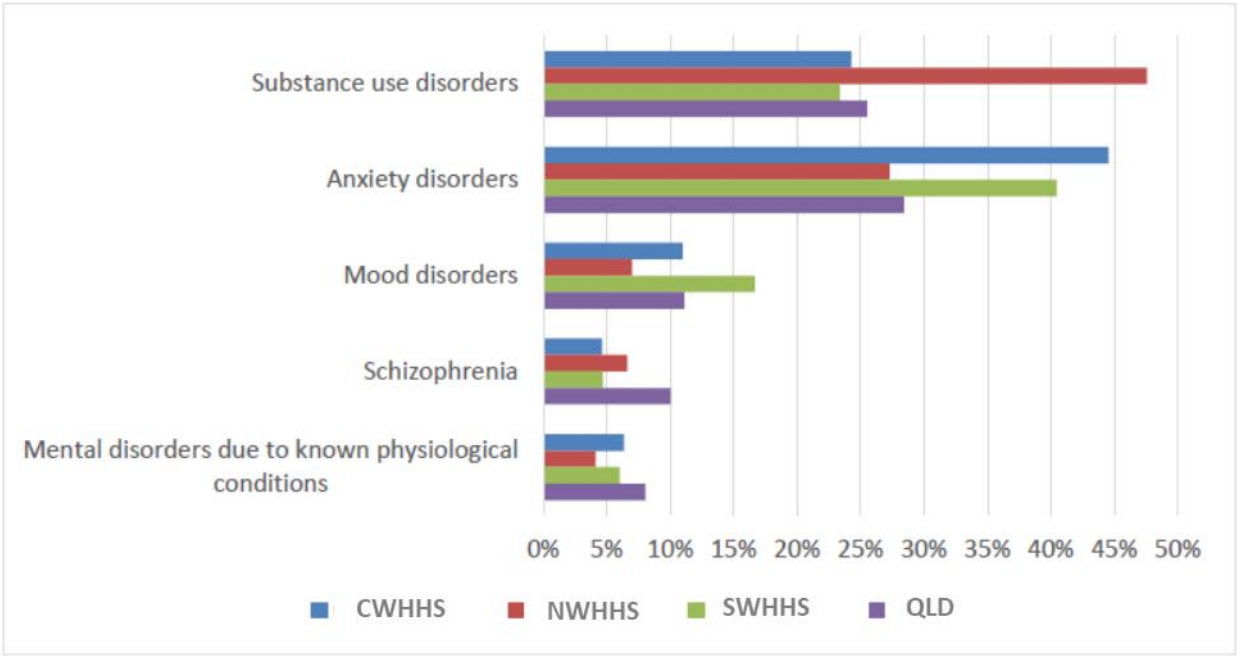
Table 5.10 Rate of mental and behavioural disorders to public emergency departments in Western Queensland, 2014

	Central West	North West	South West	WQPHN	QLD
Mental and behavioural disorders per 100,000	1391.5	2461.6	1683.3	**1986.4**	1242.7

Source: Queensland Health, Emergency Presentation data (un-published)

The majority (48%) of mental illness presentations in NWHHS were related to substance use, and was nearly twice the rate of presentations compared with Central West, South West and Queensland. In the Central West and SWHHSs, the majority of mental illness presentations were related to anxiety disorders (45% and 40% respectively), compared with 28% for Queensland, as shown in **Figure *5.6***.

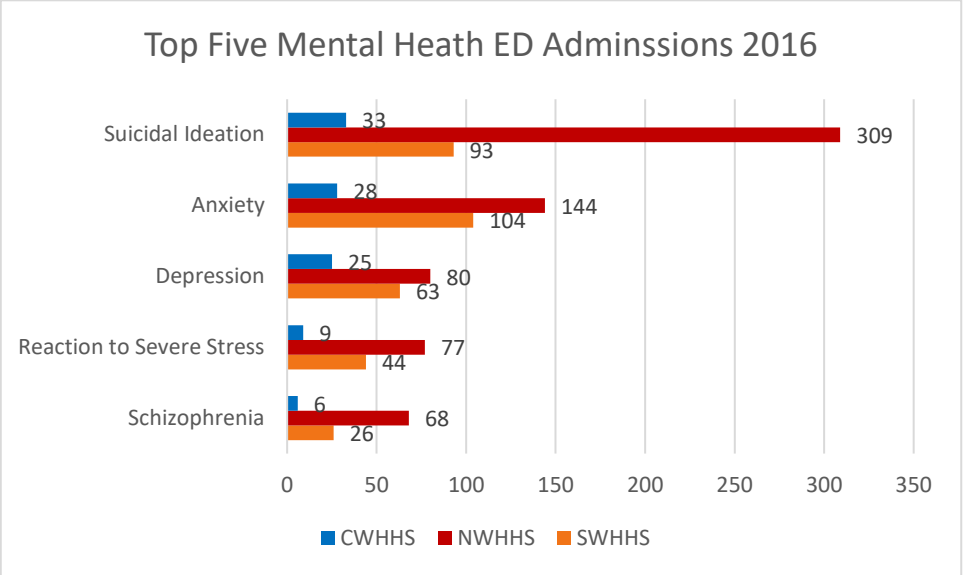
Figure 5.6 Top five mental and behavioural disorders for all public hospital Emergency Department presentations by HHS in Western Queensland, 2014



Source: Queensland Health, Emergency Presentation data (un-published)

Figure 5.7 provides an overview of the top five metal health presentations to Emergency Departments for all public hospitals. Suicidal ideation presentations during the 2016 period were more than three times the rate for the North West region (309 presentations) when compared to Central West (33 presentations) and South West region (93 presentations).

Figure 5.7 Top five mental health presentations for all public hospital Emergency Departments by HHS, 2016



Source: Queensland Health, Emergency Presentation data information system (un-published)

SWHHS community mental health data has been sourced from the Consumer Integrated Mental Health Application (CIMHA). Between 2012 and 2015 SWHHS received 2409 adult, child and youth referrals (1812 patients) to the community mental health services. **Table *5.11*** lists the top three primary diagnosis by age group that was recorded for each episode of care delivered in community mental health services. Of the total primary diagnosis recorded 284 episodes, (22%) had no primary diagnosis recorded. The main age group accessing services in SWHHS were aged between 15 and 49 years old.

Table 5.11 SWHHS community mental health activity by age and primary diagnosis, 2012-2015

Age group	Primary Diagnosis	Total
0-14	Disorders of childhood	49
	Trauma and post-traumatic stress	38
	Anxiety, stress, personality disorder	30
15-49	Depression	171
	Anxiety, stress, personality disorder	130
	Mood disorders	87
50-69	Depression	93
	Anxiety, stress, personality disorder	30
	Mood disorders	21
70+	Dementia and delirium	21
	Depression	17
	Mood disorders	10

Source: SWHHS (2016). Mental Health Services: Fact Sheet

Psychological Distress

One indication of the mental health and wellbeing of a population is provided by measuring levels of psychological distress using the Kessler Psychological Distress Scale (K10). The K10 questionnaire was developed to yield a global measure of psychosocial distress, based on questions about people's level of nervousness, agitation, psychological fatigue and depression in the past four weeks. **Table *5.12*** show the

number of residents 18 years and over who have self-reported very high levels of psychological distress by HHS. The data shows that NWHHS is similar to the Queensland average of 10 percent and SWHHS is lower with 6.8% (no data available for CWHHS).[27]

Table 5.12 Percentage of adults reporting having high or very high levels of psychological distress, 2014 - 2015				
Self-reported Psychological health	**CWHHS**	**NWHHS**	**SWHHS**	**QLD**
Percentage of adults with very high levels of psychological distress	n.a	9.8%	6.8%	10%

Source: ABS: National Health Survey: First results, 2014-15

Suicide

In 2016, intentional self-harm was the 5th leading cause of death for Aboriginal and Torres Strait Islander peoples in NSW, Queensland, South Australia, Western Australia and Northern Territory and the 15th leading cause of death for non-Indigenous people. For males, it was the 2nd leading cause of death for Indigenous and 10th leading cause of death for non-Indigenous people. For Indigenous women it was the 6th leading cause of death compared to the 24th for non-Indigenous women.

Intentional self-harm is the leading cause of death for males aged 15-24 and 25-34 in both Indigenous and non-Indigenous populations. However, the rate of death by intentional self-harm is 3.3 times higher for Indigenous males aged 15-24 than non-Indigenous males and 3.3 times higher for Indigenous males aged 25-34 than their non-Indigenous counterparts. Although fewer females die from intentional self-harm than males, the death rate for Indigenous females aged 15-24 is 4.6 times higher for Indigenous females aged 25-34 and is 3.5 times higher than for non-Indigenous females of the same age.

In Queensland in 2016 the age standardised death rate from intentional self- harm was 22.8 for the Indigenous population compared to 13.1 for the non-Indigenous population.[28]

Table 5.8 (page 31) demonstrates higher aged standardised rates of suicide and self-inflicted injuries in Western Queensland compared with Queensland and Australia (24.2, 13.6 and 11.2 per 100,000 respectively).

Table 5.13 shows suicidal and self-harm presentations to public emergency departments in Western Queensland over one year. Presentations were considerably higher in the NWHHS, compared to the South West and CWHHS. ***Table 5.13*** also shows that WQPHN has higher rates of suicidal/self-harm presentations to emergency departments compared to Queensland.

[27] ABS (2015) National Health Survey: First results, 2014-15

[28] Australian Bureau of Statistics (2016) *Age standardised death rate from intentional self-harm in QLD* http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2016~Main%20Features~Intentional%20self-harm%20in%20Aboriginal%20and%20Torres%20Strait%20Islander%20people~8 Accessed Oct 22 2017)

Table 5.13 Number of suicidal ideation/self-harm emergency presentations per 100,000, 2014			
	Males	**Females**	**Persons**
Central West	175.4	227.2	201.1
North West	511.4	640.7	570.2
South West	224.3	209.1	217.0
WQPHN	351.0	401.2	374.7
Queensland	289.2	328.6	308.9

Source: Queensland Health, Emergency Presentation data (un-published)

Further analysis of this data by Indigenous status demonstrates higher rates of presentation by Indigenous males and females compared with their counterparts in North West and SWHHS, and higher rates of presentation of Indigenous females compared with males in the North West and South West (**Table *5.14***).

Table 5.14 Number of suicidal ideation/self-harm emergency presentations by Indigenous status per 100,000, 2014				
	Indigenous		**non- Indigenous**	
	Male	**Female**	**Male**	**Female**
Central West	149.9	137.4	307.3	239.2
North West	979.5	1260.1	353.3	376.6
South West	565.6	676.4	143.1	118.3
WQPHN	788.3	977.2	259.2	244.0
QLD	719.9	811.4	262.2	301.0

From 2010-2014, WQPHN recorded 85 suicides and the worst age-standardised rate in Australia at 24.8 per 100,000 for persons and for males (37.0 per 100,000). In 2016, there were 214 Admitted patient episodes of care for mental health in WQPHN public acute hospitals. 62% of these were for Indigenous patients (**Figure *5.15***).

Table 5.15 Number of mental health admitted patient episodes of care for in WQPHN public acute hospitals by Indigenous status, 2016				
HHS	**Indigenous status**	**MH**	**Total admitted patient separations**	**% MH**
Totals		**214**	**19,730**	**1.1%**
Central West	Indigenous	7	203	3.4%
Central West	Non-Indigenous	10	2511	0.4%
North West	Indigenous	126	4251	3.0%
North West	Non-Indigenous	71	5518	1.3%
South West	Indigenous	0	1207	0.0%
South West	Non-Indigenous	0	6040	0.0%

Comorbidity

Comorbidity of disorders is common with both mental and physical disorders. The World Mental Health Survey (Scott et al., 2016) found that mental disorders of all kinds are associated with an increased risk of onset of a wide range of chronic physical conditions.[29] The National Survey of Mental Health and

[29] Scott, K. M., Lim, C., Al-Hamzawi, A., Alonso, J., Bruffaerts, R., Caldas-de-Almeida, J. M., … Kessler, R. C. (2016). Association of Mental Disorders With Subsequent Chronic Physical Conditions: World Mental Health Surveys From 17 Countries. *JAMA Psychiatry*, *73*(2), 150–158. http://doi.org/10.1001/jamapsychiatry.2015.2688

Wellbeing in 2007 found that 25.4% of people with a mental health disorder has more than one mental disorder; and more than half (54%) with multiple disorders had severe impairment.[30]

Mental disorders are more common among people with chronic physical conditions, and 1 in 9 people aged 16-85 in 2007 with a mental disorder have a physical disorder at the same time. The most common comorbidity was anxiety disorder combined with a physical condition, affecting around 1.4 million Australian adults. This was consistent for most age and sex groups, except for younger males (aged 16–24) for whom substance use disorder combined with a physical condition was most common comorbidity. In general, the results show that comorbidity increased with decreasing socio economic status (SES). For example, people living in the most disadvantaged areas of Australia were 65% more likely to have comorbidity than those living in the least disadvantaged areas.[31]

Data from the Survey of High Impact Psychosis in 2010, showed people with low prevalence but serious mental health conditions have high rates of chronic diseases including diabetes, asthma, arthritis and cardiometabolic risk factors.[32]

Data provided by an Aboriginal and Islander Community Controlled Health Organisation (AICCHO) in South West Queensland demonstrates the comorbidity of mental disorders and physical health. This data shows that 11% (302/2,669) of the practice population had a mental health disorder, of which 86.4% were high prevalence, with depression being the most common disorder, and 13% had a low prevalence mental disorder (bi-polar the most common). Of
patients with a mental health disorder, 70% had a BMI of overweight, morbid or obese, 17% had asthma, 20% were hypertensive, 7% had diabetes, and 15% had hyperlipidemia.[33]

WQPHN Mental Health, Suicide Prevention, Alcohol and Other Drugs Regional Plan (2017-2020)

WQPHN have committed to working together with partners and communities to build on the strengths and abilities of local communities and services that improve mental health, prevents suicides and addresses AOD issues in a way that is sustainable given Western Queensland's characteristics. A regional plan has been developed and regional working groups have commenced over the past 12 months to map out how best to address issues and priorities.

The National Mental Health Service Planning Framework (NMHSPF)[34] was used to assist in this process including using the stepped care model that tailors the intensity of intervention to the level of need. This enabled calculation estimates of the number of people in Western Queensland with mental illness in any year within defined levels of severity, and then set targets for those who require intervention. This data is shown in **Figures *5.8* and *5.9***.[35] The population numbers used have been drawn from

[30] Slade T., Johnston A., Teesson M., Whiteford H., Burgess P., Pirkis J., Saw S. (2009). *The mental health survey of Australia 2. Report on the 2007 National survey of mental health and wellbeing*. Retrieved from http://www.health.gov.au/internet/main/publishing.nsf/Content/A24556C814804A99CA257BF0001CAC45/$File/mhaust2. pdf (accessed 25th March 2016)

[31] Australian Institute of Health and Welfare. (2012). *Comorbidity of mental disorders and physical conditions 2007*. Canberra: AIHW. Retrieved from http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737421142 (accessed Oct 22 2017).

[32] Morgan, V. A., Waterreus, A., Jablensky, A., Mackinnon, A., McGrath, J. J., Carr, V., Bush, R., et al. (2011). *People living with psychotic illness 2010*. Canberra: Department of Health and Ageing.

[33] Charleville Western Area Aboriginal and Torres Strait Islander Community Health. *CAT Mental Health Summary Report Card, 14/03/2016*.

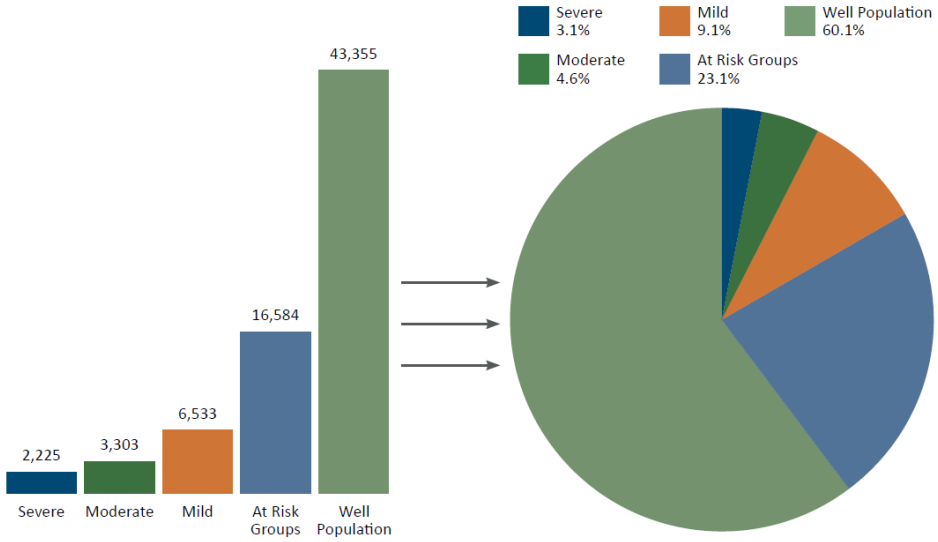
[34] The National Mental Health Service Planning Framework (NMHSPF) available at: http://www.nmhspf.org.au/ accessed 25 Oct 2017

[35] WQPHN (2017) Mental Health, Suicide Prevention, Alcohol and Other Drug Services, Regional Plan 2017-2020.

estimates by the Queensland Government Statistician's Office, Queensland Treasury for 2015.

The treatment population estimates are based on national averages, and have not been adjusted to allow for the unique characteristics of the Western Queensland population. Given the demography of the region (99% remote or very remote, large pockets with low socio-economic status, and a higher than average proportion of Aboriginal and Torres Strait Islander peoples) it is assumed that this data shows the minimum number of people in each category and age group, and that the actual need is likely to be higher.

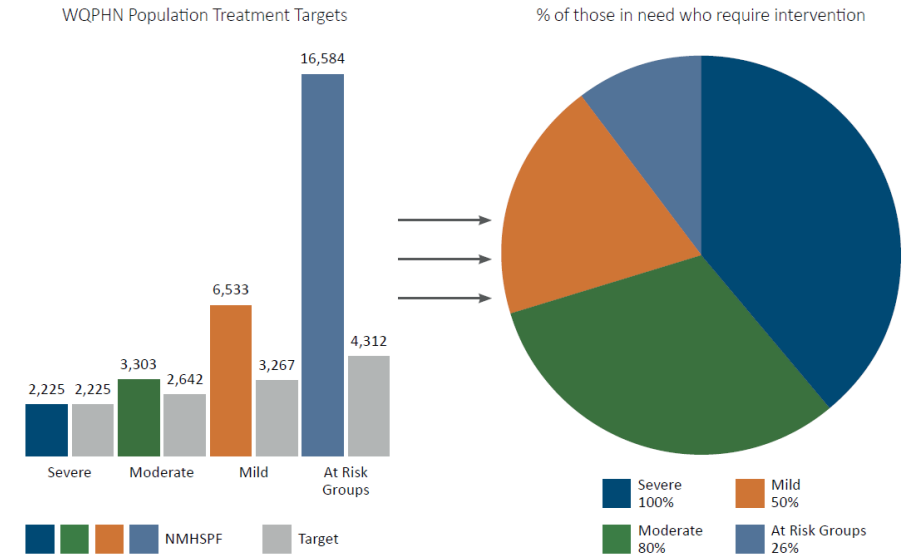
Figure 5.8 - Estimated prevalence of mental disorder in the Western Queensland population



Source: WQPHN (2017) Mental Health, Suicide Prevention, Alcohol and Other Drug Services, Regional Plan 2017-2020 (p. 12)

The pie chart of **Figure *5.9*** shows the percentage of the population categorised by level of mental health need (severe, moderate, mild, at risk and well), while the bar graph at the left shows the number of Western Queenslanders in each group (assuming Western Queensland had the Australian national average prevalence of the various levels of need).

Figure 5.9 - Western Queensland population targets and the percentage of those in need who require intervention



Source: WQPHN (2017) Mental Health, Suicide Prevention, Alcohol and Other Drug Services, Regional Plan 2017-2020 (p. 13)

The pie chart on the right of Figure 5.9 shows the percentage of people at each level of need who would require intervention (all the people with severe needs, 80% of people with moderate needs, etc.), while the bar graph on the left shows in orange the number of people who should therefore receive interventions (treatment targets) relative to the number of people in each needs group (in blue).

5.3 Cancer

Table *5.16* shows the age standardised rate (ASR) of cancer incidence in Western Queensland and is ranked from 1 to 31, 1 being the highest incidence rate and 31 the lowest incidence rate. Compared to all the PHNs in Australia, Western Queensland has the highest rate of cancer incidence for all cancers combined and lung cancer.[36]

Table 5.16 Cancer incidence ASR in WQPHN, compared to Queensland and Australia, 2006-2010

Cancer Type	WQPHN	QLD	Australia	Rank
All cancers	555	530.4	498	1 (Worst)
Breast	106	120.3	115	28
Cervical	n.a	7.8	6.9	n.a
Colorectal	68	65.5	63	6
Lung	73	47.7	44	1
Melanoma	50	66.9	51.4	12
Prostate	170	179.6	185	22

Source: Australian Institute of Health and Welfare. *Cancer incidence in Australia by Primary Health Network. Australian Government*.

Lung cancer

Lung cancer is the fourth most common cancer in Western Queensland but the leading cause of cancer mortality. WQPHN has the highest incidence rate of cancer compared to all other PHNs in Australia. On average, there are 35 Western Queensland residents diagnosed with lung cancer each year. This accounts for 11% of all cancers diagnosed.

Each year there are an average of 30 deaths as a result of lung cancer. This accounts for over a quarter (27%) of all cancer deaths. Males have higher incidence and death rates than females (nearly 3 times higher) as shown in **Table *5.17***.

Table 5.17 Lung cancer incidence and mortality in Western Queensland by HHS

	Central West	North West	South West	WQPHN
Incidence annual average, 2011-2013				
Persons	8	11	16	35
Males	6	8	11	25
Females	2	3	5	10
Mortality annual average, 2011-2013				
Persons	7	9	14	30
Males	5	7	10	22
Females	2	2	4	8

Source: Queensland Cancer Control Analysis Team, Oncology Analysis System

[36] Australian Institute of Health and Welfare. *Cancer incidence in Australia by Primary Health Network. Australian Government. Retrieved from AIHW* https://www.aihw.gov.au/reports/cancer/cancer-incidence-in-australia-by-small-geographic-areas/contents/national-framework-dynamic-data-displays *(accessed Oct 18 2017)*

Colorectal cancer

Table 5.18 Colorectal cancer incidence and mortality in Western Queensland by HHS				
	Central West	**North West**	**South West**	**WQPHN**
Incidence annual average, 2011-2013				
Persons	7	11	20	38
Males	5	7	13	25
Females	3	4	8	15
Mortality annual average, 2011-2013				
Persons	3	5	6	14
Males	2	4	3	8
Females	1	1	3	5

Source: Queensland Cancer Control Analysis Team, Oncology Analysis System

Prostate cancer

Table 5.19 Prostate cancer incidence and mortality in Western Queensland by HHS				
	Central West	**North West**	**South West**	**WQPHN**
Incidence annual average, 2011-2013				
Males	11	15	22	48
Mortality annual average, 2011-2013				
Males	3	2	4	9

Source: Queensland Cancer Control Analysis Team, Oncology Analysis System

Breast cancer

Table 5.20 Breast cancer incidence and mortality in Western Queensland by HHS				
	Central West	**North West**	**South West**	**WQPHN**
Incidence annual average, 2011-2013				
Females	8	13	19	40
Mortality annual average, 2011-2013				
Females	1	1	3	5

Source: Queensland Cancer Control Analysis Team, Oncology Analysis System

Melanoma

Table 5.21 Melanoma cancer incidence and mortality in Western Queensland by HHS				
	Central West	**North West**	**South West**	**WQPHN**
Incidence annual average, 2011-2013				
Persons	8	9	16	33
Males	5	7	9	21
Females	3	2	7	12
Mortality annual average, 2011-2013				
Persons	1	1	1	3
Males	1	1	1	2
Females	n.a	n.a	n.a	1

Source: Queensland Cancer Control Analysis Team, Oncology Analysis System

5.4 Chronic disease

Estimates of chronic disease for PHNs have been derived from the Australian Health Survey. However chronic disease estimates have not been published for Western Queensland due to the high proportion of the population in residing in:

- very remote areas
- discrete aboriginal communities and
- non-private dwellings such as hospitals, jails and nursing homes.

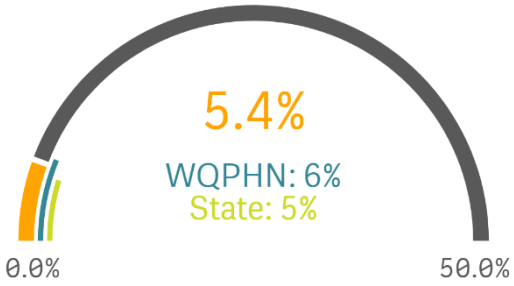
Other sources of chronic disease data found, such as National Diabetes Service Scheme (NDSS) diabetes prevalence data is reported below in **Figure *5.10***. However, caution should be used when interpreting the data as the NDSS data is based on the number of people registered on the NDSS. As registration is costly and optional, the true prevalence of diabetes is markedly underestimated. [37] Therefore, premature mortality and hospitalisation data has also been used to indicate the prevalence and impact of chronic disease in Western Queensland.

[37] Diabetes Australia. (2017).*Diabete s Map*. Retrieved from http://www.diabetesmap.com.au/#/ (accessed Oct 21 2017)

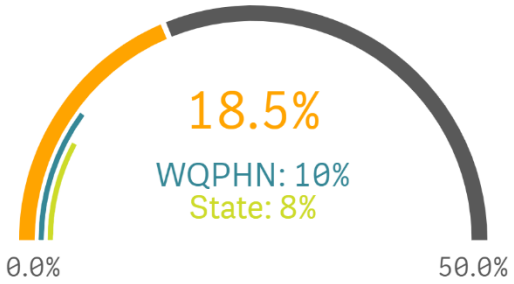
Figure 5.10 - Diabetes Prevalence Comparisons between whole population and Indigenous population by Hospital and Health Service

CWHHS

Diabetes Prevalence - Whole Population

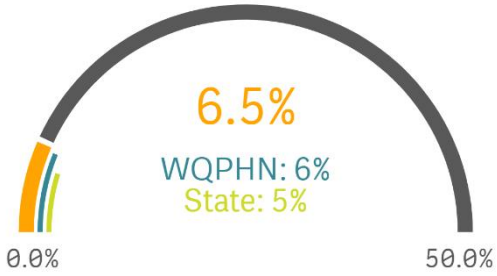


Diabetes Prevalence - Indigenous Population

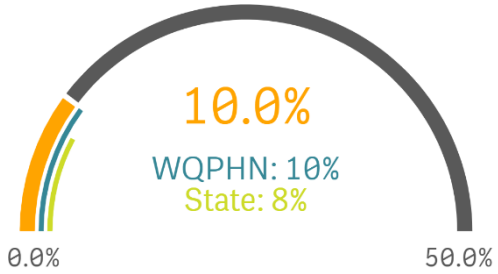


SWHHS

Diabetes Prevalence - Whole Population

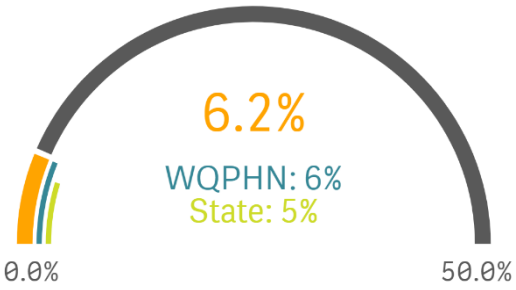


Diabetes Prevalence - Indigenous Population

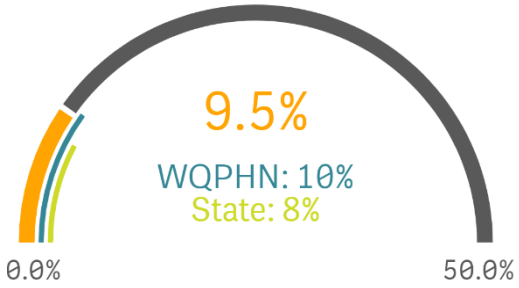


NWHHS

Diabetes Prevalence - Whole Population



Diabetes Prevalence - Indigenous Population



5.5 Prevention and screening

WQPHN has the third highest cervical cancer age-standardised incidence rate compared to all other PHN in Australia (**Table *5.22***). This may be linked to a lower proportion of females participating in cervical screening and a higher proportion of women smoking, in comparison to Queensland. The rate of HPV vaccination in Western Queensland is nearly 90%, and much higher than the Queensland rate of 71% for girls turning 15 years. This suggests that cervical cancer rates will decrease in the coming years.

Table 5.22 Percentage of HPV vaccine and rates of cervical cancer

	WQLN	QLD
Protective factors		
Percentage of girls turning 15 years in 2013 who were fully immunised against HPV	89%	71%
Percentage of cervical screening participation, females aged 20 to 69 years, 2011 to 2012	51%	55.3%
Outcome		
Cervical cancer incidence ASR, 2005-2009	9.4	7.9

Source: NHPA: My health community (HPV vaccine data), PHIDU, LGA data, Screening (cervical screening data)

The percentage of females participating in breast screening is slightly higher than Queensland. The breast cancer age-standardised incidence rate is also lower compared to Queensland and lower than most PHNs in Australia (**Table *5.23***).

Table 5.23 Breast screening participation, females aged 50-69 years, 2014-2015

	WQLN	QLD
Protective factor		
Percentage of females participating in breast screening	58.6%	55.0%
Outcome		
Breast cancer incidence ASR, 2012-2013	126	128

Source: PHIDU, LGA data, Screening (Incidence rates to not include males)

The proportion of Western Queensland residents sunburnt in the last 12 months is also lower than Queensland as is the incidence of melanoma (**Table *5.24***).

Table 5.24 Proportion of sunburn in the last 12 months for persons, 18+

	WQLD PHN	QLD
Proportion of sunburn, 2015-2016	**56.3**	53.9
Outcome		
Melanoma incidence, 2005-2009	**54**	74

Source: Queensland Health. Preventative health survey (sunburn data), AIHW. Melanoma of the skin: Incidence standardised rate by Primary Health Network and Queensland Cancer Control Analysis Team, Oncology Analysis System (Melanoma data)

There is insufficient data available on bowel screening for Western Queensland.

5.6 Oral health

Oral health is an integral aspect of general health. Poor oral health is likely to exist when general health is poor, and vice versa. A study from 2008 found Indigenous Australians have poorer oral health than other Australians.[38] In rural and remote communities, the oral health of Indigenous Australians is affected by water quality and often lack of fluoridation, diet, high rates of smoking, alcohol consumption, stress, infection, and poor access to dental services because of cost, local availability and poor transport infrastructure to support access to services in larger centres.[39]

The National Oral Health Plan states that compared to the overall Australian population of similar ages among Indigenous Australians:

- children generally have more than twice the caries and a greater proportion of untreated caries
- adults have more missing teeth
- periodontal health is worse, with poor periodontal health evident in younger populations.

Poor oral hygiene as well as environmental factors and limited access to dental services contribute to poor oral health. In remote Indigenous communities, national data indicate that less than one fifth of children brush their teeth at home. Gingivitis is evident in 60% of children. There is also a high rate of dental caries in both deciduous and permanent dentition.[40]

According to the National Oral Health Plan (2015-2024) NWHHS region meets all four criteria as a priority population (people who are socially disadvantaged or on low incomes; Aboriginal and Torres Strait Islander peoples; people living in regional and remote areas; people with additional or specialised health care needs) that experience the most significant barriers to accessing oral health care and the greatest burden of oral disease. Under the principle of proportionate universalism, it is these populations that require additional targeted resources and support. [41]

Stakeholder feedback identified high rates of tooth decay and gum disease. Factors impacting oral health include a lack of access to preventative and disease management services, sugar drink consumption, cost of toothbrush and toothpaste in remote stores and quality of the water. Opportunities exist for periodontal disease management, particularly for children and high risk groups including pregnant women and people with or at-risk of diabetes, heart disease and rheumatic heart disease.

Child oral health

The Child Health Check Initiative, conducted as part of the Northern Territory Emergency Response (NTER), identified 43% of children as having an oral health problem and the majority of these children required follow-up care.[42] Tooth decay can contribute to chronic illness in children and have a profound impact on a child's health and quality of life. **Figure *5.11*** shows that NWHHS had the highest rate of child hospitalisations for dental caries (0-9 years) (1,702 per 100,000), followed by Torres Strait and Cape York HHS (1,583 per 100,000) and

[38]Jamieson LM, Sayers SM (2008) *Oral health investigations of Indigenous participants in remote settings: a methods paper describing the dental component of wave III of an Australian Aboriginal birth cohort study*. BMC Oral Health; 8: 24 Retrieved 15 August 2008 from http://dx.doi.org/10.1186/1472-6831-8-24

[39] National Advisory Committee on Oral Health (2004)*, 'Healthy mouths healthy lives: Australian National Oral Health Plan 2004-2013'*, Australian Health Ministers' Conference.

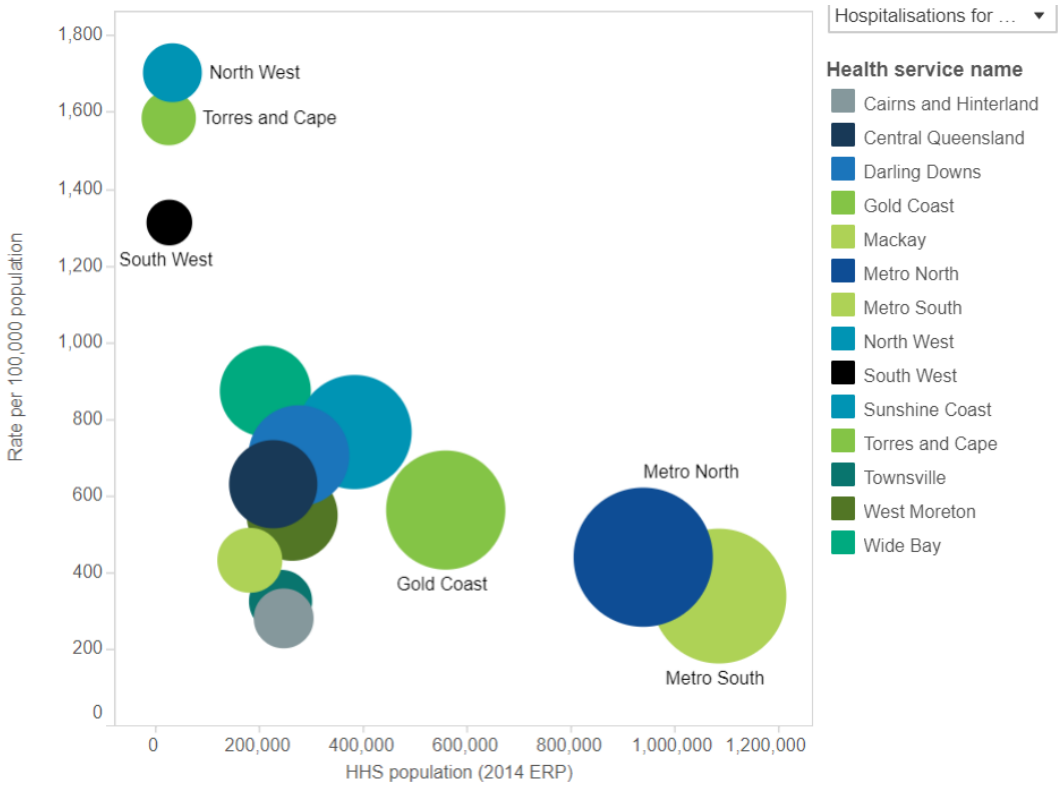
[40] Jamieson LM, Armfield JM, Roberts-Thompson KF (2007). *Oral health of Aboriginal and Torres Strait Islander children*. AIHW

[41] COAG Health Council (2015) Healthy Mouths Healthy Lives, Australia's National Oral Health Plan 2015-2024. Australian Health Ministers' Advisory Council to the COAG Health Council, Canberra. Available at: https://www.mah.se/PageFiles/1541119092/Australias-National-Oral-Health-Plan-2015-2024_uploaded-170216.pdf accessed Nov 1 2017

[42] AIHW (2008*). Progress of the NTER Child Health Check Initiative*.

SWHHS (1,311 per 100,000) (note no data available for CWHHS).

Figure 5.11 - Child Hospitalisations for Dental Caries (0-9 years) by HHS, 2013-2014



Source: Queensland Health. (2016). The health of Queenslanders 2016. Sixth Chief Health Officer Report. Queensland Government. Brisbane. Available through data visualisations at: https://www.health.qld.gov.au/research-reports/population-health/data-discovery/child-health

5.7 Mothers, infants and young children

Fertility rate

The total fertility rate is the average number of babies to be born over a women's lifetime. **Table *5.25*** shows the North West statistical division has the highest total fertility rate within Western Queensland. All three statistical divisions within Western Queensland have a higher number of babies born per woman than Queensland overall.

Table 5.25 Total fertility rate, 2013-2015

	Central West SD	North West SD	South West SD	QLD
Number of births	515	1811	1286	188165
Total fertility rate	2.39	2.4	2.67	1.94

Source: PHIDU, LGA data, Fertility

Maternal and infant health indicators

Table *5.26* shows maternal and infant indicators by Indigenous status. In Western Queensland, a higher proportion of Indigenous mothers smoked during pregnancy, were less than 20 years old and had babies that were preterm and of low birthweight compared to non-Indigenous mothers. A lower

proportion of Indigenous mothers had over five antenatal visits and exclusively breastfed in the 24 hours prior to discharge. Smoking rates are particularly high compared to non-Indigenous mothers as over half of Indigenous mothers in the North West and CWHHS smoked during pregnancy.

Table 5.26 Maternal and Infant indicators by Indigenous status, 2009 and 2011

	Central West (%)	North West (%)	South West (%)	QLD (%)
Indigenous Women				
Smoking during pregnancy (updated 2014)	66.7	51.7	47.6	42.9
Births to mothers <20years	20	20	14	19
5+ Antenatal visits	90	71	76	80
Livebirths discharged home who were exclusively breastfed in 24hrs prior to discharge	61	62	57	72
High birth weight (4000g+)	8	7	12	9
Preterm births	11	15	10	13
Low birth weight (<2500g) (updated2014-2015)	16.7	12.3	12.5	4.9
Non-Indigenous women				
Smoking during pregnancy (updated 2014)	7.6	8.6	12	9.8
Births to mothers <20years	4	6	5	4
5+ Antenatal visits	94	96	96	95
Livebirths discharged home who were exclusively breastfed in 24hrs prior to discharge	80	73	79	79
High birth weight (4000g+)	16	15	13	13
Preterm births	7	8	6	8
Low birth weight (<2500g) (updated2014-2015)	5.9	5.6	4.9	?

Source: Queensland Health. (2014). The health of Queenslanders 2014. Fifth Chief Health Officer Report. Queensland Government. Brisbane.

Infant mortality

Table *5.27* shows that the mortality amongst infants is higher in Western Queensland, compared to Queensland. Due to low numbers in the Central West, there is no published data available for child mortality, however in the North West and SWHHS, child mortality is slightly higher when compared to Queensland.

Table 5.27 Rates of death amongst infants and children, 2010 to 2014

	Central West	North West	South West	WQPHN	QLD
Number of deaths among infants aged less than 1 per 1000 live births	n.a.	4.09	5.29	**3.83**	3.6

Source: PHIDU, LGA data, Child health-mortality

Childhood Immunisation

In 2014, a target for 95% of children to be fully immunised was set by chief health officers of Australia. **Table *5.28*** shows the CWHHS meets this target for all children 1 year old, and five years old.

Table 5.28 Immunisation rates of children aged 1, 2 and 5 years, 2015-2016

	Central West (%)	North West (%)	South West (%)	WQPHN	QLD (%)
1- year old children fully immunised	**95.2**	**91.6**	**91.2**	**93.3**	**93.3**
2-year-old children fully immunised	**89.2**	**91.2**	**87.9**	**91.0**	**91.0**
5-year-old children fully immunised	**96.2**	**93.0**	**92.6**	**94.0**	**94.0**

Source: Queensland Health. Hospital Performance: Immunisation

Table *5.29* shows immunisation rates for Indigenous two-year-old children drop to 72.8% in the SWHHS. However, the immunisation rates for Indigenous five-year-old children recover in all HHSs within Western Queensland to a higher rate than Queensland.

Table 5.29 Immunisation rates of Aboriginal and Torres Strait Islander children aged 1, 2 and 5 years, 2015-2016

	Central West (%)	North West (%)	South West (%)	QLD (%)
Indigenous 1 year old children fully immunised	**95.8**	**87.3**	**80.5**	**87.4**
Indigenous 2 year old children fully immunised	**88.2**	**88.2**	**72.3**	**86.0**
Indigenous 5 year old children fully immunised	**95.8**	**92.7**	**94.8**	**93.3**

Source: Queensland Health. Hospital Performance: Immunisation

Early childhood development

The Australian Early Development Census (AEDC) is a nationwide measure that looks at how well children are developing by the time they reach school. The AEDC looks at five different domains that are important for child development. These include;

- physical health and wellbeing
- social competence
- emotional maturity
- language and cognitive skill (school- based); and
- communication skills and general knowledge.

Table *5.30* shows for all indicators across the five AEDC domains, the results for Western Queensland children are poorer compared to Queensland and Australia. Carpentaria, Burke, Balonne and Paroo statistical areas had the worst results in Western Queensland.

Table 5.30 Percentage of children vulnerable or on track in AEDC domains, 2015				
Indicator	**WQPHN (%)**	**QLD (%)**	**Australia (%)**	**SA2 groups with highest proportions at risk or vulnerable (%)**
Developmentally vulnerable on 1 or more domains	35.6	26.1	22.0	Burke (64.4), Diamantina and surrounds (60), Carpentaria (57.6), Murweh (52.9), Paroo (50)
Developmentally vulnerable on 2 or more domains	21	14.0	11.1	Carpentaria (45.5), Burke (42.2), Balonne (35.8), Paroo (27.3)
Indicator	**WQPHN (%)**	**QLD (%)**	**Australia (%)**	**SA2 groups with lowest proportions on track (%)**
Physical health and wellbeing – developmentally on track	67.1	73	77.3	Burke (50) Paroo (26.5)
Social competence – developmentally on track	66.1	71.2	75.5	Balonne (33.3), Carpentaria (30.3), Murweh (29.6)
Emotional maturity – developmentally on track	69.1	73.5	76.4	Carpentaria (42.4), Burke (31.1), Diamantina (25), Balonne (25)
Language and cognitive skills –developmentally on track	71.5	82.3	84.6	Carpentaria (38.2), Burke (32.6), Balonne (29.6), Paroo (28.1)
Communication skills and general knowledge domain	69.4	72.8	76.3	Quilpie/Bulloo (30), Balonne (23.5)

Source: Australian Early Development Census. (2014). AEDC data by Statistical Area Level 2 (SA2).

5.8 Youth

In 2015, Mission Australia surveyed young people aged 15-19 years across Australia. Of the 18,994 respondents, 4,109 were from Queensland and 112 were from remote Queensland (Western Queensland, North Queensland and Cairns). Of the 112 remote Queensland respondents, 46% were from Western Queensland, 22% were Aboriginal and Torres Strait Islander people and 48% were female.[43]

Youth of remote Queensland rated equity and discrimination (28%) as the most important issue in Australia today, followed by alcohol and drugs (27%). Males of remote Queensland rated alcohol and drugs as a much higher issue in Australia than females of remote Queensland (33.3% vs 18.8%).

The top three concerns of remote Queensland youth were:

- coping with stress (34.7% highly concerned)
- body image (30.6 highly concerned)
- school or study problems (30.3% highly concerned)

[43] Mission Australia. (2016). *Youth survey 2015: Key and emerging issues. Data breakdown for Western Queensland (custom report).* Research and Evaluation, Mission Australia

Just under half of remote Queensland respondents indicated high levels of confidence to achieve work/ study goals. However, 13.1% were less confident in their ability to achieve their goals. The top three barriers that remote Queensland respondents felt would impact on their study/work goals after school were:

- financial difficulty (18.8%)
- where you live (14.3%)
- academic ability (10.7%)

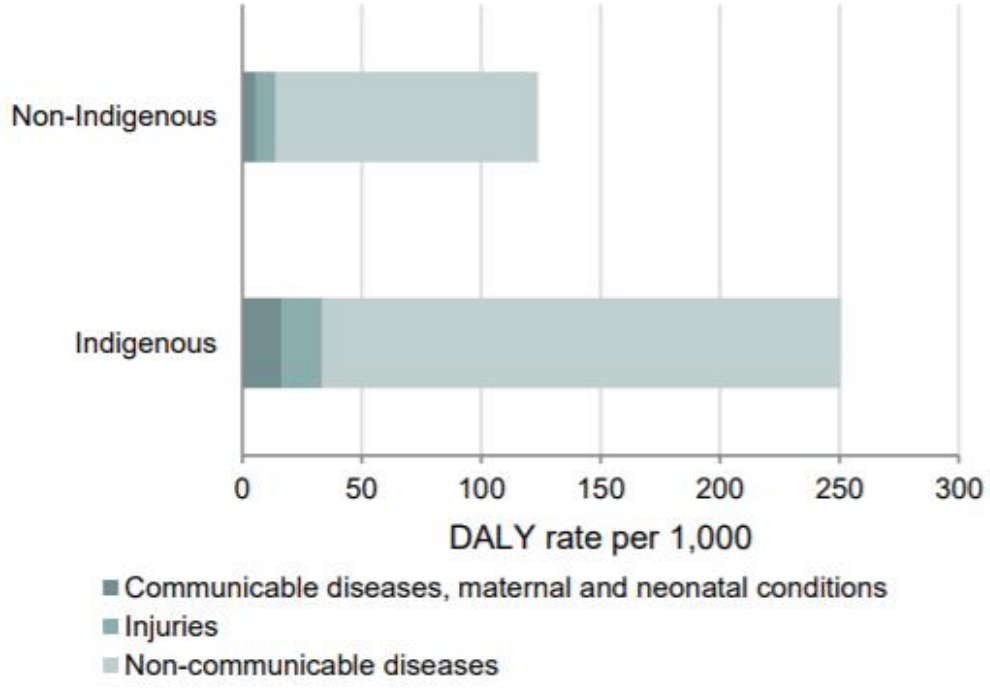
Where you live was rated as a much lower barrier in both the national and Queensland results.

5.9 Health of Aboriginal and Torres Strait Islander Peoples

Burden of disease and injury in Indigenous Australians

Aboriginal and Torres Strait Islander people in Queensland (Indigenous Queenslanders) experience a disproportionate burden of disease compared with other Queenslanders. The Health of Queenslanders 2016 report, identified that Indigenous Queenslanders are disadvantaged in many health conditions and risk factors. Compared to non-Indigenous Queenslanders, they die 23 years earlier and have 2.8 times the rate of avoidable deaths for preventable conditions and 3.2 times for treatable conditions.[44] **Figure 5.12** shows that the age adjusted rate of burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people, was 2.1 times that of non-Indigenous Queenslanders.[45]

Figure 5.12 Burden of disease and injury in Indigenous and non-Indigenous Queenslanders by major cause category



Source: Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane (page 8).

[44] Chief Health Officers Report (2016). The *Health of Queenslanders 2016* Report.
[45] Queensland Health (2016) The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people, 2014

Life expectancy gap

It is well established that Queensland's Aboriginal and Torres Strait Islander peoples experience worse health and poorer life expectancy than non-Indigenous Queenslanders. While there have been some improvements in the gap in life expectancy when compared to non-Indigenous Queenslanders, Aboriginal and Torres Strait Islander peoples are still dying prematurely and living with more disease and injury from an earlier age. [46]

Mental disorders, cardiovascular disease and diabetes were the largest contributors to disease and injury burden in Queensland's Aboriginal and Torres Strait Islander peoples (1.7 times, 3.7 times and 4.3 times) (**Figure *5.13***). This represent half of the gap in disease and injury burden between Aboriginal and Torres Strait Islander people and non-Indigenous Queenslanders (mental disorders 16.2%, cardiovascular disease 19.7%, diabetes 16.2%) (**Figure *5.14***).

Figure 5.13: Expected disease and injury burden and gap by broad cause, 2011

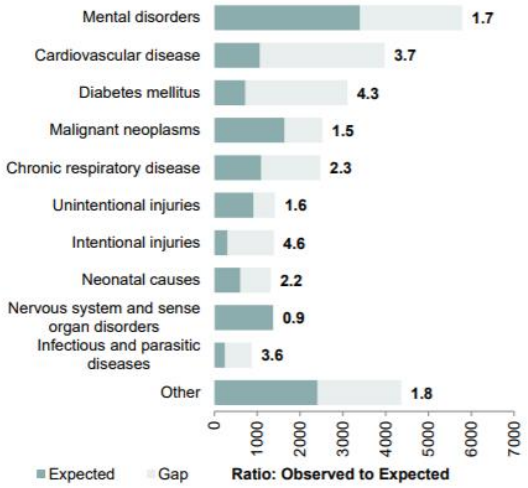
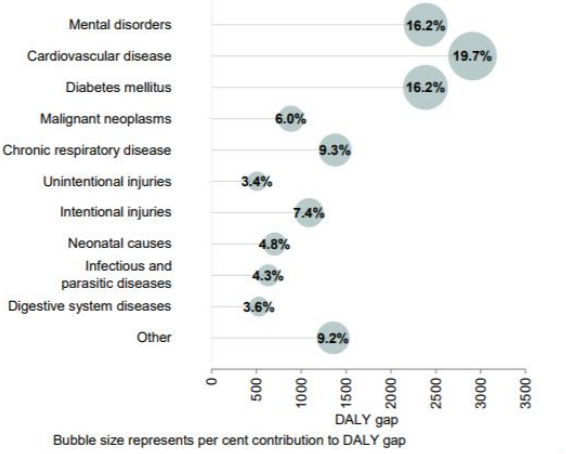


Figure 5.14: Leading broad causes of the burden of disease and injury gap



Source: Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane (page 76).

While the comparatively poor health status of Aboriginal and Torres Strait Islander peoples is documented at state and national levels, there is minimal quantitative data at a Primary Health Network or SLA level on the risk factors, health status and health outcomes of the resident Aboriginal and Torres Strait Islander population.

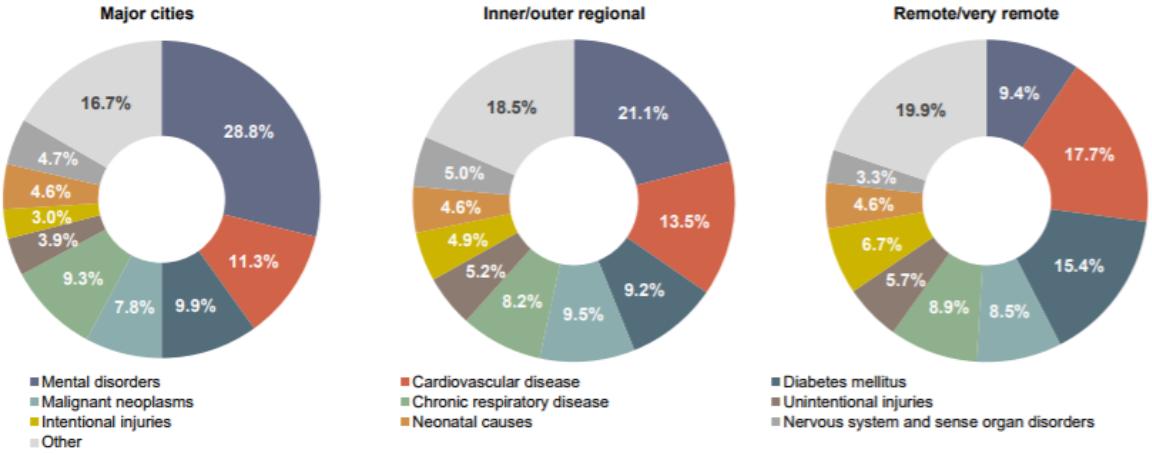
To understand the health of Indigenous Australians in Western Queensland, data published on Aboriginal and/or Torres Strait Islander people living in remote areas of Queensland has been used.[47] As section seven of this report outlines, 90.6% of the Western Queensland population live in either remote or very remote areas of Australia and 17.2% of the Western Queensland population identify as Aboriginal and Torres Strait Islander people. The majority (26%) of Western Queensland Indigenous population reside in the NWHHS 11.5% live in the SWHHS and 7.3% live in the CWHHS. Two LGAs within the NWHHS, (Mornington (86%) and Doomadgee (93.4%) have a population of approximate 90% who identify as Aboriginal or Torres Strait Islander people.

[47] Begg, S., Stanley, L., Suleman, A., Williamson, D., Santori, J. & Sergi, M. (2014). *The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people*. Queensland Health. ISBN 978-1-921021-60-2. Retrieved from https://www.health.qld.gov.au/atsihealth/documents/burden_of_disease.pdf (accessed Oct 24 2017)

Burden of disease and injury by cause and remoteness

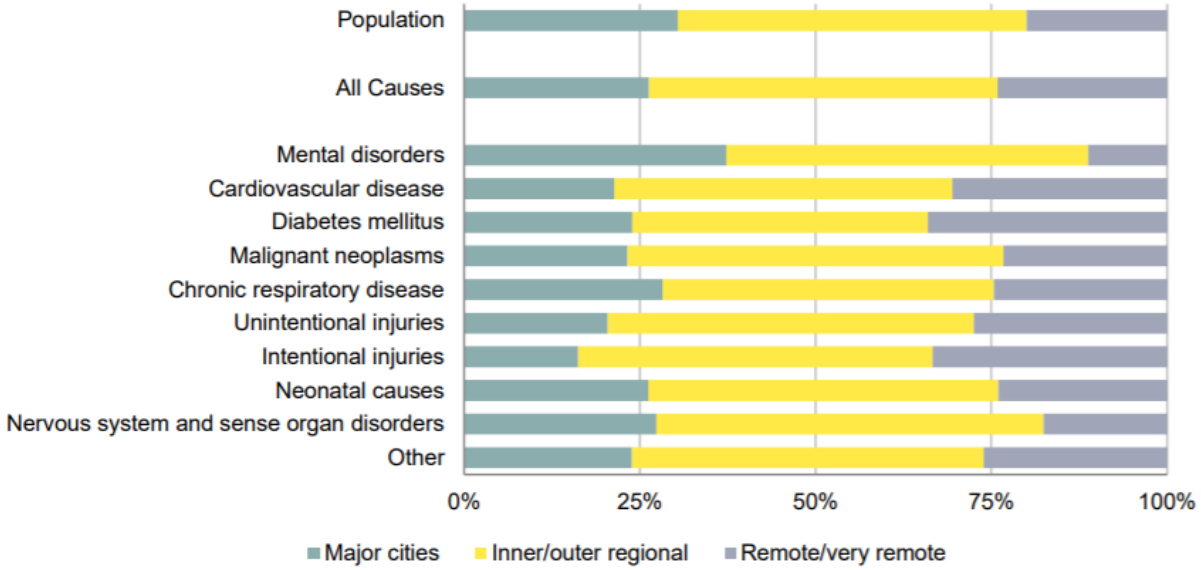
Figure *5.15* compares burden of disease and injury by cause and remoteness. Burden of disease and injury is the cumulative sum of the years of life lost due to disability and premature mortality and is also referred to as DALYs (Disability Adjusted Life Years). The leading contributors to the burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander peoples varied by remoteness. In major cities and regional areas, mental disorders were the leading contributor to the burden of disease and injury, followed by cardiovascular disease and diabetes (**Figure *5.15*; Figure *5.16***). **Figure *5.16*** shows with increasing remoteness, the rate of burden increased, with cardiovascular disease the leading contributor to the Indigenous burden of disease and injury, followed by diabetes then mental disorders.[48]

Figure 5.15 - Burden of disease and injury by broad cause and remoteness



Source: Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane (cited page 26)

Figure 5.16 - Distribution of burden of disease and injury by remoteness



Source: Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane (cited page. 26)

[48] Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane.

Leading broad and specific causes of disease burden and injury

The largest broad cause contributors to the Indigenous disease and injury burden in 2011 were mental disorders, chronic disease and unintentional injuries. Together, the top six contributors were responsible for more than two-thirds of the total disease and injury burden in Queensland's Aboriginal and Torres Strait Islander peoples (**Figure 5.17**). Mental disorders represent a significant and rising contribution to the burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander peoples. According to the burden and disease injury report (2001), there was an increase between 2007 to 2011 in both the rate of mental disorders as well as the contribution of mental disorders to the overall burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander peoples. [49]

Figure 5.17 - Leading broad and specific causes of burden of disease and injury in Queensland Aboriginal and Torres Strait Islander peoples

Source: Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane (cited p. 30)

Mental disorders were the leading contributor to the Indigenous burden of disease, responsible for around one-fifth of the total disease burden. Cardiovascular diseases were the second leading contributor to the burden of disease and the leading cause of mortality for Aboriginal and Torres Strait Islander peoples in Queensland (**Figure *5.18***).

[49] Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane.

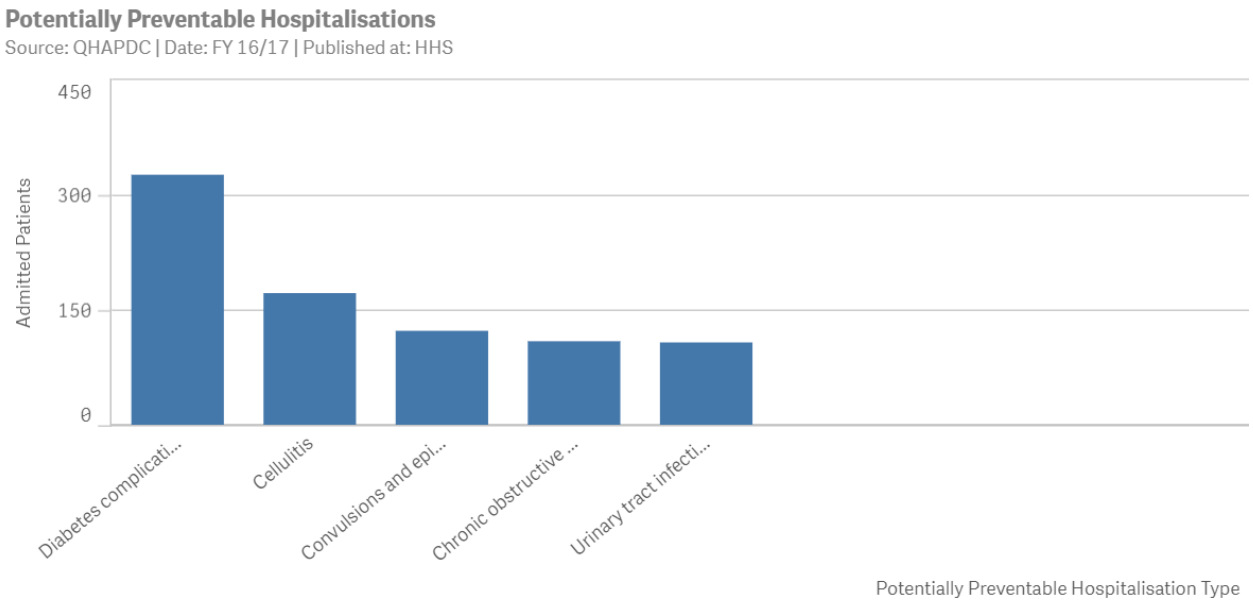
Figure 5.18 -Leading six contributors to burden of disease and injury in Queensland ASTI people

Source: Queensland Health (2017). The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people 2017 (reference year 2011) Main report, Queensland Health, Brisbane (cited p. 30)

Potentially Preventable Hospitalisations

Chronic conditions were the most common potentially preventable hospitalisations (PPH) for Indigenous people with diabetes complications, cellulitis, convulsions and epilepsy, COPD and urinary tract infection the top five contributors (**Figure 5.19**)

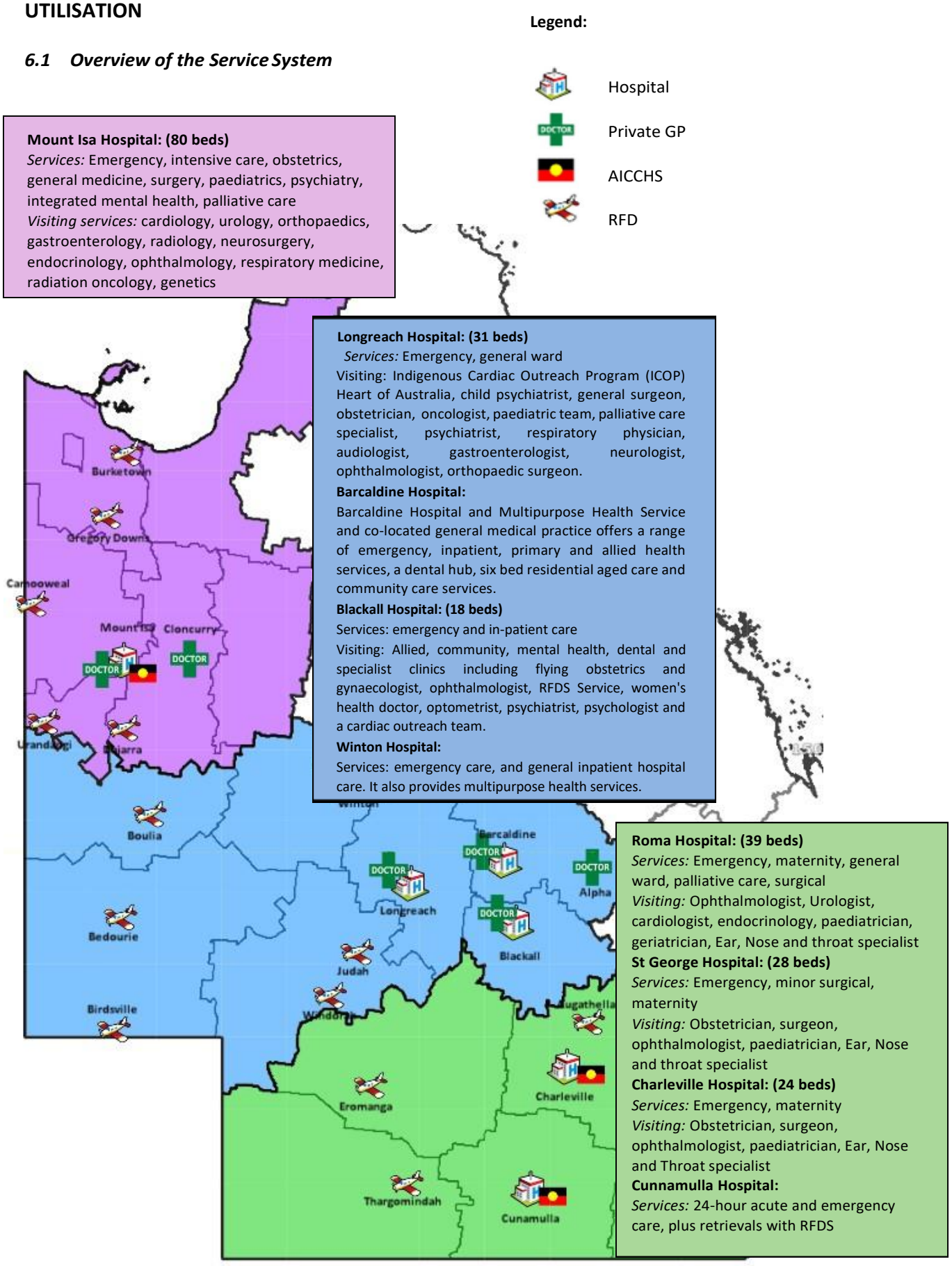
Figure 5.19 – Indigenous PPH by Admitted patients across WQPHN



Source: Queensland Hospital Admitted Patient Data Collection (QHAPDC), unpublished data

6. HEALTH SERVICES AND SERVICE UTILISATION

6.1 Overview of the Service System



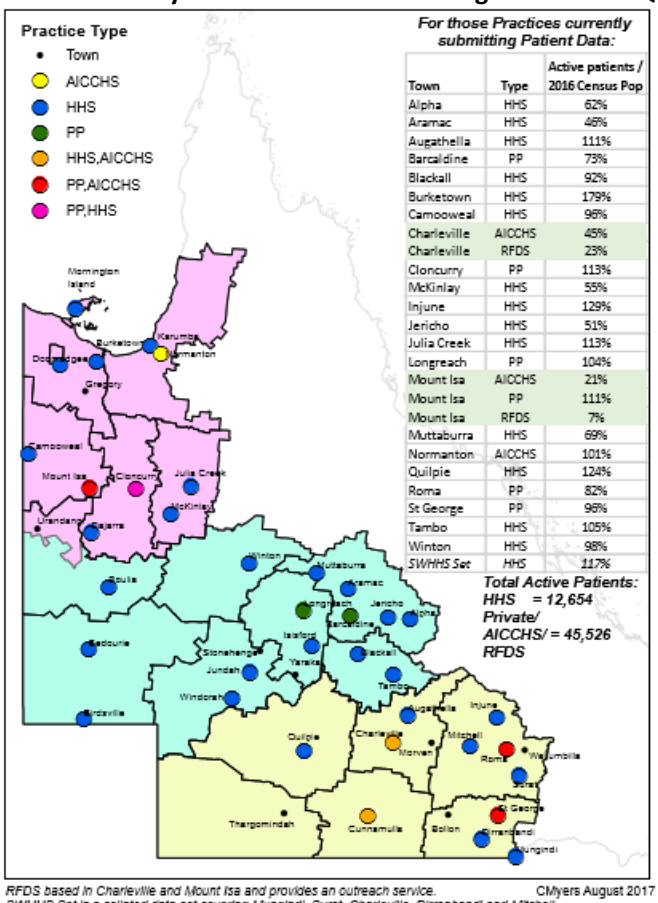
6.2 Service Providers

The health service system in Western Queensland is funded through multiple Commonwealth and State sources resulting in a very complex service system. Hospital and Health Services deliver acute care, procedural services, community health, mental health and alcohol and other drug services, visiting medical specialist services, as well as aged care services in Multipurpose Health Services.

There are 48 primary care organisations operating in Western Queensland (**Figure *6.1***). This includes:
Six AICCHS (3 Gidgee Healing Clinics in the North West and Cunnamulla Aboriginal Health Corp (CACH), CWAATSICH, Goondir in South West)

- 42 general practices of which 70% are operated by the Hospital and Health Services and the others are private practices and RFDS bases.
- There are 30 HHSs run "practices" mainly in smaller towns with a combination of nurse-led clinics with visiting SMOs or RFDS doctors, Primary Health Centres with DONs in place, and a few clinics with FTE GPs. Some of these particularly in the CW are accredited.
- There are 10 privately owned General Practices with FTE GPs (some employed by the HHS) that are accredited.
- There are 2 RFDS Bases, one in Charleville and one in Mt Isa. RFDS provide GP clinics to small communities/nursing posts and nurse-led clinics in communities in the Boulia, Diamantina, Barcoo and Paroo Shires from bases in Mt Isa and Charleville. These are now HHS run practices with a mix of RFDS Doctors and SMOs servicing them as "General Practitioners". A traditional GP model of care with MBS billing is generally not operated in these clinics.

Figure *6.1*: Primary health care service arrangements in WQPHN



Town	Type	Active patients / 2016 Census Pop
Alpha	HHS	62%
Aramac	HHS	46%
Augathella	HHS	111%
Barcaldine	PP	73%
Blackall	HHS	92%
Burketown	HHS	179%
Camooweal	HHS	96%
Charleville	AICCHS	45%
Charleville	RFDS	23%
Cloncurry	PP	113%
McKinlay	HHS	55%
Injune	HHS	129%
Jericho	HHS	51%
Julia Creek	HHS	113%
Longreach	PP	104%
Mount Isa	AICCHS	21%
Mount Isa	PP	111%
Mount Isa	RFDS	7%
Muttaburra	HHS	69%
Normanton	AICCHS	101%
Quilpie	HHS	124%
Roma	PP	82%
St George	PP	96%
Tambo	HHS	105%
Winton	HHS	98%
SWHHS Set	HHS	117%

RFDS based in Charleville and Mount Isa and provides an outreach service. CMyers August 2017
SWHHS Set is a collated data set covering Mungindi, Surat, Charleville, Dirranbandi and Mitchell

Aboriginal and Islander Community Controlled Health Services (AICCHS) offer holistic models of care provided by GPs, nurses, Aboriginal Health Workers and allied health professionals. **Nukal Murra Health Support Service (NMHSS)** is an alliance of six bodies established in 2017 including:

- Western Queensland Primary Health Network (WQPHN)
- Queensland Aboriginal and Islander Health Council (QAIHC)
- Charleville and Western Areas Aboriginal and Torres Strait Islander Community Health (CWAATSICH) Cunnamulla Aboriginal Corporation for Health (CACH)
- Goondir Health Services (Goondir) and
- Mount Isa Aboriginal and Islander Community Controlled Health Services Limited trading as Gidgee Healing

Nukal Murra Health Support Service (NMHSS) is responsible for:

- delivering Integrated Team Care (ITC) services throughout Western Queensland
- overseeing the NMHSS
- contributing to greater clinical and cultural leadership by the Western Queensland Aboriginal and Islander Community Controlled Health Service (AICCHS) sector to enable greater quality and capability in services for Aboriginal and Torres Strait Islander people of the catchment
- maximising the pool of funds available to support supplementary services for Aboriginal and Torres Strait Islander peoples with complex chronic conditions. Allied health and mental health services are delivered by private providers, NGOs, AICCHS and the HHSs, often provided under hub and spoke arrangements.

Domiciliary nursing services and Home and Community Care services are provided by NGOs, local government as well as HHSs in some locations.

Residential aged care facilities are operated by a range of providers including local government, NGOs, and for profit providers, in addition to Multipurpose Health Services operated by Hospital and Health Services in some regions. Home and Aged Care providers include local government, HHSs and NGOs.

CheckUP in partnership with the Queensland Aboriginal and Islander Health Council (QAIHC), is the jurisdictional fund holder for several programs delivering outreach services to urban, rural and remote locations and high-need populations throughout Queensland and work with WQPHN to support the Outreach program. The programs support the provision of medical specialist, GP, and allied health professional services to urban, regional, rural and remote locations including many Aboriginal and Torres Strait Islander communities. Funding through these programs is available to cover the out of pocket travel and administration expenses associated with the delivery of the Outreach service. Dates that services are visiting communities can be accessed by the online CheckUP outreach Diary available at https://outreach.checkup.org.au/ . **Tables *6.1* and *6.2*** provide an overview of the total number of Outreach locations and providers by health profession. Optometrists and specialists are often individually contracted clinicians which increases the total count of providers. With regards to allied health, the vast majority of services are provided by a single organiation in each region. In some instances, CheckUP does contract small locally based allied health clinicians over larger provider organisations to support local capacity building where it is the most appropriate service to address health needs. This leaves only around two to three large allied health providers in each region (Gidgee, NWRH, Vital, LTTS, HHS) and a handful of smaller providers who are usually individually contracted, locally based clinicians.

Table 6.1 CheckUP Total number of outreach general locations				
	Central West	**North West**	**South West**	**WQPHN**
Distinct count of general location	20	12	22	44

Table 6.2 CheckUP Total number of providers by health profession			
	Central West	**North West**	**South West**
Allied Health	6	14	16
Assistant/Coordinator/Technician/Scientist	1	4	3
General Practitioner/Medical Officer	4	3	3
Health Worker	1	1	1
Nursing/Nurse Practitioner/Midwifery	3	6	4
Specialist	10	16	13
Specialist - Registrar	n.a	2	n.a
Total*	**25**	**46**	**40**

*Note – The term 'provider' refers to an organisation of which some organisation are a provider of more than one health profession type (e.g. allied health, nursing, health worker etc) -hence the figures in the total are more than the 'registered' providers.

RFDS provide clinics in addition to retrieval service to the following communities Camooweal, Dajarra, Urandangi, Burketown, Gregory, Adels Grove, Boulia, Bedourie and Birdsville. Clinics have a focus on Chronic Disease Management to support continuity of care for patients. RFDS have also commenced a telehealth trial in Yowah which provides consultations in between visiting clinics. The trial also allows for telehealth consults to be undertaken when poor weather limits visits or if there are mechanical issues with the plane. Plans to expand the trial are in the planning stage.

There are multiple **allied health service providers** based in the main city centres of Mount Isa and Roma and to a lesser extent, Longreach. Some provide outreach from these hub communities to more remote communities but not to the same extent as the NGOs.

WQPHN Practice Support Data Management Program

Currently, there are 43 practices that have agreement with the PHN for data sharing. Thirty six of these are currently submitting data monthly to WQPHN PATCAT system. SWHHS practices submit a joint data set each month. RFDS submit 2 joint data sets, one for Charleville and one for Mount Isa. NWHHS have a data sharing agreement but are currently experiencing IT issues that prevents the data being uploaded to the WQPHN system.
Three southern AICCHS and 2 Private Practices do not currently have data sharing agreements with WQPHN although one AICCHS shares Diabetes data and participates in the Diabetes Collaborative.

WQPHN Practice Tiered System

WQPHN has developed a system to grade practices to enable the Practice Health Care Coordinators to gauge the type and intensity of support a practice requires with respect to eight key domains. The domains include:

- building relationship and engagements
- chronic disease and complex conditions
- digital health
- data management

- accreditation
- Aboriginal and Torres Strait Islander cultural awareness
- workforce and education
- quality improvement.

The system grades each practice in each domain and then gives an overall tier as below:

Tier 1	Practice is not engaged with WQPHN Primary Health Care Support Team or Programs
Tier 2	Practice receives visit and information from Coordinators but doesn't engage in any Programs
Tier 3	Practice is signed up for Data Management Program and uploads data monthly, receives visit and information from coordinators but is not enrolled in Quality Improvement (QI) programs
Tier 4	Practice does all Tier 3 activities and is enrolled and making improvements through QI programs

Diabetes Education expertise in Western Queensland

There is varying diabetes educator capacity across the WQPHN footprint. The Diabetes team in the NWHHS includes one Nurse Practitioner, two CNC, and two CN positions, one of these being 0.5 Renal, 0.5 Diabetes. There are two IHW for Diabetes. These positions are based in Mount Isa. At September 2017, the Nurse Practitioner position was vacant. CWHHS has one Credentialed DE (based in Longreach), SWHHS has one Credentialed DE (based in Roma).

The HHS Diabetes Educators have a caseload largely derived from referrals from the hospitals (within the HHS) and community health. WQPHN has previously been commissioning Diabetes Education services as a component of an allied health funding bundle of services from New Ways Real Health. However, in 2017-18, Diabetes Education will be commissioned within a new fund, bringing this investment in line across the catchment with a consistent strategy informed by the DQ-WQPHN collaboration. There is a private Diabetes Educator located in Goondiwindi that is interested in expanding activity into the SWHHS. CheckUP commissions a range of diabetes educator services in the WQPHN region, as well as visiting endocrinology services. CheckUp has commissioned NWRH to provide diabetes educator services to Cloncurry, Camooweal, Urandangi and Dajarra in the North West, and Boulia, Bedourie, Birdsville, Jundah, Stonehenge and Windorah in the Central West.

Pharmacists

The WQPHN Health Needs Assessment has highlighted there is limited access to accredited pharmacists who are available to undertake Home Medication Reviews as part of the Team based management of diabetes. Despite high prevalence, significant DAA utilisation in Aboriginal and Torres Strait Islander peoples and older populations, and the high numbers of co-morbid conditions in West Queensland populations, regular medication review with patients and referring GPs is critically low. Influencing factors include:

- limited availability of community pharmacy across the PHN
- limited capacity/ willingness to undertake work in addition to “shop front” i.e. to support team care models
- in locations where there is not a community pharmacy, Section 100 is in operation or dispensed

through the HHS hospitals/ clinics.

- the issue of HMRs and better access to pharmacists, including support for greater activation of the 6th community pharmacy agreement within interested pharmacies, and development of CheckUP funded HMR accredited pharmacists.

Following the development of the ***Mental Health Suicide Prevention and Alcohol & Other Drug Services Regional Plan 2017-2020*** the following funded activities have been either established or expanded across the region.

New Access Coaching
New Access coaches - funded through Lifeline Darling Downs, RFDS and Centacare North Queensland Mount Isa. This provides 6 sessions of low intensity Cognitive Behaviour Therapy for people with mild to moderate anxiety and depression over the age of 18. The coaches are based in Roma, Charleville, Longreach and Mount Isa.

Headspace Mount Isa - improving the wellbeing of young Australians 12-25.

Continuation of the Psychological Therapies (including Child, Youth and Suicide Prevention) provides a short term psychological services (up to 10 sessions) through a GP referral.

Primary Mental Health Nurse in General Practice
Providing coordination and support to Mental Health patients through integrated care based in General Practice. Nurses are in Roma, St George, Longreach, Cloncurry, Mount Isa and Cunnamulla.

Social & Emotional Wellbeing SEWB - Aboriginal and Torres Strait Islander Alliance
Nukal Murra Allianceis a collaborative of the four AICCHSs and the WQPHN that have established a culturally and clinically integrated social and emotional wellbeing model of care for Aboriginal and Torres Strait Islander peoples in Western Queensland.

Alcohol & Other Drugs (AODs)
DrugArm, Healthy Options Australia (HOA) in Roma and St George; Lives Lived Well in Longreach and Salvation Army in Mount Isa have been funded to provide treatment services and counselling for AOD clients.

System navigation, early intervention and telephone counselling support program
In early stage development with aim to:

- implement a rural and remote social media campaign to improve service access and system navigation in Queensland;
- work with the Queensland Government to improve the capacity of the Alcohol and Drug Information Service (ADIS) to deliver telephone counselling and facilitate warm referrals in rural and remote regions of Queensland;
- work with general practitioners in rural and remote areas of Queensland to build capacity to respond to alcohol and other drug issues.

North West – Key service providers

The NWHHS provides public hospital and health services including medical, surgical, emergency, obstetrics, paediatrics, specialist outpatient clinics, mental health, critical care and clinical support

services to the communities of North Western Queensland from Dajarra and Urandangi in the south, to Cloncurry and Julia Creek in the east and north to the Lower Gulf. It serves a population of 28,319. The footprint of CWHHS covers 300,000 km2 (nearly 20% of Queensland's total area).

The NWHHS is the public health service provider in the region. The Mount Isa Hospital is a regional hospital providing a range of inpatient and outpatient services (Map 6.1). Medical specialist services resident in Mount Isa include emergency, intensive care, general medicine, surgery, paediatrics, psychiatry and palliative care, supplemented by a range of visiting specialist services.

NWHHS has small rural hospitals or Multipurpose Health Services in Cloncurry, Normanton, Julia Creek, Mornington Island and Doomadgee, and operates Nurse-led clinics in Burketown, Dajarra, Camooweal and McKinlay.

With respect to primary care services, NWHHS provides:

- child health services in Mount Isa
- caseload model midwifery service to Doomadgee, Mornington Island, Cloncurry, Julia Creek, McKinlay and Mount Isa
- school based youth health nurses in Mount Isa
- visiting Women's Health service across the HHS
- community health services in the Lower Gulf, however, these services predominantly support the visiting services coming into the community.

The NWHHS Mental Health, Alcohol and Other Drug Service provides:

- Adult mental health services
- Child and Youth mental health
- Alcohol and other Drugs services
- Homelessness service.

A Mental Health Clinical Nurse is located in Doomadgee and Mornington Island. Most positions are in Mount Isa, with an AOD worker position located in Normanton, Mornington Island and Doomadgee.

Private general practice is limited to Mount Isa (two practices and a GP Superclinic) and Cloncurry. Three AMS practices owned by Gidgee Healing, two in Mount Isa and one in Normanton.

Private allied health services in Mount Isa include physiotherapy (x2), dental (x3), psychology (x3), exercise physiology (x2), occupational therapy (x2), speech pathology, podiatry and fly-in, fly-out dietetics (x1) ogy. A private physiotherapist visits Cloncurry on a regular basis.

Private pharmacies operate in Mount Isa, Cloncurry and Karumba

Gidgee Healing is an AICCHO located in Mount Isa providing clinical services and programs (maternal and child health, sexual health, chronic disease management, Indigenous Diabetes Eyes and Screening, Tobacco and Lifestyle program), and hosts visiting specialist services. Gidgee Healing operates the **headspace** program in Mount Isa, and has partnered with the Salvation Army to run the Normanton Recovery and Community Wellbeing Service. Gidgee provides a mobile GP service to Normanton, Doomadgee and Mornington Island. It has recently established a Mums and Bubs program in Mornington Island and Doomadgee and commenced recruiting to allied health positions transitioned

from North West Remote Health now known as New Ways, Real Health. General practice in Normanton has transitioned to Gidgee Health from NWRH.

From April to June 2017, there has been an increase in the number of new young people attending, serviced young people and the occasions of service received at **headspace in Mount Isa**. Of these, 33.9% young people are Indigenous (79 Aboriginal, 4 Aboriginal and Torres Strait Islander, 3 Torres Strait Island). 57.5% (146) of the young people are female, 40.6% (103) are male and 2% (5) identify as other. The age of the young people are 12-14 (28.3%, 72), 15-17 (31.1%, 79), 18-20 (16.5%, 42), 21-23 (18.9%,48), 24-25 (5.1%, 13).

The Royal Flying Doctor Service (RFDS) provides GP clinics and child health clinics to Camooweal, Dajarra, Urandangi and Gregory Downs from the Mount Isa base. The RFDS also provides child health services to Mornington Island and Doomadgee from Cairns.

New Ways Real Health (NWRH) is an NGO providing a range of allied health, psychology, social and emotional wellbeing, aged care, NDIS and health promotion services in the North West and Central West Queensland (plus also provide services in Townsville and surrounds).

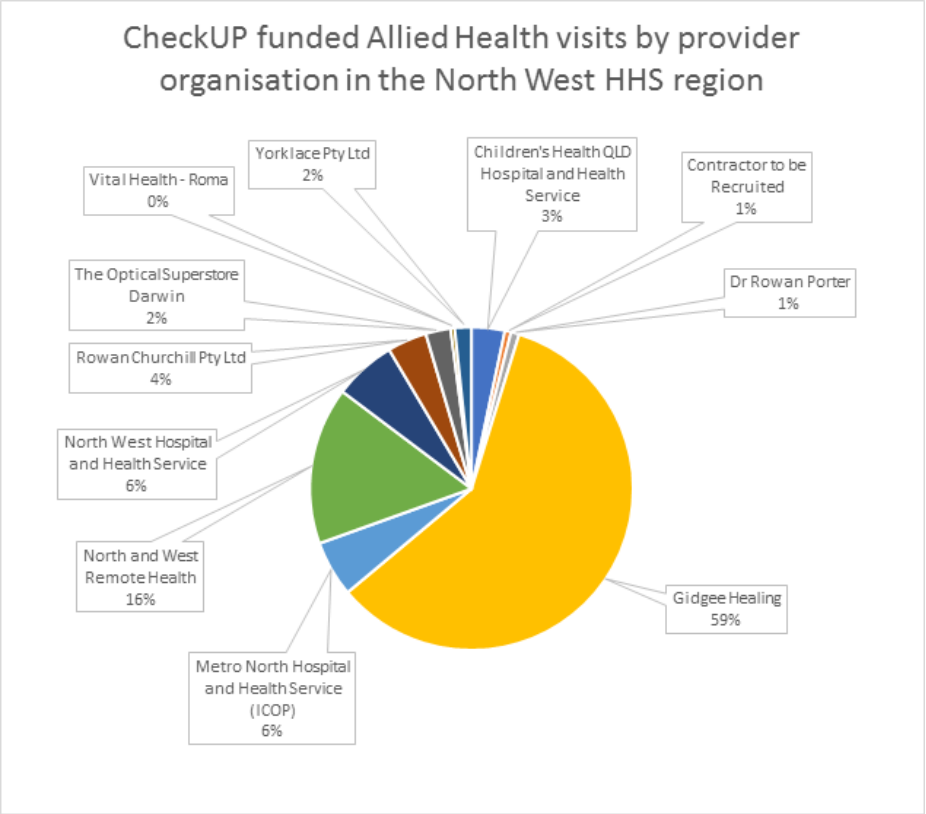
- NWRH has a hub in Mount Isa and operates an outreach model delivering podiatry, physiotherapy, occupational therapy, speech pathology, psychology, exercise physiology, diabetes education and dietetic services to the inland communities in the North West.
- Psychology services are provided under the Primary Mental Health Service funding in Mount Isa, Cloncurry, Dajarra, Julia Creek and Camooweal. These services operate from the Mount Isa hub.
- In December 2015, NWRH took over management of the residential aged care facilities in Doomadgee, Mornington Island and Normanton.
- Alcohol and other Drug program through the Wellbeing Centres in Doomadgee and Mornington Island.

There are several other visiting services to the region including:

- CheckUP who provide visiting specialist, general practice and allied health services (**Figure *6.2***)
- Gidgee Healing who provide community controlled services to Indigenous populations across the region including:
    - primary health care services
    - occupational therapy, clinical psychology and speech pathology services to school age children in Mornington and Doomadgee
      allied health services across the Lower Gulf region as well as the Indigenous population in Mount Isa
- Gidgee Healing service all community members in Normanton as the only primary health care provider
- Deadly Ears program providing surgical services to the Lower Gulf
- BUSHKids providing allied health services to children with developmental delay

Within the North West region, two GP practices provide an after-hours service with both practices open 7 days a week. Both practices are open during sociable after hours during the week and unsociable hours Saturday afternoons and on Sundays. One offers a GP on call service when the practice is closed. Hospitals in Cloncurry and Julia Creek are serviced by on-call GPs with the right to private practice in the after hours period. Most remote communities do not have a community-based GP service and are instead serviced by a mix of visiting Gidgee Healing GP services, RFDS primary health care clinics or visiting medical officers from the HHS.

Figure 6.2 – CheckUP funded Allied Health visits by provider, NWHHS



Social care service providers in the North West include, but are not limited to Anglicare, Centacare, Save the Children and the Salvation Army.

Whilst Lifeline has the overarching contract to run Partners in Recovery Program, Centacare employs and supports the facilitators in North West and Central West Queensland. Partners in Recovery coordinates services for people with complex, severe and ongoing mental health issues. Facilitators are employed in Mount Isa (2) and Longreach (1).

The Salvation Army operates the Mount Isa Recovery Service (MIRS), a recovery and withdrawal centre in Mount Isa.

There are several networks operating within the region, for example, North West Queensland Mental Health Network and Regional Youth Action Network (RYAN).

NWHHS Oral Health team provide public dental services including a surgery clinic based out of the Mount Isa hospital. This is provided to clients who are on an adult pension card and health care card as well as children from 4 years to those who are in year 10. The team do weekly visits to Cloncurry and monthly visits to Doomadgee, Normanton and Mornington Island. A mobile dental drover (van) provides services to all ages in Camooweal, Dajarra, Burketown, Karumba and Julia Creek. There are several private dental clinics in Mount Isa.

A review was undertaken in September 2016 which identified that the current system of service delivery does not meet the needs of Aboriginal and non-Aboriginal residents of the Lower Gulf.[50] The Lower Gulf

[50] KBC Australia (2016) The Health of the Lower Gulf: Case for Change, September 2016.

communities have participated in consultations about health needs and systems reform many times over the past 15 years, largely top-down in approach, driven by national and state level policy directives. This has led to the introduction of some new services, but no significant change or integration of the service delivery system and no change to health outcomes.

With the establishment of the NWHHS and the Western Queensland Primary Health Network (WQPHN) there are now regional organisations with the mandate to lead service transformation at the local level. Gidgee Healing, as a regional Aboriginal and Islander Community Controlled Health Service, is an appropriate entity to lead change through a greater community controlled model of care, and with support from the WQPHN and the NWHHS will provide greater cultural integrity within programs and services. This combination of factors underpins a strong appetite for change in the service delivery and system development approaches for the Lower Gulf.

To begin this critical change process, WQPHN, NWHHS and Gidgee Healing have committed to adopt a joint and enduring tripartite framework through which to guide reform and transformation efforts and deliver a primary health care system that better meets the needs of Aboriginal and Torres Strait Islander peoples and the wider population in the Lower Gulf.

Central West – Key service providers

The Central West Hospital and Health Service provides public hospital and health services including acute care, general surgery, emergency care, medical, paediatrics, gynaecology and obstetrics to the communities of central west Queensland from Tambo in the south-east to Boulia in the north west and serves a population of 10,722. The footprint of CWHHS covers 396,650 km^2 (nearly 23% of Queensland's total area).

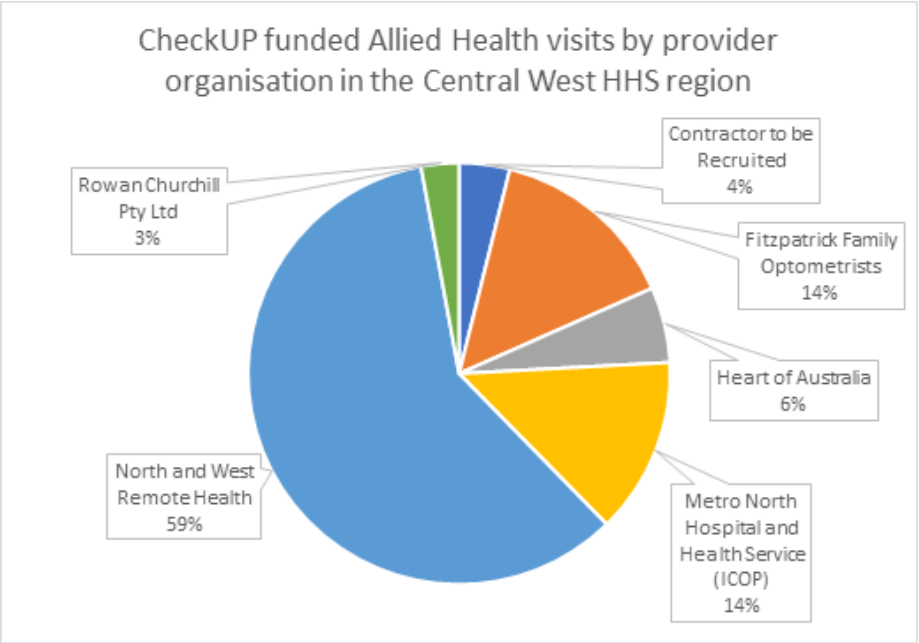
The model of service delivery is based on five hospital hubs in Alpha, Barcaldine, Winton (community hospitals), Blackall (rural hospital) and Longreach (district hospital). Longreach is a procedural hub offering elective surgery and maternity services. The CWHHS operates a one practice model across the region whereby the HHS employs GPs to deliver primary and acute care under contract in these hubs.

Primary health clinics are located at Aramac, Isisford, Jericho, Muttaburra and Tambo, staffed by Remote Area Nurses. CWHHS employed GPs deliver services to these primary health clinics under a hub and spoke model. Primary health clinics are also located in Bedourie, Birdsville, Boulia, Windorah and Jundah, with visiting GP clinics provided by the RFDS.

The CWHHS has region-wide community health care services based in Longreach and other hubs. These services include child and maternal health, Aboriginal and Torres Strait Islander health, chronic disease management, allied health, mental health and other drugs services.

NWRH provides a range of allied health and health promotion services in the Central West from its hubs in Longreach and Mount Isa and are contracted by CheckUP to provide services. For profile of CheckUP funded services by provider see **Figure *6.3*.**

Figure 6.3 – CheckUP funded Allied Health visits by provider, CWHHS



The RFDS provides psychological and counselling services to communities in the eastern sector of the CWHHS.

Whilst Lifeline has the overarching contract to run Partners in Recovery Program, Centacare employs and supports the facilitators in North West and Central West Queensland. Partners in Recovery coordinate services for people with complex, severe and ongoing mental health issues. Facilitators are employed in Mount Isa (2) and Longreach (1).

Following the securing funding through the Revitalisation of Regional, Rural and Remote Health Services Program, CWHHS established a slow stream rehabilitation service in partnership with RSL Care. Located at the Pioneer Nursing Home in Longreach, the refurbishments, fittings, equipment and health professional staffing is provided by Central West Health with RSL Care providing the physical location as well as inpatient nursing care.

There is a residential aged care facility in Longreach.

South West – key service providers

The South West Hospital and Health Service provides public hospital and health services including acute care, general surgery, emergency care, and maternity. Palliative care is provided at Roma Hospital. There are four hospitals located in the HHS at Roma, St George, Charleville and Cunnamulla. SWHHS serves a population of 24,678. The footprint of SWHHS covers 310,000 km^2 (nearly 21% of Queensland's total area).

A range of visiting specialist services are provided from the hospitals. In the SWHHS, there is an extensive network of Multipurpose Health Services located at Mitchell, Injune, Surat, Mungindi, Quilpie, Dirranbandi and Augathella and Primary Health Clinics at Morven, Wallumbilla, Bollon.

The SWHHS has region-wide community and allied health services based in Roma, St George and Charleville. These include child health, mental health, alcohol and other drugs, chronic disease

management, allied health, cancer Care coordination, health promotion and women's health.

SWHHS provides adult, older persons and Child and Youth Mental Health Services (CYMHS) in community and acute settings. The acute mental health services in SWHHS are limited with no inpatient FTE or designated mental health beds. Through an Integrated Care Innovation Fund the South West Integrated Mental Health Plan has identified several positions to be recruited through SWHHS that include; Clinical Lead, Nursing Facilitator and Educator; Early Intervention Child and Youth Psychologist. Other activities to be addressed under this funding also include, stepped care approach, early intervention, general practitioner (GP) management, and emergency department transition to care pathways. This is a two year project to be completed in 2019.

Community mental health services are delivered from the three main hubs of Roma – servicing Injune, Surat and Wallumbilla (9.5 FTE), Charleville (5 FTE) and St George (2 FTE). Visiting mental health services are also provided throughout the region.

The SWHHS have increased their investment in telehealth services as reflected by the number of telehealth services performed from July – December 2014 compared to July to December 2015 which had increased by 80 service events (78%). SWHHS has identified that there is adequate support and economies of scale both locally and centrally to ensure effectiveness and viability of the telehealth service.

Private general practices operate in Roma and St George. There are three AICCHS in the SW.

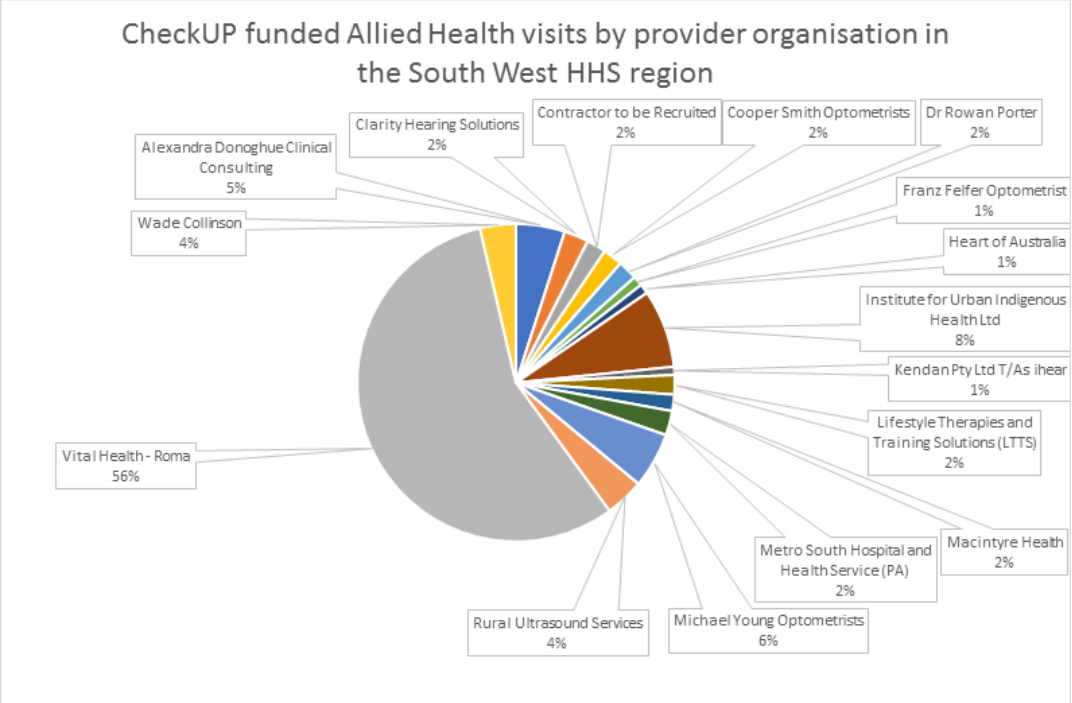
Charleville and Western Areas Aboriginal and Torres Strait Islander Community Health (CWAATSICH) is based in Charleville and has offices in Mitchell and Roma. Outreach services are provided to Quilpie and Windorah. CWAATSICH offers a range of programs and services including chronic disease, healthy for life and Mums and Bubs, mental health, eye health, hearing health, healthy lifestyle, sexual health and GP services. Visiting specialist and allied health services also operate from the CWAATSICH offices.

Cunnamulla Aboriginal Corporation for Health (CACH) is located in Cunnamulla. A wide range of medical specialist and allied health services provide visiting services from the facility. GP services are accessed from the SWHHS clinic located within the health precinct and adjacent to CACH. CACH runs a number of programs including New Directions Mums and Bubs, school readiness, new mothers group, Healthy Walkabout, Personal Helpers and Mentors and Indigenous Family Violence Service.

Goondir Health Service is located in St George and is a satellite service from the head office located in Dalby. The St George team includes a GP, practice nurse, chronic disease nurse and two Aboriginal Health Workers. Visiting services include psychology, cardiology and respiratory medicine.

In the South West, in contrast to the other regions in the WQPHN, there is a **well-stablished private allied health sector.** This includes podiatry, psychology, occupational therapy, physiotherapy, exercise physiology and dietetics in addition to community pharmacy. The allied health providers operate across the main townships of Roma, St George, Charleville and Cunnamulla, as well as providing some services to smaller communities. CheckUP also provides outreach funded services by provider see **Figure *6.4***.

Figure 6.4 – CheckUP funded Allied Health visits by provider, SWHHS



In addition to aged care beds available in the MPHSs, there are also residential aged care facilities located in Roma, St George, Charleville and Cunnamulla. The main providers of social care in the South West include Anglicare Southern Queensland, Catholic Care Social Services and Lifeline Darling Downs & South West Qld, Anglicare Southern Queensland has also secured funding for AODS to support youth across the SW region, Other services in the region include:

- Royal Flying Doctor Service which provides services across the region from their Charleville base
- NDIS Local Area Coordinators (LAC) – based in St George, Roma, Cunnamulla and Charleville
- TASC - Advocacy and Support Centre in Roma
- Carers Queensland Roma
- Care Balonne Association Inc. primarily an information and referral service based in the town of St George
- Aftercare in partnership with Lifeline Darling Downs South West Queensland has obtained funding for implementation and delivery of Community Managed Mental Health Services, in Roma, Charleville, St George and Cunnamulla.

Whilst Lifeline has the overarching contract to run Partners in Recovery Program, Centacare employs and supports the facilitators in South West Queensland. Partners in Recovery coordinates services for people with complex, severe and ongoing mental health issues. Facilitators are employed in Roma (1), Charleville (1) and St George (1).

Specialist services to the region are identified through integrated care planning and mostly funded through CheckUP. The Ideas Van Mobile Clinic and The Heart of Australia (Heart Bus that provides specialist medical services including cardiology and respiratory medicine) provide rural and remote areas with essential services that reduces the need for travel to regional and metropolitan centres.

6.3 Primary care workforce

The data presented here is from the AIHW National Health Workforce dataset. Locations are derived using the first available valid postcode of an individual's main work location, place of principle practice, or residence, in that order (**Table 6.3**). FTE rates are based on the weekly hours worked per 100,000 of the estimated resident population for 2014. The AIHW National Health Workforce dataset is formed from Australian Health Practitioners Regulation Agency (APHRA) registration data, which health professionals complete annually. Note that not all allied health professions are registered under APHRA e.g. speech pathology. In addition, this data set does not provide an indication of the Aboriginal Health Worker (AHW) workforce in Western Queensland, as AHWs must hold a Certificate IV in primary health care practice to be registered with APHRA.

The highlighted areas show lower heath workforce rates in comparison to Queensland and Australia. There is a particularly lower rate of specialist doctors and allied health workers, however there is a higher rate of general practitioners, hospital non-specialists, and nurses and midwives in comparison to state and national rates.

Table 6.3 Registered health workforce by FTE rate per 100,000, 2014

Profession	WQPHN	QLD	Australia
Medical practitioners	278.4	371.2	370.3
Medical practitioners-GPs	134.4	113.8	110.6
Medical practitioners- hospital non-specialists	52.2	48.1	47.4
Medical practitioners- other clinician	12.5	8.3	7.9
Medical practitioners- specialists	49.5	130.7	132.2
Medical practitioners- specialists in training	29.9	70.4	72.2
Nurses and midwives	1293.3	999.2	1012.3
Medical radiation practitioners	23.2	47.7	45.9
Occupational therapists	50.3	45.4	46.6
Pharmacists	65.7	80.1	79.0
Physiotherapists	46.8	79.8	78.0
Podiatrists	10.8	13.3	15.3
Psychologists	27.5	67.8	75.9
Optometrists	10.7	17.1	16.5
Dentists	31.4	55.5	54.7

Source: Australian Institute of Health and Welfare. Health Workforce. Australian Government. Retrieved from http://www.aihw.gov.au/workforce/ (accessed October 30 2017)

Table *6.4* shows the number of health professionals registered in each HHS of Western Queensland.

Table 6.4 The number of health professionals registered in Western Queensland by HHS, 2014

	Central West	North West	South West	WQPHN	QLD
General Practitioners	15	39	35	89	5682
Pharmacists	7	19	18	44	4099
Physiotherapists	5	12	21	38	4137
Podiatrists	3	2	3	8	641
Occupational therapists	4	20	14	38	2592
Nurses	217	453	464	1134	63216
Dentists	4	13	13	30	3753

Source: Australian Institute of Health and Welfare. Health Workforce. Australian Government. Retrieved from http://www.aihw.gov.au/workforce/ (accessed Feb 1 2016)

Data limitations

Some caution must be exercised when interpreting workforce data in the remote setting.

Health Workforce Queensland undertakes an annual census of medical practitioners and the 2015 minimum data set reports 99 medical practitioners working in Western Queensland, like that reported in Table 6.2. However, this is headcount data and is an over-estimate of general practice/ primary medical care capacity in the region. For example, in some communities, hospital based doctors work in general practice on a limited basis e.g. one or two sessions/week but are counted as GPs. In other locations, regular locums supply GP services to a MPHS and can be counted as two doctors (by headcount), but is in fact one FTE.

Recent six month service activity reports to the WQPHN by contracted providers, indicated up to 65% vacancies in allied health positions at June 2016 attributed to uncertainty of funding and continuity of contracts. Furthermore, recent consultations with one HHS and an NGO, indicates that up to half of the established mental health positions were vacant. Whilst there may appear to be an adequate workforce supply based on established positions, high turnover and/or long term vacancies, significantly impact on service capacity and continuity.

6.4 Service utilisation

District of workforce shortage

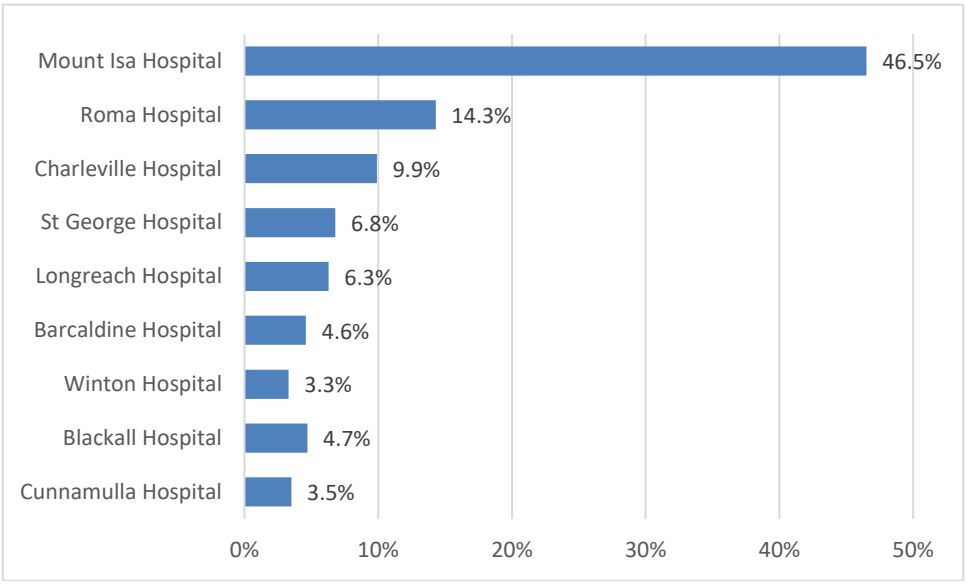
A district of workforce shortage is a geographical area in which the population has less access to Medicare-subsidised medical services when compared to the national average. These areas are identified using the latest Medicare billing statistics and updated on an annual basis. Every area with Western Queensland is currently classified as a district of workforce shortage.[51]

Emergency Department presentations

Figure *6.5* shows that nearly half (46%) of emergency presentations in Western Queensland were to Mount Isa Hospital.

[51] Department of Health. *Doctor Connect.* Australian Government. Retrieved from http://www.doctorconnect.gov.au/ (accessed Oct 18 2017)

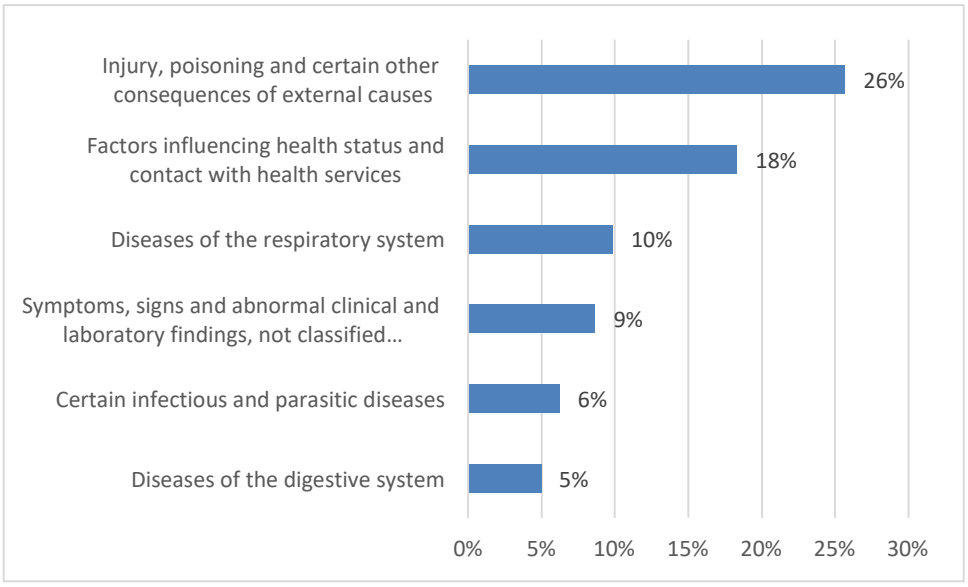
Figure 6.5 Proportion of Emergency Department presentations in Western Queensland by Hospital, Apr/May/Jun 2017



Source: Queensland Health. Emergency Presentation data (unpublished)

Figure *6.6* shows the top six principle diagnosis for all public hospitals in Western Queensland (triage category 1-5). Injury and poisoning is the leading cause followed by factors influencing health status and contact with health services. This category includes dressing changes, people who did not wait to be seen and administration of medication.

Figure 6.6 Top six causes for all public hospital Emergency Department presentations in 2014 in Western Queensland



Source: Queensland Health. Emergency Presentation data (unpublished

Category 4 and 5 Hospital Presentations to Emergency Departments

The availability and accessibility of community-based general practice and primary health care have a significant impact on the utilisation of surrounding hospitals across the WQPHN catchment. Literature evidence shows that when people cannot access appropriate primary care, they will often choose hospitals, specifically

emergency departments, to meet their immediate health care needs.[52] The provision of after hours Primary Health Care services across the WQPHN is challenging due to the dispersed geographical proximity of health services for residents, workforce challenges including General Practice (GP) shortages, limited public transport infrastructure and a significant Indigenous population. People with chronic and complex health conditions such as diabetes and respiratory conditions, also often become high users of hospital care in the absence of well-coordinated community-based care that prevents avoidable illness and deterioration of their condition.[53]

A collaborative project is being undertaken by Mount Isa Centre for Rural and Remote Health (MICRRH) in partnership with Western Queensland Primary Health Network (WQPHN) and North West Hospital and Health Service (NWHHS) to understand better how to repatriate or guide patients into planned primary care in Mount Isa. It is mapping existing ED utilisation in and out of hours and identify trends to inform a deeper understanding of utilisation and identify strategies to avoid inappropriate presentations into the future. This project will also examine primary care capacity and explore patient's rationale and factors influencing their decision making in choosing to utilise the ED for primary care sensitive conditions.

Initial outcomes of the May to August 2017 Quarterly report in relation to low acuity patients (Australasian Triage Scale category 4 and 5) presented to the Emergency Department (ED) Mount Isa Hospital has identified (between January 1, 2016, and December 31, 2016), that some 20,614 people came to the ED for medical treatment (pages 8-9).[54] Men accounted for 52.18% of that total number. A significant number of all patients were of non-Indigenous background (60.28%). The median age of presenting patients was 29 years (interquartile range 17-45 years) with nearly more than half of the patients (57.28%) belonging to 20-55 years age group. Up to 86% of all category 4 and five presentations were recorded as completed ED event and discharged. Intriguingly one out of ten patients (9.32%) did not wait to be seen or did not wait for the completion of ED event. Distribution of patients who did not wait was higher during weekday in hours. Roughly more than half (54.15%) frequent utilisation of ED up to 1-3 times per the calendar year, while nearly 10% of all patient reported frequent utilisation of ED up to more than five times per calendar year. A significant proportion (94.13%) of the total patients came for getting medical treatment or procedure. Viral infections, upper respiratory infections, and surgical dressing and sutures are common reasons Mount Isa residents go to the ED. No differences were observed between these category 5 presentations on the main demographic characteristics such as age, gender, geographical location and admission status ($p>0.05$).

The Australasian College for Emergency Medicine (ACEM) method (which considers that any self-referred, non-ambulance patient with a medical consultation time under 1 hour may have been suitable for a GP), was used to categorise Category 4 & 5 presentations as Primary Care type presentations and non Primary Care type presentations. It was found that over half of the presentations (52.69%) were Primary care type presentations. It was also found that compared with children were more likely to come to ED with primary care type presentations (Relative Risk Ratio: 1.12). Female patients were less likely to come to ED primary care type presentations than males (Relative Risk Ratio: 0.93). Compared with in hours, patients were less likely to come to ED during afterhours (Relative Risk Ratio: 0.93). No month of the year was significantly busier than any other. GP-type patient attendances were considerably evenly distributed across the weekdays, with proportionally more patients presenting during weekday daytime and proportionally fewer during afterhours. The peak period for primary care type ED presentation was during in hours (8:30am-5pm) on Monday.

[52] Masso, M., et al., Why patients attend emergency departments for conditions potentially appropriate for primary care: reasons given by patients and clinicians differ. Emerg Med Australas, 2007. 19(4): p. 333-40.

[53] MICRRH (2017) Primary Care Presentations to the Emergency Department at Mount Isa Hospital: Enabling a Framework towards better Primary Care Service Delivery in Mount Isa. Quarterly Progress Report: May 2017 to August 2017. James Cook University, Mount Isa

[54] [54] MICRRH (2017) Primary Care Presentations to the Emergency Department at Mount Isa Hospital: Enabling a Framework towards better Primary Care Service Delivery in Mount Isa. Quarterly Progress Report: May 2017 to August 2017. James Cook University, Mount Isa

Category 4 and 5 ED hospital admissions by attendances

Table *6.5* provides an overview of the number of attendances and percentages of Category 4 and 5 ED Admissions across the WQPHN for the month of August 2017 (note that this provides a one month snapshot). Mount Isa hospital (52%) and Roma Hospital (47%) had the highest Category 4 presentations and Cunnamulla Hospital (64%) and Longreach Hospital (43%) had the highest Category 5 presentations. **Table *6.5*** shows that during the Month of August 2017 Cunnamulla Hospital had the highest combined Category 4 and 5 attendances (81.6%), followed by Charleville Hospital (78%) and Longreach Hospital (75.4%).

Table 6.5 Category 4 and 5 ED Hospital Admissions by Number of Attendances and Percentage of the total for August 2017

Hospital	Category 4	Category 5	Total (All Admissions)
Mount Isa Hospital	1518 (52%)	273 (9%)	2944
Barcaldine Hospital	55 (35%)	47 (30%)	156
Blackall Hospital	31 (27%)	48 (42%)	114
Longreach Hospital	113 (32%)	150 (43%)	349
Winton Hospital	38 (25%)	58 (38%)	151
Charleville Hospital	211 (38%)	226 (40%)	560
Cunnamulla Hospital	35 (18%)	125 (64%)	196
Roma Hospital	413 (47%)	214 (24%)	887
St George Hospital	170 (29%)	241 (42%)	577

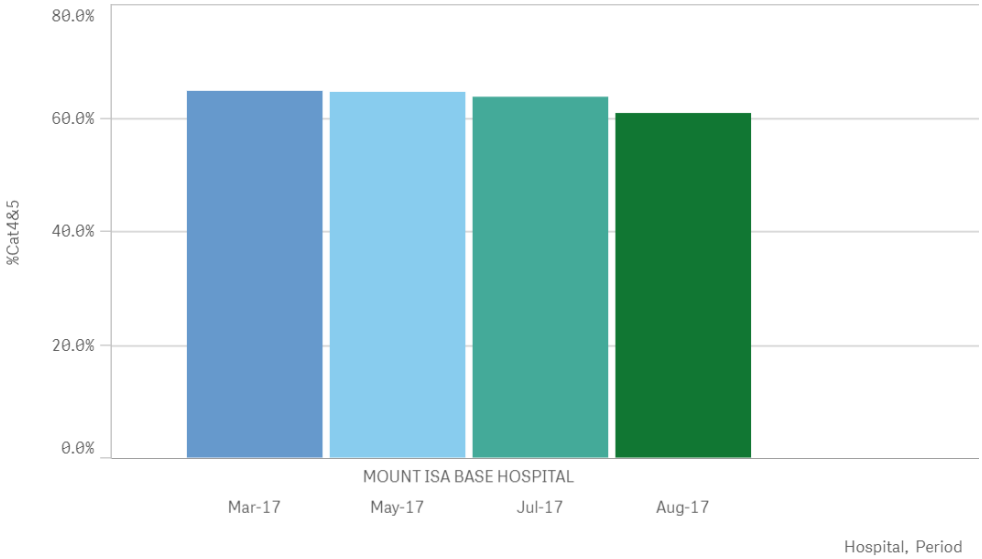
Source: Queensland Health Unpublished Emergency Department Hospital data

Percentage of all ED Admissions which are Category 4 and 5 by HHS

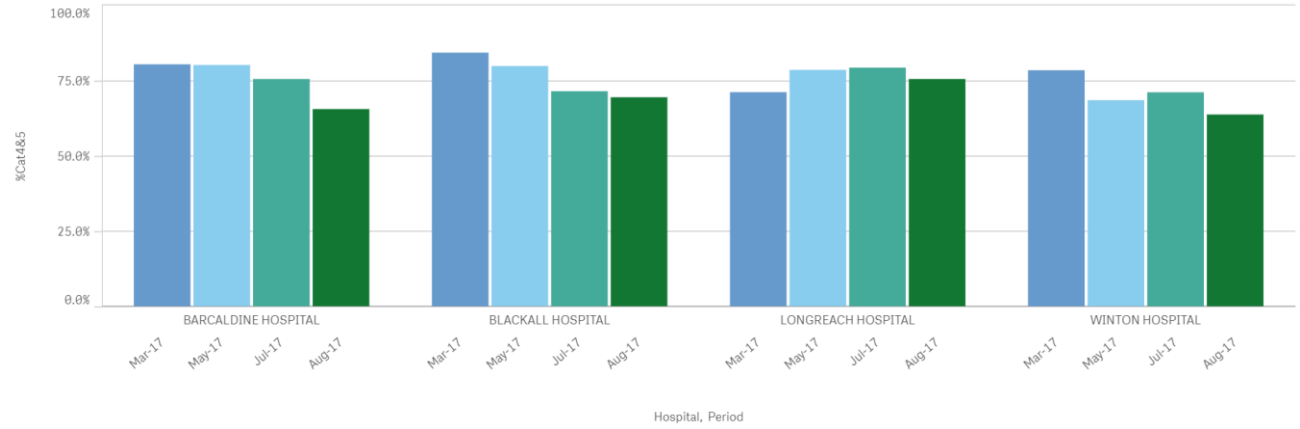
Figures *6.7* provide an overview of combined Category 4 and 5 percentages of Emergency Department Admissions by hospital and HHS over the six month period from March to August 2017

Figure 6.7 Proportion of Cat 4 and 5 Presentations by HHS, March to August 2017

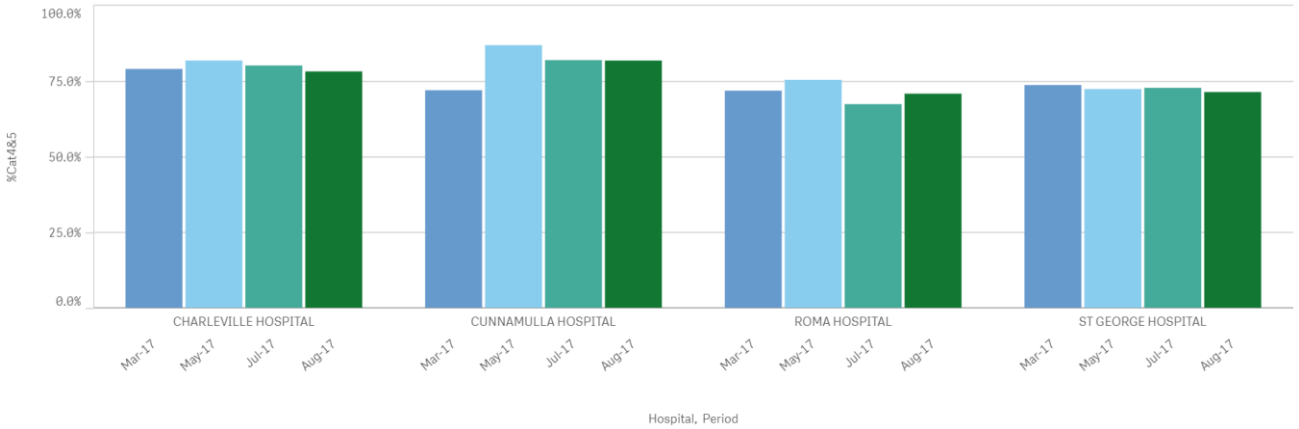
NWHHS



CWHHS



SWHHS

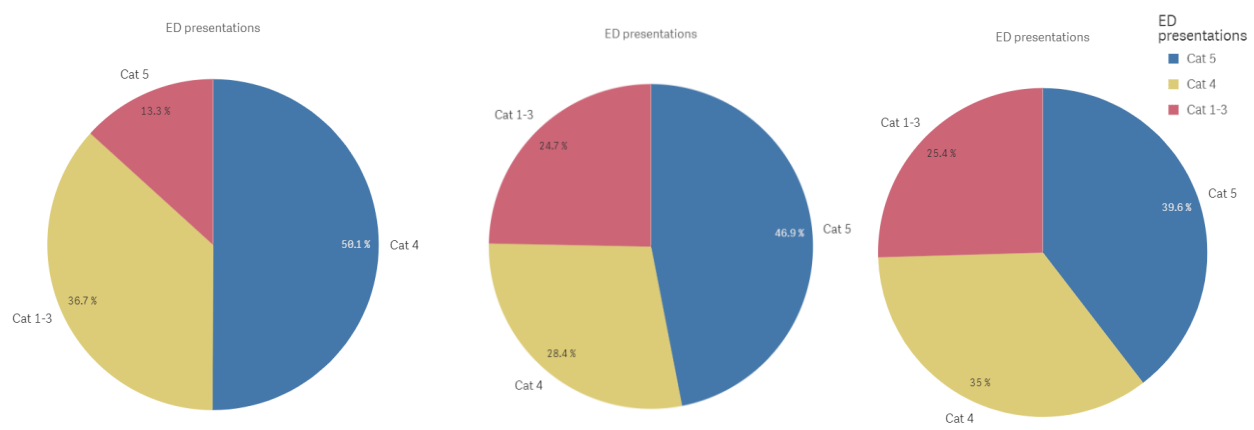


Proportion of ALL ED Attendances

Figures 6.8 provide proportion of all Emergency Department Admissions by HHS over the six month period from March to August 2017. NWHHS had the highest proportion of Category 1-3 ED admissions (36.7%) and Category 4 admissions (50.1%). CWHHS had the highest proportion of Category 5 admissions (46.9%).

Figures 6.8 – Proportion of ALL ED Attendances across the three HHS's

NWHHS **CWHHS** **SWHHS**



Hospital admissions

Table *6.6* shows hospital activity data for April, May and June 2017. Mount Isa Hospital accounted for 47% of the total hospital activity out of all the hospitals within Western Queensland.

Table 6.6 Hospital activity for April, May, June 2017

	Total admissions	Same day admissions	Overnight admissions	Outpatient services	Emergency admissions	Babies born
Mount Isa Hospital	1997	887	1110	10289	1202	122
Roma Hospital	805	463	342	3676	370	31
Charleville Hospital	291	92	199	1443	255	9
St George Hospital	231	67	164	1413	177	11
Longreach Hospital	248	114	134	2733	164	14
Barcaldine Hospital	148	56	92	941	119	0
Winton Hospital	95	12	83	443	85	0
Blackall Hospital	123	41	82	385	122	0
Cunnamulla Hospital	95	24	71	285	91	0
Total	**4033**	**1756**	**2277**	**21608**	**2585**	**187**

Source: Queensland Health. Hospital Performance: Hospital activity

In 2012/2013 pregnancy and childbirth was the most common cause of overnight hospital admission for Western Queensland residents, followed by Injury and poisoning. **Table *6.7*** also shows higher rates of admission in Western Queensland compared with Queensland, except for mental health related conditions, musculoskeletal diseases, genitourinary diseases and cancer.

Table 6.7 Overnight admissions by principal diagnosis for pregnancy and childbirth, ASR per 100,000, 2012/2013

Diagnosis	WQPHN	QLD
Pregnancy and childbirth	6368	4699

Table 6.8 Overnight admissions by principal diagnosis for all hospitals, ASR per 100,000 2012/2013

Diagnosis	WQPHN	QLD
Injury and poisoning	4619	2954
Digestive diseases	4492	4200
Respiratory diseases	2786	1919
Circulatory diseases	3059	2445
Musculoskeletal diseases	2044	2114
Cancer	2142	3028
Genitourinary diseases	1912	2019
Infectious and parasitic diseases	1080	713
Mental health related condition	1204	1889

Source: PHIDU, PHN data, Overnight admissions by principal diagnoses

Potentially preventable hospitalisations

A potentially preventable hospitalisation (PPH) is "an admission to hospital for a condition where the hospitalisation could potentially have been prevented through the provision of appropriate individualised preventative health interventions and early disease management, usually delivered in primary care and

community-based care settings (including by general practitioners, medical specialists, dentists, nurses and allied health professionals)" (page 3).[55] PPHs are those considered as potentially able to be prevented through timely and accessible quality primary and community-based care.

Chronic conditions were the most common potentially preventable hospitalisation (49.9%), followed by acute conditions (47.6%) when reviewing the number of admitted episodes over care in 2015/2016 (**Table *6.9***).[56] Acute PPHs were higher (47.6%) across the WQPHN when compared to Queensland (42.8%).

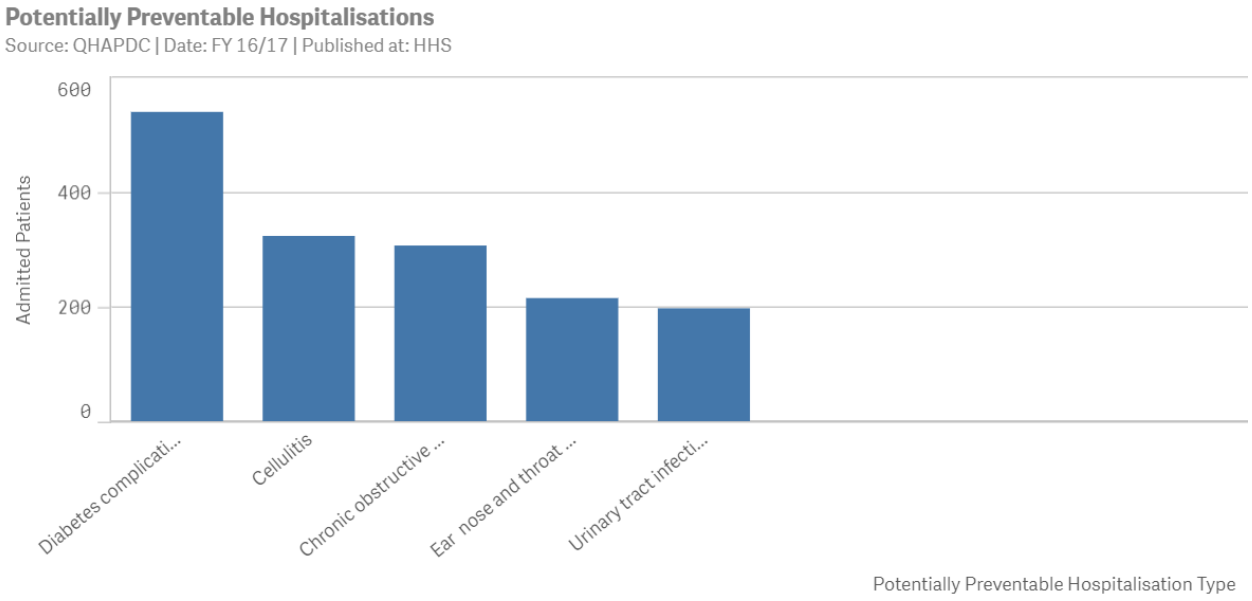
Table 6.9 Number of admitted patient episodes of care for potentially preventable conditions 2015/2016

	Vaccine preventable		Acute		Chronic		Total potentially preventable	
	n	%	n	%	n	%	n	%
Central West	10	1.8%	263	49%	264	49.2%.	536	100%
North West	56	3.5%	837	53.4%	688	43.9%	1565	100%
South West	28	2.4%	425	38.6%	659	59%	1100	100%
WQPHN	**94**	**2.8%**	**1525**	**47.6%**	**1611**	**49.9%**	**3201**	**100%**
QLD	10282	7.7%	56889	42.8%	67599	50.9%	132824	100%

Source: Queensland Health. Hospitalisation data (unpublished)

The top five contributors to potentially preventable hospitalisations (PPH) for WQPHN population were diabetes complications, cellulitis, COPD, ear nose and throat and urinary tract infection **(Figure *6.9***).

Figure 6.9 –PPH by Admitted Patients by Type across WQPHN, FY 2016/17



[55] Falster, M and Jorm, L. (2017) A guide to the potentially preventable hospitalisations indicator in Australia. Centre for Big Data Research in Health, University of New South Wales in consultation with Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare: Sydney; 2017

[56] Queensland Health. *Hospitalisation data* (unpublished)

Premature deaths

There were 2,039 (rates per 100,000) deaths of WQPHN residents in 2011-2012. Of these, 47% (961) were premature deaths. NWHHS had the highest premature death rate of 55% (Table 6.10).

Table 6.10 Deaths per HHS, 2011-2012, rates per 100,000				
	Central West	**North West**	**South West**	**QLD**
Total deaths	653	703	683	580
Premature deaths	281 (43%)	386 (55%)	294 (43%)	228 (39%)

Source: Queensland Health. (2016). The health of Queenslanders 2016. Fifth Chief Health Officer Report. Queensland Government. Brisbane.

Utilisation of general practitioners, specialists and allied health practitioners

Table *6.11* shows the average number of GP, after hours GP and specialist attendances per person. The rank is ordered from 1 to 31 as there are 31 PHNs in Australia. 1 indicates the highest number of attendances per person and 31 the lowest number of attendances per person. WQPHN had comparatively very low numbers of GP and specialist attendances compared to the other PHNs in Australia.

Table 6.11 Use of medical services in Western Queensland, 2013-2014		
	Ave. attendances per person per annum (ASR)	**Rank of PHNs (Australia)**
GP attendances	4.1	30
Afterhours GP attendances	0.17	24
Specialist attendances	0.45	30

Source: NHPA: My health community, Use of health services

Table *6.12* is also ranked from 1 to 31, 1 being the highest percentage and 31 the lowest percentage. Compared to all the PHNs in Australia, Western Queensland had the lowest percentage of adults who saw a GP in the past 12 months, the lowest percentage of adults who saw a medical specialist and the highest percentage of adults who needed to see a GP but did not.

Table 6.12 Experiences of health services in WQPHN, 2013-2014		
	WQPHN	**Rank**
Percentage of adults who reported excellent, very good or good health	85%	13
Percentage of adults who saw a GP in the preceding 12 months	69%	31
Percentage of adults who saw a medical specialist	23%	31
Percentage of adults who were admitted to any hospital	12%	21
Percentage of adults who went to any ED for their health	17%	8
Percentage of adults who had a preferred GP	44%	31
Percentage of adults who felt they waited longer than acceptable to get an appointment with a GP	25%	10
Percentage of adults who needed to see a GP but did not	25%	1

Source: NHPA: My health community, Experiences of health services

NPHA. As Western Queensland had a small sample size, the percentages could be potentially

misleading.

Table *6.13* presents a more detailed analysis of 2009-2010 MBS data compiled by PHIDU. It shows most service items are lower than Queensland. There are particularly lower rates of psychiatrist and psychologist utilisation as well as 45 year old health checks by GPs.

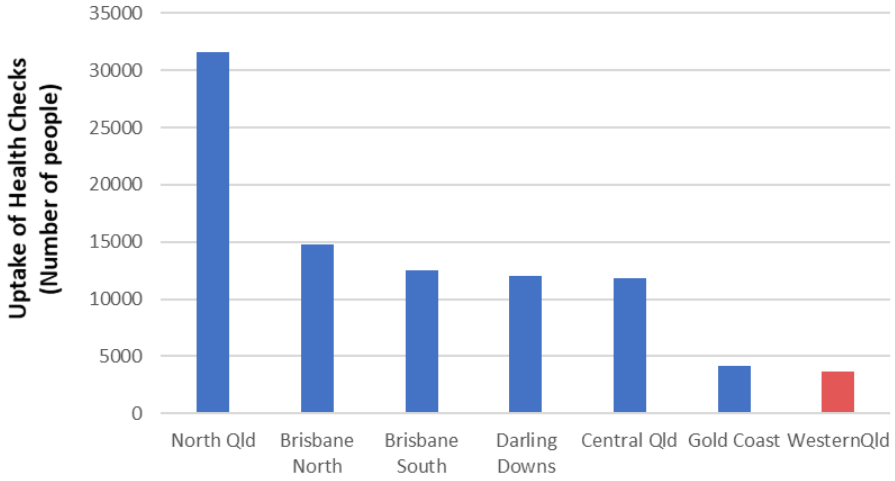
Table 6.13 Health service utilisation ASR per 100,000 persons, 2009-2010		
	WQPHN	**QLD**
Total GP services	**416119**	550071
45 year old health checks by GPs	**1782**	47271
Annual health assessments by GPs, 75+	**10834**	22255
Total GP services for EPC Items	**3862**	3062
Practice nurse services	**33944**	49214
Better Access Program (BAP): preparation of mental Health Care plan by GPs	**3055**	7690
BAP: Psychiatrists	**73.0**	441
BAP: Psychologists	**2646**	12190
BAP: social workers	**26.1**	546.0
BAP: Occupational Therapists	**0**	84.7

Source: PHIDU, PHN data, MBS services (EPC= enhanced primary care)

Indigenous health checks

AIHW data shows that there were 3,712 Indigenous health checks conducted in Western Queensland for 2015/2016. This equates to an uptake rate of 21.3%, which was the lowest rate compared to every PHN in Queensland (**Figure *6.10***).

Figure 6.10 Uptake of health checks (MBS 715) in PHNs of Queensland, 2015/2016



Source: AIHW. Indigenous health check (MBS 715) data tool.

Mental health service activity

Table *6.14* and **Table *6.15*** outlines mental health-related service usage. The number of Western Queensland residents accessing MBS subsidised mental-health related services is much lower than both Queensland and Australia. Reasons for this include:

- MBS subsides services may not be as readily available in Western Queensland
- alternative sources of services may be preferred (e.g. Community based treatment programs).

- block funding of Aboriginal Medical Services and provision of drugs under options such as section 100 of the National Health Act, 1953 lead to a gap in MBS and PBS data.
- a large proportion of Western Queensland population resides in remote or very remote areas, which decreases reliability of the data.

Table 6.14 Persons accessing MBS subsidised mental-health related services, per 100,000 persons 2014/2015

MBS Service type	WQPHN	QLD	Australia
Psychiatrist	**3456**	32646	57976
Clinical psychologist	**1208**	20504	47378
General Practitioner	**11576**	37626	74450
Other Allied Health	**4417**	37431	68181
Total	**21012**	128214	247996

Source: Department of Health. Primary Health Care Networks: Mental health data. Australian Government. Retrieved from http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental_Health_Data (accessed Oct 21, 2017)

Primary Mental Health Care (PMHC)

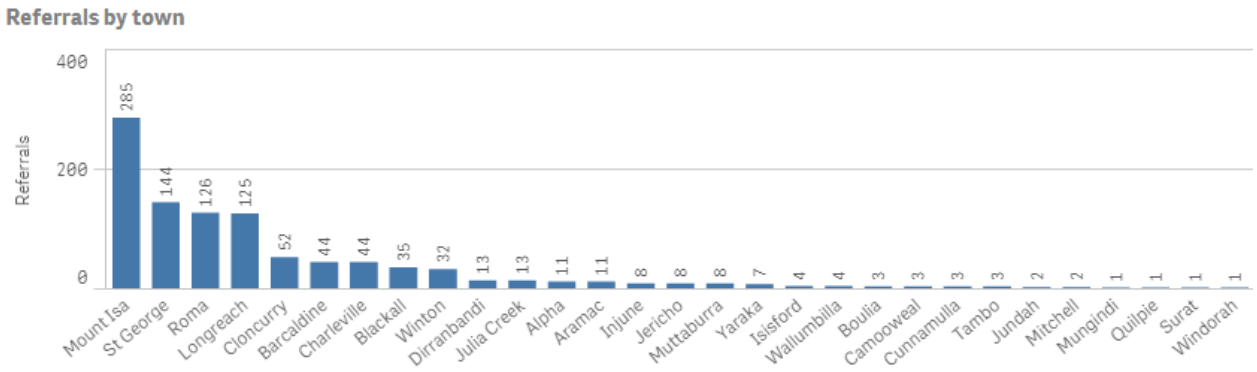
Over the 2016/2017 period, access to Primary Mental Health Care (PMHC) funding provided 3,831 sessions (417 DNAs additionally) to 1,120 clients across six organisations. 994 referrals were received during this period (see **Table *6.15***).

Table 6.15 PMHC Overview for WQPHN, 2016-2017

Organisation	Referrals	Clients	OOS (Attended Sessions)	DNAs
Total	994	1,120*	3831	417

Of the referrals, 960 (97%) were from GPs, 17 from psychiatrists, 15 from ATAPS MH professionals and two from AICCHS or Indigenous health organisations. Within the referrals, 176 were for people who lived alone, 434 were for people on low income and 35 of the referrals were for additional sessions. The majority of the referrals were from Mount Isa (285), followed by St George (144), Roma (126) and Longreach (125) (**Figure *6.11***).

Figure 6.11 Referrals by Town, 2016-17



** NB Referrals only have postcode data rather than town level so in some cases the referral is allocated to the primary town for a service e.g. Mount Isa for 4825 delivered by NWRH.*

Overview of headspace

Youth and young people (12 to 25 years) mental health services are provided from headspace in Mount Isa. From last quarter (Jan to March, 2017), to the most recent (April to June, 2017), there has been an increase in

the number of new young people attending, serviced young people and the occasions of service received. Of the clients, 33.9% young people are Indigenous (79 Aboriginal, 4 Aboriginal and Torres Strait Islander, 3 Torres Strait Island). Of the clients, 57.5% (146) of the young people are female, 40.6% (103) are male and 2% (5) identify as other. The age of the young people are 12-14 (28.3%, 72), 15-17 (31.1%, 79), 18-20 (16.5%, 42), 21-23 (18.9%,48) and 24-25 (5.1%, 13) (**Figure *6.12***).

Figure 6.12 Overview of headspace Services, 2015 to 2017

Mount Isa

	2015	2016	2017	Current reporting period (Apr-Jun17 3 months)
Occasions of Service	456	1,165	1,075	259
Serviced Young People	102	261	254	95
New Young People	101	225	175	47
Returning Young People	2	24	53	24
Average visit frequency	4.5	4.5	4.2	2.7

Mental Health Nurse Incentive Program (MHNIP)

The Mental Health Nurse Incentive Program (MHNIP) provides a non-MBS incentive payment to community based general practices, private psychiatrist services and other appropriate organisations to engage mental health nurses to assist in the provision of coordinated clinical care for people with severe mental illness. In Western Queensland, there is currently one MHNIP provider based in Roma and one fly-in, fly-out to Cloncurry. ***Table 6.16*** shows that last financial year there were 68 patients who received one or more MHNIP sessions in WQPHN.

Table 6.16 Number of patient who received MHNIP sessions in Western Queensland, 2014/2015

Age group	Males	Females
5-17	4	8
18-34	10	17
35-54	11	16
65+	2	0
Total	**27**	**41**

Source: Department of Health. Primary Health Care Networks: Secure data. Australian Government (unpublished)

Access to specialist Alcohol and Other Drug treatment services

The provision of specialist alcohol and other drug treatment services in the region is complicated by its rural and remote geography. Individuals seeking treatment in the region usually attend the public ATODS service. For most individuals wanting to attend a residential rehabilitation or residential withdrawal management service have to travel outside of the region for treatment.

In August 2105, the Queensland Network of Alcohol and Other Drug Agencies (QNADA, 2015) conducted a Needs Assessment in the region on behalf of WQPHN. It indicated a need for more integration of alcohol and other drug services with other community services (i.e. employment, housing and

Centrelink). The consultation also identified a lack of after-care support in the region and outpatient care services for individuals exiting withdrawal management services. Both clients and service providers suggested there was availability of telephone and e-health options to consider.[57]

Service mapping[58] indicates only a small number of AOD services operate in the region including:

- public ATODS services and
- Aboriginal and Torres Strait Islander peoples non-government residential rehabilitation services.

Data from the Alcohol Drug Information Service telephone line indicates that a total of 188 calls were received from Western Queensland in 2015-16.[59] Data from the AOTD National Minimum Data Set identified a high proportion of Aboriginal and Torres Strait Islander peoples accessing specialist AOD treatment with 56% of episodes for individuals whose postcode lies within the WQPHN region 2015-16. This is compared with 14% for the whole of Queensland and 14% nationally.[60]

After Hours Services

The WQPHN region is a vast stretch of Queensland, incorporating regional centres, mining communities, small towns, pastoral stations, and remote Indigenous communities. Vast distances are required to travel to provide services. Natural and environmental impacts such as floods and drought are common. The rural and remote communities in the WQPHN region face greater challenges compared to their metropolitan counterparts in addressing issues associated with access to health care, geographical and environmental considerations, workforce shortages and integration of modifiable health enablers (e.g. coordination of care, self management supports, resources, community support). Added to these challenges are higher levels of chronic disease, namely cardiovascular disease, diabetes and mental health related illness. These challenges and the regions characteristics, significantly impact on the capacity to provide after hours care. The workforce challenges including the fatigue management, safety issues, lack of incentives, the capacity to attract and retain GPs, practice staff and remote nursing workforce, places significant strain on after hours service provision. These challenges and alternate workforce models will need to be explored to support increased access to after hours care for local people. **Tables *6.17* to *6.19*** provide an overview of GP after hours services in each region within WQPHN.

Table 6.17 After Hours Services in NWHHS region

Facility Type	Provision of After Hours GP Services	Opening Hours
Private Practices = 5 (clinics)	- 2 surgeries (both in Mount Isa) are open before normal business hours and close after normal business hours Mon-Fri, and are open most of Saturday. - One is open all day Sunday, and patients attend the hospital after closing time.	- 4 out of 5 private practices open Mon-Fri regular business hours - 2 practices (Mount Isa) also provide Saturday and Sunday appointments, and evening appointments Mon-Fri (one is open 7 a.m.-7 p.m. Mon-Fri, the other 8:30 a.m.-9:00 p.m. Mon-Fri) - Julia Creek Medical Centre opening hours = 2:00 p.m.-5pm. Mon-Wed only, as the doctor also services the hospital and pharmacy

[57] QNADA Consultation Summary Report, 2015. Available at: http://webadmin.greenivymedia.com/uploads/qnada/20150928_Action%20Plan%20Consultation%20Report.pdf accessed Oct 22 2017)
[58] QNADA (2016) Western Queensland PHN Alcohol and Other Drugs Needs Assessment.
[59] *cited in* QNADA (2016) Western Queensland PHN Alcohol and Other Drugs Needs Assessment.
[60] AIHW (2016) AIHW AOTD National Minimum Data Set, 2015-16. Available at: https://www.aihw.gov.au/reports/alcohol-other-drug-treatment-services/alcohol-and-other-drug-treatment-national-minimum-data-set-aodts-nmds-2015-16/contents/dynamic-data-displays accessed Oct 22 2017.

	The other provides an on-call service after closing mid afternoon on Sunday	
NGOs (Royal Flying Doctors' Service) = 6 communities	No After Hours GP services offered *Note – Emergency After Hours provided by RFDS through the telephone and community chest.*	- 2 of the communities receive a visiting RFDS clinic once a week for a full day - 3 have a GP for a full day every second week - 1 (Adel's Grove) receives a visiting GP once a month
AMS = 5 communities	No After Hours GP services offered	- All 5 AMS clinicis open regular business hours Mon-Fri - Gidgee Healing (Burke) open half day Saturday (9:00 a.m.-1:00 p.m.) - No on-call services provided

Table 6.18 After Hours Services in CWHHS region

Facility Type	Provision of After Hours GP Services	Opening Hours
Private Practices = 5 (clinics)	No After Hours GP services offered	- 4 out of 5 private practices open Mon-Fri regular business hours, closed Sat-Sun. - Alpha Private Practice open Tue-Wed- Thurs only. - No after-hours services.
NGOs (Royal Flying Doctors' Service) = 3 communities	No After Hours GP services offered *Note – Emergency After Hours provided by RFDS through the telephone and community chest.*	- 2 of the communities that receive a RFDS GP service one day, every second week - 1 RFDS clinic provides GP service one day a week

Table 6.19 After Hours Services in SWHHS region

Facility Type	Provision of After Hours GP Services	Opening Hours
Private Practices = 4 (clinics)	- All 4 private practices offer After Hours GP services - 3 offer on-call GPS - 1 (Roma Clinic) opens Mon-Fri at 5:00 a.m. (6:30 a.m. Saturdays, closed Sundays) - St George Medical Centre has a GP on call Sunday afternoons	- All 4 practices open Mon-Fri **at least** business hours – Roma Clinic opens at 5:00 a.m. (6:30 a.m. Saturdays) - 3 clinics are open half day Saturdays (Surat Medical Centre closed Saturday) - All clinics closed on Sundays -
NGOs (Royal Flying Doctors' Service) = 6 communities	No After Hours GP services offered *Note – Emergency After Hours provided by RFDS through the telephone and community chest.*	- 2 of the communities receive a visiting RFDS GP clinic once a week for a full day - 3 have a GP for a full day every second week - 1 (Adel's Grove) has a GP once a month
AMS = 3	No After Hours GP services offered	- All AMS are open regular hours Mon-Fri (Goondir closes at 3:00 p.m. Fridays) - All AMS are closed Saturdays and Sundays

General Practice After Hours

A number of the State health services in Mount Isa, Cloncurry, Julia Creek, Winton, Barcaldine, Longreach, Blackall, Charleville, Cunamulla and St George communities, have medical practitioners work in both the hospital and GP practices. There are GPs, Senior Medical Officers (SMOs) and rural generalists who provide services through Aboriginal Community Controlled Originations (Gidgee Healing, CWAATSICH, CACH and Goondir Health Service), Royal Flying Doctors Service (RFDS) and the three (North West, Central West and South West) Hospital and Health Services.

Substantial increases in occasions of service have occurred for GP After Hours MBS services, based on a comparison of MBS service data between 2012-2013 and 2015-2016 indicating a huge increase in client demand (see **table *6.20*** below). Urgent GP After Hours MBS services have increased 34% and Urgent GP After Hours during unsociable hours has increased 200% (**Table *6.20***). The number of patients also increased for both MBS item numbers across the time periods, suggesting an increase in access to services for residents.

Table 6.20 GP After Hours MBS Services by PHN between 2012 to 2016			
MBS Item Number	**2012-2013**	**2015-2016**	**Percentage Increase**
Item 597 Urgent After Hours	1,446	1,938	34% increase
Item 599 Urgent After Hours (unsociable hours 11pm-7am)	166	499	200% increase

State Hospital and Health After Hours Services

Communities with no resident doctor rely on the State funded remote nurse clinics which are available 24 hours a day, seven days a week. Patients who present to the smaller hospitals in regional areas after hours, are triaged by the nurse and the doctor is called in as required. There has been an increase in the number of category 4 and 5 presentations to the Emergency Department at the Mount Isa Hospital in the past 12 months, up 15% compared to the same period last year[61].

RFDS

During the day GP services are provided to very remote regions, however, there is no After Hours service apart from emergency medical retrieval services. The RFDS provide a telephone service and medical evacuations and transfers 24 hours a day, seven days a week from Mount Isa and Charleville bases. Medical chests enable emergency and non-emergency treatment to be given to people working in remote areas. RFDS Medical officers prescribe contents remotely and on site.

Indigenous Australians Requiring Aeromedical Retrieval

Royal Flying Doctors Service (RFDS) published a key report in 2016 which identified the leading three reasons Indigenous Australians required an aeromedical retrieval, by 5-year age group. Across all age groups, the top three reasons were:

1. injury, poisoning and other consequences of external causes (17.9%)
2. diseases of the circulatory system, such as heart attacks or stroke (14.3%)
3. diseases of the respiratory system, such as a respiratory infection, influenza, and pneumonia (12.8%)

[61] North West Hospital and Health Services (2017) *Total ED presentations (Jan to July 2017) by day, total admissions*, Mount Isa Emergency Department.

"Together, injury, poisoning and other consequences of external causes, diseases of the circulatory system, and diseases of the respiratory system accounted for almost half (45.0%) of all RFDS aeromedical retrievals of Indigenous Australians." (p.103)[62]

After Hours in Residential Aged Care Facilities (RACF)

In RACF settings, the registered nurses use their discretionary skills to decide if a resident requires after hours care, who should be contacted (e.g GP) or whether the matter is urgent or severe enough to require QAS transport to ED. An After Hours integrated care pilot project has commenced in St George (Warawee) (ED and RACF) and Mount Isa (Laura Johnson Home). The projects are exploring GP capacity and uptake of eHealth technology and systems. This includes the promotion of My Health Record, assistance with registering RACF patients and promotion to GP to provide care through Comprehensive Medical Assessments (CMA), Team Care Arrangements, Mental Health Treatment Plans, Health Assessments and Resident Medication Management Reviews (RMMR). Initial outcomes of the St George project have identified:

- monthly phone contacts ranged from 6 to 38 per month with a total of 235 calls throughout the 2016-17 year providing an average of 19.58.
- 68 Sociable Hours Services provided
- 38 Unsociable Hours Services provided
- 99 GP Management Plan Reviews undertaken
- 78 Health Assessment completed
- 16 Residential Medicine Management Reviews completed
- 4 MH Treatment Plan implemented
- majority of calls were non-urgent consultations
- 235 requests by phone for medical support received

Both projects are contributing to improved After Hours integration through the uptake and use of eHealth technology and strategies to support GPs improve access to After Hours services for RACF residents.

Other After Hours Service Options

Police and ambulance service are often front line services involved in directing patient access. Pharmacies in larger communities are open regular business hours and are often the first point of contact for non-urgent after hours care. There was general consensus from stakeholders that access to telehealth was under utilised.

Access to services under the National Disability Insurance Scheme (NDIS)[63]

The NDIS will provide all Australians under the age of 65 who have a permanent and significant disability, with the reasonable and necessary supports they need to enjoy an ordinary life. The NDIS began in a number of trial sites around Australia from July 2013 and is being rolled out gradually around the rest of Australia from 1 July 2016. The market-based model for disability supports under the NDIS, is designed to encourage greater supply of the supports that people with disability want and need compared with previous arrangements (PC 2011, pp.

[62] Bishop, Laverty and Gale (2016). Providing aeromedical care to remote Indigenous communities. Canberra: Royal Flying Doctor Service of Australia

[63] Productivity Commission (2017), National Disability Insurance Scheme (NDIS) Costs., October 2017. Available at: http://www.pc.gov.au/inquiries/completed/ndis-costs/report/ndis-costs.pdf#page=280 accessed Oct 24 2017

111–156).[64] However, there continue to be cases when the disability support market remains too small (in terms of the number of providers or participants) to support the competitive provision of services. This outcome is known as a 'thin market'.[65] This has relevance to WQPHN as it would be regarded as a 'thin market' based on challenges associated with access to disability services across the region. The Productivity Commission Study Report (2017) identified that "insufficient supply of disability services may lead to higher prices, less variety, lower quality services and unmet demand. In the disability support sector, thin markets can result in poor participant outcomes, increased demand for mainstream services, and greater pressure on informal carers (p.272)." For these reasons, governments often intervene to ensure the supply of disability supports for people with disability. With the roll-out of the NDIS across WQPHN, opportunities exist to support patient access to services through considering a number of key measures identified in the report which have potential to be used to mitigate the risks of thin markets (p.272).[66] These include:

- partial or full block-funding to commission or procure services
- sharing infrastructure, knowledge, skills and experience among providers
- facilitating bulk-purchasing arrangements by participants
- more collaboration, coordination and integration of services, particularly with existing local and mainstream service providers, community organisations (including Indigenous organisations) — to avoid supply gaps or duplication
- providing more hours of support coordination in participants' packages, particularly for those with complex needs
- use of community or place-based services including greater employment and training of the local workforce where possible
- aboriginal community controlled organisations could also have a role in building community capacity in delivering disability services for Aboriginal and Torres Strait Islander participants
- greater use of information technology — including videoconferencing, telehealth and other technologies, particularly for therapeutic supports
- the NDIA providing more detailed and frequent information on market demand (and unmet demand) to encourage providers to enter thin markets
- cultural training, education and awareness programs
- more support and respite care for informal carers
- greater engagement with the local community to build trust and relationships — including consideration of community feedback on provider performance and the development of community plans

Pharmaceutical Benefits Scheme

The Pharmaceutical Benefit Scheme (PBS) is a system of subsiding the cost of most prescription medicines. Under the PBS, the government subsidises the cost of medicine for most medical conditions. The table below lists the patient contribution and government benefit per prescription filled for each PHN in Queensland. Western Queensland had the highest patient contribution and lowest government benefit per script compared to every other PHN in Queensland.

[64] PC (Productivity Commission) 2011, Disability Care and Support, Report no. 54, Canberra.
[65] Productivity Commission 2017, National Disability Insurance Scheme (NDIS) Costs, Study Report, Canberra.
[66] Productivity Commission 2017, National Disability Insurance Scheme (NDIS) Costs, Study Report, Canberra.

Table 6.21 Pharmaceutical Benefits Scheme (PBS) data per script, 2014/2015		
	Patient contribution	**Government benefit**
Western Queensland	**$9.68**	**$26.50**
Brisbane North	$9.38	$30.39
Brisbane South	$9.33	$29.55
Northern Queensland	$9.28	$29.62
Gold Coast	$8.99	$32.55
Darling Downs and West Moreton	$8.17	$29.11
Central Queensland, Wide Bay, Sunshine Coast	$8.14	$31.23

Source: Department of Health. Primary Health Care Networks: Pharmaceutical Benefits Scheme data. Australian Government

Table 6.22 shows that more than twice as many people in WQPHN accessed PBS subsidised mental health related prescription medication in 2011, than accessed an MBS subsidised mental health service. A smaller percentage of people in WQPHN accessed these medications than either Queensland or Australia as a whole. The highest proportion of prescriptions were anti-depressants which could suggest these are being prescribed without any other MBS subsidised service or referral.

Table 6.22 Percentage of population accessing PBS subsidised mental-health related prescription medication in 2011			
Medication	**WQPHN**	**Queensland**	**Australia**
Anti-psychotics	0.9	1.6	1.5
Anxiolytics	1.3	2.5	2.8
Hypnotics and sedatives	1.2	2.3	2.2
Anti-depressants	5.3	7.8	8.3
Psychostimulants, agents used for ADHD and nootropics	0.2	0.4	0.4
Total	7.0	10.9	11.4

Source: ABS. 4329.0 Characteristics of people using mental health services and prescription medication.

6.5 Aged Care

The Australian Government funds and regulates the provision of residential care, home care and flexible care to those approved to receive it. This care can be provided either at home or in a residential facility. ***Table 6.23*** shows the number of providers of Australian Government funded aged care services in each of the HHS regions. Note that the total number may reflect providers who offer both residential and home care.

Table 6.23 Number of approved providers of aged care services, 30th June 2015			
Provider	**Central West**	**North West**	**South West**
Home care	4	6	5
Residential care (non-flexible)	2	1	1
Multi-purpose service	1	2	3
National Aboriginal and Torres Strait Islander Aged Care	-	1	-
Total	7	9	7

Source: Department of Health. Primary Health Care Networks: Aged Care data. Australian Government

Table 6.24 shows the total number of home care and residential places in each of the HHS areas. Multi-purpose services are funded to provide both residential and home care services.

Table 6.24 Number of approved aged care places, 30th June 2015				
Provider		**Central West**	**North West**	**South West**
Home care		48	132	115
Residential care (non-flexible)		59	114	185
Multi-purpose service	Home care	17	5	16
	Residential care	57	18	60
National Aboriginal and Torres Strait Islander Aged Care		-	20	-
Total		181	289	376

Source: Department of Health. Primary Health Care Networks: Aged Care data. Australian Government

Table 6.25 shows the ratio of Australian Government funded aged care residential and home care places per 1000 people aged over 70. Overall each of the HHS areas has a higher ratio of places to population than Queensland as a whole and considerably more residential care places.

Table 6.25 Ratio of approved places to 1000 people aged over 70				
Provider	**Central West**	**North West**	**South West**	**QLD**
Home care	97.9	90	95	97.1
Residential care (non-flexible)	54.9	90.6	44.9	30.5
Total	152.7	180.6	139.9	127.6

Source: Department of Health. Primary Health Care Networks: Aged Care data. Australian Government

Table 6.26 shows the number of people who were receiving care as at 30 June 2015. These figures suggest that the number of care recipients is considerably less than the number of approved places.

Table 6.26 Care recipients				
	Sex	Age	Residential	Home Care
Central West	Male	0-49	<5	-
		50-64	-	<5
		65-84	9	<5
		85+	-	<5
	Female	0-49	-	<5
		50-64	-	<5
		65-84	10	11
		85+	-	<5
North West	Male	0-49	<5	-
		50-64	<5	5
		65-84	27	15
		85+	-	5
	Female	0-49	5	-
		50-64	7	9
		65-84	24	31
		85+	-	8
South West	Male	0-49	-	-
		50-64	-	<5
		65-84	35	18
		85+	-	6
	Female	0-49	<5	-
		50-64	-	<5
		65-84	52	28
		85+	65	22

Source: Department of Health. Primary Health Care Networks: Aged Care data. Australian Government

HACC data has been compiled by PHIDU using data from the Department of Health and Aging. ***Table 6.27*** shows in Western Queensland there is a higher proportion of HACC clients who are Indigenous and a lower proportion who do not speak English in comparison to Queensland and Australia.

Table 6.27 Demographics of HACC clients			
	WQPHN (%)	**QLD (%)**	**Australia (%)**
Clients living alone	39.7%	37.7%	37.5%
Clients living with carer	34.7%	31.3%	24.9%
Indigenous clients	15.2%	3.6%	2.6%
Non-English speaking clients	1.0%	3.6%	9.5%

Source: PHIDU, PHN data, Home and Community Care program.

Table 6.28 Shows HACC provided a higher number of instances of care for Western Queensland compared to Queensland and Australia.

Table 6.28 Types of instances of assistance HACC provided, ASR per 1000, 2012/13			
	WQPHN	**QLD**	**Australia**
Total instances of assistance	175.7	106.1	80.9
Transport	18.1	11.5	7.3
Social support	20.6	8.4	5.9
Respite care	2.5	2.4	1.5
Personal care	8.6	5.7	3.8
Nursing care	17.2	11.3	8.5
Meal	16.9	7.0	5.6
Domestic violence	21.1	16.2	12.6
Home modification	11.1	11.9	8.1
Care counselling	12.8	5.0	4.0

Source: PHIDU, PHN data, Home and Community Care program.

6.6 Digital Health Data

Currently WQPHN general practice services use a range of electronic practice management and record keeping systems. However, there is a lack of consistency and connection between these systems. For example, there may be different systems between the ED and general practice/primary health services in the same locations, even if the services are staffed by the same doctors. In at least one other case, a fly in GP keeps records on a PC and scans records to be sent back some time after the visit, creating significant challenges for continuity of care. The inconsistency of electronic health records currently creates significant barriers to the provision of comprehensive primary health care across WQPHN. These include:

- lack of coordinated care between service providers
- poor follow up of patients
- poor practice level data for efficient and effective management of patients' health
- poor data for local and regional planning

The lack of connection between services and different service providers is exemplified in the challenges posed for consumers with no shared health records. The My Health Record offers potential for improving coordination and continuity of care for consumers. As of August 2017, 8,428 people in WQPHN had

registered for the My Health Record.[67] The rate has steadily been increasing with almost double the number of registered consumers since October 2015 (**Figure *6.13***). In August 2017, 48 providers have registered across the region.

Figure 6.13 shows the number of registered consumers in PHN over time.

[67] Department of Health. *Primary Health Care Networks*: *My health record statistics by Primary Health Network February 2016*. Australian Government.

7. APPENDIX A- LIST OF TABLES

7. APPENDIX B- LIST OF FIGURES

7. Appendix C- Statistical and Local Government Areas of Western Queensland

HSS	SA2	SA2 code	LGA name	LGA code
Central West	· Barcaldine - Blackall	315031408	· Barcaldine	30410
	· Far Central West	315031410	· Barcoo	30450
	· Longreach	315031412	· Blackall Tambo	30760
			· Boulia	30900
			· Diamantina	32750
			· Longreach	34710
			· Winton	37400
North West	· Carpentaria	315021404	· Burke	31950
	· Mount Isa	315021405	· Cloncurry	32450
	· Northern Highlands (28.6373%)	315021407	· Doomadgee	32770
			· McKinlay	34800
			· Mornington	35250
			· Mount Isa	35300
South West	· Balonne	307011171	· Balonne	30300
	· Charleville	315031409	· Bulloo	31750
	· Far South West	315031411	· Maranoa	34860
	· Roma	307011176	· Murweh	35600
	· Roma Region	307011177	· Paroo	35800
			· Quilpie	36150