



**Australian Government**

**Department of Health**



An Australian Government Initiative

# Primary Health Network

## Core Needs Assessment

**Name of Primary Health Network**

***Western NSW PHN***

# Section 1 – Narrative

## *Needs Assessment process and issues*

The *Needs Assessment* conducted by Western NSW PHN (the PHN) involved a six-stage process:

- (1) **Project planning:** the PHN established a project team. Regional collaboration with the Local Health Districts (LHDs) was promoted via the use of a joint Health Intelligence Unit (HIU) to collect and analyse statistical data and promote joint planning. The data analysed by the HIU informed the Needs Assessment preparation.
- (2) **Context description:** we reviewed
  - the priorities identified by the needs assessments prepared by the previous three Medicare Locals whose catchments are now covered by the PHN. This provided a starting point to assess ‘what’s changed’ since 2014.
  - relevant NSW Health / LHD policies and strategies including the Integrated Care, Connecting Care strategies and the First 2,000 days strategy.
- (3) **Data analysis:**
  - The HIU prepared data on comparative and expressed demand for relevant hospital and primary health services within the PHN catchment. We also mapped the distribution of primary services at a regional level.
  - Consultations: throughout December 2015 to mid-February 2016 the PHN conducted consultations with key service stakeholders in the major PHN population centres: Broken Hill, Bathurst Orange, Dubbo, and Bourke. These forums sought the views of attendees on unmet health and service needs and priorities for service development, using the prior Medicare Local needs assessment findings as a baseline for comparison. The consultations were attended by 253 organisations and services, comprising health services (75 attendees), LHDs (59), NGOs (36), GPs (34), councils (18), other government agencies (12), consumers (7), general practice staff (8), pharmacy (1) and the PHN Board/ Council (11).
  - The main observations from the statistical analysis and stakeholder consultation were triangulated and analysed to identify common themes, emerging issues and gaps in current service delivery.
- (4) **Synthesis and prioritisation:** the project assessed the individual priorities identified in Stage 3 and selected issues of direct relevance to the PHN. Activities that could be progressed in 2016/17 were identified and were prepared as a draft list of opportunities, priorities and options. These were submitted to the PHN Board for their consideration.
- (5) **Board approval and submission:** the draft priorities were critiqued by the Board. A process for finalisation was agreed prior to sign off this document by the CEO and the Board Chair.

- (6) **Review for Submission:** This document has been reviewed (October 2017) and populated with updated data (where available) with minor changes made to Tables 1 and 2. No changes have been made to Table 3 due to there being no significant changes in the data underlying the priorities. This information has been circulated to Western NSW PHN Board for noting.

#### **Additional Data Needs and Gaps**

The *Needs Assessment* is built on data analysis completed by the previous Medicare Locals. Where possible the PHN updated this information with more recently released data and the has collaborated with the HIU to incorporate the recently completed comprehensive health and service needs analysis. The most obvious area where additional effort on data analysis is required is on service mapping. The work of the Medicare Locals was more limited in this area and was of variable quality at the sub-regional level. The next round of needs assessment will focus on obtaining more uniform, comprehensive descriptions of primary care service availability within the PHN's sub-regional areas.

The PHN has made some use of data available from the PHN and Australian Institute of Health and Welfare's MyHealthy Communities websites which provides useful national and sub-regional comparisons. Western NSW PHN notes that many of the data series available from the website have limited capacity to enable easy aggregation of data at a sub-regional level lower than Statistical Area 3 (SA3)

#### **Additional comments or feedback**

As there has been no material change in the needs of our region over the past 12 months, Western NSW PHN has refreshed the November 2016 *Needs Assessment* bringing in only minor data updates. This is an indication that the data making up this report does not change rapidly.

It is important to note, for the purposes of sub-regional granularity, many of the indicators, where data was available, were analysed at the local government area (LGA) level. In May 2016, the Western NSW PHN LGAs of Dubbo and Wellington were merged to form the Dubbo Regional Council. Prior to the May mergers, analysis of large number of health and service indicators had been completed for LGAs using the 2011 boundaries as opposed to the 2016 LGA boundaries. As such, for the November 2017 refresh of the *Needs Assessment*, the LGA 2011 boundaries have been applied and as such data was analysed for 28 LGAs. This also ensures consistency with previous versions of the *Needs Assessment*.

The Clinical, Community and Aboriginal Health Councils established by Western NSW PHN have also reflected on the regional *Needs Assessment* since the last submission and are now progressing specific advisory areas or key issue-focused working groups that will assist progress one or more of the regional priorities.

Western NSW PHN is currently part-way through the synthesis of the comprehensive service mapping and data review and will undertake triangulation of the key findings with consultations, review of relevant literature and alignment with national and state priorities in preparation as preparation for next year's *Needs Assessment*.

## Section 2 – Outcomes of the health needs analysis

This section summarises the findings of the health needs analysis for Western NSW PHN in the table below.

*Table 1: Unmet health needs of the Western PHN catchment*

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
<b>GEOGRAPHY AND DEMOGRAPHY</b>		
<b>Population density</b>	Low population density	From ABS Census 2016 and PHIDU (Population Health Information Development Unit), 4.0% of the state's population (2016 usual resident population - URP) is geographically distributed over more than half (55%) of the total land mass of New South Wales (NSW)
<b>Transient population may not be included in estimations</b>	Transient/migratory population in the West/North West of the PHN	From the Far West Medicare Local (FWML) Preliminary Primary Health Care Population Needs Investigation report, 2013: a transient/migratory population due to for example seasonal work, migration to warmer parts during winter, contract workers, drought affected migration and tourists
<b>Population projections</b>	Small population growth projections with sub-regional variations	From HealthStats NSW, population projections for the 20 years from 2016 to 2036, the NSW population is expected to increase by 28.1% compared to a smaller increase of 6.3% for the Western NSW Primary Health Network (WNSW PHN) population.. Of the 28 LGAs within the region, over the 20 year period populations of 11 are expected to increase. The central west LGAs of Bathurst (27.5%), Cabonne (24.1%), Orange (17.1%) are expected to have the largest growth. . Population numbers in the remaining 17 LGAs are expected to see a decline with Lachlan (-20.6%), Walgett (-17.8%) and Weddin (-15.4%) expected

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
<b>GEOGRAPHY AND DEMOGRAPHY</b>		
		to see the greatest falls. The population residing in the far west regional centre of Broken Hill is expected to decline by 13.7%.
<b>Aboriginal population</b>	High Aboriginal population	From PHIDU using the latest available 2016 URPs (Australian Bureau of Statistics (ABS) Census 2016) ), WNSW PHN had the highest proportion of its total population identifying as Aboriginal (10.5%) of all NSW PHNs, and the third highest nationally behind the Northern Territory and Western Queensland PHNs
<b>Population profile</b>	Less 20-34-year population group and more aged younger than 20 years and older than 65 years	From PHIDU using the latest available 2016 URPs (ABS Census 2016), 26.2% of the total PHN 2016 URP were aged younger than 20 years compared to 24.5% of that for the State. Similarly, 18.9% of the total PHN 2016 URP were aged 65 years and over compared to only 16.3% for that for the State. However, those aged 20 to 34 years make up only 17.3% of the total PHN 2016 URP compared to 20.8% of that for the State. From HealthStats NSW, a well-recognised rural phenomenon suggests a migration of young people from rural areas for tertiary education and employment opportunities.
	Younger Aboriginal age profile compared to non-Aboriginal profile	From HealthStats NSW, for 2015, almost half (45.6%) of the PHN Aboriginal population are aged under 20 years compared to a quarter (24.7%) for the same age cohort for the non-Aboriginal population. This is most likely due to a higher fertility rate and a lower life expectancy for the Aboriginal population
<b>Population profile (continued)</b>	Ageing population	From HealthStats NSW, population projections suggest that for the PHN, the proportion of the population aged 65 years and over will rise from 18.5% in 2016 to 25.1% in 2036. Over the 20 years the largest population growth in the PHN is expected to occur in the 70 plus age groups, projected to increase by

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>GEOGRAPHY AND DEMOGRAPHY</b>		
		61.8% while those aged 0-14 years, 15 to 44 years and 45 to 69 years are expected to decline for the same period.
<b>Cultural and Linguistic Diversity</b>	Subregional variation for residents born in non-English speaking countries	According to 2011 Australian Bureau of Statistics (ABS) census data the Walgett LGA has a high proportion of people speaking language other than English (5.5%) and 10.6% were born overseas.

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
<b>HEALTH DETERMINANTS</b>		
<b>Socio-economic factors</b>	High levels of socio-economic disadvantage	The ABS produce the SEIFA 2011 (Socio- Economic Indexes for Areas) - Index of Relative Socio-economic Disadvantage (IRSD). This is a general socio-economic index of disadvantage that summarises a range of information about the economic and social conditions of people and households within an area. Compared to the NSW average SEIFA IRSD score of 1000, 92.6% of the PHN LGAs (2011 boundaries) has a SEIFA IRSD score less than 1000. More than 80% (85.7%) of the 28 LGAs within the PHN boundaries have a SEIFA IRSD in the 50% most disadvantaged deciles nationally. More than a third of the LGAs (35.7%) are classified in 1st and 2nd deciles for the most disadvantaged nationally.
<b>Health literacy</b>	Lower levels of health literacy	From the 2016 Needs Assessment community consultation process: low health literacy levels were evident in high risk groups such as Aboriginal people and older people reported from stakeholder consultations. Further according to the ABS, people aged 65 years and over had lowest levels of health literacy.
<b>Accessing Health Care</b>	Travelling long distances to access health care	Over a third (39.2%) of the PHN LGAs (2011 boundaries) have an Accessibility/Remoteness Index of Australia (ARIA 2011+) classification of remote or very remote; and, only 3 classified as Accessible.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>HEALTH DETERMINANTS</b>		
<b>Accessing Health Care</b>	Difficulty accessing healthcare when needed	According to the 2012 NSW Adult Population Health Survey, respondents living in Far West (FW) and Western NSW Local Health Districts (WNSW LHDs) reported the highest levels of difficulty accessing health care when needed of all NSW LHDs (30.4% and 27.0% (smoothed estimates), respectively)
<b>Life Expectancy</b>	Lower life expectancy for Western NSW population	From HealthStats NSW, residents born in WNSW PHN in 2015 have the lowest life expectancy in the State, 80.9 years.
<b>Potentially avoidable deaths</b>	Higher rates of potentially avoidable deaths	According to WNSW HIU analysis of data extracted from HealthStats NSW over the 5 years from July 2010 to June 2015 deaths from preventable causes in the PHN increased slightly (1.0%) compared to a 4.9% decrease for the same in NSW. The five-year average rate of potentially avoidable deaths in the PHN was significantly higher than that in NSW by 42.7%.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>HEALTH STATUS AND BEHAVIOURS</b>		
<b>Health status</b>	Lower rates of self-reports of good health	From the Australian Institute of Health and Welfare (AIHW) ABS Patient Experience Survey for 2015-16, 85.9% of adults from WNSW PHN reported excellent, very good or good health. This compared to 87.0% for the same nationally.
<b>Risk factors</b>	Higher prevalence of chronic disease risk factors, increasing with remoteness	<p>From HealthStats NSW and the NSW Adult Population Health Survey, the proportion of WNSW PHN residents aged 16 years and older:</p> <ul style="list-style-type: none"> <li>• who were current smokers has increased from 18.6% in 2012 to 22.9% in 2016, which was the highest rate of all State PHNs in 2016.</li> <li>• Currently undertaking alcohol consumption at levels posing long-term risk to health remained steady from 2012 to 2016, 32.0% and 32.1% respectively. However, the 2016 rate for the PHN was slightly higher than that in NSW of 29.8%.</li> <li>• overweight or obese remained steady with 60.2% in 2012 to 60.3% in 2016, which was higher than that in NSW of 53.3%</li> <li>• currently undertaking insufficient physical activity increased from 45.7% in 2012 to 48.8% in 2016, which was higher than that for the State of 42.8%.</li> </ul> <p>From PHIDU modelled estimates in 2014-15 the rate of combined health risk factors (current smoker, high risk alcohol, obesity or inadequate physical activity, by sex and for all persons was higher in WPHN and all 28 LGAs (2011 boundaries) than that in NSW.</p>

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>HEALTH STATUS AND BEHAVIOURS</b>		
		<p>From the NSW Adult Population Health Survey, in 2013, the proportion of people reporting high cholesterol was higher than the state average for residents of FW and WNSW LHDs</p> <p>From the PHIDU modelled estimates of people aged 18 years and over who had high blood pressure in 2014-15 was lower in WNSW PHN than the same in NSW, with inconsistent patterns at the LGA level.</p>
	Higher prevalence of smoking in pregnancy overall, higher again for amongst Aboriginal mothers and increasing with remoteness	From HealthStats NSW, in 2015, the proportion of WNSW PHN mothers smoking in pregnancy (22.4%) was the highest of all NSW PHNs, and higher still for Aboriginal mothers with more than half smoking during pregnancy.. For the years 2013-15, the prevalence ratio for smoking in pregnancy was higher among LGAs within the PHN, than for the state, increasing with remoteness.
<b>Health outcomes</b>	All-cause hospitalisations increase with remoteness	From HealthStats NSW and HIU analysis for 2010-11 to 2014-15, the five-year average rate of all-causes hospitalisations are significantly higher than the state in those more remotely located LGAs
	Higher rates of potentially preventable hospitalisations.	<p>From HealthStats NSW and HIU analysis, for 2011-12 to 2015-16, the 5-year average rate of potentially preventable hospitalisations (PPH) was 20.3% higher than that in NSW.</p> <p>According to the AIHW analysis of the National Hospital Morbidity Database 2015-16, compared to the average rate of Australian PHNs WNSW PHN has higher rates of potentially preventable conditions for the following categories: chronic, acute and vaccine preventable, cellulitis, COPD (4<sup>th</sup> highest nationally) and diabetes complications. While rates for the same for congestive heart failure were equal and Kidney and UTI complications lower than the national average</p>

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>HEALTH STATUS AND BEHAVIOURS</b>		
	Circulatory diseases and cancer are the leading cause of deaths	From HealthStats NSW and HIU analysis for the 5-years from January 2011 to December 2015, circulatory disease (31.0% of all deaths) was the leading cause of death for PHN residents followed by cancer (27.9% of all deaths).
	Prostate, breast, lung, melanoma and colon were the most common types of cancers	The most recent data from the Cancer Institute is quite old; however, from HIU analysis for the years 2008-2012 prostate cancer (31.6%) was the leading cancer diagnosis for the PHN, followed by breast (26.7%), lung (10.0%), melanoma (9.2%) and colon cancer (8.3%).
	Incidence rates of cancer compared to Australian rates vary by type of cancer	An AIHW report comparing the incidence of common cancers for the years -2006-2010 amongst national PHNs to the Australian age-standardised rate found for: breast, bowel, lung, melanoma and cervical cancer rates for WNSW PHN were above the national rate. While, for the same for prostate cancers were lower than national rate.
	Higher smoking attributable hospitalisations and deaths increasing with remoteness	From HealthStats NSW, for 2013-14, the PHN had higher rates of smoking attributable hospitalisations compared to that for the state. In 2013, rates of smoking attributable deaths were higher in the PHN and increased with remoteness with the north west of the PHN
		From HealthStats NSW, for 2013, LGAs located within the PHN had higher rates of smoking attributable deaths compared to that for the State, increasing with remoteness with the highest rates occurred in LGAs located in the North West of the PHN.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>HEALTH STATUS AND BEHAVIOURS</b>		
	Higher alcohol attributable hospitalisations and deaths for men and for all persons increasing with remoteness	<p>From HealthStats NSW and HIU analysis from 2011 to 2015 rates of alcohol presentations to Emergency Departments within the PHN increased by 20.0% compared to an 8.2% increase for the same in NSW.</p> <p>For 2010-11 to 2014-15, the 5-year average rate of alcohol attributable hospitalisations in the PHN was 1.8% higher for all persons and 8.0% higher for males, than those for the State. For all persons, from July 2013 to June 2015 rates increased with remoteness with highest rates occurring in those LGAs located in the far west and north west of the PHN.</p> <p>From HealthStats NSW, alcohol attributable deaths in 2012-13 were higher for PHN males than the state average for the same. For all persons, rates increased with remoteness, particularly for North West LGAs.</p>
	Higher circulatory disease hospitalisations and deaths increasing with remoteness. Higher rates were seen in men than women for the same.	<p>From HealthStats NSW, from July 2011 to June 2016 circulatory disease hospitalisations rates for PHN residents have fallen by 11.9%. However, the 5-year average rate was 19.9% higher than that for the state. Further, this increases for residents from LGAs located in more remote regions of the PHN. Men have higher rates than women.</p> <p>Similarly, data from NSW HealthStats indicates that although trends for circulatory disease deaths show a decrease of 14.8% from July 2010 to June 2015, the 5-year average rate for the PHN are 24.5% higher than that for the State. In 2014-15 circulatory disease deaths rates were highest in far west and north west LGAs of the PHN.</p>
	Higher prevalence of diabetes increasing with remoteness	As of October 2017, 6.0% of the PHN’s population are National Diabetes Services Scheme registrants compared to the national average of 5.2% increasing with

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>HEALTH STATUS AND BEHAVIOURS</b>		
		remoteness with higher rates in in those LGAs located in the far west and north west of the PHN.
	Poorer oral health	From NSWHealth Stats and HIU analysis, for the 5 years from July 2010 to June 2015 rates of oral health hospitalisations for all causes fell in WPHN by 4.9% however the 5-year average rates were 14.1% higher than that in NSW by 14.1%. For the same reporting period, rats of hospitalisations for removal and/or restoration of teeth for dental caries decreased by 21.9% for WNSW PHN resident. The 5-year average rate was 59.1% higher than that in NSW.
	High rates of sexually transmitted disease notifications (Chlamydia and Hepatitis C)	From HealthStats NSW and HIU analysis, the most notified disease from January 2011 to December 2015 was Chlamydia., In 2015, the rate of Chlamydia notifications for PHN residents aged 15 to 24 years of age was 68.5% higher than that for NSW. In 2015, the Hepatitis C notifications rate for PHN residents aged 25 to 44 years was more than double that for NSW and was the highest of all NSW PHNs.

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>POPULATIONS WITH SPECIAL NEEDS</b>		
<b>Maternal and child health</b>	Higher fertility rates and declining fertility rates but with regional variation	Total fertility rates by PHNs are not available however, from HealthStats NSW, in 2015, WNSW LHD females had the highest total fertility rate (2.25) of all LHDs. In comparison the total fertility rate for FW LHD females (1.33), in 2015 was lower than the NSW average (1.79). Fertility rates have fallen for WNSW LHD females from 2.35 in 2011 to 2.25 in 2015 as in NSW (1.90 in 2011 to 1.79 in 2015) but have increased in FWLHD females from 1.28 in 2011 to 1.33 in 2015.
	Aboriginal mothers have higher fertility rates compared to non-Aboriginal mothers	Rates are not available for the PHN or lower. However according to the HealthStats NSW, in 2015 NSW Aboriginal mother's total fertility rate was 2.20 compared to 1.76 for non-Aboriginal women. From HealthStats NSW, 22.7% of all WNSW LHD babies born in 2015, were born to mothers identifying as Aboriginal and 25.1% for the same in FWLHD, around 4 times that for NSW (5.7% )
	Higher rates of teen pregnancies	From HealthStats NSW and HIU analysis for the 5 years from January 2011 to December 2015, the average annual proportion of PHN resident mothers who gave birth aged under 20 years was double that for NSW, 7.6% and 2.9%, respectively. In 2015, the PHN had the highest proportion of mothers giving birth aged under 20 years for NSW. This generally increases in LGAs located in the far west and north west of the PHN, with the exception of the Unincorporated Far West NSW.

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>POPULATIONS WITH SPECIAL NEEDS</b>		
	Higher proportion of low birth weight babies	From HealthStats NSW and HIU analysis, from January 2011 to December 2015, the 5-year average annual proportion of low birth weight babies born to PHN resident mothers was 7.0% higher than that for NSW, 6.7% and 6.3%, respectively.
	Higher proportion of low birth weight babies born to Aboriginal mothers	From HealthStats NSW in 2015, 79.0% more low birth weights babies were born to PHN resident Aboriginal mothers compared to non-Aboriginal mothers , 11.1% compared to 6.2%.
	Higher prevalence of smoking in pregnancy overall, higher again for amongst Aboriginal mothers and increasing with remoteness	From HealthStats NSW, for the five years from January 2011 to December 2015, on average, the proportion of WNSW PHN mothers smoking in pregnancy is more than double that for NSW mothers, 23.8% and 9.9%, respectively.. It is higher still for Aboriginal mothers with more than half (53%) smoking during pregnancy in 2015, compared to 16.1% for the same in non-Aboriginal mothers For the years 2013-15, the prevalence ratio for smoking in pregnancy was higher among LGAs within the PHN, than for the state, increasing with remoteness.
	Higher rates of perinatal mortality	From HealthStats NSW and HIU analysis, from January 2011 to December 2014, the 4-year average perinatal mortality rate was 27.9% higher in the PHN compared to that in NSW. However, in 2015 the rate of perinatal mortality in the PHN was lower than that in NSW, 6.6 and 8.2 per 1,000 births, respectively.
	High blood lead levels in Broken Hill children	According to information from HealthStats NSW, Broken Hill is a lead endemic area. Although the city's lead mine is no longer operational, it has left a legacy of widespread lead contamination throughout the city. Concerted effort by

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>POPULATIONS WITH SPECIAL NEEDS</b>		
		multiple agencies succeeded in achieving a steady decline in blood lead levels among preschool children living in Broken Hill over the years. In 2014, 80% of Broken Hill children aged between 1 and 4 years of age had blood lead levels <10 microg/dL
	Early childhood development risk indicators are poorer, worsening with remoteness.	From HIU analysis of the Australian Early Development Census (AEDC) data from 2009, 2012 and 2015, the average proportion of children in their first full year of full-time school who were developmentally vulnerable on two or more domains was 53.6% higher for PHN resident children compared to the NSW average, 14.9% and 9.7%, respectively, with worsening rates for children living in LGAs located in the north west of the PHN
	High immunisation rates for children - and by age 5, WNSW PHN have the highest proportion of children fully immunised for all children; and for Aboriginal children. Early immunisations for Aboriginal children appear to be delayed.	<p>According to the AIHW analysis of Department of Human Services, Australian Immunisation Register, for 2015-16, the PHN had the 4<sup>th</sup> highest rates nationally for children aged 1 year fully immunised (94.4%) and for children aged 2 years fully immunised (92.5%); and <b>the highest of all national PHNs for children aged 5 years fully immunised (96.1%)</b>.</p> <p>According to the AIHW analysis of Department of Human Services, Australian Immunisation Register, for 2015-16, the proportion of PHN resident Aboriginal children aged 1 year who were fully immunised was higher than national average for the same, 90.4% and 89.8%, respectively. Similarly, PHN resident Aboriginal children aged 2 years and fully immunised was 88.0% higher than the national average of 87.7% and PHN resident Aboriginal children aged 5 years and fully immunised was 96.3%, the 5<sup>th</sup> highest nationally for all PHNs.</p>

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>POPULATIONS WITH SPECIAL NEEDS</b>		
	Poorer oral health	Unfortunately, publicly available data related to decayed, missing and filled teeth for children is very old. From HealthStats NSW, in 2007, rates were higher for WNSW LHD compared to all LHDs, with no data available for FW.
<b>Mental Health and substance abuse</b>	Increasing trend in emergency department presentations for mental health problems and higher rates of overnight hospitalisations for anxiety and stress disorders and depressive episodes	From HIU analysis of the NSW Emergency Department Record for Epidemiology for the five-year period from July 2011 to June 2016, rates of emergency presentations for mental health problems increased by 70.3%. From the AIHW analysis of the National Hospital Morbidity Database for 2014-15, overnight hospitalisations for anxiety and stress disorders and depressive episodes for PHN residents were the second highest nationally.
	Decreasing trends, and lower rates, of mental and behavioural disorders hospitalisations and mortality	From HealthStats NSW and HIU analysis, for the five-year period from July 2011 to June 2016, rates of hospitalisations due to mental disorders decreased in WNSW PHN residents by 4.7% compared to a 9.1% increase for the same in NSW. The PHN five-year average rate for the same as 22.1% lower than that in NSW. Between January 2011 and December 2015 WNSW PHN mortality rates due to mental and behavioural disorders fell by 23.2% compared to a 17.5% increase for the same in NSW.
	Higher rates of mental disorders hospitalisations in Aboriginal people compared to non-Aboriginal	From HealthStats NSW and HIU analysis, for the five years from July 2011 to June 2016, there was a decline in the rates of Aboriginal hospitalisations due to mental disorders by 15.0% for WPHN residents. However, the five-year average rate for PHN Aboriginal residents was more than two times higher than the same in PHN non-Aboriginal residents.

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>POPULATIONS WITH SPECIAL NEEDS</b>		
	Lower prevalence of risk factors	From HealthStats NSW and the NSW Population Health Survey, for 2011, 2013 and 2015 the average proportion of adults aged 16 years and over who had experienced high or very high psychological distress in WNSW PHN was lower than that in NSW, 10.3% and 10.6%, respectively.,
	Higher rates of intentional self-harm hospitalisations for males aged 15-24 years	From HealthStats NSW, intentional self-harm hospitalisations for PHN males aged 15-24yrs in 2015-16 was 33.6% higher than that in NSW, 253.7 and 189.9 per 100,000, respectively.
	Higher rates of suicide	From HealthStats NSW from January 2011 to December 2015 the 5-year average rate of suicide in WNSW PHN residents was 16.0% higher than that in NSW, 11.3 and 9.7 per 100,000, respectively.
	Higher rates of mental health overnight hospitalisations for drug and alcohol use and significantly increasing trends in methamphetamine-related hospitalisations	From the AIHW analysis of the National Hospital Morbidity Database for 2014-15, the rate of mental health overnight hospitalisation for PHN residents was 10.0% higher than the national rate, 198.0 and 180.0 per 100,000, respectively. From HealthStats NSW, rates of methamphetamine-related hospitalisations for PHN persons aged 16 years and over have increased in the 5 years from July 2011 to June 2016 more than 30 times, reflecting similar trends for the same in NSW. However, in 2015-16 the rates were lower for PHN residents than the State average, 111.8 and 124.4 per 100,000, respectively.

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>INDIVIDUALS AND POPULATIONS AT RISK OF POOR HEALTH OUTCOMES</b>		
<b>Aboriginal people</b>	Highest population proportion of Aboriginal people of all NSW PHNs and third highest nationally.	From PHIDU analysis of ABS Census 2016, in 2016, WNSW PHN had the highest proportion of Usual Resident Population (URP) of Aboriginal people of all NSW PHNs (10.5%) which was almost 4 times the average for NSW (2.9%). Nationally, the PHN has the third highest proportion of its total population identifying as Aboriginal behind the Northern Territory and Western Queensland PHNs and higher than the national average of 2.8%. WNSW PHN has the fifth highest total Aboriginal population nationally.
	Younger age profile	See population profile under demography.
	Higher levels of socio-economic disadvantage	There is significant disadvantage across a large range of social, economic and cultural factors impact of the health of the aboriginal people.
	Lower life expectancy	Sub-state data is unavailable however, from HealthStats NSW; Aboriginal people have a much lower life expectancy for both males and females, than non-Aboriginal for the same at state and national levels.
	Poorer health outcomes	From HealthStats NSW Aboriginal people have poorer health than the non-Aboriginal population for many measures. Many of these are not available at sub-state levels
	Higher prevalence of chronic disease risk factors	According to the 2012-13 National Aboriginal and Torres Strait Islander Health Survey conducted by the ABS, for residents of the WNSW PHN 40.7% of respondents aged 15 yrs. + were current daily smokers; 59.5% of participants aged 2 yrs. and over were overweight or obese; and 76.7% had at least 1 long term health condition.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>INDIVIDUALS AND POPULATIONS AT RISK OF POOR HEALTH OUTCOMES</b>		
	Higher rate of ED presentations	HIU analysis of 2016/17 ED data highlighted that 19% (across all PHN emergency sites) of presentations were identified as Aboriginal. The average number of presentations per patient was also higher for the Aboriginal cohort: 2.3 average presentations per patient for Aboriginal patients and 1.8 for non-Aboriginal presentations.
	Higher rates of hospitalisations for Aboriginal PHN residents compared to non-Aboriginal residents across a range of causes	From HealthStats and HIU analysis, for the 5 years from July 2011 to June 2016 the average annual rate of all causes hospitalisations for WNSW PHN Aboriginal residents was 88.1% higher than that for non-Aboriginal residents. For the reporting period, dialysis was the leading cause of hospitalisations for Aboriginal people and the average annual rate of which was more than 6 times that of non-Aboriginal residents. Similarly, the 5-year average rate for respiratory disease (2 <sup>nd</sup> leading cause of Aboriginal hosp) for Aboriginal residents was more than double that for non-Aboriginal residents. Similarly, the 5-year average rate of injury and poisonings hospitalisations (3 <sup>rd</sup> leading cause of Aboriginal hosp) was 51.5% higher in Aboriginal residents than that for non-Aboriginal residents. For the same reporting period, the 5-year average rate of potentially preventable hospitalisations for Aboriginal residents were more than 2.5 times that for non-Aboriginal PHN residents.
	Higher proportion of low birth weight babies compared to non-Aboriginal babies	See Maternal and Child Health

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>INDIVIDUALS AND POPULATIONS AT RISK OF POOR HEALTH OUTCOMES</b>		
<b>Older people (aged 65 years and over)</b>	Ageing population and lower life expectancies with sub-regional variation.	<p>From HealthStats NSW and HIU analysis, , population projections predict that by 2036 a quarter (25.1%) of the PHN's population will be aged 65 years or older.</p> <p>From HealthStats NSW, PHN residents aged 65 years in 2015 have the lowest life expectancy of all PHNs in the State, 85.3 years.</p> <p>At the sub-PHN level, FWLHD Residents aged 65 years and over in 2015 have lower life expectancies – 84.9 years .</p>
	Sub-regional variation of the prevalence of falls in the elderly	<p>From HealthStats NSW and HIU analysis, between July 2010 and June 2015, the rate of fall-related injury hospitalisations in persons aged 65 years and older increased in NSW and FWLHD, 5.4% and 8.7% , respectively; but decreased by 19.0% for PHN residents for the same.</p> <p>For the same reporting period, the 5-year average rate of fall-related hospitalisations in older people were significantly lower in PHN residents compared to that for NSW by 19.4%. Rates were higher in females than males.</p>

## Section 3 – Outcomes of the service needs analysis

This section summarises the findings of the service needs analysis for Western NSW PHN in the table below.

*Table 2: Unmet service needs of the Western PHN catchment*

Outcomes of the health needs analysis		
Identified Need	Key Issue	Description of Evidence
<b>GEOGRAPHY</b>		
<b>Population geographically dispersed over more than half of the total area of the state of NSW.</b>	Challenges providing, or facilitating access to, a wide range of primary and community health services to over 60 towns and communities	The population of Western NSW Primary Health Network (WNSW PHN) reside within 28 local government areas (LGAs). Health services are provided to more than 60 towns ranging from large regional centres (e.g. Broken Hill and Orange), smaller rural towns (e.g. Bourke and Parkes) to remotely located small communities (Tibooburra and Goodooga).
<b>Cross-border flows and access to services in adjacent regions</b>	Complex array of cross-border flow arrangements with three states, multiple PHNs and multiple local health district partners.	The PHN shares borders with 3 states: Queensland, South Australia and Victoria. Further, within NSW alone, the PHN shares boundaries with 5 other PHNs and associated local health districts.
		In particular, Wentworth and Balranald LGAs have close connections across the state border of Victoria, with many community members relating to Mildura as the closest regional centre. Broken Hill's main centre (for subspecialist and tertiary care) is Adelaide. Given these and similar proximal relationships, PHNs may benefit from joint commissioning.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>GEOGRAPHY</b>		
	Need for improved communication and collaboration across PHN boundaries to ensure patient access to services close to home.	Several community forums discussed cross-border flows and the need to understand services across boundaries. Funding silos and lack of joint planning limit ability to provide joined up services.
	High level of outflows for acute care with largest outflow to Victorian hospitals	<p>From HIU analysis of Patient flows (to Private and other LHDs) extracted from FlowInfo version 15.0 (NSW Ministry of Health) for 2014-15:</p> <ul style="list-style-type: none"> <li>• over a third of FWLHD (35.2%) and WNSW LHD (34.1%) resident inpatient separations were provided outside of the LHDs. Close to a quarter (24.2%) of separations for WNSW LHD residents were from Private Hospitals and Private Day Procedure Centres.</li> <li>• The largest outflow for FWLHD residents were to Victorian based hospitals (21.5% or 2,205 separations) followed by South Australia (10.7% or 1,100 separations). The largest outflow for WNSW LHD residents was to the Sydney LHD (2.0% or 1,786 separations) and Sydney Children’s Hospitals Network (1.3% or 1,194).</li> <li>• Thus, at the PHN level, a total of 34.2% of resident separations occurred outside the region with the largest outflow being to Victoria (23% or 2,317 separations).</li> </ul>
<b>Networking of services within the region</b>	Complex network of transfers and referrals for patients across the region to access higher levels of care and specialist services in larger centres. Need to understand the	From the WNSW LHD The Clinical Services Framework 2015: the WNSW LHD is organised into southern and northern network systems. Referral networks, both informal and formal, that exist for intra-district and tertiary services for WNSW LHD consequently follow the southern and northern network system. These are based on usual flows from smaller towns to larger towns and cities for generalist

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>GEOGRAPHY</b>		
	picture and impact on primary care. Further, funding arrangements and inadequate collaborative planning impact on effective and efficient service distribution and cross-border networking.	and specialist services. Flow patterns for certain speciality services i.e. acute coronary syndrome, stroke and severe trauma are influenced at a state level according to state-wide pathways. Funding arrangements and lack of collaborative planning can be a barrier to effective and efficient service distribution and cross-border working.
		WNSW LHD Southern Sector Referral Network: the majority of southern sector residents access their local hospitals for the majority of their community, ambulatory and in-patient services. The majority of residents requiring higher levels of generalist or specialist care services access these in Bathurst, Dubbo, Mudgee and/or Orange. Adults requiring services not available at Dubbo are frequently referred to Royal Prince Alfred Hospital and a small number to Westmead and Nepean hospitals - located in Sydney. Children requiring tertiary level care are generally transferred to Westmead's Children's Hospital.
		WNSW LHD Northern Sector Referral Network: Residents access their local hospitals and health services for the majority of their community, ambulatory and inpatient services. People requiring higher levels of generalist or specialist care are generally referred to health services at Mudgee or Dubbo. Adults requiring services not available at Dubbo are frequently referred to Royal Prince Alfred Hospital and a small number to Westmead and Nepean hospitals - located in Sydney. Children requiring tertiary level care are generally transferred to Westmead's Children's Hospital.

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
<b>Access to specialist clinicians</b>	Lower annual specialist attendances per person with sub-regional variation.	From the AIHW analysis of Department of Human Services, Medicare Benefit statistics 2015-16, the average age-standardised number of specialist attendances per person in WNSW PHN were 10.2% lower than the national average for the same, 0.79 and 0.88, respectively. The Statistical Area 3 (SA3) of Lower Murray had the highest specialist attendances (0.87 per person) but lower than the national average. The larger regional SA3s of Dubbo (0.85 per person), Orange and Broken Hill Far West (0.84 per person) were also higher than the SA3 Lachlan Valley (0.73 per person) and Bourke-Cobar-Coonamble (0.66 per person) which had the lowest specialist attendances in the region for the reporting period.
	Longer waiting times to wait for an appointment with a specialist	From the Bureau of Health Information (BHI) analysis of the Commonwealth Fund International Health Survey Policy, 2016 – in 2016 27% of PHN residents surveyed aged 18 years and over had to wait 2 months or longer for a specialist appointment compared to 15% for the same in NSW.
<b>Access to specialist medical, nursing and allied health by people living outside of regional centres.</b>	Location of specialist and allied health services mainly in regional centres, creates challenges for access to more remote communities	From the WNSW Strategic Health Services Plan (2013) and FW LHD Healthcare Services (2015) plan specialist medical, nursing and allied health clinicians are primarily located in Bathurst, Orange, Dubbo and Broken Hill. There is evidence that in some locations, even where positions exist there can be challenges in recruiting and therefore sometimes sustained vacancies. From HIU analysis (2017) of allied health service provision (including public, private and outreach), Occupational Therapy services are unavailable across 11 LGAs and

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
		<p>Physiotherapy is unavailable in 4 LGAs. At the location level, Oberon has 4 Allied Health Service types unavailable and Brewarrina and Gilgandra both with 3 unavailable.</p> <p>HIU analysis (2017) of Specialist service availability demonstrated that Gastroenterology and Geriatric were the least available specialty across the region. It was also noted that the majority of specialist outreach services were to large regional centres (Broken Hill, Bathurst and Dubbo), although Lachlan, Walgett and Central Darling LGAs received a total of 4 specialist outreach services each.</p>
<b>Transport</b>	Access to affordable transport with lower IPTAAS claims from Aboriginal PHN residents.	<p>From the Australian Bureau of Statistics (ABS) Census 2011, almost a third of Aboriginal households (28.9%) do not have a motor vehicle and only Broken Hill has a regular passenger bus service -this creates problems when trying to access services. From community consultations financial support available through Isolated Patient Transport and Accommodation Assistance Scheme (IPTAAS) was considered inadequate.</p> <p>From HIU analysis of claims for the Isolated Patients Transport and Accommodation Assistance Scheme (IPTAAS). For the period August 2016 to May 2017 (10 months) there was a total of 9,785 IPTAAS claims within the PHN – FWLHD – 2,285 and WNSW LHD – 7,500. A total of 42.6% of claimants travelled within the region. Aboriginal patients made up only 5.2% of all PHN claimants. Of which half (50.3%) were for outside of the region.</p>

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
<b>Heavy reliance on outreach/visiting services</b>	Diverse and complex array of outreach services from multiple providers and funding sources	<p>NSW RDN data shows 13 different organisations administer 367 approved outreach services within the WNSW PHN boundaries. These include LHDs, ACCHS' and Marathon Health with 335 operational services, 18 with an identified provider in readiness to commence clinics; and 14 are not operational.</p> <p>The diverse array of outreach specialist services in our region includes: cardiology; dermatology; ear, nose and throat; endocrinology; gastroenterology; geriatrics; haematology; gynaecology/obstetrics; nephrology; oncology; ophthalmology; respiratory and urology. Endocrinology outreach services occurred at the most locations – across 8 LGAs – followed by Cardiology at 7 LGAs.</p>
<b>Quality - practice accreditation and PIP enrolment</b>	Need to continue to engage practices in practice accreditation and support with the Practice Incentive Program and digital health, in particular with quality prescribing and CTG compliance activity	<p>From the PIP-PHN-Tables-Public-Release-Series-Q20199As, of August 2015 (latest available) there were 91 PIP Practices receiving an incentive payment per quarter, 85% of practices within the region. Breaking these down: 79 were receiving eHealth Incentive payments; 64 were receiving payments for having at least one Indigenous Health incentive patient registration; 40 were receiving an Indigenous Health Incentive Tier 1 payment; 40 were receiving a Teaching Incentive payment; 32 were receiving a level 5 After Hours Incentive payment; and, 14 were receiving a Diabetes Incentive outcomes payment, amongst others. Of note nil PIP practices received incentive payments for Quality Prescribing, and less than 6 PIP practices received incentive payments for Asthma Incentive sign on and cervical screening incentive sign on.</p>

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
<p><b>Specific Service Challenges and Gaps aligned to priority health service needs</b></p>	<p>Gaps in health services for older people, including older Aboriginal people including: residential care, geriatricians; allied health and mental health, and also, community-living support services. This need is projected to increase due to the ageing population.</p>	<p>From the WNSW Health Needs Assessment 2013, it was noted older people wish to reside in their homes in the community, which is enabled through home-based support programs. However, only 2.4% of WNSW 70 yr. olds were receiving home-based support in June 2010, with sub-regional variation.</p> <p>From HIU analysis of AIHW National Aged Care Data Clearinghouse, as at 30 June 2016, there were 3,456 subsidised residential care places and 1,284 home transition care places in the PHN region. The national target for operational ratio is 113 places per 1,000 people aged 70 years and for 15 of the 28 LGAs have rates lower than the national target and the LGAs of Blayney, Central Darling, Cobar, Narromine, Walgett, Weddin and Wellington having significantly lower rates than the national target.</p> <p>As at June 2015 (latest available) there were a total of 14,336 recipients of aged care services (including Lithgow). Of the total 68.0% were female and over 77.2% were in residential care.</p> <p>For the same period, 1.9% of the total regional recipients of aged care services identified as Aboriginal of which half were in home care. 25.0% of Aboriginal people receiving aged care services in the region were aged under 65 years</p> <p>From June 2011 to July 2015, there was a 17.7% increase in the total number of Aboriginal recipients of aged care services. For the same reporting period, the proportion of aged care recipients of non-English speaking background has increase by 12.0%.</p>

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
		<p>For the same reporting period there were a total of 132 registered aged care services operated by 38 providers.</p> <p>From the Far West Medicare Local (FWML) and Western ML (WML) Comprehensive Needs Assessments (CNAs) stakeholder consultations, poor access to allied health services, mental health services for older people, as well as geriatrician services was identified.</p> <p>Gaps in chronic disease and complex care services</p> <p>Stakeholder consultation conducted by FWML, Lower Murray (LM) ML and WML identified a need to improve the integration of chronic care service management, particularly diabetic and chronic pain care, and a need to upskill health providers. A need for locally delivered services including palliative care and diabetic education.</p> <p>Stakeholder consultation conducted as part of the FWML Preliminary Primary Health Needs Assessment 2013 identified a lack of locally delivered sexual health services, including those following a sexual assault.</p> <p>Gaps in mental health and substance abuse community-</p> <p>Stakeholder consultation conducted by FWML and WML identified a need to improve community-based mental health services including after-hours services, community-living support and mental health promotion. From the WNSW LHD Health Partners' Mental Health Review 2014 higher unmet need was noted for Aboriginal, children, adolescents and older people</p>

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
	based services, increasing with remoteness.	<p>From the WNSW Health Needs Assessment 2013, it was noted most older people wish to reside in their homes in the community, which is enabled through home-based support programs. However, with 2.4% of WNSW 70 yr. olds receiving home-based support in June 2010, with subregional variation.</p> <p>Stakeholder consultation conducted by WML as part of the 2014 Comprehensive Needs Assessment (C.N.A.) identified drug and alcohol rehabilitation services.</p> <p>From the WNSW Health Needs Assessment 2013, Medicare Benefit claims for the 'Better Access' program for the 2009-10 period were similar for the average for rural NSW, both significantly less than the same for all of NSW. Within WNSW, the rate of utilisation of this program decreased with remoteness.</p>
	Oral Health services for children	From HealthStats NSW, for the years 2011-14 and children aged 5-15 years of age: 69.4% of WNSW LHD children and 78.9% of FW LHD children visited a dental professional, compared to 75.7% of all LHD for the same.
<b>Access to effective, culturally safe primary care for Aboriginal people</b>	Higher rates of ED attendances for Aboriginal people may be reflective of unmet primary health care needs.	From the WNSW Health Needs Assessment 2013, in 2012, rates of ED attendances were higher for Aboriginal people than non-Aboriginal people to the 3 largest hospitals in the WNSW LHD.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
	Lack of primary health care <i>Closing the Gap</i> (CTG) prioritisation, particularly GP and Allied Health Services	<p>From the WML C.N.A 2014 stakeholder consultation, a lack of culturally sensitive/safe health services for the Aboriginal population including inadequate or unaffordable GP services was identified.</p> <p>From a local qualitative study conducted by Webster et.al. (2017) Aboriginal people described feeling stereotyped by non-Aboriginal health professionals and a need for them 'to understand our culture' and explained they found communication about their health easier with Aboriginal health staff.</p> <p>Available at:  <a href="http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12605/abstract;jsessionid=6D15977ADB84274B8F3BA0FD6947E6C0.f04t04">http://onlinelibrary.wiley.com/doi/10.1111/1753-6405.12605/abstract;jsessionid=6D15977ADB84274B8F3BA0FD6947E6C0.f04t04</a></p>
	Lack of mental health, drug and alcohol service gaps for Aboriginal people.	From the WNSW LHD Health Partners' Mental Health Review 2014; and, FWML and WML community consultations, mental health and drug and alcohol service gaps were identified by stakeholders. In particular, key stakeholders concern that drug and alcohol service delivery is one of the greatest unmet needs for the WNSW LHD population, in particular for Aboriginal people and youth.
	An identified need for Aboriginal Health Immunisation Providers to improve immunisation rates for children aged 2 years and younger	AIHW analysis of Department of Human Services, Australian Immunisation Register for the years 2015-16, lower rates of fully immunised 1 and 2 year old Aboriginal children resident in the PHN while higher than the national average for the same, remain lower than that for all WNSW PHN children.
	Lack of culturally sensitive/safe health services for the Aboriginal	The FWML Preliminary Primary Health Care Population Needs Investigation Report, 2013, and the current consultation forums flagged the need to ensure

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
	population including inadequate or unaffordable GP services.	culturally sensitive health service delivery. In particular, that all service provider staff are culturally competent.
<b>Limited access to primary care and related services in the communities</b>	Higher rates of potentially preventable hospitalisations than peers and national PHN rates; and, high rates of admissions for ambulatory sensitive conditions (conditions that could be treated in the community) and avoidable admissions	From HealthStats NSW and HIU analysis, for 2011-12 to 2015-16, the 5-year average rate of potentially preventable hospitalisations (PPH) was 20.3% higher than that in NSW. According to the AIHW analysis of the National Hospital Morbidity Database 2015-16, compared to the average rates of Australian PHNs WNSW PHN has higher rates of potentially preventable conditions for the following categories: chronic, acute and vaccine preventable, cellulitis, COPD (4 <sup>th</sup> highest nationally), diabetes complications. While rates for the same for Congestive Heart Failure were equal and Kidney and UTI complications lower than the national average
	Highest in-hours AND out-of-hours ED attendances of any PHN nationally	From National non-admitted patient emergence department care database 2015-16, WNSW PHN had the highest numbers of in-hours ED attendances per 1000 people (227) of all national PHNs.  From National non-admitted patient emergence department care database 2015-16, WNSW PHN had the highest numbers of out-of-hours ED attendances per 1000 people (206) of all national PHNs.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
		From HIU analysis of 2016/17 ED data, a total of 41.5% of presentations were classified as Triage 4 (within 60 minutes) when combining the results for Dubbo, Orange and Bathurst.
<b>GENERAL PRACTICE</b>		
<b>Limited access to primary care and related services in the communities (cont.)</b>	Lack of GP services in majority of WNSWPHN region	All areas of WNSWPHN defined as District of Workforce Shortage (DWS) with the exception of the townships of Broken Hill, Dubbo and Orange as per Australian Government Doctor Connect website accessed 31/10/2016.
	Fewer GP attendances compared to residents from peer PHNs with sub-regional variation.	From AIHW analysis of Department of Human Services, Medicare Benefits Statistics 2015-16, for 2015-16, the number of age-standardised GP attendances per person in the PHN was 10.2% lower than the national average, 5.3 and 5.9 per person, respectively. Rates were highest in the Broken Hill and Far West and Bourke-Cobar-Coonamble SA3 areas, 5.9 and 5.7, respectively, and lowest in Lower Murray, Orange, Bathurst and Lithgow-Mudgee SA3s.
	Lower rates of patients seeking urgent medical GP care	From AIHW analysis of the ABS Patient Experience Survey 2015-16, the proportion of PHN adult participants aged 15 years and over who saw a GP for urgent medical care in the preceding 12 months was 22.1% lower than the national average, 8.1% and 10.4%, respectively; the fifth lowest nationally.

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
	More difficulty to get medical care in the evenings, on weekends, or holidays without going to the ED	From the Bureau of Health Information (BHI) analysis of the Commonwealth Fund International Health Policy Survey, 2016 – in 2016, 51% of WPHN residents found it somewhat or very difficult to access care out of hours without going to an ED compared to 46% for the State.
	Identified after-hours service gaps	From the Carramar Consulting After-hours Services Audit (2017): The following were identified as service gaps from the analysis of data and responses received from interviews and surveys: 1 Workforce supply and sustainability of supply 2 Capacity to provide after-hours services across the PHN given its size and population density in some areas 3 Disparity between after-hours clinic coverage in main towns and the volume and timing of presentations to EDs for triage category 4 and category 5 patients 4 Gaps for some population groups particularly Mental Health and Palliative Care 5 Extent of the access (hours provided) by the current arrangements 6 Duplication of some services, particularly the after-hours telephone service with the availability of HealthDirect 7 Rural/remote areas have limited after-hours access and sometimes the only available option is through ED 8 Distance and transport for remote residents.
	Lower MBS expenditure on GP attendances per person despite having more GP attendances bulk-	From AIHW analysis of Department of Human Services, Medicare Benefits Statistics 2015-16, the Medicare Benefits expenditure on GP attendances per person, age standardised, for PHN residents was 8.7% lower than the national

## Outcomes of the health needs analysis

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
	billed than the national average, with sub-regional variation.	<p>average, \$264.37 and \$389.64, respectively. The SA3s of Broken Hill and Far West and Bourke-Cobar-Coonamble had higher expenditures than the national averages while the lowest were the SA3s of Orange, Bathurst and Lithgow-Mudgee.</p> <p>From AIHW analysis of Department of Human Services, Medicare Benefits statistics, 2015-16, greater rates of PHN GP attendances were bulk-billed compared to the national average for the same, 87.9% compared to 85.1%. The highest rate of GP attendance bulk-billing occurred in the Bourke-Cobar-Coonamble and Broken Hill &amp; Far West SA3s, 96.0% and 95.3%, respectively and the lowest in the Bathurst and Orange SA3s, 86.0% and 81.0, respectively.</p>
	Highest levels nationally of patients who believed they had to wait an unacceptable time to get an appointment with a GP.	From AIHW analysis of the ABS Patient Experience Survey 2015-16, 38.1% of adults aged 15 years and over felt they waited longer than acceptable to get an appointment with a GP compared to 22.6% nationally and the highest of all PHNs.
	Very low levels of adults who had a preferred GP in the preceding 12 months.	From the ABS patient experience survey, for 2013-14, 73% of WNSW PHN surveyed adult had a preferred GP in the preceding 12 months. This is the second lowest nationally: the lowest being Country South Australia (72%) and the highest 87% for Nepean Blue Mountain PHN residents.
	Over the PHN as a whole, cost was not a not a major barrier for accessing GP services	From AIHW analysis of the ABS Patient Experience Survey 2015-16, 4.7% of PHN adults aged 15 years and over did not see or delayed seeing a GP due to cost in the preceding 12 months compared to 4.1% nationally.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
	Fifth lowest rate of after-hours GP attendances nationally with sub-regional variation.	From AIHW analysis of Department of Human Services, Medicare Benefits statistics, 2015-16, for 2015-16, the age standardised number of After-hours GP attendances per person for PHN residents was 60% lower than the national average, 0.19 and 0.48, respectively. While the rate in the Dubbo SA3 was higher than the national average, 0.49, the remaining SA3s were less 0.18 or lower with the lowest occurring in the SA3s of Lachlan Valley, Bathurst and Orange, 0.09, 0.08 and 0.07, respectively.
	After hours PIP program may not provide the best option to encourage after-hours services	Carramar consulting: Improving access, telehealth, key partnerships Recruit GPs to the area to improve the provision of after hours services
<b>PRESCRIPTION MEDICINE</b>		
<b>Limited access to primary care and related services in the communities (cont.)</b>	WNSW PHN had lower levels of adults who delayed or avoided filling prescription due to cost	From AIHW analysis of the ABS Patient Experience Survey 2015-16, 5.0% of PHN residents aged 15 years and over delayed or avoided filling a prescription due to cost in the preceding 12 months compared to 7.6% nationally.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>ACCESS TO SERVICES</b>		
<b>SPECIALIST SERVICES</b>		
<b>Limited access to primary care and related services in the communities (cont.)</b>	Lower average specialist attendances than the national average	From AIHW analysis of Department of Human Services, Medicare Benefits statistics, 2015-16, the number of age specialist attendances per person in 2015-16 was 0.32% lower than the national average, 0.79 and 0.88, respectively. The highest rates occurred in the SA3s of Lower Murray, Dubbo, Orange and Broken Hill & Far West and the lowest occurred in Bourke-Cobar-Coonamble.
	Lower average MBS expenditure on specialists than the national average.	From AIHW analysis of Department of Human Services, Medicare Benefits statistics, 2015-16, the age-standardised average MBS expenditure of specialists per person for PHN residents was 13.7% lower than the national average, \$63.49 and \$73.53, respectively.
	Access to cancer treatment and associated services	Stakeholder consultation from the FWML Preliminary Primary Health Needs Assessment 2013, identified a lack of affordable and accessible cancer services. The HIU analysis of IPTAAS data (August '16 to May '17) demonstrated that the 3 <sup>rd</sup> highest service type for claims was Radiation Oncology – with 3.9% of total claims in the region. Also, HIU analysis of non-admitted patient data showed that in the 2015/16 year 2,600 occasions of service (OoS) for radiation oncology were provided to Bathurst residents out of Orange; 2,441 OoS for radiation oncology were provided to Cowra/Parkes/Forbes residents out of Orange.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>WORKFORCE</b>		
<b>Ageing health workforce</b>	Maintaining a mixed age workforce with opportunities for succession over time.	Both the FWML and WML CNAs 2014 mentioned the ageing medical workforce. Data shows the nursing workforce in the region is also ageing. Related comments were about the need for better succession planning, currency of professional knowledge and skills and introducing new models of care, and the challenges of providing adequate supervision for young clinicians. According to Australian Health Practitioner Regulation Agency (AHPRA) registered practitioner database (2015), 29.4% of our region’s practitioners are over the age of 55 years – compared to the NSW State result of 26.3%. Nurses and Midwives, Optometry and Osteopaths represent our oldest workforce (32.6%, 35.6% and 66.7% respectively).
<b>Professional development</b>	Cost and opportunities for professional development	PHN consultation forums, particularly in smaller and more remote communities, discussed the difficulties of offering staff regular opportunities to participate in professional development. Some of the issues raised included the extra time commitment if long distance travel is required, the lack of (and cost of) providing backfill, and a desire to have more opportunities available locally.

**Outcomes of the health needs analysis**

Identified Need	Key Issue	Description of Evidence
<b>INTEGRATION AND COLLABORATION</b>		
<b>Coordination and Integration</b>	Disconnected care and poor communication and collaboration between providers.	Previous CNAs and current stakeholder consultation strongly confirmed the need to focus on better connections between service providers, and improved integration of care. Some of the specific issues raised include: inconsistent discharge planning, poor awareness of available services and lack of coordination, duplication of services by different providers in a location in some instances, insufficient networking and interagency collaboration, service planning not coordinated across service providers. There was a particular emphasis on the need for improved coordination of care for disadvantaged patient groups and at-risk populations.
<b>Data and information and technology</b>	Availability of effective information technology that enables effective use of contemporary data and related systems	The FWML C.N.A. 2014 identified poor availability of fast and reliable internet and associated technology as a barrier to effective service delivery. Similar issues were raised in 2016 consultation forums in a number of locations in the region.
<b>More effective information recording processes</b>	Incomplete primary health care records, quality of data collections, including of Aboriginal status. Add Leigh's	The WNSW Needs Assessment 2013 found there was a lack of available data to report on the rate of usage of Aboriginal people for primary care in WNSW or NSW. Only a minority of practices have effective routine Aboriginal identification and recording processes in place.

## Section 4 – Opportunities, priorities and options

This section summarises the proposed opportunities, priorities and options of the Western NSW PHN in response to the findings of the health needs and services analysis.

*Table 3: Opportunities, priorities and options of the Western PHN*

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>1. PHN &amp; regional workforce capability, capacity &amp; development</b>				
1.1 Workforce planning	Collaborative workforce planning to develop: <ul style="list-style-type: none"> <li>- shared employment opportunities;</li> <li>- more allied health assistants;</li> <li>- training pathways for Aboriginal staff;</li> <li>- GP training;</li> <li>- improved after hours services; -</li> <li>succession plans for GPs; and - more GP Proceduralists.</li> </ul>	Reduce gaps in local workforce availability that support continuity of care.	Number of specific new workforce initiatives identified.	PHN with LHDs, Aboriginal Health Council, ACCHS <sup>1</sup> , NGOs, universities, and the RFDS.

<sup>1</sup> ACCHS – Aboriginal Community Controlled Health Services. This term is preferred by the NSW Aboriginal Health and Medical Research Council

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>1. PHN &amp; regional workforce capability, capacity &amp; development</b>				
1.2 Intelligent purchasing	Commissioning contract terms to identify workforce requirements on: <ul style="list-style-type: none"> <li>- succession planning;</li> <li>- Aboriginal employment targets;</li> <li>- sustainability; and</li> </ul> education, training and clinical supervision.	Clear service provider expectations on workforce sustainability and development.	Each contract includes workforce sustainability and development commitments.	PHN.
1.3 Enhancing practice & improving quality of care	Provide GPs and their team, including growing practice nurse numbers, with practice support to create <ul style="list-style-type: none"> <li>- a learning collaborative of GPs and primary health care providers;</li> <li>- redesigned models of care ; and</li> </ul> clinical quality improvement and team building opportunities.	Strengthened skilled and engaged general practice and primary health care workforce.	Provider plans addressing quality of care, practice enhancement, and clinical pathways.	PHN.

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>2. Locally relevant, people &amp; community centred health system &amp; service improvement</b>				
2.1 Mental Health and Substance Abuse	<p>The Mental Health Plan should address priorities in:</p> <ul style="list-style-type: none"> <li>- community and primary care provider education;</li> <li>- suicide prevention;</li> <li>- drug and alcohol comorbidities;</li> <li>- the role of GPs, including integration with general health care;</li> <li>- role of primary care in children, youth and older persons mental health;</li> <li>- Aboriginal Social and Emotional Well-Being (SEWB);</li> <li>- local applicability of Step-Care model; and - self-care support including digital health.</li> </ul>	Commence implementation (outcomes to be defined in plan).	<p>Measure achievement against project milestones, including, for example substance abuse and service redesign.</p> <p>The Plan should address both regional and sub-regional mental health priorities.</p>	<p>PHN working with</p> <ul style="list-style-type: none"> <li>- the Clinical, Community and Aboriginal Health Councils</li> <li>- GPs</li> <li>- the MH sector, including the Centre for Rural and Remote Mental Health, the Black Dog Institute, and</li> <li>- other human service agencies (e.g. education, police and housing).</li> </ul>

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>2. Locally relevant, people &amp; community centred health system &amp; service improvement</b>				
2.2 Child and Maternal Health	Support GP, ACCHS, private allied health and NGOs involvement in the LHDs' first 2000 days strategy including: <ul style="list-style-type: none"> <li>- screening and early intervention;</li> <li>- access to comprehensive assessment services;</li> <li>- clearly defined referral pathways including support for 'at-risk' children;</li> <li>- incorporate existing targeted programs demonstrated to be effective; and</li> <li>- capacity building for generalist workforce e.g. practice nurses.</li> </ul>	Implementation plan finalised and implementation commenced.	Achievement against milestones.  Subject to LHD support, initiatives should address both regional and subregional priorities.	PHN with WNSW LHD.

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>3. Effective partnerships with Aboriginal communities</b>				
3.1 Aboriginal Health planning	Strengthen local level planning and consultation including Elder engagement, building on existing partnerships with Maari Ma, Bila Muuji and existing LHD partnerships.	Greater local engagement by Aboriginal people and more culturally appropriate care delivery.	Clearly identified PHN priorities for Aboriginal health development that have local level support.  Processes are implemented and regular attendance and participation by Aboriginal people including Elders.	PHN in consultation with Aboriginal Health Council.
3.2 Cultural competence	PHN commissioning framework to include cultural competency requirements and accountability mechanisms.	More culturally sensitive and responsive service delivery by PHN funded services	Service user and community feedback	PHN with Aboriginal Health Council, Clinical Council and Community Council.

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>3. Effective partnerships with Aboriginal communities</b>				
3.3 Care Coordination	Develop redesign options that enhance access to CCSS-type services (care navigation).	Broader range of service options for Aboriginal clients; Improved management of chronic conditions.	Range of available options expanded.	PHN in consultation with Aboriginal Health Council, Clinical Council and Community Council.

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>4. Sustainable development of primary health care &amp; integration between providers</b>				
4.1 Integration and Collaboration	Actively work in partnership with the LHDs on their Integrated Care and health pathway strategies and ensure targeted activity for priority planning in different PHN sub-regions is progressed, including the role of GPs and consumer focused care pathways.	Clear plans on integration initiatives that are endorsed by major stakeholders and applicable to targeted local priorities.	Achievement against milestones.  Reduced use of EDs, hospital admissions	PHN with LHDs, Clinical and Community Councils, Aboriginal Health Council, ACCHS and NGOs.
4.2 Health promotion	Promote effective preventive health care in general practices and other primary health care services, encouraging greater use of resources that are already available.	Implementation plan finalised and implementation commenced.	Achievement against milestones.	PHN in collaboration with general practices and other primary healthcare services
4.3 Preventative health and early intervention	Engage general practice and other primary health care services (including ACCHS and the RFDS) on cancer screening practices by providing feedback.	More effective preventative and early intervention strategies that better aligns limited regional resources.	Number of preventative and early intervention strategies implemented.	PHN

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>5. Effective regional health system</b>				
5.1 Regional planning	Agree number and boundaries for sub-regional zones.	Enhanced service planning, service coordination and partnership building within locally relevant communities of interest.	Commencement of sub-regional dialogue with providers.	PHN with LHDs and Clinical, Community and Aboriginal Health Councils.
5.2 Cross PHN patient flows	Engage with bordering PHNs in Victoria, South Australia and Queensland to identify opportunities for joint service development, including consumer focused care pathways.	More effective patient care pathways	Cross-border priorities identified	PHN
5.3 Access	<p>Develop tele-health consultation capability by undertaking an audit of current usage and infrastructure availability in major primary care outlets across the PHN catchment.</p> <p>Identify medical specialties and other services (eg paediatric allied health) where it is a priority for general practice to obtain access to additional e-health advice and consult capacity.</p>	More flexible pathways for accessing primary care consultation.	<p>Conduct of a telehealth usage and infrastructure audit.</p> <p>Dialogue initiated with local GPs, LHDs, ACCHS and RFDS on areas where infrastructure is limiting greater use of e-health consultation.</p>	PHN with Clinical Councils, general practice, LHDs, ACCHS and RFDS.

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>5. Effective regional health system</b>				
5.4 Child and Maternal Health	Support GPs to maintain skills in antenatal, birthing and postnatal care and support management of emergency births in communities without local birthing services.	Improved safety and quality of care for mothers and babies Stronger GP retention, greater workforce satisfaction.	Workforce survey on skills maintenance.	PHN in conjunction with LHDs, ACCHS and RFDS.

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>6. Improved health outcomes in priority areas</b>				
6.1 Chronic disease support for patients	<p>Explore opportunities for chronic disease specific support groups in particular localities across the region e.g. diabetes, cardiac.</p> <p>Strengthen support for families and carers.</p>	Implementation plan developed.	Measurement against milestones.	PHN working with Community Council, LHDs and ACCHS.
6.2 Chronic disease management	<p>Identify further opportunities to implement best practice models of care at a sub-regional level.</p> <p>Promote GP participation in LHDs' Connecting Care and Integrated Care programs, risk stratification and patient selection, and effective use of MBS items.</p> <p>Further develop integrated care through use of consumer focused care pathways.</p>	Improved management of chronic conditions for the catchment.	Number of enrolments in relevant programs, number of chronic disease management plans created and number of practices receiving support for new models of care.	PHN working with Clinical Councils, Aboriginal Health Council, general practices, LHDs and RFDS

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>6. Improved health outcomes in priority areas</b>				
6.3 Older Persons Health	Enhanced early identification and management of deteriorating older people within both community and residential care settings and further support GPs in their care coordination role.	Improved quality of care, especially timely access	Reduced inappropriate ED attendances, hospital admissions, and ACCHS attendances by older people.	PHN

Priority	Possible Options	Expected Outcome	Possible Performance Measurement	Potential Lead
<b>7. Effective use of regional resources</b>				
7.1 Access	Work with LHDs, NGOs and general practice to conduct further mapping of services at a subregional level and align annual planning to optimise co-ordination of service provision and minimise inappropriate duplication of services.	Reinvestment of duplicated service funding that is better targeted	Commence dialogue with sub-regional providers.	PHN
7.2 Access	Work with local service providers to ensure that details of local and visiting service availability is locally updated and transferred to the National Health Services Directory (NHSD) when applicable.	Locally relevant service information available for use by service providers.	Total number of services available at a locality level on the NHSD.	PHN

# Section 5 - Checklist

Requirement	✓
Governance structures have been put in place to oversee and lead the needs assessment process.	✓
Opportunities for collaboration and partnership in the development of the needs assessment have been identified.	✓
The availability of key information has been verified.	✓
Stakeholders have been defined and identified (including other PHNs, service providers and stakeholders that may fall outside the PHN region); Community Advisory Committees and Clinical Councils have been involved; and Consultation processes are effective.	✓
The PHN has the human and physical resources and skills required to undertake the needs assessment. Where there are deficits, steps have been taken to address these.	✓
Formal processes and timeframes (such as a Project Plan) are in place for undertaking the needs assessment.	✓
All parties are clear about the purpose of the needs assessment, its use in informing the development of the PHN Annual Plan and for the department to use for programme planning and policy development.	✓
The PHN is able to provide further evidence to the department if requested to demonstrate how it has addressed each of the steps in the needs assessment.	✓
Geographical regions within the PHN used in the needs assessment are clearly defined and consistent with established and commonly accepted boundaries.	✓
Quality assurance of data to be used and statistical methods has been undertaken.	✓
Identification of service types is consistent with broader use – for example, definition of allied health professions.	✓
Techniques for service mapping, triangulation and prioritisation are fit for purpose.	✓
The results of the needs assessment have been communicated to participants and key stakeholders throughout the process, and there is a process for seeking confirmation or registering and acknowledging dissenting views.	✓
There are mechanisms for evaluation (for example, methodology, governance, replicability, experience of participants, and approach to prioritisation).	✓