Australian Government
Department of Health

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Nepean Blue Mountains Primary Health Network Needs Assessment

Compiled March 2016

Wentworth Healthcare
Blue Mountains | Hawkesbury | Lithgow | Penrith

phn
NEPEAN BLUE MOUNTAINS
An Australian Government Initiative

Section 1 – Narrative

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

Needs Assessment process and issues (500-1000 words)
– in this section the PHN can provide a summary of the process undertaken; expand on any issues that may not be fully captured in the reporting tables; and identify areas where further developmental work may be required (expand this field as necessary).

The approach taken for the development of this 2015-2016 Needs Assessment has accepted the value of previous research conducted by the former Nepean-Blue Mountains Medicare Local (NBMML) concerning local health needs. The NBMPHN has maintained the same boundaries as the NBMML, which had been an amalgamation of several GP Divisions.

The processes followed in these needs assessment have been:

- Review of previous needs assessment studies and formal stakeholder consultations undertaken as Medicare Local and General Practice Networks/Divisions, in 2012, 2013, 2013/2014 and 2014/2015.
- Identified consistent themes arising from previous assessments consistent with National priorities for Primary Health Networks (PHNs).
- Undertaken new research and consultation activities to refresh and expand information supporting demographic profiles and priority themes including:
    - Review of current demographic, epidemiological and other related performance data to refresh and further inform priority themes.
    - Assessment of new and expanded data sources (e.g. PHN website, myHealthyCommunities, NSW Cancer Institute, Australian Atlas of Healthcare Variation, and others)
    - Assessment of stakeholder consultation processes and reports undertaken since the 2014-15 Needs Assessment (e.g. Aboriginal Sharing and Learning Circles: Blue Mountains, Lithgow, Hawkesbury and Penrith, The Aged Care Stakeholder Consultation Forum, and others)
    - Interviews with regional key stakeholders including: NBMLHD; NBMPHN program managers; NBMPHN NGP; GP and Allied Health interviews concerning mental health; NBMPHN Mental Health Stakeholder Forum consultation concerning priority needs
- Identified priority topics within priority themes consistent with the Needs Assessment Guide
- Established baseline health service needs to inform Annual Planning and planned commissioning of services.

The key previous needs assessment reports, undertaken as the NBM Medicare Local are listed below. Other studies concerning general practice and allied health workforce have also contributed to the background for this needs assessment.

- A Report on the Health Needs of the Nepean Blue Mountains Medicare Local Area". Undertaken by JustHealth Consulting in partnership with The Menzies Centre for Health Policy, August 2012.
- "Whole of Area Needs Assessment Update for the Nepean Blue Mountains Medicare Local Area". JustHealth Consulting, April 2013.
- "Understanding the Needs of Allied Health Professionals & GPs". Outcome Solutions, December 2013. (Examination of Workforce)
- "Comprehensive Needs Assessment". Nepean Blue Mountains Medical Local, 2014/2015.

A full list of reports and data sources reviewed as part of this Needs Assessment can be provided on request.

A full listing of needs identified under this assessment, together with service needs and options can be provided on request.

Preliminary analysis has been undertaken for the Mental Health and Drug and Alcohol reform priorities. The priorities identified here represent the initial step in the preparation of a detailed and targeted needs analysis that aims to develop regional plans for Mental Health and Drug and Alcohol primary care, and also aims to identify special needs for Aboriginal people within those priority themes.

Sections Two, Three and Four for mental health (and suicide prevention) and drug and alcohol services, represent initial priorities that are expected to be further refined with additional research and detailed analysis. In particular, comprehensive stakeholder consultation using multiple techniques will be employed to further examine these priorities. This will include local surveys, interviews and focus groups to clarify gaps in services and additional research to estimate likely demand for services.

NBMPHN experience and involvement in mental health services has facilitated greater depth of consideration in this needs assessment compared to our capacity to assess Drug and Alcohol needs.

In this needs assessment, the assessment of Aboriginal health needs have benefited from NBMPHN involvement in Close the Gap and Healthy for Life programs, as well extensive consultation during 2015 with the Aboriginal communities in four regional locations (reports can be access on NBMPHN website). However, further research is required to assess mental health and drug and alcohol service needs for Aboriginal people in greater detail.

The priority health needs and outcomes presented here for Mental Health, Drug and Alcohol, and Aboriginal health are regarded as preliminary and this needs assessment will form the basis of the next stage of research and consultation, which will commence immediately.

Service needs assessment has been primarily qualitative. Further comprehensive service mapping will be required to be undertaken in order to analyse and validate the service needs that have been identified here through qualitative methods. Future research will focus on

service mapping for selected key priority areas (e.g. mental health, drug and alcohol, Aboriginal specific services). Program evaluations will also be assessed to inform service needs.

Wentworth Healthcare has a strong commitment to consumer engagement and has documented consumer identified needs for each of our four regions (refer to Community Reports: Community Forums on Health for Blue Mountains, Hawkesbury, Lithgow and Nepean, 2013, available on NBMPHN website). Health needs continue to be identified and addressed through the joint PHN/LHD Consumer Working Groups and the Consumer Advisory Committee (now known as Community Advisory Committee). These groups have also been involved in the development of previous needs assessments.

Governance concerning needs assessment rests with the Clinical Council and the Community Advisory Committee. The newly established PHN Clinical Council will meet formally for the first time in April 2016, subsequent to the formal submission of this needs assessment. However many members of this Committee have been consulted individually to provide input into this needs assessment. Both the Community Advisory Committee and the Clinical Council will provide input to the next stage of feedback concerning the priorities identified here, as well as assist in establishing the parameters and focus of the next important stage of consultation. Their involvement will be pivotal to the continued development of the overall assessment of needs for the NBM region.

The priority needs identified in this needs assessment support the themes identified from previous needs assessments. A summary of themes and high level needs identified for primary care in the NBM region are listed below:

Chronic and preventative conditions	High prevalence compared to state average rates: o Diabetes o Cardiovascular disease o Obesity and overweight o Respiratory disease o Asthma o COPD o Chronic pain o Influenza and pneumonia. **Childhood immunisation**: below national target rates. **Potentially preventable hospitalisations**: COPD and infections above state average.
Older persons	Increasing proportion of aging population (compared to the state) increasing existing pressure on: - General practice workforce - Inadequate awareness of available services - Support needs for independent living.
Alcohol and other drugs	High prevalence (compared to state average): - Illicit drug use - Risky alcohol consumption

	Other prevalence indicators: - Misuse of prescriptions for medications - Mental health and drug and alcohol diagnosis - Health disorders and shorter life expectancy - Socioeconomic disadvantage and high risk groups - Drug use in Aboriginal communities.
Cancer Care	Breast screening: - Lower rates than state - Lower rates for CALD (compared to state CALD population) - Lower rates for NBM Aboriginal women (compared to Aboriginal women for the state). Variation in rates for cervical screening across the region. Low rate of bowel cancer screening across the region.
Access to health services	Difficulties accessing services. Inadequate communication between primary health providers. Transport: Difficult or unable to travel for health appointments. Health workforce: - GP shortages - Aging GP workforce - Inadequate data to support regional planning workforce. Inadequate coverage after-hours general practice.
Cultural and demographic factors influencing health status:	Aboriginal health regional comparisons to non-Aboriginal population: - Above average discharge against medical advice - Above average 28 day readmissions - Inequitable access for optimal care - High proportion of NBM population - The region is made up of three different Aboriginal nations - Poorer socioeconomic status - High incidence of risk factors in chronic conditions - Lower rates of immunisation - High prevalence of smoking - Higher rates of hospitalisation due to alcohol related factors - Higher maternal risk factors - Lower life expectancy - Different rates of disease and injury - Higher rate of hospitalisation. CALD community differences to general population for the region: - Higher rates of readmission within 28 days - Diverse health needs - High prevalence of chronic disease and high number of presentations to ED by Samoan community - Syrian refugee intake with complex health issues

	- Poor access to mental health services. Other: - High incidence of domestic violence in Penrith. Social disadvantage and equity: - Increasing levels of disadvantage - Increasing number of disadvantaged residents Penrith. Increasing levels of disadvantage Lithgow.
Mental health – suicide prevention	High rates suicide middle aged and elderly men. Increasing rates of suicide among youth. High suicide rates for Indigenous Australians. Lack of data for CALD populations. Variation in rates of suicide across the region. High rates Penrith, Spring-Winmalee. Rick factors include: - Remoteness of residence - Socioeconomic disadvantage - Mental illness - Drug and alcohol abuse - Previous suicide attempt or family history - LGBTI populations - Following change in treatment. High levels of admissions for self-harm.
Mental health – general population	Prevalence of mental disorders among adults. High rates of mental disorder hospitalisations. High proportion Aboriginal people experience psychological distress. Relatively low proportion of Aboriginal people access psychological and psychiatric services. High proportion of Aboriginal people hospitalised for mental health disorders.

Additional Data Needs and Gaps (approximately 400 words)

– in this section the PHN can outline any issues experienced in obtaining and using data for the needs assessment. In particular, the PHN can outline any gaps in the data available on the PHN website, and identify any additional data required. The PHN may also provide comment on data accessibility on the PHN website, including the secure access areas. (Expand field as necessary).

There are a range of data sources that have recently become available to the NBMPHN that require further investigation. Key future research activities as part of ongoing needs assessment will include the following:

Potentially Preventable Hospitalisations involving a review of hospital discharge data from the LHD to better understand opportunities for primary care impact.

MBS item utilisation data involving detailed investigation to consider relevance to indicators for performance.

Detailed service mapping to establish baselines for regional planning in Mental Health, Drug and Alcohol and Aboriginal health services. Mapping will involve geo-spatial illustration of key indicators relevant to demand for services such as socioeconomic and behavioural factors.

General practice clinical data may also be extracted from general practice clinical software for specified encounters (e.g. diabetes, asthma, cervical screening) and analysed alongside local population data, to more fully support assessment local needs that impact on primary care service provision.

In future, it would be desirable to have more direction concerning the requested measurements for the Needs Assessment Template. Under Section Four, options related to capacity building such as training, research, and consultation, do not generally link up to the national or local indicators that have been detailed under the Performance Framework (March 2016).

Further consideration of the role of PHNs for capacity building in the context of needs assessment would also be helpful for future needs assessments. Often service needs assessment identifies the absence of certain services or inappropriate service models of care. Typically this arises when the region does not have sufficient capacity (workforce, funding, points of service) to deliver these services. The response to identify such needs is generally further investigations of options and contextual statistics that may either modify existing models of care or identify new service providers to fill in gaps for services. Both directions demand substantial capacity building efforts from PHNs, and are difficult to measure in the short to medium term.

Additional comments or feedback (approximately 500 words)
– in this section the PHN can provide any other comments or feedback on the needs assessment process, including any suggestions that may improve the needs assessment process, outputs, or outcomes in future (expand field as necessary).

Additional resources on the PHN website to support future needs assessment may include visualisation and extraction tools such as QlickView, and data sets that can be drilled down to regional level. For example, analysis of Australian refined diagnosis-related groups (AR-DRG) at the regional level would facilitate targeting of primary care services in relation to headline indicators such as potentially preventable hospitalisations.

It is also suggested that the date for submission of future needs assessments be reassessed to allow a greater time period between identification of needs and the development of solutions. This would support more timely consultation with key stakeholders.

Difficulties encountered in the use of the template for reporting of this needs assessment relate primarily to readability and access to information within the report. The readability of the document in the template format is poor.

We note that DoH has proposed that this report is placed on the PHN website for general public access and suggest that publication of the needs assessment in this form would be problematic because it is very difficult to fully comprehend in its present form.

NBMPHN will be preparing another Needs Assessment Report in a form more suitable for communication of the results to the community and health professionals. In addition, a range of summary reports will be developed as communication tools.

Other problems encountered with the template are the absence of a summary tool and the absence of an index.

Section 2 – Outcomes of the health needs analysis

This section summarises the findings of the health needs analysis in the table below. For more information refer to Table 1 in '5. Summarising the Findings' in the Needs Assessment Guide on www.health.gov.au/PHN.

Additional rows may be added as required.

CHRONIC AND PREVENTABLE CONDITIONS

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
Identified Need	Key Issue	Description of Evidence
Diabetes		
Diabetes	High and increasing prevalence of diabetes in the community as measured across the community.	Diabetes prevalence increased overall in the NBM region from 6.1% in 2002 to 7.6% in 2012. This increase is undesirable however it was not regarded as statistically significant. The prevalence of diabetes significantly increased in NSW from 4.7% of the NSW population in 2002 to 8.4% in 2012. *NBMLHD Epidemiological profile. 2014.*
Diabetes	Lithgow and Penrith LGAs have the highest prevalence of diabetes. Blue Mountains and Hawkesbury are below the state average.	National Diabetes Services Scheme (NDSS) is a voluntary scheme that people with medical practitioner or nurse diagnosed diabetes can enrol in. NDSS coverage of the population with diagnosed diabetes is about 80-90%. Smaller area data indicates differences in prevalence of diabetes within the region. Registrations for NDSS shows that compared to the region average of 5.6%: Lithgow is

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		highest at 7.2%, followed by Penrith at 6.1%. Blue Mountains and Penrith LGAs report 4.6% each and less than the total for the region. *AIHW – www.hihw.gov.au/diabetes-indicadtors/annual -cycle-of-care* *NBMML: Primary Health Care Support Program – Diabetes Prevention and Management Activities 2013-14*
Diabetes	Primary care reporting of diabetes for the NBM region is likely to be significantly underreported due to data quality issues.	Assessment of diabetes registers for 49 general practices within the region that are participating in data quality improvement activities indicate that approximately 64% of patients with diabetes, and registered with the NDSS, are not accounted for in participating practice diabetes registers. *NBMML: Primary Health Care Support Program – Diabetes Prevention and Management Activities 2013-14*
Diabetes	An insufficient number of people with diabetes are serviced by General Practitioners utilising the MBS diabetes annual cycle of care Practice Incentive Program (MBS items 2517, 2521 and 2525).	Uptake of the Diabetes Practice Incentive Program by eligible general practices in NBM region is an indication of self-regulated quality improvement by participating general practitioners. This relates to the completion of an annual cycle of diabetes care and the management of recall and reminder systems for patients with diabetes. NBM MBS data for Q1-Q4 2015 indicates 3,666 diabetes annual cycles of care were completed by 192 practitioners. This figure decreased from the previous 2 years where 3,690 (2013) and 3,784 (2014) diabetes annual cycles of care were conducted. In 2013, only 3,690 diabetes annual cycles of care were completed, indicating only approximately 19.7% out of the 18,660 persons in the NBM region registered for the *National Diabetes Services Scheme* were managed through a diabetes annual cycle of care through primary care. *Department of Human Services Medicare Local Statistics Reports: http://medicarestatistics.humanservices.gov.au/statistics/med_locals.jsp*

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		NBMML 2013 Report: Primary Health Care Support Program – NBMML support with Diabetes Prevention and Management in Primary Health Care
Cardiovascular Disease		
Cardiovascular Disease	Highest rates of death for cardiovascular disease compared to 8 metropolitan LHDs.	Cardiovascular diseases accounted for 18% of the total disease burden in Australia for 2003. This was second to the disease burden for cancer. Almost 80% of the burden was due to mortality. Ischaemic heart disease accounted for 56% of the total burden and stroke for one-quarter of the total burden of cardiovascular disease (Begg et al. 2007). Cardiovascular disease was the leading cause of death in the NBM region during 2010-11. There were 629 deaths representing 32.1% of all deaths. 2010-11 cardiovascular death rates were significantly higher for NBM males and females compared to the NSW population and highest among the eight metropolitan LHDs. Behavioural risk factors including tobacco smoking, physical inactivity, poor diet, and risky alcohol consumption – lead to the physiological risk factors in cardiovascular disease. These are high blood pressure, elevated blood lipids, diabetes mellitus, and overweight or obesity. Psychological risk factors contribute to the risk of developing coronary heart disease as well as the worsening of clinical course and prognosis. These factors include: low socio-economic status; lack of social support; stress at work and family life; depression or anxiety; and hostility. These factors may act as barriers to treatment adherence and efforts to improve life-style in patients and populations. 2010-11 male cardiovascular disease death rate was 228.8 deaths and not significantly different to the NSW population at 208.3 deaths per 100,000 population. The female death

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		rate of 165.8 was significantly higher than the NSW population rate of 149.9 deaths per 100,000 population. *NBMLHD Epidemiological Profile: Respiratory Disease Deaths and Hospitalisations. 2014.*
Obesity and Overweight		
Obesity and Overweight	There is variation in the rates of overweight and obesity reported for people in the NBM population for 2011-12 and 2014 based upon different data sources. 29% of persons in the NBM region were reported to be obese and 35% of people were overweight in 2011-12. One in five people were reported to be obese within the NBM population for 2014. One in three people were overweight. High body mass contributed to 5.8% of NBM deaths.	Excess weight, especially obesity, is a risk factor for circulatory disease, Type 2 diabetes, some musculoskeletal conditions and some cancers. As the level of excess weight increases, so does the risk of developing these conditions. In addition, being overweight can hamper the ability to control or manage chronic disorders. (AIHW Cat. N. AUS 122 1020). High body mass is calculated a risk attributed to all people in the population with a body mass index (BMI) greater than 21 with the degree of risk increasing exponentially above this value. Management of obesity in general practice was recently discussed in the NSW Knowledge Exchange Discussion Tables. A proposal by the Centre for Obesity Management and Prevention Research Excellence in Primary Health Care, for regions to develop referral and care pathways for the primary care management of obesity. The aim is to provide up to date information regarding the services and providers in the local region in order to facilitate referrals. Long term issues around knowing what services (NGO services, allied health, etc.) are available in the region for the PHNs and GPs. *COMPaRE-PHC Forum Sydney 8th October 2015* **For NBM region:**

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
	Male and female death rates are the highest compared to eight other metropolitan health regions.	The percentage of adults reported to be overweight or obese in the NBM region for 2011-12 was 64% (35% overweight, 29% obese), ranking NBMML region medium-high compared to the other 60 regions. One in five people were reported to be obese within the NBM population for 2014. One in three people were overweight. High body mass contributed to 5.8% of NBM deaths. Male and female death rates are the highest compared to eight other metropolitan health regions. There has been significant change in obesity and overweight prevalence between 2002 and 2014 in the region however as proportion of the population obesity increased from 17% to 23.8% during this period. Prevalence for 16 years and under was 34.7% for overweight and 23.8% for obesity in 2014. Although somewhat higher, these rates were not significantly different to NSW at 33% and 19.5% respectively. Males had high proportions of obese and overweight than females in most age groups over 16 years for 2014. The prevalence of overweight and obesity increases in the NBM population with age until the 75 and over group. *National Health and Performance Authority: Overweight and obesity rates across Australia, 2011-12* *NBMLHD Epidemiological profile. 2014*
Respiratory disease		

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
	Respiratory disease was the third leading cause of death the NBM population in 2010-11.	The average deaths per year for 2010-11 were 188. Respiratory disease accounted for 4.9% of hospitalisations and 6,488 hospitalisations. Male respiratory hospitalisation was significantly higher than the female rate at 2,047 compared to 1,739 per 100,000. Both male and female hospitalisation rates for NBM were the 2nd highest among the eight NSW metropolitan health districts, after South Western Sydney. *NBMLHD Epidemiological profile. 2014*
Asthma	High prevalence of asthma compared to metropolitan health regions for children and adults	Asthma is a common chronic inflammatory disease of the airways and thought to be caused by a combination of genetic and environmental factors. Asthma is a significant health problem in Australia with one of the highest rates of prevalence in the world. In 2003, asthma was estimated to represent 2.3% of the disease burden. Asthma is the leading cause of disease for Australian children, representing over 18% of their total disease burden (Begg et. al. 2007) For the 2-15 year old group, prevalence of asthma in the NBM region was the highest among the eight metropolitan local health districts and significantly higher than Sydney, at 18.5% of the population age group. For people 16 years and over, the prevalence was 12.3% in 2012 and 2nd highest among the eight metropolitan local heath districts. Both age groups did not have significantly different prevalence compared to the NSW population. The NBMLHD male and female hospitalisation rates decreased from 305.4 and 311.8 hospitalisations per 100,000 population in 1998/99 to 194.2 and 194.7 in 2011-12 respectively.

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		General Practice uptake of the Asthma Service Incentive program for completion of the asthma cycle of care over the last 2 years (Q4 2013-Q4 2015) is low in the NBM region with 32 services by 18 practitioners. MBS NBM Medicare Local data, 2014-15
COPD	COPD is the leading cause of potentially preventable hospitalisations	Chronic bronchitis and emphysema are the two main conditions for this category. Cigarette smoking is the main risk factor for COPD. Today's incidence rates reflect smoking rates 20 years and more in the past. COPD was the leading cause of potentially preventable hospitalisations in the NMB region during 2011-12, with a 6.1 day average length of stay. Respiratory diseases are the third leading cause of death in the NBM population accounting for 8.6% for male deaths and 10.6% of female deaths in 2010-11. Hospitalisations for respiratory diseases represented 4.9% of all hospitalisations in 2011/12 for the NBMLHD. The NBM female respiratory death rate (54.7 deaths per 100,000 population) was significantly higher than the NSW female rate of 40 in 2010-11. Female influenza and pneumonia hospitalisation rate (321.1 hospitalisations per 100,000 population) was significantly higher than the NSW female rate of 281. Both the NBMLHD male and female rates were the highest rates among the eight NSW metropolitan LHDs. The female chronic obstructive pulmonary disease hospitalisation rates increased from 228 hospitalisations per 100,000 population in 2000-01 to 264 in 2011-12.

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		NBMLHD Epidemiological Profile: Respiratory Disease Deaths and Hospitalisations. 2014.
Influenza And Pneumonia		
Influenza And Pneumonia	Highest hospitalisation rate compared to metropolitan and regional LHDs	The NBM 2011-12 rates of hospitalisation for influenza and pneumonia were significantly higher than the NSW population. Male rates were 405.6 compared to 354.9 per 100,000. Female rates were 321.2 compared to 281 per 100,000. Hospitalisation rates for the NBM were highest among eight metropolitan LHDs. *NBMLHD Epidemiological Profile: Respiratory Disease Deaths and Hospitalisations. 2014.*
	Variation in microcrobial prescribing rates for across the region.	Recommendations arising from the Australian Atlas of Healthcare Variation (2015) relevant to Influenza and pneumonia are those concerning the prescribing rates of antimicrobials. Overall, Australia has very high overall rates of community antimicrobial use compared with some countries. In 2013–14, more than 30 million prescriptions for antimicrobials were dispensed. It is suggested that many of these were unnecessary because antimicrobials are frequently used to treat infections for which they provide little or no benefit. The rate of total antimicrobial dispensing was over 11 times more in the area with the highest rate compared to the area with the lowest rate. High community use of antimicrobials increases the risk that bacteria will become resistant to these medicines and they will cease to be effective against serious life-threatening conditions. Preliminary analysis of rates reported for the NBM region indicate considerable variation across SA3 locations. High prescribing rates were reported for Penrith, St Mary's in relation to antimicrobials, amoxicillin and amoxicillin-clavulanate. Richmond-Windsor and parts of Hawkesbury also had high prescribing rates for antimicrobials.

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		The highest age standardised rates for antimicrobials only, per 100,000 population, were St Mary's at 168,152, followed by Penrith at 156,536. The lowest rates were Blue Mountains at 119,393 and Lithgow-Mudgee at 115,820. *Australian Atlas of Healthcare Variation, November 2015.*
Chronic Pain		
Chronic Pain	Prevalence of chronic pain	In NSW around 1 in 5 people experience chronic pain (defined as greater than 3 months duration). Primary care interventions to impact chronic pain management include prompt and targeted care, screening and appropriate referral, multimodal therapies including cognitive based programs and high intensity instead of low intensity care processes. Chronic pain should be acknowledged as a chronic disease and evidence-based information about pain prevention and early intervention, pain medicines, multidisciplinary treatment, pain management programs and procedural interventions should be in place and encouraged to reduce the incidence of chronic pain and prevent the misuse of pharmaceuticals.
	High cost of chronic pain to the economy	*NSW Ministry of Health Pain Management Taskforce Report.* The cost of chronic pain to the Australian economy is estimated at$34b per annum. *The high price of pain. 2007* Hip and knee replacement procedure hospitalisation rates of NBMLHD males and females (336 and 435 hospitalisations per 100,000 population) were significantly higher than NSW males and females. NBMLHD females had the highest rate among the 15 LHDs. *NBMLHD Epidemiological Profile: Injury and poisoning deaths and hospitalisations. 2014*

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
	Variation in prescribing of opioids across NBM region.	In 2013–14, nearly 14 million prescriptions were dispensed through the PBS for opioids – medicines that relieve moderate to severe pain. These medicines are very effective in relieving acute pain and cancer pain, and in palliative care. However, studies have shown they are also being prescribed for chronic non-cancer pain. Current evidence does not support the long term efficacy and safety of opioid therapy for chronic non-cancer pain. The Australian Atlas of Healthcare Variation (2015) identified concerns regarding opioid dispensing and has recommended that PHNs work in partnership to implement systems for real-time monitoring of opioid dispensing. Preliminary analysis of variation in opioid prescribing for NBM region indicate the prescribing levels are most likely within the normal range of Australian practice with minimal variation across the region. The highest age standardised rates per 100,000 were observed in Lithgow-Mudgee SLA3 at 63,974 and the lowest for Blue Mountains SLA3 at 47,599. *Australian Atlas of Healthcare Variation, November 2015.*
Potentially Preventable Hospitalisations	Potentially high levels of preventable levels of hospitalisations for COPD and infections.	Preliminary analysis of 2013-14 data indicates the overall NBM region has relatively low rates of Potentially Preventable Hospitalisations (PPH) compared to other PHNs. COPD is one possible exception to this, based on preliminary analysis. COPD as part of PPH bed days shows variations across LGAs within the region. The Penrith LGA appears to have higher than average rates of PPH for COPD. Further analysis is needed to identify possible links between admissions for COPD and chronic conditions such as diabetes. Data also indicates that older persons and other vulnerable groups include CALD populations may be over represented among PPH. There are also indications that chronic disease and increased use of medications are predictors for PPH.

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		National Health Performance Authority, Potentially Preventable Hospitalisations by condition, NBM PHN, 2014-14.
	Potentially preventable infections, especially among older persons and people with chronic conditions.	Preliminary data analysis indicates the likelihood of targeted strategies to reduce infections that lead to hospitalisation, however further analysis of detailed PPH data is needed. Analysis will focus on urinary traction infections including pyelonephritis especially in older persons and for people with diabetes.
Childhood Immunization	Below national target immunization rates for NBM region.	The NBMPHN in conjunction with the NBMLHD population health unit, has recently realigned organisational Childhood Immunisation Target Rates of 90% with those from NSW Health of 92%, for all age groups (1, 2 & 5 years of age) for Aboriginal and non-Aboriginal children. Realignment of targets has resulted in overall below target performance. Current performance for the NBM region are generally below average for the state, as below. The exception is for immunization of non-Aboriginal children at 5 years of age. • 1 year of age 2013-2014 non-Aboriginal was 90% (below NSW average 90.1) • 1 year of age 2013-2014 Aboriginal 87.7% (below NSW average 89.2) • 2 years of age 2013-2014 non-Aboriginal 91.2% (above NSW Average 90.7) • 2 years of age 2013-2014 Aboriginal 89.9% (below NSW average 91.3) • 5 years of age 2013-2014 non-Aboriginal 93.5% (above NSW average 92.3) • 5 years of age 2013-2014 Aboriginal 93.97% (below NSW aver 94.4) *NSW Health Statistics, NBMLHD*

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
	Variation in immunization rates across LGAs and for some postcode groups.	**Blue Mountains LGA** has consistently under performed in childhood immunization rates compared to the other LGAs, across all age groups. Conscientious objector data from ACIR indicate high representation across the mid-upper Blue Mountains, peaking at Katoomba (2780) and Blackheath (2785). Similar pockets of conscientious objectors for the Hawkesbury LGA however with small numbers. *Australian Childhood Immunisation Register* **Lithgow L**GA has demonstrated some movement in rates with declines in the recent past and more recently this decline appears to be reversing. Current rates for Lithgow postcode are: • 1 year of age 88.3%, • 2 years of age 83.9 % • 5 years of age 90.6% Postcode data for the upper Blue Mountains indicates low rates of immunization compared to national averages. • Katoomba (2780) 1 year of age 76.8%, 2 years of age 75.8% and 5 years of age 85.6% • Blackheath (2785) data is linked to warnings due to small samples: 1 year of age 85.4%, 2 years of age 80.0% and 5 years of age 76.8%. There is anecdotal evidence that suggests that even lower levels for Blackheath than Katoomba are possible. *NBMLHD, Public Health Unit*

OLDER PERSONS

Outcomes of the health needs analysis – Priority Theme: *Older Persons*		
Identified Need	Key Issue	Description of Evidence
Aging Population	Increasing primary care needs of aging population.	NBM region population is increasing by 7.2% by 2026. This represents an additional 29,089 persons by 2016 and total of 431,233. In 2031 the total population is expected to reach 459.954. This is a higher growth rate compared to the state average, of 1.43% to 2026 compared with 1.28% for the State. This is the 4th highest growth rate among State Local Health Districts. From 2011-2026, the 75-79 year age group will experience the highest growth of 6.07% (6,889 to 16, 674 people) followed by 80-84 years of 5.08% (5012 to 10,538 persons). The 70+ year age group will observe a rapid increase in population numbers across all LGAs in NBM region. *NBMLHD: NSW and NBMLHD Population Projections to 2013: Summary.*
Coordination of Services	Increasing pressure on General Practice to coordinate services for older persons. Increasing prevalence of chronic pain among older persons.	The average cost to treat patients aged 75+ in NBMLHD was $9,544 per patient in 2011/12. This was 2.4% higher than the NSW average of $9,329 per patient. *Health Economics and Analysis team, ACI, January 2014.* Resource use by people over 65 years shows substantial increases between 2001 and 2015 in general practice. Encounters increased from 22.8% to 27.8%. GP clinical time increased from 23.9% to 28.7%. Problems managed increased from 26.9% to 35%. Medications increased from 28.2% to 35.8%. Tests ordered increased from 24.9% to 30.8%. Referrals made increased from 24.2% to 32.3%. *BEACH, University of Sydney, Focus on People aged 65 years and over.* The prevention Support of injury and falls through ongoing monitoring of medications and mobility by general practice prevents hospitalisations. The review of home medicines to prevent accidental misuse of meditations is a key factor in preventing hospitalisation. *2015-2016 NBMML Needs Assessment*

Outcomes of the health needs analysis – Priority Theme: *Older Persons*		
		Falls overnight stay hospitalisation rates in the 65 years and over age group of NBMLHD males and females (3,401 and 4,058 hospitalisations per 100,000 population) were significantly higher than NSW male and female rates. NBMLHD rates were the highest among the 15 local health districts. *NMBLHD Epidemiological Profile: Injury and poisoning deaths and hospitalisations. 2014*
Awareness of Services	Inadequate awareness of available support and services for older persons among primary care providers.	Access to services before crisis point and after hours support is impeded by lack of awareness among health professionals, carers and older people. Consumers have identified increasing social isolation as a major and increasing risk impacting on older people. Primary care providers including General Practitioners have limited access to up to date and comprehensive information to support directing older persons to available support and services. My aged Care portal is regarded as hard to navigate by consumers and service providers. *NBMPHN Aged Care Stakeholder Forum 27/8/15*
Home Care	Increasing support needs for older persons to be cared for at home.	Social isolation among older persons is an increasing problem. Caring for the cognitively impaired among older people is inadequate to meet present and increasing needs for home based care. Support independent living at home is inadequate to meet present and increasing needs in primary care services. Navigating the new My Aged Care portal, for consumers and GPs, to navigate care needs has been identified as problematic. *NBMPHN Aged Care Stakeholder Forum 27/8/15*

ALCOHOL AND OTHER DRUGS

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
Identified Need	Key Issue	Description of Evidence
	Apparent high prevalence of illicit drug use supported by prevalence of drug related crime.	2014 crime statistics indicate that Hawkesbury and Blue Mountains LGA report drug related crime below the state average. Penrith LGA is higher than state averages for amphetamine use or possession at 121.8 per 100,000 population compared to 95.2 per 100,000 for the state. Ecstasy use or possession was also higher at 58.5 per 100,000 population compared to 37.6 per 100,000 for the state. Lithgow LGA reported the highest rates of cannabis use or possession at 312.5 per 100,000 population, when compared to the other LGAs in the region. Amphetamine use or possession for Lithgow LGA was 118.4 per 100,000 population and higher than the state average of 95.2 per 100,000 population. *NSW Bureau of Crime Statistics and Research, 2014* Regional rates for the possession or use of amphetamines were higher for the Outer Western and Blue Mountains region (132.8 per 100,000 population) when compared to greater Sydney and the state (110.7 per 100,000 population and 118.1 per 100,000 population respectively). *NSW Bureau of Crime Statistics and Research, 2014.* Reference: sr15-13513 National Household Survey 2013 indicates that one in five people smoked and used alcohol at risky levels or used illicit drugs. These rates double in remote areas. Based on 2011 census data, more than 70,000 people in the NBM region may be involved in risky use of tobacco, alcohol and drugs. During 2013, cannabis the most common of illicit drugs used with 10% of the population over 14 years of age reporting use in the previous 12 months and 35% reporting lifetime use.

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
		Cannabis and amphetamine users are more likely to use every months at 64% and 52% respectively. *National Drug Strategy Household Survey detailed report, 2013* NBM primary care providers report presentations and referrals for drug and alcohol services in relation to: - Often the first contact with the primary care provider is through the family seeking advice regarding another family member - Cannabis is the leading drug use. This cohort ranges from long term heavy use to recreational use. Long term users were often regarded as using to self-medicate (possibly 20-30%). - Users of ICE rarely attended primary care providers. Those that attend are young to middle aged. - Abuse of prescription and other medications - Young people are the main group presenting with issues concerning drug use. *NBMPHN Preliminary Mental Health and Drug and Alcohol Stakeholders. 2016*
	Apparent high prevalence of risky alcohol use supported by prevalence of alcohol related crime.	Alcohol is consumed widely in Australia and harmful levels of consumption are a major health issues associated with increased risk of chronic disease, injury and premature death. *National Drug Strategy Household Survey detailed report, 2013* Blue Mountains and Lithgow LGAs reported the highest levels of crime involving alcohol. For the Blue Mountains robbery related to alcohol was 35% of all robberies compared to 19.3% for the state. Lithgow LGA reported Domestic Violence involving alcohol at 34% compared to 33.4% for the state. Assault involving alcohol was 38.1% compared to 36.6% for the state. And robbery involving alcohol was 42.9% compared to 19.3% for the state. NBM primary care providers identified alcohol as a substance use problem across all ages. This included alcohol abuse and addiction. Often requiring medicated detoxification support. Longer term users were often regarded as using to self-medicate (possibly 20-30%). *NBMPHN Preliminary Mental Health and Drug and Alcohol Stakeholders. 2016*

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
	Indications of prevalence of misuse of prescription medications.	Misuse of pharmaceutical medications had increased from 4.2% in 2010 to 4.7% in 2013, according to the National Drug Strategy Household Survey. *National Drug Strategy Household Survey detailed report, 2013* NBMPHN preliminary stakeholder consultations with NBM primary care providers indicate prevalence of abuse of abuse of prescription medications. *NBMPHN Preliminary Mental Health and Drug and Alcohol Stakeholders. 2016*
	Prevalence of mental health and drug and alcohol diagnosis.	Illicit drug use is a major risk factor for mental illness, suicide, self-inflicted and overdose. There is a strong association between illicit drug use and mental health issues. In the context of self-meditation, it is difficult to isolate to what degree drug use causes mental health problems, or to what degree mental health problems give rise to drug use. People using meth/amphetamines in the past 12 months were more likely than any other drug users to report diagnosis or treatment for a mental illness at 29% compared to 13.5% for non-users. And also report greater levels of high or very high psychological distress at 27% compared with 9.6%. The rate of mental illness almost double with illicit drug use. Almost twice as many recent illicit drug users (21%) as non-illicit drug users (12.6%) have been diagnosed with, or treated for mental illness. Illicit drug users reported being more likely to experience high or very high levels of psychological distress in the four weeks before participating in the National Drug Strategy Household Survey (NDSHS) (17% compared with 8.6%). *National Drug Strategy Household Survey detailed report, 2013* NBM PIR clients with complex and severe mental illness report high prevalence of comorbidity with drug use. *NBMPHN*

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
		NBMLHD Drug and Alcohol regional planning has prioritised treatment of co-morbid conditions in mental health and drug and alcohol treatment alongside new models of integrated care that support: Whole of Family Teams; and co-located service provision. *NBMLHD Drug and Alcohol Draft Regional Plan 2016*
	Prevalence of health disorders among alcohol and drug users reflected in shorter than average life expectancy.	Alcohol is consumed widely in Australia and harmful levels of consumption are a major health issues associated with increased risk of chronic disease, injury and premature death. *National Drug Strategy Household Survey detailed report, 2013* Studies have shown that chronic substance users have a shorter life expectancy compared to the general population, of approximately 15-20 years. NBMLHD has identified co-existing physical disorders as a major contributor to early death among chronic substance users. There is an increasing need for drug and alcohol services to address a range of comorbid physical health including diabetes, circulatory diseases, blood borne viruses, as well as mental health, depression and neurocognitive deficit disorders. This population group have poor access to preventative health services and high rates of admission to hospital for a range of health issues, in addition to drug and alcohol use. *NBMLHD Drug and Alcohol Service Planning Consultation, 2016.*
	Prevalence of socioeconomic disadvantage and high risk groups.	Studies have found clear links between socioeconomic disadvantage and the risk of dependence on alcohol, nicotine and other drugs. In Australia the high risk population groups are: socioeconomically disadvantages, those living in rural and remote areas, Aboriginal people, pregnant women, the unemployed, people who identify as homosocial or bisexual, people with mental illness and those with high levels of psychological distress. *National Drug Strategy Household Survey detailed report, 2013* Refer also to Socioeconomic Disadvantage and Equity for details of levels of disadvantage within the NBM region. In summary:

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
		- Penrith LGA reflects wide disparities of advantage and disadvantage. The most disadvantaged areas were in Cranebrook; South Penrith; Kingswood; Cambridge Park; and St Marys. - Blue Mountains LGA reflects relative advantage among the broader population with pockets of extreme disadvantage in Katoomba. - Hawkesbury LGA reflects relative advantage among the broader population. Extreme disadvantage has been identified in South Windsor. - Lithgow LGA broadly reflects high levels of disadvantage with extreme pockets of disadvantage in Bowenfels, Hermitage Flat, Vale of Clwydd, Cullen Bullen. *NBMLHD: Socio-economic Indexes For Areas of NBMLHD in 2011 Census.*
	Prevalence of drug use in Aboriginal communities.	Overall Indigenous Australians were more likely to abstain from drinking alcohol than non-Indigenous Australians (28% compared with 22% respectively). However among those who did drink alcohol, risky drinking levels represented a higher proportion. Excluding ecstasy and cocaine, Indigenous Australians use illicit drugs at a higher rate than the general population. In 2013, Indigenous Australians were: 1.6 times more likely to use any illicit drug in the previous 12 months; 1.9 times more likely to use cannabis; 1.6 times more likely to use meth/amphetamines; and 1.5 times more likely to misuse pharmaceuticals, compared to non-Indigenous people. These differences were still apparent after adjusting for differences in age structure of both populations. There were no significant changes in illicit drug use among Indigenous Australians between 2010 and 2013. *National Drug Strategy Household Survey detailed report, 2013* NBMLHD reports that in 2011, the population who identified as Aboriginal comprised 2.5% of the total population, and 8,827 people. This represents 5.32% of the NSW population of Aboriginal people. As a proportion of the total population, NBM region reports the highest among the eight NSW metropolitan LHDs.

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
		Lithgow LGA has the highest number of Aboriginal residents and lowest number of people at 703, representing 3.4%. Penrith had the highest number of Aboriginal residents at 5,351. Hawkesbury reported 1,513 Aboriginal residents and 2.4% of the total population. Blue Mountains reported 1,259 Aboriginal residents and 1.6% of the total population. *Epidemiological Profile of NBMLHD, 2014* Preliminary consultation with Aboriginal stakeholders indicate: - NBM Aboriginal residents are generally reluctant to discuss drug and alcohol uses due to shame and fear of stigma. The importance of working with a trusted service provider who can take the necessary time to discuss how the person is feeling has been emphasised. - Barriers to access due to the lack of culturally safe drug and alcohol services for Aboriginal residents. - Prevalence of cannabis use and emerging problems with use of meth/amphetamines among Aboriginal communities in the region. - The need for outreach services into Aboriginal NGOs in the region. *NBMPHN Preliminary Stakeholder Consultations for Drug and Alcohol, 2016* NBM Aboriginal Sharing and Learning Circles identified drug and alcohol issues as a priority. The concerns raised across four LGAs were: - High risk of substance use among a younger population. Approximately 55% of NBM Aboriginal people are under 25 years of age - The need for early intervention to reduce harm from alcohol and drugs - There is a high prevalence of cannabis use - The need for more Aboriginal health workers in the region to be trained to provide support for drug and alcohol issues - Access to culturally relevant information about alcohol and drugs - The need for an Aboriginal detoxification unit. *NBM Aboriginal Sharing and Learning Circles, 2015.*

Outcomes of the health needs analysis – Priority Theme: *Alcohol and Other Drugs*		
	Inadequate service models for early intervention and effective support and treatment	Preliminary consultation with service providers indicate that: - Drug and alcohol presentations represent approximately 20% of all presentations to ED - There are insufficient numbers of Aboriginal health workers in drug and alcohol services - It is likely that one in four inpatients could meet criteria for D&A treatment however most of these patients are not aware that they have a problem - Excluding detoxification - drug and alcohol related hospital separations are one of the top 5 medical DRGs with an average of 80 separations per month - There are difficulties obtaining D&A consultations for patients presenting to ED and other hospital services - There are currently no mechanism or links for shared care or advice between the regional drug and alcohol service and general practice *NBMPHN Preliminary Stakeholder Consultations for Drug and Alcohol, 2016*

CANCER CARE

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*		
Identified Need	Key Issue	Description of Evidence
	663 preventable cancer deaths projected for 2016	Similar to the NSW population, cancer is the second highest cause of death in the region. Cancer incidence for the region also reflects state averages. The NSW Cancer Institute performance snapshot for the NBM region lists the following indicators: - 15.7% smoking prevalence in adults - 45.6% adult tobacco smoking – never smoked - 14.3% prevalence of smoking in pregnancy - 12.9% prevalence of smoking in pregnancy for non-Aboriginal women - 47.7% prevalence of smoking in pregnancy for Aboriginal women - 31.2% annual bowel screening participation rate - 54.5% biennial cervical screening participation rate for women aged 20-69 - 44.8% biennial breast screening participation rates for women aged 50-69 - 29% proportion of NSW women aged 50-69 never screened by BreastScreen NSW - 27.3% biennial breast screening participation rate for Aboriginal women - 39.5% biennial breast screening participation rate for CALD women. The number of preventable cancer deaths for the NBM regions are expected to increase alongside population increases. For 2016 there are expected to be 663 preventable cancer deaths. This figure is projected to rise to 758 in 2021. Regional prevalence of cancer in adults is second highest ranking for NSW. Despite this high ranking, the impact of smoking cessation strategies in the region has been demonstrated by a reduction in smoking prevalence from 22.5% in 2005 to 15.7%. The region has the lowest rates for the proportion of people who have never smoked at 45.6% indicating a comparatively high proportion of uptake of smoking in youth. This view is

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*		
		supported by the high proportion of women who smoke during pregnancy at highest ranking for all regions. Aboriginal women who smoke during pregnancy are 47.7% of that population compared to 12.9% for non-Aboriginal women, representing a very high risk group and priority for smoking cessation strategies. Regional priorities for tobacco control are: - Accessing opportunities for brief interventions to support smoking cessation - Identifying teachable 'moments' for pregnant women or women planning to get pregnant who smoking with a priority on interventions involving Aboriginal women. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*
Breast Screening	Lower than state average screening rates. Lithgow and Penrith LGA report the lowest rates within the region.	Breast screening rates of change have been relatively stable in the NBM region with increases reflecting population growth. NBM region is the 2nd lowest ranking PHN region within the state with 44.8% compared to the NSW state average of 50.9%, and the 3rd lowest ranking region in Australia compared to 31 PHN regions Australia-wide. Lithgow and Penrith LGAs have the lowest screening rates for the region, however all LGAs report lower than state average screening rates. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*
- **Breast Screening In CALD Women**	CALD communities in the region report lower than state average rates, especially Blue Mountains LGA	CALD communities in the Blue Mountains, Lithgow and Penrith report lower than state averages. The Blue Mountains LGA at 32.1% for women aged 50-69 compares poorly to the state average of 44.8%. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.* *Australian Institute of Health and Welfare: cancer Screening in Australia by Primary Health Network.*

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*		
- **Breast Screening In Aboriginal Women**	Screening rates for Aboriginal women are below the state average.	The screening participation rate for Aboriginal women has improved, which is also a state-wide trend. Screening rates for Aboriginal women are well below the state average at 27.3% compared to 36.3%. The rates across LGAs varies with Lithgow reporting the lowest at 17.6%. Hawkesbury LGA rate of 33% is higher than the average for the region at 27.3%. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*
- **Rescreening Rates**	More women are not presenting for rescreening.	There has been an increase in the number of women who are not rescreening. Further information is needed to explore potential barriers or disincentives to regular screening after previous participation in breast screening. NSW goals for BreastScreen have targeted an addition 3820 breast screen episodes for the region. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*
Cervical Screening	Stable rates for cervical cancer screening.	Cervical cancer screening rates in the region are relatively stable. NBM region is the 4th lowest ranking PHN region within the state with 54.5% compared to the NSW state average of 57.7%. Similarly, NBM region is the 7th lowest ranking region in Australia compared to 31 PHN regions Australia-wide. The Penrith LGA has the lowest screening rate at 50.4%. There is no data available to show variations in CALD women or for Aboriginal women. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.* *Australian Institute of Health and Welfare: cancer Screening in Australia by Primary Health Network.*
Bowel Screening	Low rate of bowel cancer screening for the region.	The NBM region rate of bowel screening is 4th lowest ranking PHN region for the state at 31.2% compared with 32.8%. Similarly, NBM region is the 6th lowest ranking region in Australia compared to 31 PHN regions Australia-wide. The Penrith LGA has the lowest screening rate at 29.4%. There is no data available to show variations for CALD persons or for Aboriginal persons.

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*		
		The Cancer Institute NSW has identified bowel cancer screening as a priority to work closely with the primary care sector. The Agency for Clinical Innovation and Cancer Institute NSW are collaborating to develop improved patient pathways and identification of best practice for bowel screening. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*

ACCESS TO HEALTH SERVICES

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*		
Identified Need	Key Issue	Description of Evidence
All Residents		
All Residents	Difficulty accessing services.	More than half of Australians aged 15 to 74 years had a level of health literacy that was inadequate. *Australia's health, 2012* People living in more disadvantaged areas and areas outside major cities, and people with poorer self-accessed health status, were more likely to have lower health literacy. *AIHW, 2012* NBM resident survey reports of difficulties accessing services have reduced from 12.2% in 2002 to 10.4% in 2010. However the change has not been significant. *Epidemiological Profile of NBMLHD, 2014.* It is likely that there has been little or only marginal improvements in access to health services for NBM residents in recent years. Consumer forums conducted by the NBMML in each of the LGAs, during 2012, indicate the following barriers to access: - Transport including availability, long distances especially for outlying areas and costs were dominant issues for all LGAs - Workforce shortages including access to specialist care. For Blue Mountains and Lithgow LGAs in particular, there were difficulties accessing general practice due to limited supply. Consumers reported that GPs often closed their books to new patients. Or there was a 2 week plus waiting period. Long waiting lists for services were experienced by residents from all LGAs - Inadequate information about available services and eligibility was raised by consumers from all LGAs. Residents were not able to access existing services because of lack of awareness of those services. GPs and allied health professionals

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*		
		also experienced similar difficulties obtaining up to date knowledge of available services and eligibility requirements - Inadequate support and lack of services for aged care and carers was also identified by all LGAs. The effects of increasing demand for these services due to the aging population were believed to be negatively impacting on access. *NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012*
Primary Health Communication	Inadequate access to communication between primary health providers.	Secure referrals and direct communication between primary care providers is important to support communication of confidential correspondence between general practitioner, allied health providers, and other service providers including diagnostic services, aged care facilities and hospitals. NBMML undertook extensive consultation with general practice and allied health professionals during 2014. This was a multiple phase study that assessed the needs of General Practitioners and Allied Health Professionals. The survey responses provided insights into the business practices and views of general practitioners and allied health professionals. Overall the survey indicated specific opportunities to improve interaction with general practice and allied health professionals through the web site, practice visits and CPD events. One important aspect of the study was investigation of information technology infrastructure in primary care practices across the region. The findings were that information technology was widely utilised for email between professionals however electronic exchange of reports was much less largely because of the need for secure communication. The survey identified the need for increased multidisciplinary communication and connectivity, and the development and or strengthening of 'smooth flowing' electronic referral pathways. The enhancement of referral pathways supports communication and referral for the management of chronic conditions and supports prevention of hospitalisation for chronic conditions such as diabetes.

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*		
		Outcome Solutions, Consultation with General Practice and Allied Health Professionals, 2014. *NBMML Diabetes in Primary Care Report, August 2014.*
Transport	NBM residents often have difficulty or are unable to travel for health care due to inadequate transport options.	Consumer forums undertaken across the region consistently reported that transport options were inadequate for their needs either due to high cost or lack of suitable transport services. The region is geographically diverse and depending on the LGA and remoteness of the location, the main transport flows may run contrary to the location of the nearest specialist health services. Long waiting times are often experienced for public transport and private transport may be costly due to long distances travelled. Examples of problems experienced by consumers include: discharge from hospital after hours and no available transport services; difficulties accessing dialysis via public transport requiring multiple modes of transport; hospital parking difficulty and expense. *NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012* Anecdotal evidence from the Connecting Care in the Community Care Coordination Program, previously conducted by the Nepean Blue Mountains Medicare Local, identified issues with a health transport for dialysis patients across LGAs, i.e. Hawkesbury to Penrith. The Health Transport Initiative was established by the NBMPHN brought together key stakeholders involved in health and transport services, together with consumer representatives to develop options for improved transport services for health consumers, especially targeting special needs groups. Research identified that 10,438 residents had reports often having difficulty or were unable to travel to places due to lack of transport over a 12 month period. This Group proposed that there was increasing demand for health transport and inadequate funding throughout NSW, and found that special needs groups such as Aboriginal people and people with cancer were especially disadvantaged by inadequate transport options in the region. The Group report that inadequate transport may deny special needs groups access to basic health services.

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*		
		NBMPHN Health Transport Initiative, 2015 The NBMPHN Community Health Transport Initiative has compiled and made available local transport options for each LGA. These options can be accessed via the NBMPHN website. http://www.nbmphn.com.au/Community/Programs-Services/Health-Transport-Initiative.aspx
Health Workforce	General practice workforce shortages.	A large proportion of the NBM region is designated District Workforce Shortage (DWS) for 2016. The Blue Mountains LGA is designated DWS. Most of Penrith LGA which has the largest population of 178,467 persons is mostly DWS with only two suburbs, Colyton and St Mary's not designated DWS. Portland and Wallerawang within the Lithgow LGA are designated DWS. This represents approximately 20% of the Lithgow LGA . The Hawkesbury LGA has a smaller group of suburbs designated DWS that represent around 15% of the LGA. *Department of Health: General Practice Workforce Statistics, 2013-14* *Department of Health, District Workforce Shortage, 2016.*
	High levels of attrition of general practice workforce due to aging of NBM workforce.	Consultations with general practitioners and regular retirements indicate that the NBM general practice workforce is aging and may not be replaced at the same rate as retirement. This is a particular concern among GPs from the Blue Mountains, and may also be indicated by the recent re-designation of the Blue Mountains region as DWS. The Australian Health Practitioner Registration Authority (AHPRA) does not currently report workforce age profiles at regional levels however there are plans for APHRA to report age profiles according to PHN region in the near future. Local consultations indicate that the recent changes to the processes involved in general practice registrar placement may further compound high levels of attrition of the GP workforce. It is expected that under the new arrangements it will be more difficult to attract general practice registrars to regional and remote areas.

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*		
		NBMPHN Workforce Consultations 2015-16.
	Inadequate data to support regional planning for primary care workforce	Primary care workforce data for NSW and the NBM region is not currently maintained by central authority. The National Health Services Directory (NHSD) contains a repository of health organisations (not individuals) across all four LGA but is reliant on NBMPHN and self-reporting to maintain currency. The NBMPHN regularly surveys practices and pharmacies to collect workforce data however these surveys are generally limited to practices, not individuals, and do not indicate FTEs for any workforce category. National sources of data such as APHRA have limited application for regional planning purposes. It is not currently possible to establish health workforce levels per LGA or for the region in primary care. This prevents the analysis of trends and development of strategies for support in all areas including: Aboriginal Health, Mental Health, Drug and Alcohol Services, chronic conditions, care coordination, general practice, nurse practitioners, and allied health professionals. *NBMPHN Workforce Consultations 2015-16.*
After Hours General Practice Services	Inadequate coverage for After Hours General Practice across the NBM region.	After hours general practice coverage has been a long standing concern for the NBMPHN. An after-hours GP clinic, staffed by local GPs, has been operating in the Nepean Hospital campus for the past 10 years; originally by the Nepean Division of General Practice, then the NBMML and now the NBM PHN to support after-hours GP coverage for the Penrith LGA, and to reduce the number of presentation to the Nepean Emergency Department. In 2015, the Nepean Emergency Department clinic was attended by 67,237 patients. For the same period, the Nepean after-hours GP clinic was attended by 5,217 patients. The attendances at the GP clinic potentially represent a reduction of 7.8% of presentations at the Nepean ED department. Additionally the NBMPHN supports the conduct of another after hours GP clinic in the Hawkesbury, as a part of Hawkesbury hospital. In 2015, the Hawkesbury Emergency Department clinic was attended by 22,699 patients. For the same period, the Hawkesbury after-hours GP clinic was attended by 7,041 patients. The attendances at the GP clinic

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*		
		potentially represent a reduction of 31.0% of presentations at the Hawkesbury ED department. The NBMML has supported the establishment of deputising services currently operating across the Hawkesbury, Penrith and more recently the Blue Mountains LGAs. However there is no deputising service currently operating in the Lithgow LGA. NBMPHN general practice workforce consultations indicate that after-hours coverage continues to be inadequate in the region requiring residents to either delay seeking medical attention, or to present to local Emergency Departments. There is wide variety in the type of MBS consultations that take place after-hours. This makes it difficult to interpret MBS data for informing after-hours service planning. *NBMPHN Workforce Consultations 2015-16.*

CULTURAL AND DEMOGRAPHIC FACTORS INFLUENCING HEALTH STATUS

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
Identified Need	Key Issue	Description of Evidence
Aboriginal Health		
Quality And Continuity Of Hospital Care Provided	Left hospital against medical advice. Readmission within 28 days of discharge from hospital.	The NBMLHD measures quality and continuity of care provided to patients while in hospital and the weeks following discharge according to the proportion of people who leave hospital against medical advice and according to readmission within 28 days of hospitalisation. NBM Aboriginal residents had a higher proportion of hospitalisations (3%) where the patient left against medical advice, compared to all hospitalisations for non-Aboriginal residents (0.8%). NBM Aboriginal residents had a lower proportion of hospitalisations (6.1%) where the patient was re-admitted within 28 days, compared to all hospitalisations for non-Aboriginal residents of (6.8%). *Epidemiological Profile of NBMLHD, 2014*
Access To Health Care	Inequitable access to optimal care for Aboriginal people living in the region.	Equitable access to optimal care is an indicator of public health system performance. **2010-11 Revascularisation procedure for coronary heart disease.** There was less disparity between the Aboriginal (28.5%) and the non-Aboriginal population (28.2%) in NBM, compared with the NSW Aboriginal population (20%) and the non-Aboriginal population (27.9%). However because Aboriginal people have higher rates of coronary heart disease, it is expected that for equitable access the Aboriginal rate would be higher, not equal to or less than the rate for the non-Aboriginal population.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		2010-11 Cataract surgery. The national blindness rate of the Aboriginal population is 1.9%. This is 6.2 times great than for non-Aboriginal people. The NBMLHD rate for cataract surgery in the Aboriginal population was 377 per 100,000. This was nearly half that of the non-Aboriginal population at 713 per 100,000. **2010-11 Total knee and hip replacements**. Aboriginal people have significantly lower rates of access to joint replacements compared to non-Aboriginal people. The age standardised rate for total knee and hip replacement procedures in the Aboriginal population was 183 per 100,000 population. This was nearly half that of 306 per 100,000 population for the non0Aboriginal population of NBM. **2010-11 Inpatient rehabilitation**. Aboriginal people have an increased need for inpatient rehabilitation due to the higher rates of stroke and injury compared to the general population. However, Aboriginal people have lower rates for rehabilitation. Inpatient rehabilitation hospitalisation in the Aboriginal population resident in the NBM was 750 per 100,000 and less than one quarter of the rate for the non-Aboriginal population in the NBM of 3,172 per 100,000. *Epidemiological Profile of NBMLHD, 2014*
	High proportion of Aboriginal people living in NBM region, compared to proportion of population for other metropolitan health districts.	NBMLHD reports that in 2011, the population who identified as Aboriginal comprised 2.5% of the total population, representing 8.827 people. This represents 5.32% of the NSW population of Aboriginal people. As a proportion of the total population, NBM region reports the highest among the eight NSW metropolitan LHDs. *Epidemiological Profile of NBMLHD, 2014* Lithgow LGA has the highest number of Aboriginal residents and lowest number of people at 703, representing 3.4%. Penrith had the highest number of Aboriginal residents at 5,351.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		Hawkesbury reported 1,513 Aboriginal residents and 2.4% of the total population. Blue Mountains reported 1,259 Aboriginal residents and 1.6% of the total population. Indigenous population estimates across Australia are widely regarded as underestimated. There was a 30% increase in the estimate of the Indigenous population across Australia between the 2006 and 2011 Censuses. *Aboriginal and Torres Strait Islander Health Performance Framework 2014 Report* Local consultations with Aboriginal people and staff involved in the Close The Gap and Healthy For Life programs suggest that the current population estimates for the NBM region are substantially underestimated due to reluctance of some Aboriginal people to formally acknowledge their identity. *NBMPHN workforce consultations, 2015*
	NBM region is made up three different Aboriginal nations as identified by traditional lands and language.	There is considerable diversity of Aboriginal peoples the region. There are three Aboriginal nations represented in the NBM region that roughly equate to LGAs. The people of the Nepean and Hawkesbury LGAs are living on the land of the Dharug people. The Blue Mountains roughly equates to the land of the Gandangara people. The Lithgow LGA is part of the Wiradjuri peoples land which extends through central NSW. *NBM Sharing and Learning Circles, 2014*
	Young and growing population of Aboriginal residents in NBM	The median age of Aboriginal residents in the region was 21 years in 2011. NBM Aboriginal people under 25 years of age represent 55.5% of the total Aboriginal population, compared to 35.5% of people under 25 years of age in the non-Aboriginal population. The age group 15-19 years is the largest percentage of the population at 12.3%. *Epidemiological Profile of NBMLHD, 2014*

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
	Aboriginal people have poorer socio-economic status compared to non-Aboriginal people	Selected socioeconomic indicators from the 2006 Census demonstrate the relative disadvantage in NSW of the Aboriginal population when compared with the non-Aboriginal population. In NSW, and compared with the non-Aboriginal population - larger percentages of Aboriginal people were: unemployed; had no post-school qualifications; had no household internet connection; had a weekly household income less than $500; rented housing; lived in multi-family households; and resided in dwellings with 7 or more people. Of these the largest categories of disparity were: unemployment, no post-school qualifications and rental accommodation. *Epidemiological Profile of NBMLHD, 2014*
	Aboriginal people have higher incidence of risk factors in chronic conditions	NSW comparison of Aboriginal and non-Aboriginal populations showed that Aboriginal people have a high proportion of risk factors that result in chronic conditions. For Aboriginal people, in the period 2004-2006, the risk factors were: 64.4% overweight and obesity; 46.9% 3 or more long term conditions; 28.7% fair to poor self-assessed health status; 17.6% asthma; 9.7% diabetes or high blood glucose. For the same categories, non-Aboriginal people reported 51.4%, 36.5%, 16.3%, 9.2% and 3.6%. *The Burden of Disease and Injury In The Aboriginal and Torres Strait Islander Peoples, 2007.* 2011-12 NBMLHD high body mass attributable to hospitalisations was 668 hospitalisations per 100,000 population. This was higher than but not significantly different to non-Aboriginal residents rate of 413.3 hospitalisations per 100,000. *Epidemiological Profile of NBMLHD, 2014*
	NBM Aboriginal residents have significantly lower rates of immunisation compared to non-Aboriginal people	For 2010 87% of Aboriginal children aged 12 to 15 months were fully immunised. This was significantly lower than the general population rate of 92% in the region. Recent strategies implemented by the NBMLHD to target an increase in Aboriginal children's immunisation rates have proved successful.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		Epidemiological Profile of NBMLHD, 2014
	NBM Aboriginal residents have a higher prevalence of smoking compared to non-Aboriginal people.	2011-12 hospitalisation rates that may be attributed to smoking show that Aboriginal people have a rate of 1,263 hospitalisations per 100,000 population, compared to 550 per 100,000 for non-Aboriginal residents admitted to hospital. *Epidemiological Profile of NBMLHD, 2014*
	NBM Aboriginal people experience a significantly higher rate of hospitals that is attributable to alcohol, compared to non-Aboriginal people.	2011-12 rates of hospitalisation attributable to alcohol for the NBMLHD shows that Aboriginal people have a rate of 1082.5 hospitalisations per 100,000 population. The rate for non-Aboriginal people was 731.3 hospitalisations per 100,000. *Epidemiological Profile of NBMLHD, 2014*
	NBM Aboriginal births have a significantly higher proportion that are low birth weight. Aboriginal perinatal mortality is higher than the non-Aboriginal rate. Smoking during pregnancy is significantly higher for Aboriginal mothers.	There were 15.5% of low birth weight births to Aboriginal mothers at NBMLHD during 2010-11. The proportion of low birth weight to non-Aboriginal mothers was 5.9%. This was the highest proportion of low birth weight among the eight NSW metropolitan LHDs. During 2006-2010, the Aboriginal perinatal mortality rate in the BNMLHD was 9.63 deaths per 1,000 live births. This was higher than the non-Aboriginal rate of 7.1 deaths per 1,000 live births. In NSW, the perinatal mortality rate is highest among teenage mothers and up to five times higher when comparing Aboriginal teenage mothers to non-Aboriginal teenage mothers. In 2011, the rate of smoking during pregnancy for NBM Aboriginal women was 53.1% of confinements. This was significantly higher than 14.2% of confinements for non-Aboriginal NBM mothers.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
	Fewer Aboriginal mothers have their first antenatal visit before 14 weeks gestation.	The percentage of confinements where the first antenatal visit occurred before 14 weeks gestation was lower for Aboriginal women. In 2011, 73.8% of NBM confinements for Aboriginal women achieved this benchmark. For non-Aboriginal women the rate was 81.2%. *Epidemiological Profile of NBMLHD, 2014*
	NBM Aboriginal residents have lower life expectancy than general population residents	Based on 2005-2007 deaths occurring in the NBM region: Aboriginal males had a life expectancy of 69.9 years. This is 8.6 years lower than the life expectancy for the male general population living in the NBM region. Aboriginal females had a life expectancy of 75 years. This is 7.4 years lower than for all female residents of the NBM region. *Epidemiological Profile of NBMLHD, 2014*
	Cardiovascular diseases, malignant neoplasms, injury and poisoning; and respiratory diseases were the four leading causes of death. Injury and poisoning has a higher rate of death for Aboriginal people than for the general population.	Causes of death for all NSW residents between 2003-2007 shows that Aboriginal people have higher proportion of death for Injury and poisoning; digestive system diseases; endocrine diseases; maternal, neonatal and congenital causes. The proportion of deaths occurring due to injury and poisoning were 11.7% for NSW Aboriginal population of NSW, compared to 5.2% for the non-Aboriginal population. This category includes suicide and trauma. *Epidemiological Profile of NBMLHD, 2014*
	Aboriginal residents of NBM have higher rate of **hospitalisations** than the general population	During 2011-12 the NBMLHD Aboriginal hospitalisation rates were 43,885.7 per 100,000 population. This was significantly higher than the non-Aboriginal hospitalisation rates of 33,080.3. It was also significantly lower than the NSW Aboriginal hospitalisation rate of 63,658.4 hospitalisations per 100,000 population.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		The highest numbers of Aboriginal hospitalisations were for: Dialysis (716); maternal, neonatal and congenital causes (357); injury and poisoning (331); and digestive diseases (215). The NBM rate of 4,187.1 hospitalisations per 100,000 population for **potentially preventable hospitalisations** among Aboriginal residents was significantly higher than for non-Aboriginal residents, who had a rate of 2,405.8. It was also significantly lower than for NSW Aboriginal potentially preventable hospitalisations with a rate of 6,486.3 per 100,000 population. *Epidemiological Profile of NBMLHD, 2014*
Capacity Of Services For Aboriginal People	Inadequate capacity of primary health services to respond to Aboriginal health needs	The Sharing and Learning Circles conducted in each LGA identified the importance of building service capacity to meet broad range needs for Aboriginal health service provision. **Inadequate knowledge of health services**: was identified as an issue by each community group. The primary concern is one of knowledge and lack of access to relevant information to support equitable and necessary access to health services. This prevents Aboriginal people from attempting to access a range of services. Lack of knowledge of entitlements was also identified as part of this issue. When unique services and supports are provided to support identified issues, Aboriginal people are often not aware of these opportunities due to social and cultural isolation. **Lack of trust** in mainstream service providers was identified as a barrier to access by each of the community groups. Examples given were CTG benefits not provided by certain pharmacies. **Cultural safety** was identified by all community groups either directly or indirectly. There is limited and potentially no access to Aboriginal medical service providers in the region due to the uncertain future of the Mount Druitt and Penrith services. A culturally safe environment

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		recognises and respects traditional values, norms and preferences, and supports the dignity and cultural identity of each individual. **Engagement with services by Aboriginal people**: Each community groups indicated that there are no clear mechanisms for Aboriginal people to become involved in the governance of health services in the NBM region. The broad issues raised were the need for information, forums, engagement with identified providers to facilitate access and linkages to other services. There appeared to be no specific mechanisms in place to support the engagement of Aboriginal people in the decision making and development of service provision for their communities. *NBM Sharing and Learning Circles, 2015*
	Additional services required needed to meet identified needs	**Dental services:** These services either could not be accessed or were difficult to access by a number of community groups. **One stop shop:** A central point where Aboriginal people can access a broad range of information, coordination and support was absent. This is not necessarily a location for service provision, but rather a place where Aboriginal people can feel safe to participate and discuss their needs in order to understand service provision options and facilitate access. **Mental Health:** There is a need for more appropriate follow up and support for dual diagnosis for substance abuse and mental health issues. The importance of mentoring was identified as part of a culturally safe response to mental health issues. **Aged Care**: The need for increased support for aged people at home including home support services and volunteer services was identified.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		Drug and Alcohol: Inadequate supply of culturally safe drug and alcohol services has been identified for the region. Additional services are needed especially to support Aboriginal people with mental health problems, and for culturally safe detoxification services or dedicated facility. **Ante and Post Natal Care:** For the Lithgow area there were concerns expressed regarding a lack of understanding of Aboriginal maternal needs and cultural awareness. *NBM Sharing and Learning Circles, 2015*
Breast Screening In Aboriginal Women ***(refer also to Cancer Priority Theme)***	Screening rates for Aboriginal women are below the state average.	The screening participation rate for Aboriginal women has improved, which is also a state-wide trend. Screening rates for Aboriginal women are well below the state average at 27.3% compared to 36.3%. The rates across LGAs varies with Lithgow reporting the lowest at 17.6%. Hawkesbury LGA rate of 33% is higher than the average for the region at 27.3%. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*
CALD communities		
Quality and Continuity of Hospital Care Provided	Readmission within 28 days of discharge from hospital.	The NBMLHD measures quality and continuity of care provided to patients while in hospital and the weeks following discharge according to the proportion of people who leave hospital against medical advice and according to readmission within 28 days of hospitalisation. NBM residents who were born overseas were over-represented in hospital re-admissions compared with the NBM Australian born population in hospitalisations from 2008-09 with 2011-12. Hospital readmission were largely due to extracorporeal dialysis (53.2%) of readmissions for NBM residents born overseas compared with 30.6% of readmissions for Australian born residents readmissions for dialysis.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		In hospital readmissions for extracorporeal dialysis in the overseas born NBM population, 64.8% of readmissions were residents born in England, Malta, Philippines, Poland, Western Samoa and Fiji. NBM residents born in Western Samoa, Fiji and Tonga were significantly over-represented in hospital readmissions for dialysis. *Epidemiological Profile of NBMLHD, 2014*
	Diversity of high needs CALD communities	The refugee communities within the NBM are statistically small and diverse. There are significant challenges in meeting their health needs. Many are newly arrived refugee communities that have not yet established community structures due to their small numbers. There are new or no community elders and a lack of resources from within those communities. In general these small refugee communities lack familiar social landmarks, support structures and self-supporting mechanisms. DIAC data shows that the main backgrounds of people intending to settle in the NBM region are from Sudan, Bhutan, Iraq, Iran, Uganda, Tanzania and Afghanistan. Many have been away from their homeland for long periods with children born in their first country of refuge. The Sudanese community was captured for the first time in the 2011 Census. A total of 276 persons from NBM region recorded their country of birth as Sudan. The majority of the South Sudanese community are under the age of 35 with over a third being under 11. There is an emerging Bhutanese refugee community that was captured for the first time in the 2011 census. A total of 63 people recorded their country of birth as Bhutan. Many of these refugees lived for up to 20 years in a refugee camp in Nepal and have had children born there. There are 280 Nepal born residents in the NBM region and some of these would be children born to the Bhutanese refugees over that 20 year period. Estimates by the

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		Bhutanese community leaders bring the figure to approximately 100 Bhutanese refugees who have recently settled in the NBM region. A total of 49,302 people responded as speaking a language other than English in the 2011 census. This represents 14.6% of the total population for the region. Penrith LGA has the largest population at 34,081, followed by the Blue Mountains LGA of 7.341 residents, Hawkesbury LGA with 6,009 residents and Lithgow with 1,871 residents who reported speaking a language other than English.
Samoan Community	High prevalence of chronic disease with high number of presentations to Emergency Department among Samoan community.	Analysis of hospital admissions, readmissions and chronic disease admissions during 2013-14 for people of Samoan background was undertaken by the NBMLHD Multicultural Health Service. The findings were that the Samoan speaking community were over-represented in health service utilisation compared to the size of the population. There were relatively high levels of hospital admissions related to diabetes and renal dialysis. Other problems identified were late presentations for maternal services. At the time of study there were 448 Samoan born people residing in the Penrith LGA. And 830 people who spoke Samoan at home. There were 1,188 people who identified as having Samoan ancestry. The life expectancy for people in Samoa is 72.4 years compared to 81.7 years for all Australians. Queensland Health has reported that Samoan born people have a mortality rate 1.5 times higher for total deaths, compared to the general population. Their hospitalisation rates were between two and seven times higher than the general Queensland population. There is limited research data available concerning the health of Samoan Australians however indications are that Samoan born people have high rates of overweight, obesity, Type 2 diabetes and hypertension.

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		The known values and behavioural norms of the Samoan community are: - Family focus with communal relationships and the church - Highly structured society that emphasises obedience - Formal patriarchal structure - Emphasis on kinship, interdependence and loyalty - The church minister is high respected and the church has considerable influence on the community. Local research indicates that the health issues affecting Samoan communities are: - Diabetes, obesity and cardiovascular disease - Disengagement from health services - Unhealthy diet and poor nutrition - Late presentation to health care often in crisis - Poor compliance with health related directives. Social and psychological problems and issues identified through local research are: - Child abuse, domestic and family violence - Mental health disorders - Socioeconomic disadvantage - Teenage pregnancy and substance abuse - High suicide rate among youth and young adults - Poor health literacy. *NBMLHD: Multicultural Health Service*
Cancer Screening ***(refer also to Cancer Priority Theme)***	CALD communities in the region report lower than state average rates, especially Blue Mountains LGA	CALD communities in the Blue Mountains, Lithgow and Penrith report lower than state averages. The Blue Mountains LGA at 32.1% for women aged 50-69 compares poorly to the state average of 44.8%. *Cancer Institute of NSW Report: Nepean Blue Mountains Primary Health Network 2015.*

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
Syrian Refugees	Complex health issues including mental health problems due to trauma and children with disability	Approximately 100-200 humanitarian refugees will arrive in early 2016 and located in Penrith. Training programs developed by NSW government for general practice is being developed for access by PHNs. A great proportion of these will be children under 15 years of age. *NBMLHD Multicultural Services Unit*
Mental Health	Access to CALD youth	Preliminary and ongoing investigations undertaken by the NBMLHD Multicultural Services Unit indicate that CALD youth typically do not access mental health services. The usual approach in certain CALD communities is to take care of mental health problems within the family environment. *NBMLHD Multicultural Services Unit*
Other cultural and demographic factors		
Domestic Violence	High incidence of domestic violence in Penrith LGA	Penrith reported the second highest number of domestic violence related assaults (1100) compared to other NSW LGAs up to June 2015. *NSW Bureau of Crime Statistics quarterly update. June 2015* Domestic violence related assaults per 100,000 population for each LGAs and rankings for the period July 2014 to June 2015 follow. Note that higher ranking indicates comparatively lower numbers of assaults: - Blue Mountains 271.1 assaults and NSW rank 99/141 - Hawkesbury 418.1 assaults and NSW rank 64/141 - Lithgow 475.3 assaults and NSW rank 54/141 - Penrith 566.6 assaults and NSW rank 34/141 *NSW Bureau of Crime Statistics (sr15-13257)*
Social Disadvantage & Equity	Increasing levels of disadvantage in all NBM LGAs.	Socio-economic indicators are an important in understanding the health of a population. Social determinants of health are the economic and social conditions under which people live. These are generally viewed as:

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
	High number of disadvantaged residents living in Penrith LGA. Increasing levels of disadvantage in Lithgow LGA.	- Individual and household income - Income distribution in the society - Employment and working conditions - Education and literacy, including health literacy - Housing, health and social services, including early childhood development support - Social cohesion. These conditions represent the resources that a society makes available to its members to support and equip them for social wellbeing and healthy life. Socioeconomically disadvantaged groups experience more ill health, and are more likely to engage in risky health behaviours. These inequalities are regarded as preventable and bring with them a high direct and indirect impact on the health system. In general the lower the individual's socioeconomic position, the worse their health is likely to be. **Penrith LGA**: The 2011 census data shows SEIFA scores mostly in the 8th decile. Variations were for education and occupation indicating that overall residents had very low levels of education and employment in professional occupations. There are wide disparities with SEIFA scores ranging from extremely high levels of disadvantage (488) to very low levels of disadvantage (1140). The most disadvantaged areas for Penrith in the 1st decile were: some areas of Cranebrook; South Penrith; Kingswood; Cambridge Park; and St Marys. St Mary's experienced the lowest SEIFA scores. The greatest disparity in SEIFA scores was in Cranebrook with a range of 488-1104. Glenmore Park reported the highest SEIFA score. **Blue Mountains LGA**: The 2011 census data shows SEIFA shows scores mostly in the 9th decile indicating low levels of disadvantage and high levels of economic resources, education and employment in professional occupations. There are however pockets of disadvantage, at times extreme, in some small areas together with low levels of education and low levels of employment in professional jobs.

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		Katoomba reported the lowest SEIFA score (760) with some areas showing disadvantage in the 1st decile. The highest SEIFA score was Mount Review at 1149. **Hawkesbury LGA**: The 2011 census data shows SEIFA scores were mainly in the 8th and 9th deciles, indicating lower levels of disadvantage and higher levels of economic resources. However, the SEIFA for Education and Occupation was in the 6th decile indicating average levels of education and professional jobs compared to other NSW LGAs. The lowest SEIFA scores with pockets of population in the 1st decile was South Windsor (750). The highest SEIFA score of 1122 was for Windsor Downs. **Lithgow LGA**: The 2011 census data shows SEIFA scores in the 1st, 2nd and 3rd decides. This indicates much more widespread higher levels of disadvantage along with lower levels of economic resources, education and professional jobs, compared with other NSW LGAs. Against pockets of extreme disadvantage in Lithgow, there were also pockets of relative advantage; however the majority of the Lithgow population showed relative disadvantage and some extreme disadvantage. Suburbs with the lowest SEIFA score and populations within the 1st decile were Bowenfels, Hermitage Flat, Vale of Clwydd, Cullen Bullen. Bowenfels had the greatest disparity within a suburb with SEIFA scores ranging from 569 to 1104. *NBMLHD: Socio-economic Indexes For Areas of NBMLHD in 2011 Census.* **Dropping Off the Edge (DOTE) 2015 Report:** developed indicators to identify persistent communal disadvantage in Australia. These indicators analysed data from a range of variables including internet access; housing stress; disability support; long-term unemployment; rent assistance; education levels; child maltreatment; criminal convictions; domestic violence; prison and psychiatric admission. One important difference between

Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*		
		SEIFA and DOTE classifications is the range. SEIFA has 10 categories and DOTE has 4. Another difference is in the variables used to calculate scores. The DOTE variables include a wider range of social indicators. The top 40 suburbs reported in NSW as most disadvantaged did not include suburbs from the NBM region. Nearby suburbs that were included in this top 40 ranking were Mount Druitt and Cabramatta. Consistent with SEIFA scores, the DOTE mapping shows that Lithgow and Katoomba and outer suburbs of the Penrith LGA were among the most disadvantaged postcodes in NSW. *Jesuit Social Services: Dropping Off the Edge 2015*.

SUICIDE PREVENTION

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
Identified Need	Key Issue	Description of Evidence
Males	High suicide rates for middle-aged and elderly men.	Higher suicide rates for males (2.8 times the age standardised rate for women), with peaks at ages 35 to 54, and a substantial spike over age 85. *Australian Bureau of Statistics. (2015). Causes of Death, Australia, 2013. ABS Cat. No. 3303.0. Canberra, ACT: Australia* Men who have previously attempted suicide are an especially high-risk group for subsequently completing suicide. *J Mendoza & S Rosenberg, Suicide and suicide prevention in Australia: Breaking the silence, Lifeline Australia & Suicide Prevention Australia, Sydney, 2010*

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
Youth	Increasing rates of suicide among youth.	The "Young Minds Matter" survey (2013–14) showed that 7.5% of 12 to 17 year-olds had seriously considered attempting suicide in the previous 12 months, 2.4% reported having attempted suicide in the previous 12 months, and 0.6% received medical treatment as a result of their injuries. Suicidal behaviour was more common in females than males, and in 16-17 year-olds compared with younger adolescents. 15.4% of females aged 16-17 years had seriously considered attempting suicide and 4.7% had attempted suicide in the previous 12 months. 56.4% of females aged 12-17 years with major depressive disorder (based on self-report) had seriously considered suicide and 22.1% had attempted suicide in the previous 12 months. In comparison 13.8% of males aged 12-17 years with major depressive disorder (based on self-report) had attempted suicide in the previous 12 months. *Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR (2015) The Mental Health of Children and Adolescents. Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. Department of Health, Canberra*
Aboriginal & Torres Strait Islander People	High suicide rates for Indigenous Australians.	Suicide rates for indigenous Australians are high (2.25 times age standardised, 2001-2010). Slightly better in NSW at 1.4 times age standardised for the same period. The largest difference between Indigenous and non-Indigenous rates are at younger ages, with the age-standardised rate 4 times higher for 25-29 year old males and more than 5 times higher for 20-24 year old females. *Australian Bureau of Statistics. (2012). Suicides, Australia, 2010. ABS Cat. No. 3309.0. Canberra, ACT: Australia*

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
CALD Communities	Lack of data.	Culture and ethnicity is not captured in ABS data. *Australian Bureau of Statistics. (2012). Suicides, Australia, 2010. ABS Cat. No. 3309.0. Canberra, ACT: Australia.* National statistics indicate lower suicide rates amongst migrants from Africa, the Middle East and Asia (about half, age standardised) but rates are comparable with the whole population for other migrant groups. Data on suicide behaviour amongst migrant communities in the NBM region is not collected and it is not known whether particular CALD communities face higher than average suicide risk. *NBMPHN Suicide Prevention Stakeholder Consultation 24/2/16*
CALD Communities	Syrian refugee intake commencing in March 2016.	Syrian refugees will be resettled in Colyton, commencing from March 2016. This group may be at increased risk of suicide due to post-traumatic stress disorder, bereavement, physical illness, other mental health issues and social dislocation. *NBMPHN Suicide Prevention Stakeholder Consultation 24/2/16*
Location	The number and rate of suicide is notably higher in some NBM region SA2s.	Based on a 10-year sample the highest number of suicides have been in the Lower Blue Mountains (Blaxland to Winmalee), St Marys–Colyton, Cambridge Park, Glenmore Park–Regentville, and Penrith. The highest suicide rates have been in Penrith and Springwood–Winmalee. *Region specific data provided by LifeLine (unpublished data from ABS 3303.0 Causes of Death, 2013). Numbers and rates are aggregated for 2004 – 2013*

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
Location	Remoteness of residence may be a risk factor for people living in outlying SA2s.	National age-standardised suicide rates increase with the remoteness of the person's place of residence. *AIHW: Harrison JE & Henley G 2014. Suicide and hospitalised self-harm in Australia: trends and analysis. Injury research and statistics series no. 93. Cat. no. INJCAT 169. Canberra: AIHW.* *SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health 2013, obtained from http://www.healthstats.nsw.gov.au/*
Socioeconomic Disadvantage	Socioeconomic disadvantage may be a suicide risk factor in the NBM region.	National age-standardised suicide rates increase with socioeconomic disadvantage (particularly for males, less markedly for females). *AIHW: Harrison JE & Henley G 2014. Suicide and hospitalised self-harm in Australia: trends and analysis. Injury research and statistics series no. 93. Cat. no. INJCAT 169. Canberra: AIHW.* There appears to be a correlation between suicides rates and economic index in the NBM region(e.g. Penrith & Colyton) however this is not uniform across the region. *Region specific data provided by LifeLine (unpublished data from ABS 3303.0 Causes of Death, 2013). Numbers and rates are aggregated for 2004 – 2013*

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
Risk Factors: **Mental Illness** **Drug & Alcohol**	People with mental illness and/or D&A addictions are much more likely to commit suicide, attempt suicide or experience suicidal ideation. Rates vary according to type of illness / addiction.	Suicide is the main cause of premature death among people with a mental illness. More than 10% of people with a mental illness die by suicide within the first 10 years of diagnosis. *SANE Australia, 2008. Factsheet: Suicidal behaviour and self-harm.* People with alcohol or drug abuse problems have a higher risk of suicide than the general population. *Department of Health and Ageing, (2007) Living is for Everyone: Life Framework, Canberra* Based on ABS national survey results, 72% of people experiencing suicidal ideation had a mental illness at the time. *Australian Bureau of Statistics. National Survey of Mental Health and Wellbeing: Summary of Results (Cat. No. 4326.0). Canberra: Australian Bureau of Statistics, 2008* Suicide attempts are highest for substance use disorders (3.1% of those affected), followed by affective and anxiety disorders (2.1% each). Suicidal ideation is highest for affective disorders (16.8%), followed by substance use disorders (10.8%) and anxiety disorders (8.9%). The comparative rate for no mental disorder is 0.8%. *Beyond Blue, Intentional self-harm and suicidal behaviour in children, submission to the Australian Human Rights Commission, 2014*

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
Risk Factors: **Prior Suicide Attempt** **Family History**	Individuals who have previously attempted suicide, have a family history of suicide or are bereaved by a suicide have a higher risk of attempting or completing suicide themselves.	People who have previously attempted suicide have a very high risk of attempting or completing another suicide event. *J Mendoza & S Rosenberg, Suicide and suicide prevention in Australia: Breaking the silence, Lifeline Australia & Suicide Prevention Australia, Sydney, 2010* *Connor, K. R., Langley, J., Tomaszewski, K. J., & Conwell, Y. (2003). Injury hospitalization and risks for subsequent self-injury and suicide: A national study from New Zealand. American Journal of Public Health, 93(7), 1128-1131* As many as 42% of child and youth suicides may be due to exposure to another person's suicide. *State of Queensland, Commissioner for Children and Young People and Child Guardian, Final Report: Reducing Youth Suicide in Queensland, Commissioner for Children and Young People and Child Guardian, Brisbane, 2011*
LGBTI	Lack of data on LGBTI suicides in Australia.	There is currently no population-based data on completed suicides by LGBTI people in Australia. Research indicates that mental ill health, self-harm, suicide attempt and suicidal ideation rates within these groups are significantly higher than the general population. *Rosenstreich, G. (2013) LGBTI People Mental Health and Suicide. Revised 2nd Edition. National LGBTI Health Alliance. Sydney*

Outcomes of the health needs analysis – Priority Theme: *Suicide Prevention*		
Hospital Discharge / Continuity of Care	Higher risk of suicide following a change in treatment.	There is a higher risk of suicide after discharge from hospital or when treatment has been reduced. *Martin, G., Swannell, S., Harrison, J., Hazell, P., & Taylor, A. (2010). The Australian National Epidemiological Study of Self-Injury (ANESSI). Brisbane, QLD: Centre for Suicide Prevention Studies.* *NBMPHN Suicide Prevention Stakeholder Consultation 24/2/16* A UK study identified that 43% of suicide deaths occurred within a month of discharge, and 47% of those occurring before a first follow-up appointment. The first day and first week after discharge were particularly high-risk periods. *Hunt, I.M., et al., Suicide in recently discharged psychiatric patients: a case-control study. Psychological Medicine, 2009. 39(03): p. 443-449*
Hospital Admissions	High levels of admissions for self-harm in NBM region.	In 2011/12, the NBMLHD population experienced 601 hospitalisations for intentional self-harm (240 male and 361 female). Of these, 30% were in the 15 to 24 years age group (60 male and 112 female). This represented the highest hospitalisation rate for males and 2nd highest for females aged 15-24 compared with all other NSW metropolitan LHDs. The self-harm hospitalisation rates for all ages counted together were also significantly higher for males and females compared with NSW-wide rates. *NBMLHD Epidemiological Profile: Mental Ill Health, 2014*

MENTAL HEALTH

Outcomes of the health needs analysis – Priority Theme: *Mental Health*		
Identified Need	Key Issue	Description of Evidence
Prevalence Of Mental Health Disorders	Prevalence of mental disorders amongst adults.	The 2007 National Survey of Mental Health and Wellbeing (NSMHWB) estimated that 45% of Australians aged 16 to 85 experienced a mental disorder during their lifetime, and that an estimated 20% had experienced a common mental disorder in the previous 12 months. Anxiety disorders were the most common conditions reported for the 12-month period (14% of the population), followed by affective disorders such as depression (6%) and substance use disorders (5%). These three disorder groups were most prevalent in people aged 16 to 24 and decreased as age increased. Women experienced higher rates of anxiety disorders than men (18% and 11% respectively) and higher rates of affective disorders (7% and 5% respectively), but lower rates of substance use disorders (3% compared with 7%). *Australian Institute of Health and Welfare 2015. Mental health services—in brief 2015. Cat. no. HSE 169 Canberra: AIHW*
	Levels of psychological distress.	In 2013, 9.7% of the NBMLHD population aged over 16 years reported high or very high psychological distress. This was in line with the NSW rate of 9.8% but well below most previous recordings. In 2011 the corresponding figure for NBMLHD was 13.0% compared with the NSW rate of 10.3%. In NSW the rates of reported high or very high psychological distress are higher for females (11.1%) than males (8.5%). The highest female rates are for 16-24 year olds (14.2%) and 45-54 year olds (14.7%). *NSW Population Health Survey (SAPHaRI) 2013. Centre for Epidemiology and Evidence, NSW Ministry of Health*

Outcomes of the health needs analysis – Priority Theme: *Mental Health*		
	Prevalence of psychotic disorders amongst adults.	Estimates from the 2010 NSMHWB Survey of People Living with Psychotic Illness indicated that 0.45% of the population aged 18 to 64 accessed treatment annually from public sector mental health services for a psychotic disorder, with schizophrenia being the most common. About two-thirds of these people experienced their initial episode of psychotic illness before they turned 25. *Morgan VA, Waterreus A, Jablensky A, Mackinnon A, McGrath JJ, Carr V et al. 2011. People living with psychotic illness 2010. Canberra: DoHA,, cited in Australian Institute of Health and Welfare 2015. Mental health services—in brief 2015. Cat. no. HSE 169 Canberra: AIHW*
	Prevalence of mental disorders amongst children and youth.	The "Young Minds Matter" survey (2013–14) showed that 13.9% of 4 to 17 year olds were assessed as having mental health disorders in the previous 12 months. Males were more likely than females to have experienced mental disorders in the 12 months (16.3% compared with 11.5%). ADHD was the most common disorder (just over 7%), followed by anxiety disorders (just under 7%), major depressive disorder (3%) and conduct disorder (2%). *Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J, Zubrick SR (2015) The Mental Health of Children and Adolescents. Report on the second Australian Child and Adolescent Survey of Mental Health and Wellbeing. Department of Health, Canberra.*
	Burden of mental ill health.	Mental disorders are the third leading cause of disability burden in Australia, accounting for an estimated 27% of the total years lost due to disability. Major depression accounts for more days lost to illness than almost any other physical or mental disorder. Mental and behavioural disorders were the 5th leading cause of death in the NBM region, accounting for 4.6% of all deaths (92 deaths) in 2010-11. *NBMLHD Epidemiological Profile: Mental Ill Health. 2014.*

Outcomes of the health needs analysis – Priority Theme: *Mental Health*		
	Mental disorder hospitalisations.	In 2011/12, the NBMLHD male hospitalisation rate for mental disorder was highest among the 15 NSW Local Health Districts and significantly higher than all the metropolitan Local Health Districts in NSW. The corresponding female hospitalisation rate was 4th highest among the 15 NSW Local Health Districts and 4th highest among the 8 NSW metropolitan Local Health Districts. *NBMLHD Epidemiological Profile: Mental Ill Health. 2014*
Risk Factors	Identified risk factors for mental illness.	In the most recent Australian Burden of Disease study the leading attributable risk factors in mental disorders were found to be the harmful effects of alcohol (9.7% of attributable burden), illicit drugs (8%), child sexual abuse (5.8%) and intimate partner violence (5.5%). *Begg S, Vos T, Barker B. The burden of disease and injury in Australia, 2003. Cat. no. PHE 82 edition. Canberra: AIHW, 2007 cited in NBMLHD Epidemiological Profile: Mental Ill Health. 2014*
Aboriginal People And Mental Health	A high proportion of Aboriginal and Torres Strait Islander people experience psychological distress.	In 2012-13 in the Sydney-Wollongong area 27.3% of adult males and 41.9% of adult females were found to have high or very high levels of psychological distress. Rates of high/very high psychological distress were significantly higher for women than men in every age group, apart from those aged 45–54 years. Aboriginal and Torres Strait Islander people aged 18 years and over were 2.7 times more likely than non-Indigenous people to have experienced high/very high levels of psychological distress (age standardised). This pattern was evident for men and women across all age groups. *Australian Bureau of Statistics. (2013). Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-13. ABS Cat. No. 4727.0.55.001. Canberra, ACT: Australia.*

Outcomes of the health needs analysis – Priority Theme: *Mental Health*		
Aboriginal People And Service Accessibility	A relatively low proportion of Aboriginal and Torres Strait Islander people access psychological and psychiatric services.	Based on MBS services claimed Indigenous Australians are approx. 37% less likely to access psychological services and 49% less likely to access psychiatric services (age standardised rate ratios). *Aboriginal and Torres Strait Islander Health Performance Framework 2014* *Table 3.10.2: VII adjusted, MBS services claimed for psychologists and psychiatrists, by Indigenous status, Australia, 2013–14*
Aboriginal People Hospitalisation	The proportion of Aboriginal people hospitalised for mental health conditions is high relative to non-Indigenous Australians.	Age-standardised hospitalisation rate for mental health-related conditions (NSW, 2011/12 - 2012/13) was 1.7 times higher for Aboriginal people compared with non-Aboriginal people (27.3 per 1,000 compared with 16.4 per 1,000). The hospitalisation rate for Aboriginal men was 2.0 times the rate for non-Aboriginal men and the rate for Aboriginal women was 1.4 times the rate for non-Aboriginal women. The rate of hospitalisations with specialised psychiatric care was 2 times as high for Indigenous Australians (12 per 1,000) than for non-Indigenous Australians (6 per 1,000). The rate of hospitalisations without specialised psychiatric care was 3.3 times as high for Indigenous Australians (13 per 1,000) than for non-Indigenous Australians (4 per 1,000) (Table 3.10.9). *Aboriginal and Torres Strait Islander Health Performance Framework 2014* *Table 3.10.8: Hospitalisations for principal diagnosis of mental-health-related conditions, by Indigenous status, sex and state/territory, Australia, 2011–12 to 2012–13*

Outcomes of the health needs analysis – Priority Theme: *Mental Health*		
Aboriginal People: Mental Health, Drug & Alcohol	Substance abuse is a high risk factor for development of mental disorders in Aboriginal communities.	One-third of the burden of disease and injury due to mental disorders amongst Aboriginal and Torres Strait Islander peoples may be attributable to illicit drugs. *Vos T, Barker B, Stanley L, Lopez AD 2007. The Burden of Disease and Injury in Aboriginal and Torres Strait Islander peoples 2003, School of Population Health, The University of Queensland, Brisbane* The use of illicit drugs is relatively high. In 2012/13 22% of Aboriginal and Torres Strait Islander people aged 15 years and over said that they had used an illicit substance in the previous year, and a further 23% at some other time in their life. Males were significantly more likely than females to have used an illicit substance in the previous year (27% compared with 18%), and before then (25% compared with 21%). Rates of recent illicit substance use were fairly consistent across age groups: 15–24 years (28%), 25–34 years (27%) and 35–44 years (23%), before decreasing to 19% for 45–54 years and 7% aged 55 years and over. *Australian Bureau of Statistics. (2013). Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-13. ABS Cat. No. 4727.0.55.001. Canberra, ACT: Australia*
		In 2013-14 the population rate of methamphetamine-related hospitalisation amongst Aboriginal males was approx. 6 times higher than non-Aboriginal males. Among Aboriginal females, the rate was just under 8 times higher. *Crystalline Methamphetamine Background Paper – NSW Data, September 2015 (Revised), NSW Ministry of Health 2015, retrieved from* [*http://www.healthstats.nsw.gov.au/IndicatorGroup/publications*](http://www.healthstats.nsw.gov.au/IndicatorGroup/publications)

Outcomes of the health needs analysis – Priority Theme: *Mental Health*		
Aboriginal People: Mental Health & Health Literacy	Lack of mental health literacy contributes to poor health outcomes.	Increased opportunities for education to improve health literacy will further enable Aboriginal people to make informed health decisions for themselves and their families *National Aboriginal and Torres Islanders Health Plan 2013-2013*
Service Integration CALD Communities	Lack of data.	Data on mental illness amongst migrant communities in the NBM region is not collected and it is not known whether particular CALD communities face higher than average mental health risks. *NBMPHN Suicide Prevention Stakeholder Consultation 24/2/16*
Service Integration CALD Communities	Syrian refugee intake commencing in March 2016.	Syrian refugees will be resettled in Colyton (Penrith LGA), commencing from March 2016. This group, including the large proportion of children under 15 years of age, may be at increased risk of severe mental illness due to post-traumatic stress disorder, bereavement, physical illness and social dislocation.
Service Integration LGBTI	Higher rates of mental illness for LGBTI population.	Research indicates that mental ill health rates within these groups are significantly higher than the general population. *Rosenstreich, G. (2013) LGBTI People Mental Health and Suicide. Revised 2nd Edition. National LGBTI Health Alliance. Sydney*
Service Integration Prison Population Post Release	Correctional facilities in the NBM region.	4 of the 33 NSW correctional centres and 3 community corrections offices are located in the NBM region.

Section 3 – Outcomes of the service needs analysis

This section summarises the findings of the service needs analysis in the table below. For more information refer to Table 2 in '5. Summarising the Findings' in the Needs Assessment Guide on www.health.gov.au/PHN.

Additional rows may be added as required.

CHRONIC AND PREVENTABLE CONDITIONS

Outcomes of the service needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
Identified Need	Key Issue	Description of Evidence
Diabetes	Indications that services do not adequately assess and manage risk factors. Staff shortages across the LHD. Inconsistency in level of diabetes education of practice nurses in primary care delivering diabetes care.	Consultations and review of epidemiological profiles indicate: • Poor management of disease and associated risk factors in primary care • Staff shortages and low numbers of Aboriginal health care workers - NBMLHD is classified as a District of Workforce Shortage (DWS) • Inadequate IT infrastructure to support home telemedicine and secure messaging of reports to GPs. *NBMLHD Epidemiological profile. 2014.* *NBMML comprehensive needs assessments 2014* *NBMLHD Aboriginal Health Profile 2016* *NBMML Allied Health Report 2014* *Staff consultation, NBMLHD* *Practice nurse consultations – 2013 NBMML Comdiab education program*
Cardiovascular Disease	Indications that services do not adequately assess and manage risk factors.	Consultations and review of epidemiological profiles indicate: • Prevalence of clients who smoke

Outcomes of the service needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
	Inadequate self-management programs.	• Smoking cessation programs not incorporated in treatment plan for patients with cardiovascular disease who continue to smoke. • Poor focus on risk factors and prevention in primary care • Very few or absence of self-management programs which focus on building health literacy and improving management of risk factors. *SEIFA* *Staff consultation, NBMLHD* *NBMLHD Epidemiological profile 2014* *NBMLHD health services plan 2012/22* *PWC Review of community health and outpatients services 2014*
Obesity	Indications that services have limited focus on exercise therapy as part of management plan Access to health services is difficult for bariatric clients	Consultations and review of epidemiological profiles indicate: • Poor focus on exercise therapy as part of treating obesity • Access to health services not designed for bariatric clients • Low allied health staffing levels - NBMLHD is classified as a District of Workforce Shortage (DWS) The MBS chronic conditions interpretation does not recognise obesity as an independent chronic condition and therefore GP management plans and team care arrangements, that might support preventive activities, can only be rendered as a comorbidity of a chronic disease. MBS prevention items that enable GPs to support a continuum of care for obese and overweight patients are limited to regular MBS items without supportive allied health subsidisation e.g. Dietetic, exercise physiology. Further research is needed to explore the approaches to obesity assessment across primary care providers. Investigation needs to assess

Outcomes of the service needs analysis – Priority Theme: *Chronic and Preventable Conditions*		
		the tools used, models of care and the range of service providers involved. *NBMML Allied Health Report 2014* *Staff consultation, NBMLHD* *MBS online search MBS 721, 723 explanatory notes*

OLDER PERSONS

Outcomes of the service needs analysis – Priority Theme: *Older Persons*		
Identified Need	Key Issue	Description of Evidence
Older Persons - Access To Health Services	Indications that access to services is hindered due to transport issues, wait lists and operating hours of service. Poor knowledge of local health services and difficult to obtain the information.	Consultations and review of previous NBMML needs assessment indicate: • Poor access due to - long wait lists for ACAT/ CHC's - limited parking - unsuitable public transport - lack of after-hours and weekend services NBMLHD is classified as a District of Workforce Shortage (DWS) *Staff consultation, NBMLHD* *NBMML comprehensive needs assessments 2014*
Older Persons – Service Co-ordination	Indications that service provision is poorly coordinated and lacks communication between health providers across multiple treatment settings i.e. acute, community and primary care. Poor knowledge of local health services and difficulty obtaining the information.	Consultations and review of previous NBMML needs assessment indicate: • *Poor care coordination* • *Poor communication between health care providers* • *Poor holistic case management* • *Lack of GP referral pathways* • *Poor knowledge of existing health services in the NBMLHD* • *Strengthen the role of facilitators to enhance coordination of care.* NBMLHD is classified as a District of Workforce Shortage (DWS) *Staff consultation, NBMLHD* *NBMML comprehensive needs assessments 2014*

Outcomes of the service needs analysis – Priority Theme: *Older Persons*		
Older Persons – Chronic pain	Indications that there is a lack of community based chronic pain programs and poor management of chronic pain for older persons.	Consultations and review of chronic pain services indicate: • Lack of community based chronic pain management programs specific to older persons • Poor management of older persons with chronic pain particularly those waiting for services /surgery There is a high prevalence of chronic pain in the NBMLHD. The Australian Atlas of Healthcare Variation (2015) identified concerns regarding opioid dispensing and has recommended that PHNs work in partnership to implement systems for real time monitoring of opioid dispensing. In NSW around 1 in 5 people experience chronic pain (defined as greater than 3 months duration). Further research is needed to explore the approaches to and options for management and assessment across primary care providers. *NBMML comprehensive needs assessments 2014* *Ministry of Health Pain Management Taskforce Report 2012*
Older Persons – Residential Aged Care	The number of beds in residential aged care is inadequate for population projected growth	The NBM region has 24 Residential Aged Care Facilities (RACF) with capacity for around 2,000 residents. Currently attracting a workforce of general practitioners to support the care of RACF residents is also an identified challenge. If ageing projections are fulfilled, there will not be enough RACF beds or GPs working within RACFs to cater for the needs of the ageing population. *DPS Guide 2016*

Outcomes of the service needs analysis – Priority Theme: *Older Persons*		
		Nepean Blue Mountains Epidemiological Profile 2014

DRUG AND ALCOHOL

Outcomes of the service needs analysis – Priority Theme: *Drug and Alcohol*		
Identified Need	Key Issue	Description of Evidence
Drug and Alcohol (D&A)– Poor Access	Indications that access to drug and alcohol services is: - Poor due to hours of service operation - Difficult for youth and aboriginal clients - Poor due to inadequate staffing levels.	Consultation and review of Drug and Alcohol services indicate: • Limited after hour services particularly for youth (12 – 20 yrs) • Lack of addiction medicine specialists in community setting • Low staffing levels and long wait lists • Very limited outreach clinics for youth (12-20yrs) • Limited GP experience in dealing with D&A clients • Poorer access for aboriginal clients *NBMLHD Health Services Plan 2012/2022* *Staff consultation, NBMLHD*
Drug and Alcohol (D&A)– Coordination of Care	D&A services operate independently of mental health services, have limited focus on clients holistic well-being and the 'whole of family' approach has not been adopted.	Consultation and review of D&A services indicate: • Prevalence of dual diagnoses with mental health and D&A clients • Absence of service collocation with mental health services • Poor focus on holistic care / physical well being • Lack of 'whole of family' approach in treatment plan and therapy Further research is required to explore models of care that incorporate holistic management. *NBMLHD Epidemiological profile 2014* *NBMLHD Health Services Plan 2012/2022*

Outcomes of the service needs analysis – Priority Theme: *Drug and Alcohol*		
Drug and Alcohol (D&A)– Smoking Cessation Programs	Indications that Drug and Alcohol services need to broaden and implement more smoking cessation programs	Consultation and review of D&A services indicate: • Lack of smoking cessation clinicians in Child and Family Nursing teams • Lack of smoking cessation programs within Aboriginal maternal health services. *Staff consultation, NBMLHD*
Child and Youth D&A Services	Lack of appropriate detoxification service for young people for drug or alcohol withdrawal.	Stakeholders have identified the need for specific detoxification services to support the withdrawal of young people from long term drug or alcohol substance use. Further research is required to examine existing detoxification treatment options for young people in the NBM region. Stakeholder have raised the following concerns: • Lack of provision for young people within the detox facility at Nepean Drug and Alcohol Service, with regards to being in the same environment as adults. • Lack of free or cheap detox/rehab facilities. *Stakeholder Consultation, NGO 8/3/16* *NBMPHN GP and AHP Consultations March 2016*
Community Wide Communication For Youth: D&A	Enhanced and targeted communication methods are required to engage and inform young people about the use of drugs and alcohol.	Stakeholders have raised the following concerns regarding community wide engagement and education of young people: • Lack of D&A services within the community to help engage and educate young people. • Lack of education for young people in relation to the effects of Drug and Alcohol. • Lack of community education and understanding of ICE.

Outcomes of the service needs analysis – Priority Theme: *Drug and Alcohol*		
		NBMPHN GP and AHP Consultations March 2016 *Stakeholder Consultation, NGO 8/3/16*
Community Wide Communication for Youth	Enhanced and targeted communication methods are required to engage and inform young people about the mental health risks and available supports.	Stakeholders have raised the following concerns regarding community wide engagement and education of young people: • Need for better engagement of 18-25 year old group (majority of young people who use Headspace are 14-17 years old). • Lack of proactive identification of children with behavioural problems through primary schools. • Lack of promotion of the Cools Kids Program through proactive identification of children with anxiety. • Lack of promotion of the Cools Kids Program through proactive identification of children with anxiety. • Lack of education to GPs on resources available in the community. *NBMPHN GP and AHP Consultations March 2016* *Stakeholder Consultation, NGO 8/3/16*

CULTURAL AND OTHER DEMOGRAPHIC FACTORS

Outcomes of the service needs analysis – Priority Theme: *Cultural and Demographic Factors*		
Identified Need	Key Issue	Description of Evidence
Cultural and Demographic Factors - Poor Access	Indications that access is poor due to lack of Aboriginal Medical Services in the NBMLHD	Consultation and review of access to services indicate: • A lack of culturally appropriate services in NBMLHD • Inequitable access to health services The health of the Aboriginal population is poorer compared to non-Aboriginal population *NBMLHD Aboriginal Health Profile 2016* *NBMLHD Health Services Plan 2012/2022* *NBMLHD Development Proposal for Aboriginal Medical Service 2015*
Poor Management of Risk Factors That Lead to Chronic Disease	Aboriginal people have poorer health and lower life expectancy than non-Aboriginal people.	Consultation and review of Aboriginal health profiles indicate: • High prevalence of risk factors that contribute to chronic disease • Increasing prevalence of hemodialysis • Significantly higher death rates due to circulatory diseases than non-Aboriginal population • Higher rates of potentially avoidable death rates than non-Aboriginal population • Increasing hospitalization rates for diabetes *NBMLHD Aboriginal Health Profile 2016* *NBMLHD Health Services Plan 2012/2022*

SUICIDE PREVENTION

Outcomes of the service needs analysis – Priority Theme: *Suicide Prevention*		
Identified Need	Key Issue	Description of Evidence
Risk Assessment	Identification of risk for suicide is not perceived as systematic or effective across services.	Stakeholders perceived a general absence of systematic processes for risk identification and intervention at the primary care level of service provision. Further research is needed to explore the approaches to suicide risk assessment across primary care providers. Investigation needs to assess the type of presentations being assessed, the tools used, and the range of service providers involved. *NBM Suicide Prevention Stakeholder Consultation 24/2/16*
Referral Pathways	Wide variation in referral pathways for people at risk of suicide.	The perceived barriers and problems concerned with referral for people at risk of suicide include: • Lack of easily understood and accessible clinical referral pathways. • Lack of easily understood and accessible community program referral pathways. • Lack of utilisation in some regions of ATAPS SOS for mild to moderate suicidality. *NBM Suicide Prevention Stakeholder Consultation 24/2/16* *NBMLHD Mental Health & Suicide Prevention Focus Group 2/3/16* *ATAPS Program Feedback*

Outcomes of the service needs analysis – Priority Theme: *Suicide Prevention*		
Gaps And Barriers To Service Provision	There are a number of key barriers to accessing appropriate services to support people in the community, who have a history of self-harm, suicide ideation or suicide attempt.	Limited or absent support in the community for people at risk of suicide has been identified at all levels of primary care. This includes inadequate support after discharge from hospital due to limited service availability coupled with long waiting lists. Overall stakeholders perceive the absence of appropriate community based support for people at risk of suicide either due to too few services with long waiting lists, or needed services that are not provided, or inappropriate services. Preliminary stakeholder consultation has identified the following concerns regarding barriers to service provision for suicide prevention: • Lack of support in the community following discharge from MH inpatient unit. • Limited access to community MH programs due to waiting lists. Lack of appropriate community programs in the region. • Lack of interventions for people who repeatedly self-harm or attempt suicide e.g. similar to Early Psychosis Intervention program for young people. • Lack of long-term interventions for young people who are engaged with homelessness services or with previous foster care and/or family breakdowns. Further investigations are needed to clarify the range of service models needed and where they may be located. *NBM Suicide Prevention Stakeholder Consultation 24/2/16* *Commonwealth-funded Community-based Suicide Prevention Project List,* distributed by *Department of Health, 2016*

Outcomes of the service needs analysis – Priority Theme: *Suicide Prevention*		
		Stakeholder Consultation, NGO 26/2/16
Culturally Safe Suicide Prevention For Aboriginal People	Appropriate and culturally safe suicide prevention programs are not provided within the NBM region.	Stakeholder feedback indicates that suicide prevention programs that involve Aboriginal people in service provision are needed to support Aboriginal people at risk of suicide. NBMLHD has one Aboriginal trainee position located in Lithgow providing mental health services. It has been widely acknowledged by stakeholders that suicide prevention programs run by Aboriginal people are absent from the NBM region. Further investigation is necessary to establish the range and type of services needed. *NBM Suicide Prevention Stakeholder Consultation 24/2/16* *NBMLHD Mental Health Consultation 2/3/16*
Skills And Training Capacity	Appropriate skills and training for suicide prevention and follow up support is generally regarded as inadequate throughout the NBM region. The need for specialised skills has been identified to support suicide prevention amongst especially vulnerable populations, including Aboriginal people, youth and CALD populations.	Stakeholders have indicated that skills and training for suicide prevention are generally inadequate and further investigation is required on models of care, skills required and different options for capacity building through training support. Stakeholders have indicated that: • Suicide prevention training and capacity amongst primary healthcare providers is unclear. • Need for education and training for non-clinical workers who have contact with high-risk people e.g. police, ambulance. • Lack of DBT (Dialectical Behaviour Therapy) training and services in the region.

Outcomes of the service needs analysis – Priority Theme: *Suicide Prevention*		
		• Lack of relevant staff and training in youth specific mental health first aid at local schools. • Lack of cross-cultural suicide training for workers. These issues requires further investigation to understand the extent of the gap. *NBM Suicide Prevention Stakeholder Consultation 24/2/16*
Continuity Of Care	Barriers to follow up and support subsequent to assessment for people at risk of suicide indicate breakdowns in continuity of care, and the likely need for formalised care coordination across suicide prevention services.	Stakeholders have identified barriers to follow up and support between hospital discharge and the community based ACCESS team. There are concerns that these services are unable to accommodate the demand for services within the region. Further investigations are required to fully assess the nature of these barriers to continuity of care. Preliminary stakeholder engagement has indicated the following concerns: • Lack of follow-up from ACCESS team due to time constraints and difficulty in contacting people. • People discharged from ACCESS team may not have a GP, aren't followed up by GP or don't make an appointment. • Lack of support for family members when people are discharged from hospital into their care. *NBMLHD Mental Health & Suicide Prevention Focus Group 2/3/16* *NBM Suicide Prevention Stakeholder Consultation 24/2/16*

Outcomes of the service needs analysis – Priority Theme: *Suicide Prevention*		
		Refer *Clinical Care of People Who May Be Suicidal, NSW Health Policy Directive, 2016*
Absence Of Quantitative Evidence To Support Analysis Of Demand For Services	Access to data to support analysis of demand for suicide prevention services is poor.	Research to date indicates that potentially important data to support planning for suicide prevention is not available. In particular, it is important to analyse the extent to which vulnerable populations such as Aboriginal people, adult men and youth, utilise telephone services. *NBM Suicide Prevention Stakeholder Consultation 24/2/16*
General Population Awareness Of Support For Suicide Prevention	Community awareness of suicide and risks is perceived as inadequate at the regional level. Poor community awareness may result in hidden prevalence of suicidal behaviors.	Preliminary stakeholder consultations indicate that the actual prevalence of suicidal behaviours and risk is likely to be underestimated because the general population is not sufficiently aware of the presentations and behaviours that indicate risk and the opportunities to support people who are at risk. Stakeholders have indicated that there is: • Lack of community engagement and understanding of suicide - prevalence is hidden. • Lack of education and awareness to reach people who don't access mental health services. Some national public health campaigns are not localised. *NBM Suicide Prevention Stakeholder Consultation 24/2/16*
Evaluation Of Service Models	Existing models of care provided to the community to prevent suicide and support people who are at risk may not	Preliminary stakeholder consultation has indicated a lack of evaluation of existing service models for suicide prevention and support services.

Outcomes of the service needs analysis – Priority Theme: *Suicide Prevention*		
	be properly evaluated and may be inappropriate for the needs of the community.	*NBM Suicide Prevention Stakeholder Consultation 24/2/16*
Models For Effective Suicide Prevention Stakeholder Engagement	There are no appropriate community consultation and stakeholder engagement models for suicide prevention in the NBM region.	Preliminary stakeholder consultation has indicated the importance of appropriate community consultation and stakeholder engagement models to identify service needs and provide ongoing feedback for capacity development and evaluation of service models. *NBM Suicide Prevention Stakeholder Consultation 24/2/16*

ADULTS WITH MODERATE TO SEVERE MENTAL ILLNESS

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
Identified Need	Key Issue	Description of Evidence
General Practice Mental Health Treatment Plans	General practice involvement in mental health plan development and review is widely variable across the region.	Further investigation is required into general practice uptake of mental health planning and review. The highest levels of uptake are in the Blue Mountains region and lowest in the Lithgow LGA. The Blue Mountains SA3 is in the top decile nationally, Hawkesbury and Richmond-Windsor SA3s are in the 3rd decile, and Penrith SA3 is in the 4th decile. Lithgow-Mudgee (which includes 4 SA2 regions in the NBM) is in the 7th decile for number of mental health treatment plans (age standardised, per 100,000). *Number of MBS-funded services for the preparation of mental health treatment plans by general practitioners per 100,000 people, age standardised, by SA3, 2013–14. Australian Atlas of Healthcare Variation, November 2015*
PBS Prescriptions Dispensed For Mental Health Patients	There is considerable variation across the NBM region for prescribing of: antipsychotic medicines; ADHD medicines for under 18s; and, antidepressant and anxiolytic medicines to people over 65 years of age.	Further investigation of data and consultation with general practitioners is needed to assess variation and develop appropriate local responses. Review of available data indicates the following: • The rate of prescribing antipsychotic medicines to under 18s is relatively high in Lithgow and the Blue Mountains. • The number of antipsychotic prescriptions is in the 2nd decile for Lithgow-Mudgee SA3 and 3rd decile for the Blue Mountains.

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		• The rate of prescribing ADHD medicines to under 18s is high across the NBM region. The number of ADHD medicine prescriptions is in the top decile for Lithgow-Mudgee SA3, 2nd decile for Blue Mountains, Penrith and Richmond-Windsor, and the 3rd decile for Hawkesbury. • The rate of prescribing antidepressant and anxiolytic medicines to over 65s is relatively low across the NBM region. Notably the rate of anxiolytic prescribing in Lithgow-Mudgee SA3 is very low (1st decile). • The rate of prescribing antipsychotic medicines to over 65s is relatively high across the NBM except in Lithgow-Mudgee. Average or lower prescribing rates across the entire NBM region for over 65s, except for antipsychotics. *Number of PBS prescriptions dispensed per 100,000 people aged 65 years and over, age standardised, by SA3, 2013–14. Australian Atlas of Healthcare Variation, November 2015*
Inpatient Facilities	Use of mental health inpatient facilities is high relative to other PHNs, particularly for same day treatment.	Across all Diagnosis Related Groups (DRGs) for Mental Health, the NBM region's relative utilisation (RU) is high at 136.7%. (RU is age/sex standardised attendance rate compared with the national average). Same day mental health treatment without ECT is very high at 176.9% RU for 3,363 separations (58.8% of total separations). *Admitted Patient Utilisation Comparisons for PHNs, Department of Health, 2016*

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
Primary Care Mental Health Services	Positive trends can be identified in the uptake of MBS mental health items by GPs, allied health and psychiatrists.	The number of mental health MBS services claimed in the NBM region increased at 5.2% per annum between 1/7/11 and 30/6/15. The largest growth rate was services claimed by clinical psychologists (9.8% p.a.) and GPs (6.4% p.a.). GPs made 33% of all claims, followed by "Other Allied Health" (Better Access items) at 29% and Psychiatrists at 21%. *MBS Mental Health Data by PHN, Department of Health, 2016 http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental_Health_Data*
	Negative trends can be identified in the uptake of MHNIP services in NBM region.	The number of patients receiving MHNIP services shrunk by 17.2%, from 285 in 2011/12 to 236 in 2014/15. The number of occasions of service dropped by 25.5% over the same period, from 3,607 to 2,688. As a proportion, males made up 37% of all MHNIP patients, and received 27% of occasions of service over the 4 years. MHNIP Tables 2011-2015 by PHN, Department of Health, 2016 *http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental_Health_Data*
	Negative trends can be identified in the uptake of ATAPS services in the NBM region.	The number of services per patient under ATAPS has been consistently higher in the NBM region than the national average (e.g. 6.2 NBM vs 4.8 national in 2014/15). ATAPS has grown at a slower rate in the NBM region compared to nationally. Over the 4 years to 30/6/15 patient numbers increased by 8.9% p.a. in the NBM region, compared to 11.7% p.a. nationally, and number of services

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		provided grew by 12.7% p.a. in the NBM region compared with 14.2% p.a. nationally. Less than one-third of ATAPS patients in the NBM region have been male and less than one-third of services have been provided to males. *ATAPS Tables 2011-2015 by PHN, Department of Health, 2016* *http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Mental_Health_Data*
Continuity Of Care After Discharge From Acute Services	Consultations indicate that there are possible breakdowns in the continuity of care for patients discharged from acute mental health services.	Further investigations are required to examine possible sources to breakdowns in continuity of care. Stakeholders have expressed the following views: • Lack of consistent approach to discharge planning including lack of coordinated follow up after discharge (unless consumer is on a Community Treatment Order). • People discharged from Mental Health Inpatient Unit do not always make a follow up appointment with their GP. • Quality of discharge summaries from Nepean Mental Health Inpatient Unit - handwritten and very hard to impossible to read. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *Headspace Penrith Consultation 8/3/16* *NBM ML & PHN Blue Mountains Aboriginal Sharing and Learning Circle Report 2015NBMPHN GP and AHP Consultations March 2016* *PIR Consumer Group Consultation 23/3/16*

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
Coordination Of Care	Mental health services across the region appear to be impacted by fragmentation of service provision between different providers and between acute and primary care. This is likely to represent a care coordination issue.	Preliminary stakeholder consultation indicates a wide range of issues that may be sourced back to fragmentation of service delivery. Further research is required to establish the possible sources of fragmentation. Stakeholders have expresses the following views that may be related to fragmentation of services: • Lack of effective coordination, integration and follow up between acute and primary mental health care. • Lack of care coordination, referral pathway coordination and case management (including public and private sector and clinical as well as nonclinical services) to support consumer centered care based on consumer need rather than available service options. • Lack of service coordination and linkages to support seamless step up or step down from services. • Consumers with complex trauma need access to long-term integrated care between GP, psychiatrist, mental health nurse and psychologist (or equivalent) to support recovery journey. • Significant number of consumers are not connected to GP and do not have a 'medical home'. • Significant number of consumers without a carer - they are especially vulnerable, particularly in the older age group, and in need of care coordination. • Lack of coordination between outreach areas and Nepean Hospital for acute mental health issues. • Lack of coordination and sharing of information/results of regular screening for physical health issues between GPs and Community Mental Health.

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		• Need for clinical multidisciplinary approach to care and sharing of information between public and private sector (e.g. private AHPs are limited in what they can treat). • Lack of access to consumer health information by NGOs. • Community Mental Health, ACCESS and Child &Youth Mental Health services less likely to engage/accept referral if private therapist is already involved. • Most psychiatrists (Penrith and Blue Mountains region) do not coordinate well with mental health AHPs - lack of feedback. • Explore issues arising from the transition of Partners in Recovery to the NDIS in particular loss of care coordination capacity for people with severe mental illness who do not access the NDIS or clinical care coordination for other chronic conditions. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBMLHD Mental Health & Suicide Prevention Focus Group 2/3/16* *2015NBMPHN GP and AHP Consultations March 2016* *PIR Consumer Group Consultation 23/3/16* *NBMML Comprehensive Needs Assessment Report 2014-15*
Service Gaps **Psychiatry**	There is a perceived lack of specialist psychiatric services in the NBM region.	Further investigation of the number of specialist psychiatrist positions in the NBM region are required. Stakeholders have indicated the following concerns regarding access to specialist psychiatric services: • Lack of psychiatric services across the region. • Lack of sufficient bulk-billing by private psychiatrists (long waiting lists for those who do bulk-bill). • Long waiting lists to access public psychiatrists.

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		NBMPHN Mental Health Stakeholder Forum 23/2/16 *NBMPHN GP and AHP Consultations March 2016*
Gaps In Service Provision	Fragmentation of mental health service provision may be further indicated by stakeholder perceptions of gaps in service provision.	Further research is needed to map existing mental health services in the region with perceived gaps in services. Stakeholders have expressed the following concerns: • Lack of evidence based treatment services for consumers with complex trauma (often diagnosed with personality disorders). • Lack of adequate psychological support for those with more complexity (trauma) and/or severe mental illness as ATAPS and Medicare 12/10 session per year is not designed to address moderate to severe issues – more subsidised sessions are needed per year for those consumers who can benefit from psychological interventions. • Lack of step down facilities from acute to sub- or non-acute care. • Lack of stepdown services from severe to moderate mental illness. • Lack of appropriate integrated service options (including between LHD and primary care) for consumers with dual mental health and D&A diagnosis. • Lack of access to mental health services for consumers with co-morbid D&A issues – strong gate keeping and specific eligibility criteria can exclude these consumers • Difficulty in getting quick access (within a week) to services for consumers in Lithgow area due to waiting lists (lack of sufficient services). • Lack of sufficient subsidised group work (e.g. mindfulness based stress reduction)

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		• Limitation of Medicare or ATAPS psychological therapies – does not allow work with couples or families. • Inconsistent provision of psychosocial services and appropriate social support to support consumers at all stages of their recovery journey across the region (particularly Blue Mountains, Lithgow and Hawkesbury) *NBMML Report: A Snapshot of Health Needs in Cranebrook 2014* *NBMML Comprehensive Needs Assessment Report 2014-15* *Trankle, S. A.,& Reath, J. (2015). The Nepean Blue Mountains Partners in Recovery Evaluation. Campbelltown: University of Western Sydney.* *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBMPHN GP and AHP Consultations March 2016* *PIR Consumer Group Consultation 23/3/16* *NBMPHN ATAPS Stats 2013-15 – people accessing service for two consecutive years*
Gaps And Barriers To Accessing Housing And Accommodation	Access to housing and accommodation for people with mental illness is inadequate across the NBM region.	Further research is required to map the availability of housing services for the region. Relevant research and stakeholder feedback indicates that there is a lack of housing options for people with mental illness in the region and that this is having negative consequences for the wellbeing and ongoing treatment of people with mental health problems. Stakeholders have raised the following concerns:

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		• Lack of appropriate accommodation for homeless people results in discharged from hospital to unstable accommodation and increases likelihood of re-admission. • Lack of available accommodation for homeless people can result in unnecessary longer hospital stay (social admission). • Lack of stable long term quality accommodation which is socially supported and economically sustainable and takes into account the special needs of consumers (e.g. HASI type services). • Lack of mental health outreach services for homeless people in the region. *NBMML Homelessness Needs Identification Project Report 2014* *NBMPHN GP and AHP Consultations March 2016* *NBMPHN Mental Health Stakeholder Forum 23/2/16* *PIR Consumer Group Consultation 23/3/16* *Trankle, S. A.,& Reath, J. (2015). The Nepean Blue Mountains Partners in Recovery Evaluation. Campbelltown: University of Western Sydney*
Capacity Building To Support Carers And Consumers	Respite care and other types of support for carers and consumers may be inadequate in the NBM region.	Further research is required to map available support services for carers and consumers. Stakeholders have raised the following concerns: • Carers and families not sufficiently included and not receiving sufficient support (e.g. respite options). • Carers and families not adequately informed about mental health condition so they can stay safe and supportive in their own environment.

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		• Lack of support for financial management – consumers accumulate debts which jeopardise payment for accommodation and living expenses, increases anxiety and can contribute to homelessness. • Insufficient education of consumers about prescribed medications including side effects. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *PIR Consumer Group Consultation 23/3/16*
Workforce Capacity Including Skills And Training	There is a general view that workforce capacity for mental health in the region could be substantially improved with training and skills development.	Further research is needed to examine the potential sources of the issues raised by stakeholders to develop appropriate options. The concerns raised by stakeholders were: • Increase GPs knowledge of available clinical and non-clinical services and their referral pathways. • Increase GP capacity to identify early if consumer needs more intensive treatment (not provided through ATAPS or Medicare) such as MHNIP. • Patchy GP mental health engagement in region. • Need for trauma education for health professionals. • Lack of GP Education dual diagnosis drug and alcohol & severe mental illness. • Insufficient dual diagnosis support and supervision for private therapist. • Lack of GP education in relation to depression in the elderly. • Lack of peer workers to help increase consumer health literacy, understanding of treatment and psycho-social support options and to

Outcomes of the service needs analysis – Priority Theme: *Adults with Moderate to Severe Mental Illness*		
		provide support for people while in acute care and in the community – identified as a high need by consumer group. • Lack of support workers who are available after hours and on weekends. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBMPHN GP and AHP Consultations March 2016* *PIR Consumer Group Consultation 23/3/16*

MENTAL HEALTH OF ABORIGINAL PEOPLE

Outcomes of the service needs analysis – Priority Theme: *Mental Health of Aboriginal People*		
Identified Need	Key Issue	Description of Evidence
Service Gaps	There are no culturally safe mental health services available to Aboriginal people in the region.	Mental health services provided to Aboriginal people in the region are generally not regarded as culturally secure and supportive of the needs of Aboriginal people. Further consultation is required to assess a wide range of concerns raised by stakeholders. These include the following but wider issues are likely to be found when comprehensive stakeholder consultation is undertaken: • Lack of indigenous programs run by Aboriginal people. • Lack of culturally appropriate services and lack of Aboriginal workers in identified roles, including community programs, psychiatrists and psychologists. • No Aboriginal Controlled Medical Service in region. • Need for improved and enhanced dual diagnosis mental health and D&A services. • Aboriginal workers are not trained in clinical assessment, and clinical forms are not culturally adapted. *Stakeholder Consultation, NGO 8/3/2016* *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBM ML & LHD Blue Mountains, Penrith, Hawkesbury Aboriginal Sharing and Learning Circle Reports 2015* *NBMPHN Suicide Prevention Stakeholder Consultation 24/2/16* *NBMLHD Mental Health & Suicide Prevention Focus Group 2/3/16* *Stakeholder Consultation, NGO 8/3/2016*
Care Coordination	Medium to long term follow up and support is not provided through mental health programs.	The role and importance of care coordination in supporting improved health outcomes is well recognised and exemplified through Closing the

Outcomes of the service needs analysis – Priority Theme: *Mental Health of Aboriginal People*		
		Gap programs for chronic disease and Social and Emotional Wellbeing programs through Aboriginal Community Controlled Health Organisations (ACCHOs). Recently the NBMLHD commenced planning for a "Whole Family Team", in partnership with FACS, to provide intense mental health and family support to Aboriginal mental health patients following discharge from hospital where child protection has been involved. The program will involve six months intensive support at home involving the whole family. The family will then be linked to other LHD services for ongoing support. Further stakeholder consultation, service mapping and research will aim to identify and assess service options available to Aboriginal people with mental illness in the NBM region. *Stakeholder Consultation, NGO 8/3/2016* *Trankle, S. A.,& Reath, J. (2015). The Nepean Blue Mountains Partners in Recovery Evaluation. Campbelltown: University of Western Sydney*
Workforce Training And Capacity Building	Widely perceived lack of awareness of Aboriginal mental health needs from service providers coupled with an inadequate number of designated Aboriginal specific clinical positions in the NBM region.	Stakeholders have indicated a general lack of awareness of the needs of Aboriginal people with mental illness, as well as the need to develop programs to target those needs. Further investigations will seek to assess the need for workforce cultural safety training, targeted program development, mental health literacy in Aboriginal communities and capacity building for Aboriginal mental health professionals. The concerns raised by stakeholders in preliminary consultations included the following: • Mental health services need willingness to engage with Aboriginal communities and need proper guidance from community members (Elders) to build trust.

Outcomes of the service needs analysis – Priority Theme: *Mental Health of Aboriginal People*		
		• Need to increase designated Aboriginal specific clinical positions in mental health. • Lack of understanding of stressors affecting the mental health of Aboriginal people, particularly intergenerational trauma and associated PTSD. • Lack of Aboriginal mentors for people undergoing treatment and therapy. • Need to increase mental health literacy in Aboriginal communities. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBM ML & LHD Blue Mountains, Penrith Aboriginal Sharing and Learning Circle Reports 2015*

RURAL AND REMOTE AREAS AND OTHER UNDERSERVICED AND/OR HARD TO REACH POPULATIONS

Outcomes of the service needs analysis – Priority Theme: *Rural and Remote Areas and Other Underserviced and/or Hard to Reach Populations*		
Identified Need	Key Issue	Description of Evidence
Service Gaps For CALD Populations	Lack of targeted support for CALD populations across a range of mental health service needs.	A range of service support needs have been identified for CALD populations including suicide prevention, outreach services, and specialist services include post-natal support for depression. Further research and consultation is required to establish the main CALD groups of concern and options for enhancing existing services or providing additional services. The concerns raised by stakeholders include the following: • Lack of appropriate transcultural services in suicide prevention in all LGAs. • Lack of mental health outreach services for CALD people. • Lack of culturally appropriate psychiatric and psychological services. • Lack of CALD clinicians, e.g. counselling services in own language. • Lack of post-natal support/services for people suffering post-natal depression • Need to support people from CALD communities who remain isolated in their own homes and remain hesitant to access mental health services. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBMPHN GP and AHP Consultations March 2016* *Stakeholder Consultation, NGO 11/3/16*
Workforce Training And Capacity Development For CALD Populations	Need for enhanced workforce training to support special needs of CALD populations with mental illness.	A range of workforce issues have been identified for CALD populations. These include awareness of support services for CALD populations (translator services) and transcultural competency. Further research and

Outcomes of the service needs analysis – Priority Theme: *Rural and Remote Areas and Other Underserviced and/or Hard to Reach Populations*		
		consultation is required to establish the main CALD groups of concern and options for providing enhanced training and support to the workforce. The concerns raised in preliminary stakeholder consultation include the following: • More education is needed for clinicians in relation to the high number of psychosomatic disorders within the CALD community. • GP's need more education in working with CALD communities in relation to their mental health – lack of cultural understanding • Lack of training provided to GP's / Allied Health in using Telephone Translation Services. • Lack of public/service provider awareness of CALD mental health provision. • Lack of transcultural competency in workforce. • Education, information and mental health literacy for CALD community organisations on existing mental health services so they can support their communities adequately. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *Stakeholder Consultation, NGO 11/3/16*
Communication For CALD Populations	Inadequate communication for CALD populations regarding mental health service information and resources.	A range of communication issues have been identified for CALD populations. These include awareness of support services in relevant languages, mental health educational resources and the need for CALD specific directories of services. Further research and consultation is required to establish the main CALD groups of concern and options for providing improved communication and education to CALD communities. The concerns raised in preliminary stakeholder consultation include the following:

Outcomes of the service needs analysis – Priority Theme: *Rural and Remote Areas and Other Underserviced and/or Hard to Reach Populations*		
		• Lack of easy to access services outside the clinical setting • Lack of education in relation to stigma and discrimination with regards to mental health in CALD communities • Lack of awareness on how to navigate the mental health system and what supports are available • Lack of local mental health related resources in different languages. *Stakeholder Consultation, NGO 11/3/16*
Homelessness And Mental Health	Inadequate referral pathways between clinical and social support services for mental health patients with housing and accommodation problems.	The problems confronting many people with mental illness in relation to housing and accommodation are well known and have been the subject of various government initiated reviews and evaluations. The recent changes to NSW government housing support (HASI packages) have provided additional options to people with mental illness. However concerns continue to be raised by NBM stakeholders regarding the difficulties encountered by people with mental illness in relation to housing. These concerns include the inadequacy of the number of HASI packages and the criteria for eligibility. Further research and consultation is required to establish the key issues concerning people with mental illness in the NBM region. Stakeholder raised the following issues with regarding to housing in preliminary consultations: • Lack of mental health skills amongst homelessness assertive outreach workers. • Lack of referral pathways between clinical and non-clinical mental health service providers for people who are homeless.

Outcomes of the service needs analysis – Priority Theme: *Rural and Remote Areas and Other Underserviced and/or Hard to Reach Populations*		
		Stakeholder Consultation, NGO 15/2/16 *Evaluation of Housing and Accommodation Support Initiative (HASI). UNSW, 2012*
Service Needs For Prisoners On Release	Prisoners transitioning to the community have higher than average incidence of mental health and D&A problems, typically have complex needs, and require access and strong links to a broad range of services.	In a 2012 study, 29% of NSW prisoners surveyed reported high or very high psychological distress on release from prison. 41% of NSW prisoners reported that in the past they have been told (by a doctor, psychiatrist, psychologist or nurse) that they have a mental health disorder. Correctional services stakeholders from the NBM region have indicated that the mental health needs of former inmates are not currently being met in a substantive or systematic way post-release. Further research is required to identify usual referral pathways, services available and utilisation of services by former inmates in the region. *Australian Institute of Health and Welfare 2013. The health of Australia's prisoners 2012. Cat. no. PHE 170. Canberra: AIHW.* *Consultations with Correctional Services Stakeholders. (2015/16)*
Regional Variation In The Provision Of Services	Inadequate mental health services in outer LGAs of NBM region: Lithgow and Hawkesbury LGAs.	Stakeholders have indicated concerns specific to the outer areas of the NBM region, Lithgow and Hawkesbury LGAs. A wide range of issues have been identified.Further research is required to identify referral pathways and service mapping of the type of services currently available to people with mental illness in these LGAs, and the potential impact of any lack of service provision. In preliminary consultations stakeholders have raised the following issues: • Insufficient skills by private clinicians to treat consumers with moderate to severe mental illness in the Hawkesbury area.

Outcomes of the service needs analysis – Priority Theme: *Rural and Remote Areas and Other Underserviced and/or Hard to Reach Populations*		
		• Minimal mental health support in Hawkesbury – Nepean hospital is main MH inpatient unit which often has bed block. • Social isolation in outer regional areas particularly Lithgow and Hawkesbury LGAs. • Limited availability/location of clinical services in Lithgow. *NBMPHN GP and AHP Consultations March 2016* *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBMML and NBMLHD Community Reports 2013-Hawkesbury and Lithgow*
Services To LGBTI People	Inadequate support for LGBTI people with mental illness.	Preliminary consultations indicate that LGBTI people living in the NBM region may not be receiving adequate support for mental illness. *NBMPHN GP and AHP Consultations March 2016*

CHILDREN & YOUTH

Outcomes of the service needs analysis – Priority Theme: *Children & Youth*		
Identified Need	Key Issue	Description of Evidence
Gaps In Services For Children And Youth	Inadequate paediatric and adolescent service provision in psychiatry and mental health.	A wide range of shortcomings have been identified for services currently available to children and youth through preliminary consultations. The importance of providing paediatric and adolescent services across all types of health services is well understood. There are indications that the apparent increase in mental illness amongst children and adolescent over recent decades has not been met in the NBM region by increasing the range and number of services targeting this population. Further research is required to identify the range of service needs in the NBM region as well as mapping of services currently provided. Stakeholders have raised the following concerns in regard to gaps in services for this population: • Lack of early intervention mental health and D&A programs for under 16 year olds. • Lack of psychiatric services for children and young people. • Lack of After Hours service for ages 12 to 24. • Lack of general intervention programs for children under 12 to support complex needs. • Difficulty in finding services for 18-25 year olds, and no provision for people under 18 to be admitted to Nepean Hospital Mental Health Unit.. *NBMPHN GP and AHP Consultations March 2016* *NBMPHN Mental Health Stakeholder Forum 23/2/16*

Outcomes of the service needs analysis – Priority Theme: *Children & Youth*		
		Stakeholder Consultation, NGO 8/3/16
Regional Variation In Provision Of Services	The perceived lack of service provision for children and youth may be aggravated in some LGAs and postcodes where there are higher proportions of young people.	Stakeholders have identified the potential for poorer service availability in locations where there are higher proportions of young people. Further research is required to map service provision in these regions and compare it with the distribution of youth populations. The concerns raised by stakeholders included the following: • Lack of mental health services in the Upper Mountains, Lithgow abd Hawkesbury. • Lack of outreach services across all 4 LGAs. • Lack of tertiary mental health unit for children and youth in the region. • Lack of GP's who can take children/youth, especially in Cranebrook. • Lack of Headspace services in Lithgow, Blue Mountains and Hawkesbury. *Stakeholder Consultation, NGO 8/3/16* *NBMPHN Mental Health Stakeholder Forum 23/2/16* *NBMPHN GP and AHP Consultations March 2016*
Services For Vulnerable Groups Within Young Populations	The overall perceived lack of services for young people in the region appears to be aggravated for young people in vulnerable groups.	Stakeholders have indicated that children and young people who are especially vulnerable have unmet service needs. Further research is required as part of broader mapping of services to children and young. Stakeholders raised the following concerns: • Lack of service provision for children high on the Autism Spectrum. • Lack of support for young people identifying as LGBTI.

Outcomes of the service needs analysis – Priority Theme: *Children & Youth*		
		• Lack of Aboriginal and CALD youth/child mental health services. • Lack of service provision for young mothers with children who are experiencing symptoms of anxiety and depression, and antenatal services for young mothers with post-natal depression. • Lack of appropriate support for homeless youth. • Need for better connection for young people in and out of Home Care, Juvenile Justice, FACS, Health and NGOs, through sharing data and information to support integrated care. *NBMPHN Mental Health Stakeholder Forum 23/2/16* *Stakeholder Consultation, NGO 8/3/16* *NBMPHN GP and AHP Consultations March 2016*

LOW INTENSITY

Outcomes of the service needs analysis – Priority Theme: Low Intensity		
Identified Need	Key Issue	Description of Evidence
Community Wide Communication To Support People At Risk Of Mental Illness	Enhanced and targeted communication methods are required to engage and inform the general population about the risks of mental illness and available supports.	Stakeholders have raised the following concerns regarding community wide engagement and education concerning mental health, risks and wellbeing: • Need for resources and education that promote mental wellbeing. • Lack of service navigation website or tool to find appropriate services and interventions across the stepped care model. • Lack of guidance available to access appropriate, evidence-based digital interventions. • Need for support to use e-health interventions in the home. *NBMLHD Mental Health & Suicide Prevention Focus Group 2/3/16* *NBMPHN Mental Health Stakeholder Forum 23/2/16*