

Nepean Blue Mountains Primary Health Network

Core Needs Assessment

November 2017

Section 1 – Narrative

The findings from the original needs assessment developed in March 2016 has provided direction for the NBM PHN and key stakeholders in targeting areas of unmet need. As the needs assessment is a dynamic document, the refresh most recently conducted in November 2017 has provided some new and emerging issues and themes that will be reflected in the future direction of planning activities for the PHN. The priority themes identified in the initial needs assessment of March 2016 substantially remain unchanged and work to date has continued in line with the most recent PHN Activity Plan with key stakeholders in addressing those priorities. This work includes quality improvement activities that support enhancements in the care continuum for individuals and consultations with service providers including the local health district, councils, NGOs and consumers to jointly plan and co-design services and initiatives that meet our local needs

The update of this needs assessment required another systematic review of each priority theme as presented in the initial needs assessment, submitted in March 2016. The review included consultation with relevant stakeholders and staff to collate activities that have commenced or are in development stage. Updated data was sourced and refreshed, along with assessment of any new reports that became available.

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

A more detailed list of needs identified under this assessment, together with service needs and options can be provided on request.

Mental health (inclusive of suicide prevention) and Alcohol and other Drugs (AOD) which were previously contained within this report in March 2017 have been treated separately and are contained as individual documents to this report.. The refreshed reports for these areas are more detailed and targeted in addressing the specific needs analysis for each area. The needs analysis for these two areas will support the development of regional plans for Mental Health and Drug and Alcohol in primary care; and also aim to identify special needs for Aboriginal people within those priority themes.

Further comprehensive service mapping is an ongoing process undertaken in order to analyse and validate the service needs that have been identified in this report partly through qualitative methods. The service mapping work will continue to be completed in stages and is an integral component in the development of HealthPathways. HealthPathways is a key priority and enabler of joint integrated care with the local health district and secondary specialist services and has positively impacted consultations with local health professionals. This has in turn supported the more localised development and or redesign of services to suit local 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 and have contributed to this.

Governance supporting the needs assessment rests with the Clinical Council and the Community Advisory Committee. However operational implementation is the responsibility of all key program streams particularly in relation to prioritisation and commissioning of services. The NBM PHN Clinical Council meets quarterly and has provided valuable feedback on the approach for various activities planned by the PHN as a result of identified needs. The Community Advisory Committee has also been valuable in providing feedback to the PHN in terms of service needs. The PHN aims to further develop the needs assessment by incorporating 'lived experiences' which will be channelled to the PHN via the Community Advisory Committee. The involvement of these committees is pivotal to the continued development of the overall assessment of needs for the NBM region.

The priority needs identified in this refreshed needs assessment continue to build upon the initial themes identified from the previous needs assessments submitted in 30 March 2016. A summary of themes and high level needs identified for primary care in the NBM region are listed below:

<p>Chronic and preventative conditions</p>	<p>High prevalence compared to state average rates:</p> <ul style="list-style-type: none"> ○ Diabetes ○ Cardiovascular disease ○ Obesity and overweight ○ Respiratory disease ○ Asthma ○ COPD ○ Chronic pain ○ Influenza and pneumonia. <p>Childhood immunisation: Above average childhood immunisation rates compared to NSW however variation across LGAs and for some postcode groups.</p> <p>Potentially preventable hospitalisations: COPD and infections above state average with COPD the leading cause of potentially preventable hospitalisations.</p> <p>Considerable variation in anti-microbial prescribing rates across the region.</p> <p>Hip and knee replacement procedure hospitalisation rates significantly higher than NSW rates.</p>
<p>Older persons</p>	<p>Increasing proportion of aging population (compared to the state) increasing existing pressure on:</p> <ul style="list-style-type: none"> - General practice workforce - Inadequate awareness of available services - Support needs for independent living. <p>Falls the leading cause of injury and hospitalisations among older persons.</p> <p>Increasing prevalence of dementia among older persons.</p>

	Lack of appropriate aged based care services to support independent living at home
Palliative care	Increase in projected need for end of life care in the NBM region
Cancer Care	<p>Breast screening:</p> <ul style="list-style-type: none"> - 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). <p>Variation in rates for cervical screening across the region. Low rate of bowel cancer screening across the region.</p> <p>Highest proportion of women who smoked during pregnancy for all regions in NSW.</p>
Access to health services	<p>Difficulties accessing services, including accessing GP services.</p> <p>Inadequate access to secure communication platforms between primary care providers.</p> <p>Continued meaningful use of My Health Record across the region to further develop information exchange between health care providers.</p> <p>Transport: Difficulties accessing transport or unable to travel for health appointments.</p> <p>Health workforce:</p> <ul style="list-style-type: none"> - GP shortages - Aging GP workforce - Inadequate data to support regional workforce planning <p>Inadequate coverage for after-hours general practice services. Scarcity in supply of reliable and efficient after-hours GP services. Challenges in providing high-quality after-hours primary care for RACF residents.</p> <p>Higher demands for GP, after-hours and aged-care services by populations with special needs and individuals at risk of poorer health outcomes:</p> <ul style="list-style-type: none"> - RACF residents - Older persons and carers - Persons with a disability <p>Low health literacy is a risk factor for poor health.</p>
Cultural and demographic factors influencing health status:	<p>Aboriginal health regional comparisons to non-Aboriginal population:</p> <ul style="list-style-type: none"> - 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

	<ul style="list-style-type: none"> - 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 <p>CALD community differences to general population for the region:</p> <ul style="list-style-type: none"> - 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. <p>Other:</p> <ul style="list-style-type: none"> - High incidence of domestic violence in Penrith. <p>Social disadvantage and equity:</p> <ul style="list-style-type: none"> - Increasing levels of disadvantage - Increasing number of disadvantaged residents Penrith. <p>Increasing levels of disadvantage Lithgow.</p>
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Additional Data Needs and Gaps

There are a range of data sources that have recently become available to the NBMPHN that require further investigation. Future key 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. ED data from privately run hospitals in our region is not yet available but consultations continue to progress to access these data sets. After hours data relating to emergency department presentations will also support more detailed investigation around gaps in after hours and deputising service provision across the region.

MBS item utilisation data involving detailed investigation to consider relevance to indicators as a measure of performance particularly around chronic conditions management.

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. The availability of Qlik Sense will support data visualisation of the results.

General practice aggregated clinical data extracted from general practice clinical software for specified encounters (e.g. diabetes, asthma, cervical screening, COPD) and analysed alongside

local population data, to more fully support assessment of local needs that impact on primary care service provision both individually at a practice level, and collectively within regions.

Future needs assessments would be better developed using an independent format that may capture all related needs. Under Section Four, Opportunities linked to service planning may be premature to include as these require consultation, service planning and are often related to available resource allocation.

The opportunity for PHNs to contribute to the new DoH PHN performance framework will support improvements in identifying appropriate formats, data sets and time lines. Additionally 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) or capability (appropriate skills) to deliver these services. The response to identify such needs is generally through 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 outcomes rather than outputs, in the short to medium term.

Additional comments or feedback

Additional resources on the PHN website to support future needs assessment may include more current data sets that can be drilled down to regional and postcode 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.

An extended interval between the submission of needs assessments of greater than 12 months and a similarly greater interval between identification of needs and the development of opportunities to address needs that can be incorporated into planning are required. This will also allow for 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 template does not contain a summary tool, index, table of meanings /descriptions and abbreviations.

We note that this report is placed on the PHN website for general public access and suggest that publication of the needs assessment in this format is not conducive to easy reading and communicating outcomes. The document as it stands, continues to require transcribing into a more publishable format for communication to the community and health professionals as well a range of summary reports.

Section 2 – Outcomes of the health needs analysis

CHRONIC AND PREVENTABLE CONDITIONS

Outcomes of the health needs analysis – Priority Theme: <i>Chronic and Preventable Conditions</i>		
Identified Need	Key Issue	Description of Evidence
Diabetes		
Diabetes prevalence	High and increasing prevalence of diabetes in the NBM region as measured across the community.	<p>The estimated prevalence of diabetes among persons aged 16 years and over increased overall in the NBM region from 7.6% in 2012 to 9.6% in 2016. The estimated prevalence of diabetes in NSW also increased during this timeframe from 8.4% in 2012 to 8.9% in 2016.</p> <p><i>Health Statistics NSW online portal – diabetes prevalence in adults: NBMLHD and all NSW LHDs.</i></p> <p>85% of people with diabetes had two or more chronic diseases. The reason for this is that people with diabetes tend to be older and the likelihood of having multiple chronic diseases increases with age. <i>AIHW Australia's Health 2016.</i></p>
	Lithgow and Penrith LGAs have the highest prevalence of diabetes. Blue Mountains and Hawkesbury are below the state average.	<p>National Diabetes Services Scheme (NDSS) is a voluntary scheme that people with medical practitioner or nurse diagnosed diabetes can enroll in. NDSS coverage of the population with diagnosed diabetes is about 80-90%.</p> <p>Smaller area data indicates differences in prevalence of diabetes within the region. Registrations for NDSS shows that compared to the region average of 5.5%: Lithgow is highest</p>

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*

		<p>at 6.6%, followed by Penrith at 6.2%. Blue Mountains 4.4% and Hawkesbury 4.7% LGAs report less than the total for the region.</p> <p><i>National Diabetes Service Scheme – Diabetes map by Nepean Blue Mountains PHN and LGAs as at 16 October 2017: https://www.ndss.com.au/diabetes-map</i></p>
<p>Hospitalisations for diabetes complications</p>	<p>Higher rate of hospitalisations for diabetes complications in Aboriginal compared to non-Aboriginal persons</p> <p>Higher rate of hospitalisations for diabetes complications than in NSW for some local areas in NBM region</p>	<p>In 2014-15, there were 43,737 hospitalisations for diabetes complications in Australia, equivalent to 173 hospitalisations per 100,000 persons. The rate of hospitalisations for diabetes complications in NSW was slightly lower at 141 per 100,000 persons. The rate for Aboriginal and Torres Strait Islander Australians (668 per 100,000 people) was 4.1 times as high as other Australians (163 per 100,000 people). Rates were higher among Aboriginal and Torres Strait Islander Australians than other Australians in all states and territories.</p> <p>The number and rate of hospitalisations for diabetes complications across SA3 local areas within the NBM region varied across areas. The age and sex-standardised rate of hospitalisations for diabetes complications per 100,000 persons in order from highest to lowest was: 175 in Lithgow-Mudgee; 167 in St Marys; 166 in Hawkesbury; 143 in Richmond-Windsor; 138 in Penrith; and 58 in Blue Mountains.</p> <p><i>Australian Atlas of Healthcare Variation 2017: Diabetes complications</i></p>
<p>General practice systems</p>	<p>Primary care reporting of diabetes for the NBM region is likely to be significantly underreported due to data quality issues.</p>	<p>Assessment of diabetes registers for 58 general practices within the region that are participating in data quality improvement activities indicate that approximately 2.08% of patients with diabetes are not accounted for in participating practice diabetes registers.</p> <p>Analysis of PENCat aggregated de-identified data extracted from General Practices participating in data quality improvement (N=53 or 47% of all computerised general practices) indicates that the diabetes registers included 5.8% of all patients identified in the practice populations as diagnosed with diabetes. An additional 2.08% of patients within practice clinical</p>

Outcomes of the health needs analysis – Priority Theme: *Chronic and Preventable Conditions*

		<p>software were indicated as having diabetes, due to the types of medications those patients were receiving but not appropriately coded and therefore captured on their diabetes register. Of the 2.08% of patients, 49.4% were likely to have diabetes while a further 28.5% were possibly diabetic.</p> <p><i>NBMML: Primary Health Care Support Program – Diabetes Prevention and Management Activities 2017</i></p>
<p>Diabetes MBS</p>	<p>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).</p>	<p>Uptake of the MBS 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.</p> <p>NBM MBS data for FY 2015/16 indicates 3,766 diabetes annual cycles of care were completed by 271 practitioners. 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 <i>National Diabetes Services Scheme</i> were managed through a diabetes annual cycle of care through primary care. In Australia in the 12 months to 30 June 2017, 396,460 people (32% of all people with diabetes; 24% of NDSS registrants with Type 2 diabetes) registered with the NDSS required insulin therapy.</p> <p><i>Department of Human Services Medicare Local Statistics Reports:</i> http://medicarestatistics.humanservices.gov.au/statistics/med_locals.jsp <i>NBMML 2013 Report: Primary Health Care Support Program – NBMML support with Diabetes Prevention and Management in Primary Health Care</i> <i>National Diabetes Service Scheme – Data Snapshot – Insulin Therapy (June 2017):</i> https://www.ndss.com.au/data-snapshots</p>

Cardiovascular Disease

Cardiovascular Disease prevalence

Highest rates of death for cardiovascular disease compared to 8 metropolitan NSW LHDs.

Higher than average hospital admissions due to heart disease in the Lithgow LGA

In 2011, cardiovascular diseases accounted for 15% of the total disease burden in Australia. This was second to the disease burden for cancer.

AIHW – Australia’s Health 2016

Circulatory disease was the leading cause of death in females in the NBM region in 2015 and was the second leading cause of death in males. In 2014-15, there were 645 deaths at a rate of 174.9 per 100,000 persons. This was significantly higher than the death rate due to circulatory disease in NSW which was 155.7 per 100,000 persons. 2014-15 cardiovascular death rates were significantly higher for NBM males and females compared to the NSW population and highest among the eight metropolitan LHDs.

Health Statistics NSW online portal: Circulatory disease deaths, NBMPHN 2014-15

In 2013, admissions to hospital due to heart disease were variable across LGAs in the NBM region and was significantly higher in the Lithgow LGA compared to the national average.

Admissions due to heart disease per 10,000 persons were: 58.9 in Lithgow; 53.2 in Penrith; 39.6 in Hawkesbury and 34.7 in Blue Mountains.

Heart Foundation Australia – Australian heart maps [Accessed 16 October, 2017]:

<https://www.heartfoundation.org.au/for-professionals/heart-maps/australian-heart-maps>

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.

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Obesity and Overweight		
Obesity and Overweight prevalence	<p>30% of adults in the NBM region were reported to be obese and 31% of people were overweight in 2017. Rates of obesity in the NBM region are significantly higher than in NSW.</p> <p>Regional variability in obesity rates in NBM, with the highest rates of obesity in Lithgow and Penrith.</p>	<p>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).</p> <p>High body mass is estimated in a population by the number of persons with a body mass index (BMI) greater than 25 kg/m², with the degree of risk increasing exponentially above this value.</p> <p>Overweight and obesity significantly contributes to the burden of disease experienced by NBM residents. In 2011, the burden of disease attributable to overweight and obesity in NBM was: cardiovascular diseases (38%), cancers (19.3%), musculoskeletal conditions (16.7%) and diabetes (17.2%).</p> <p>For NBM region:</p> <p>The percentage of adults aged 18 years and older reported to be overweight or obese in 2017 was 61.3% (31.1% overweight, 30.2% obese). This compares to a similar prevalence of overweight (31.9%) but significantly higher rate of obesity (21.4%) compared with NSW. In the 2-17 years age group, 24.6% of children in 2017 were overweight (16.6%) or obese (8.0%).</p> <p>There is some regional variability obesity rates in NBM. In 2014-15, the rate of obesity was significantly higher in the Penrith (32.8), Hawkesbury (30.5) and Lithgow (38.2) compared to NSW (28.2).</p> <p>Historical trends for the NBM region show a faster increase in obesity prevalence. Among NBM males aged 16 years and older, obesity increased from 16.6% in 2002 to 28.3% in 2016; an annual increase of 3.88% compared with the 2.7% average increase per year in NSW males. Among NBM females aged 16 years and older, obesity increased from 17.5% in 2002 to 31.2%.</p>

Cardiovascular Disease	
<p>Increasing rate of obesity prevalence in the NBM region, and at a faster rate than in NSW.</p> <p>Projected future increases in the prevalence of obesity and severe obesity in the NBM population.</p> <p>High body mass contributed to 5.8% of NBM deaths.</p> <p>8 out of 10 adults have one or more risk factor for obesity in the NBM region</p>	<p>in 2016; an average annual increase of 4.22% compared with the 2.7% average increase per year in NSW females.</p> <p>The prevalence of obesity and severe obesity in the NBM population is projected to increase. If obesity rates remain steady, in the NBM population by 2036 will include:</p> <ul style="list-style-type: none"> • 2.7% of children aged 2-15 years are projected to be severely obese • 42.5% of persons aged 16 years and older are projected to be obese • 17.5% of persons are projected to be severely obese <p>High body mass contributed to 5.8% of NBM deaths in 2013. Deaths attributable to high body mass were not significantly different to death rates in NSW. Hawkesbury LGA had a significantly higher rate of hospitalisations attributable to high body mass in 2013/15 compared to NSW.</p> <p>Males had higher proportions of overweight and obesity than females in every age group over 16 years for 2016. The prevalence of overweight and obesity increases in the NBM population with age until the 55-64 year age group.</p> <p>The prevalence of people with one or more risk factor for obesity is high in the NBM region. In 2014-15, 8 out of 10 people aged 18 years and older had one or more risk factors for obesity. Both males (80.6 per 100 population) and females (82.8) had significantly higher rates compared with NSW. The highest rates of risk factors were in the Penrith and Lithgow LGAs. Of these, Penrith had a significantly higher proportion of the population who were physically inactive, and who had an increased waist circumference (females) compared to NSW.</p> <p><i>NBMLHD Epidemiological Profile: Overweight and obesity in Nepean Blue Mountains Local Health District Population 2017.</i></p>
Respiratory disease	

Cardiovascular Disease		
Respiratory disease prevalence	Respiratory disease was the fourth leading cause of death the NBM population in 2010-14.	<p>The average number of deaths due to respiratory disease per year for 2013-15 was 104 for males and 107 for females. The population rate of respiratory disease deaths in NBM region (58.4 per 100,000 persons) was higher than in NSW (46.8 per 100,000 persons). <i>Epidemiological Profile of Local Government Areas populations in NBMLHD 2017</i></p> <p>In 2015-16, respiratory disease accounted for 4.9% of hospitalisations and an average of 7,014 hospitalisations per year. Male respiratory hospitalisations was significantly higher than the female rate at 1,977 compared to 1,749 per 100,000. Male hospitalisations rates for NBM were the 2nd highest among the NSW metropolitan health districts, after South Western Sydney. Female hospitalisations rates for NBM were the highest among the NSW metropolitan health districts. <i>Health Statistics NSW online portal: Respiratory diseases hospitalisations by Primary Health Network, NSW 2015-16</i></p>
Asthma prevalence	High prevalence of asthma compared to NSW metropolitan health regions for children and adults	<p>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 2014/15 asthma was one of the most common chronic health conditions among children, affecting 479,000 children aged 0-14 (11%). <i>AIHW Australia's Health 2016</i></p> <p>For the 2-15 year old group in 2015-16, prevalence of current asthma in the NBM region was the highest among the NSW metropolitan local health districts, at 12.8% of the population age group. For people 16 years and over, the prevalence of current asthma was 11.3% in 2016 and similarly highest among the NSW metropolitan local health districts. Both age groups did not have significantly different prevalence compared to the NSW population due to a higher prevalence of asthma in non-metropolitan regions. <i>Health Statistics NSW online portal: Asthma prevalence in children and adults by Primary Health Network, NSW 2015-16</i></p>

Cardiovascular Disease		
		<p>The NBM rate of hospitalisations due to asthma for all ages remained similar between 2011-12 and 2015-16, being 197.2 in 2011-12 and 192.2 in 2015-16 per 100,000 population respectively.</p> <p><i>Health Statistics NSW online portal: Asthma hospitalisations, NBMPHN 2001-02 to 2015-16</i></p> <p>General Practice uptake of the Asthma Service Incentive program for completion of the asthma cycle of care were too low for publication (2011-2016. <i>Medicare Statistics Dept of Human Services</i>)</p> <p>MBS NBM Medicare Local data, 2014-15</p>
Respiratory disease deaths	Significantly higher rate of respiratory disease deaths in males and females compared to NSW	<p>Respiratory diseases were the third leading cause of death in the NBM population in 2015 and accounted for 9.7% of deaths in 2013. The NBM male respiratory death rate (69.7 deaths per 100,000 persons) was significantly higher than the NBM female respiratory death rate (51.0 deaths per 100,000 persons) in 2013-15. In addition, the NBM respiratory death rate for males and females was significantly higher than for NSW.</p> <p><i>Health Statistics NSW online portal: Respiratory disease deaths total, NBMPHN 2001-03 to 2013-15</i></p>
COPD prevalence	COPD is the leading cause of potentially preventable hospitalisations	<p>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.</p> <p>90% of people with COPD had two or more chronic diseases <i>AIHW Australia's Health 2016</i></p>

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The reason for this is because people with COPD tend to be older and the likelihood of having multiple chronic diseases increases with age. *AIHW Australia's Health 2016*

COPD was the 5th leading underlying cause of death in Australia in 2013 or 4.4% of all deaths. *AIHW Australia's Health 2016*

COPD was the leading cause of potentially preventable hospitalisations in the NBM region in 2015/16. Persons hospitalised due to COPD had a 6.0 day average length of stay in 2015/16. *AIHW – MyHealthyCommunities: Potentially preventable hospitalisations by PHN area, 2015-16 (<http://www.myhealthycommunities.gov.au/interactive/potentially-preventable-hospitalisations>)*

Epidemiological Profile of Local Government Areas populations in NBMLHD 2017

Cardiovascular Disease		
Hospitalisations due to respiratory disease	High rates of hospitalisations due to respiratory disease in most NBM LGAs compared to NSW	<p>Penrith and Hawkesbury LGAs in NBM region both had higher rates of hospitalisations due to respiratory disease than NSW in 2014/15, including:</p> <ul style="list-style-type: none"> • Chronic and Obstructive Pulmonary Disease • Influenza and pneumonia • Asthma <p>Lithgow LGA also had a significantly higher rate of hospitalisations due to influenza and pneumonia compared to NSW</p> <p><i>Epidemiological Profile of Local Government Areas populations in NBMLHD 2017</i></p>
Influenza And Pneumonia		
Influenza And Pneumonia prevalence	Highest hospitalisation rate compared to metropolitan regions in NSW	<p>The NBM 2015-16 rates of hospitalisation for influenza and pneumonia for males and females were the highest among metropolitan regions in NSW, but were not significantly higher than the NSW average due to higher rates in regional PHNs. Male rates were 404.4 and female rates 338.3 per 100,000.</p> <p><i>Health Statistics NSW online portal: Influenza and pneumonia hospitalisations by PHN, 2015-16</i></p> <p>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</p>

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	Variation in anti-microbial prescribing rates for across the region.	<p>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.</p> <p>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.</p> <p>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.</p> <p><i>Australian Atlas of Healthcare Variation, November 2015.</i></p>
Chronic Pain		
Chronic Pain prevalence	Prevalence of chronic pain	<p>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.</p> <p>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.</p> <p><i>NSW Ministry of Health Pain Management Taskforce Report.</i></p>

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	<p>High cost of chronic pain to the economy</p> <p>Hip and knee replacement procedure hospitalisation rates of NBMLHD males and females hospitalisations were significantly higher than NSW rates with NBMLHD females having the highest rate among the 15 NSW LHDs</p> <p>Variation in prescribing of opioids across NBM region.</p>	<p>The cost of chronic pain to the Australian economy is estimated at \$34b per annum. <i>The high price of pain. 2007</i></p> <p>Hip and knee replacement procedure hospitalisation rates of NBMLHD males and females in 2013/14 (353.9 and 470.7 hospitalisations per 100,000 population) were significantly higher than NSW males and females. NBMLHD females had the highest rate among the 15 NSW LHDs. <i>Epidemiological Profile of Local Government Areas populations in NBMLHD 2017</i></p> <p>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.</p> <p>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.</p> <p>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. <i>Australian Atlas of Healthcare Variation, November 2015.</i></p>
Potentially Preventable Hospitalisations (PPH)		
PPH Prevalence	Potentially high levels of preventable levels of hospitalisations for COPD and	Preliminary analysis of 2015-16 data indicates the overall NBM region has relatively low rates of total Potentially Preventable Hospitalisations (PPH) (2,452 per 100,000) compared to other

Cardiovascular Disease

infections with five top presentation due to Chronic obstructive pulmonary disease, Kidney and urinary tract infections, Acute dental conditions, Acute cellulitis and Congestive heart failure

PPH due to COPD in the NBM region was the highest among metropolitan regions in NSW

Australian PHNs (2,822 per 100,000). COPD is one possible exception to this, based on preliminary analysis.

PPH due to COPD in the NBM region was the highest among metropolitan regions in NSW, at a rate of 308 per 100,000. Analysis of PPH rates due to COPD by SA3 location highlight variation across the region. Highest PPH rates were in Hawkesbury (467), Richmond-Windsor (433) and St Marys (402) per 100,000. In addition, average length of stay in hospital due to COPD was significantly higher in the Hawkesbury region, with an average length of stay at 7.8 days. This compares to lower average length of stay in Penrith (6.2 days), St Marys (5.2 days), Blue Mountains (5.0 days) and Lithgow-Mudgee (4.8 days). Further analysis is needed to identify possible links between admissions for COPD and chronic conditions such as diabetes.

AIHW – MyHealthyCommunities: Potentially preventable hospitalisations by PHN area, 2015-16 (<http://www.myhealthycommunities.gov.au/interactive/potentially-preventable-hospitalisations>)

The eight common chronic diseases –mental health, asthma, cardiovascular disease, arthritis, cancer, COPD, diabetes, back pain and problems were associated with more than 1 in 3 (39%) of Potentially Preventable Hospitalisations in 2013-14. *AIHW Australia’s Health 2016*

Data also indicates that older persons and other vulnerable groups including CALD and Aboriginal populations may be over represented among PPH. There are also indications that chronic disease and increased use of medications are predictors for PPH.

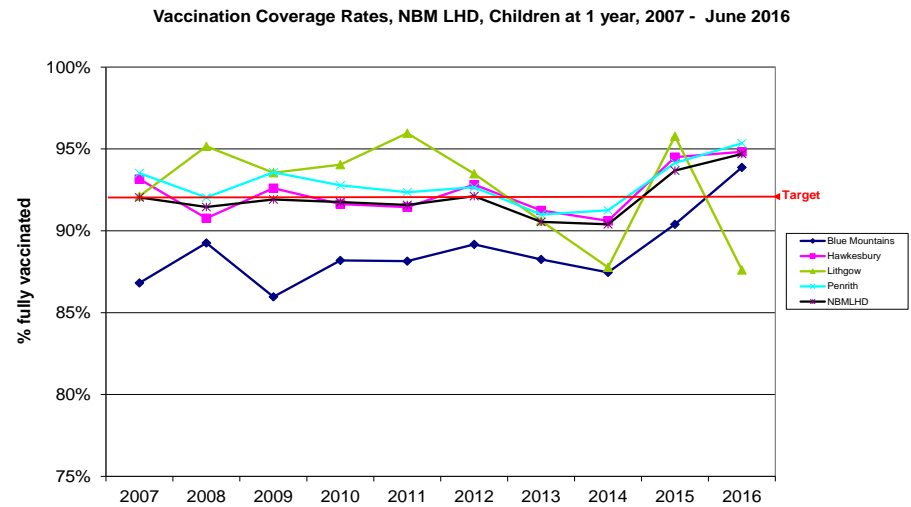
National Health Performance Authority, Potentially Preventable Hospitalisations by condition, NBM PHN, 2014-15.

In Australia, the PPH rate due to COPD for Aboriginal and Torres Strait Islander Australians (1,146 per 100,000 people) was 5 times as high as the rate for other Australians (230 per 100,000 people). Rates were higher among Aboriginal and Torres Strait Islander Australians than other Australians in all states and territories.

Cardiovascular Disease		
		<p><i>Australian Atlas of Healthcare Variation 2017: Chapter 1.1 Potentially preventable hospitalisations, COPD</i></p> <p>The top five PPHs in 2015-16 for NBM region were: Chronic obstructive pulmonary disease (1,197 hospitalisations), Kidney and urinary tract infections (1,036 hospitalisations), Acute dental conditions (1,033 hospitalisations), Acute cellulitis (903 hospitalisations), and Congestive heart failure (774 hospitalisations).</p> <p><i>AIHW – MyHealthyCommunities: Potentially preventable hospitalisations by PHN area, 2015-16</i></p>
	Potentially preventable infections, especially among older persons and people with chronic conditions.	<p>Preliminary data analysis indicates the importance of targeted strategies to reduce infections that lead to hospitalisation, however further analysis of detailed PPH data is needed.</p> <p>Analysis will focus on urinary traction infections including pyelonephritis especially in older persons and for people with diabetes.</p>
Childhood Immunisation		
Childhood Immunisation Prevalence	Above average childhood immunisation rates in NBM compared to NSW	<p>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.</p> <p>Current performance for the NBM region are generally above average for the state, as below. The exception is for immunization of Aboriginal children at 1 year of age.</p> <ul style="list-style-type: none"> • 1 year of age at June 2016 non-Aboriginal children was 95.1 % (above NSW average 93.3) • 1 year of age at June 2016 Aboriginal children 91.5% % (below NSW average 92.1)

Cardiovascular Disease		
		<ul style="list-style-type: none"> • 2 years of age at June 2016 non-Aboriginal children was 92.4% (above NSW Average 90.7) • 2 years of age at June 2016 Aboriginal children 92.7%% (above NSW average 90.7) • 5 years of age at June 2016 non-Aboriginal children 95.1 % % (above NSW average 93.5) • 5 years of age at June 2016 Aboriginal children 100% % (above NSW aver 94.6) <p><i>Australian Childhood Immunisation Register - ACIR</i></p>
	Variation in immunisation rates across LGAs and for some postcode groups.	<p>Blue Mountains LGA has consistently under performed in childhood immunization rates compared to the other LGAs, across all age groups.</p> <p>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.</p> <p><i>Australian Childhood Immunisation Register</i></p> <p><i>Trends over the past 10 years for immunisation rates for NBM region provided by the NBM Public Health Unit are illustrated below.</i></p>

Cardiovascular Disease



The most recent statistics for immunisation rates across the region are tabled below. These statistics were sourced from the NBM Public Health Unit.

LGA by age group (Age calculated as at 30 June 2016) Date of processing <= 30 September 2016

	12-<15 mths	24-<27 mths	60-<63 mths
Blue Mountains	94%	90%	95%
Hawkesbury	93%	92%	95%
Lithgow	90%	96%	96%
Penrith	95%	93%	96%
Total	94%	92%	96%

NB: the statistics above reflect children who were vaccinated by the due date.

There is anecdotal evidence that suggests even lower levels for Blackheath than Katoomba are possible.
NBMLHD, Public Health Unit

Cardiovascular Disease		
Human Papillomavirus Vaccination among Adolescents	Variation in uptake of HPV vaccination among adolescent males and females across the NBM region	<p>Registrations on the National HPV Vaccination Program Register in 2016 show that nearly 8 out of 10 NBMLHD female adolescents and 7 out of 10 NBMLHD male adolescents aged 13 to 14 years received 3 doses of human papillomavirus vaccine by 2016.</p> <p>However, uptake of HPV vaccination amongst adolescent males and females was variable across the NBM region. Specifically:</p> <ul style="list-style-type: none"> • Penrith LGA (78% of female target group) and Blue Mountains LGA (76%), had significantly lower rates of HPV vaccination of females than NSW (83%). • Blue Mountains LGA (62%) and Hawkesbury LGA (65%) had significantly lower rates of HPV vaccination of males than NSW (70%). • Blue Mountains male immunisation rate was ranked in the lowest 12% among NSW LGAs. <p><i>Epidemiological Profile of Local Government Areas populations in NBMLHD 2017</i></p>

OLDER PERSONS

Outcomes of the health needs analysis – Priority Theme: <i>Older Persons</i>		
Identified Need	Key Issue	Description of Evidence
Ageing Population	The region's population is projected to increase by 27% (92,600 persons) by 2031, impacting demand on primary care services for the ageing population.	<p>The NBM region population is increasing. The region's population is projected to increase by 27% by 2031. This represents an additional 92,600 persons by 2031 and total population of 441,000 persons. This growth rate is slightly lower compared to the NSW state average, of 30% by 2031.</p> <p>As at November 2017, the GP to population ratio in the NBM region was 118.0 GPs per 100,000 persons. In order to maintain the same GP to population ratio by the year 2031, an additional 74 GPs (total of 520 GPs) will be required to practice in the NBM region within this timeframe.</p> <p><i>Data obtained from NBMPHN CRM database, as at 1 November 2017</i></p>

Outcomes of the health needs analysis – Priority Theme: *Older Persons*

		<p>The projected rate of population growth is variable between LGAs and between age groups in the NBM region. Penrith LGA is projected to have the highest rate of growth at 37% to 2031, higher than the NSW state average. From 2011-2031, the 85+ year age group will experience the highest growth of 151% (4,700 to 11,800 persons) followed by the 70-84 years age group of 146% (21,700 to 53,300 persons).</p> <p>The 85+ and 70-84 year age groups will observe the most rapid increases in population numbers across all LGAs in NBM region.</p> <p><i>Epidemiological Profile of Local Government Areas populations in Nepean Blue Mountains Local Health District 2017</i></p>
<p>Coordination of Services</p>	<p>Increasing pressure on General Practice to coordinate services for older persons.</p> <p>Increasing prevalence of chronic conditions among older persons.</p>	<p>The average cost to treat patients aged 75 yrs + in NBMLHD was \$9,544 per patient in 2011/12. This was 2.4% higher than the NSW average of \$9,329 per patient. <i>Health Economics and Analysis team, ACI, January 2014.</i></p> <p>Nearly all patients aged 65+ at a GP consultation had one or more diagnosed chronic condition. In the Australian population, 90% of this older group had a least one chronic condition, the majority (57%) had three or more (multi-morbidity) and almost 10% had seven or more diagnosed chronic conditions. For example, both hypertension and osteoarthritis had already been diagnosed in more than 50% of older patients visiting a GP <i>BEACH, General Practice Activity in Australia 2015-16,</i></p> <p>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%.</p> <p><i>BEACH, University of Sydney, Care of Older People in Australian General Practice 2014-15.</i> http://sydney.edu.au/medicine/fmrc/publications/BEACH-feature-2015.pdf</p>

Outcomes of the health needs analysis – Priority Theme: *Older Persons*

	<p>Falls are a leading cause of injury and hospitalisations among older persons.</p> <p>High number of Ambulance NSW calls due to falls, in particular for persons in older age groups</p>	<p>The prevention and 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 medications is a key factor in preventing hospitalisation. <i>2015-2016 NBMML Needs Assessment</i></p> <p>In the NBM region the major causes of injury and poisoning were: suicide, motor vehicle accidents, falls and unintentional poisoning. Falls were the leading cause of injury and poisoning hospitalisations in 2014/15 in the NBMLHD population, comprising 38.2% of all injury and poisoning hospitalisations. Almost one in four (23.1%) of people aged 65 years and over were reported to have at least one fall per year in 2013. In 2014/15, the hospitalisation rate in the NBM population (3,135 per 100,000 persons) where the fall was the principal diagnosis was significantly higher than the NSW rate (3,044 per 100,000 persons). <i>NBMLHD Epidemiological Profile: Injury and poisoning deaths and hospitalisations. 2014/15</i></p> <p>The most common problem to which Ambulance NSW paramedics were called in 2014 were falls, with 13-14% of calls to patients who have fallen. In 2014, 3,115 recorded (approximately only 75% of activity due to electronic medical records available) Ambulance NSW calls were due to falls in Western Sydney Zone 2 (Nepean Blue Mountains). Falls cases in NSW increased dramatically with age from the age 65-69 years. The highest proportion of Ambulance NSW falls cases were in the 85-89 year age group, in females (57.0% of falls patients) and the highest falls incidence rate was in the 95-99 and 100+ age groups. <i>NSW Ambulance Falls Patients: Evaluation of 2014 Activity. Ambulance Service of NSW, 2016.</i></p> <p>The prevalence of dementia in the NBM population is expected to increase, due to the increase in dementia-risk with increased age and the increasing proportion of the NBM region in 65 and higher age groups. The prevalence of dementia in the NBM population is projected to increase from 1.0% in 2011 to 1.9% in 2031, with the highest prevalence in the Blue Mountains (2.3%) and Lithgow (3.0%) LGAs. <i>NBMLHD Epidemiological Profile: Ageing population. 2017</i></p>
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Outcomes of the health needs analysis – Priority Theme: *Older Persons*

	<p>Increasing prevalence of dementia in the NBM population, among older persons.</p> <p>High prevalence of dementia amongst Indigenous Australians</p>	<p>The prevalence of dementia amongst Indigenous Australians is almost five times the rate in the general Australian population. In addition, the Indigenous Australian population is beginning to age in a manner consistent with non-Indigenous populations in Australia. In line with these trends, it is expected that the prevalence of dementia among Indigenous persons, particularly older Indigenous persons is high in the NBM region.</p> <p><i>Ageing, Cognition and Dementia in Australian Aboriginal and Torres Strait Islander Peoples: A Life Cycle Approach, June 2010</i></p>
<p>Awareness of Services</p>	<p>Inadequate awareness of available support and services for older persons among primary care providers.</p> <p>Accessing and navigating an electronic platform of aged care service provision is problematic for those aged 85 yrs. and over</p>	<p>Access to services before crisis point and after hours support is impeded by lack of awareness among health professionals, carers and older people.</p> <p>Consumers have identified increasing social isolation as a major and increasing risk negatively impacting on older people.</p> <p>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.</p> <p>Highly proactive General Practitioners working in aged care in the NBM region have reported loss of their ability to directly liaise with and exchange information with ACAT teams regarding their older patients' care, with the introduction of the My Aged Care portal, a continuing trend over the last few years.</p> <p>Older persons particularly those 85 years and older frequently experience poor or limited access to and use of digital platforms that provide information, access to or assist navigation of health services.</p> <p><i>NBMPHN Aged Care Stakeholder Forum 27/8/15</i></p>
<p>Aged Care</p>	<p>Issue of premature placement of older persons into residential aged care facilities and lack of appropriate aged based care services to support independent living at home</p>	<p>An emerging issue across NSW is the premature placement of older persons in residential aged care facilities (RACFs). This is occurring due to a lack of community based aged care places to support people to remain living independently at home. The result is lengthy delays on waiting lists for home based service provision. This in turn leads to carer/ family stress and older people are being prematurely placed into RACFs.</p> <p><i>Meetings of the Aged Care Liaison Group NSW, 2017</i></p>

Outcomes of the health needs analysis – Priority Theme: <i>Older Persons</i>		
Home Care	Increasing support needs for older persons to be cared for at home.	<p>Social isolation among older persons is an increasing problem.</p> <p>Caring Care for the cognitively impaired among older people is inadequate to meet present and increasing needs for home based care.</p> <p>Support for independent living at home is inadequate to meet present and increasing needs in primary care services.</p> <p>Navigating the new My Aged Care portal, for consumers and GPs, to navigate care needs has been identified as problematic.</p> <p><i>NBMPHN Aged Care Stakeholder Forum 27/8/15</i></p>

PALLIATIVE AND END OF LIFE CARE

Outcomes of the health needs analysis – Priority Theme: <i>Older Persons</i>		
Identified Need	Key Issue	Description of Evidence
End of Life Care	Increase in projected need for end of life care in the NBM region	<p>The population in Nepean Blue Mountains region was just over 378,000 in 2016 and is estimated to grow to 441,000 by 2031. Of significance is the population under the age of 65 is expected to grow by under 2% over the next 15 years, while the population growth of those over 85 is expected to grow by over 12%.</p> <p>Deaths per year in the NBM region is expected to increase from 1,900 in 2015 to 1,969 by 2030. Estimates of the need for end of life care (EoLC), based upon modelling of mortality data and underlying cause of death codes (ICD10 codes) predicts that the number of individuals in the NBM region needing EoLC will increase from 1,370 in 2015 to 1,420 in 2030.</p> <p><i>Caring for People in Their Last Year of Life – Report for Wentworth Healthcare Limited by Synergia, November 2017</i></p>

Outcomes of the health needs analysis – Priority Theme: *Older Persons*

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CANCER CARE

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*

Identified Need	Key Issue	Description of Evidence
Prevalence	758 preventable cancer deaths projected for 2021	<p>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.</p> <p>The NSW Cancer Institute performance snapshot for the NBM region lists the following indicators:</p> <ul style="list-style-type: none"> - 11.6% smoking prevalence in adults, 2015 - 5.4% smoking prevalence in young person's 12 to 17 years, 2014 - 12.7% proportion of women who smoked during pregnancy, 2014 - 12.9% prevalence of smoking in pregnancy for non-Aboriginal women, 2013 - 37.2% proportion of Aboriginal women who smoked during pregnancy, 2014 - 36.6% annual bowel screening participation rate, 2015-16 - 52.2% biennial cervical screening participation rate for women aged 20-69, 2015-16 - 48.9% biennial breast screening participation rates for women aged 50-74, 2015-16 - 28.5% proportion of NSW women aged 50-69 never screened by BreastScreen NSW, 2014-15 - 29.8% biennial breast screening participation rate for Aboriginal women, 2014-15 - 40.7% biennial breast screening participation rate for CALD women, 2014-15 <p>The number of preventable cancer deaths for the NBM regions is expected to increase alongside population increases. In 2016, 663 preventable cancer deaths were predicted for the region. This figure is projected to rise to 758 in 2021.</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p>

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*

	<p>Highest proportion of women who smoked during pregnancy \or all regions in NSW with Aboriginal women, representing a very high risk group.</p>	<p><i>Australian Institute of Health and Welfare: Cancer Screening in Australia by small geographic areas 2015-16</i></p> <p>82% of people with cancer had two or more chronic diseases. The reason for this is because people with cancer tend to be older and the likelihood of having multiple chronic diseases increases with age. <i>AIHW Australia’s Health 2016</i></p> <p>The impact of smoking cessation strategies in the region has been demonstrated by a reduction in smoking prevalence from 22.5% in 2005 to 11.6% in 2015. While the region has the lowest rates for the proportion of people who have never smoked at 45.6% , it also has the highest proportion of women who smoked during pregnancy \or all regions in NSW at 14.3%.</p> <p>37.2% of Aboriginal women smoke during pregnancy compared with 12.9% for non-Aboriginal women, representing a very high risk group and priority for smoking cessation strategies.</p> <p>Regional priorities for tobacco control are:</p> <ul style="list-style-type: none"> - Accessing opportunities for brief interventions to support smoking cessation - Identifying teachable ‘moments’ for pregnant women or women planning to get pregnant who smoke with a priority on interventions involving Aboriginal women. <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p>
<p>Breast Screening</p>		
<p>Breast Screening rates</p>	<p>Lower than state average screening rates.</p> <p>Lithgow and Penrith LGA report the lowest rates within the region.</p>	<p>Breast screening rates have been relatively stable in the NBM region with increases in the number of women screened slightly outstripping population growth. NBM PHN region latest results show an increase in breast screening rates from 44.8% in 2013-14 to 48.9% in 2015-16. Across NSW the state average increased from 50.9% to 53.0%. These results now place the NBM PHN 8/10 across the NSW PHNs, previously 9/10. St Marys and Penrith SA3 local</p>

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*

		<p>areas continue to have the lowest screening rates for the region, however, screening rates for these areas are increasing (St Marys 46.6% and Penrith 48.8%).</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p><i>Australian Institute of Health and Welfare: Cancer Screening in Australia by small geographic areas 2015-16</i></p>
- Breast Screening In CALD Women	<p>CALD communities in the region report lower than state average rates, especially Blue Mountains and Penrith LGAs</p>	<p>In 2014-15, CALD communities in the Blue Mountains, Penrith and Hawkesbury LGAs report lower than state averages for CALD communities. The Blue Mountains LGA at 34.6% and Penrith LGA at 42.0% for CALD women aged 50-69 compares poorly to the state average of 46.1%.</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p><i>BreastScreen NSW – BreastScreen NSW Information System and NSW Ministry of Health (SAPHARI) as at July 2016</i></p>
- Breast Screening In Aboriginal Women	<p>Screening rates for Aboriginal women are below the state average.</p>	<p>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 30.9% compared to 40.2%. The rates across LGAs varies with Lithgow reporting the lowest at 13.9%. Hawkesbury and Blue Mountains LGAs rates of 35.4% and 38.1% is higher than the average for the region at 30.9%.</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p><i>BreastScreen NSW – BreastScreen NSW Information System and NSW Ministry of Health (SAPHARI) as at July 2016</i></p>
- Women who have never attended a BreastScreen	<p>More women have never attended a BreastScreen</p>	<p>While the proportion of women who have screened but not in the last 24 months has decreased from 31.0% in 2012 to 26.6% in 2015, the proportion of women who have never attended a BreastScreen has increased from 25.7% to 28.5% during this period. Further</p>

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*

		<p>information is needed to explore potential barriers or disincentives to breast screening in particular among women who have never attended a BreastScreen.</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p>
<p>Cervical Screening</p>		
<p>Cervical Screening rates</p>	<p>Declining cervical screening participation rates in keeping with the NSW state average trend.</p>	<p>Latest figures from the Cancer Institute NSW and AIHW show a decline in cervical screening rates from 54.5% in 2013-14 to 52.2% in 2015-16, with NSW state averages also declining from 57.7% to 55.4% in this period. NBM PHN ranking across NSW PHNs dropped from 7/10 to 8/10.</p> <p>St Marys and Penrith SA3 local areas had the lowest cervical screening rates with latest figures showing a further decline (Penrith 49.7% and St Marys 44.5%).</p> <p>There is no data available to show variations in cervical screening participation for CALD women or for Aboriginal women.</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p><i>Australian Institute of Health and Welfare: Cancer Screening in Australia by small geographic areas 2015-16</i></p>
<p>Bowel Screening</p>		
<p>Bowel Screening rates</p>	<p>Low rate of bowel cancer screening for the region.</p>	<p>Latest figures from the Cancer Institute NSW and AIHW show an increase in bowel screening rates for the NBM region from 31.2% to 33.3%. Similarly across NSW bowel screening rates increased from 32.8% in 2013-14 to 36.6% in 2015-16. The NBMPHN ranking against NSW PHN remains unchanged at 7/10.</p> <p>St Marys and Richmond-Windsor SA3 local areas had the lowest screening rates, at 30.8% and 33.3% respectively, There is no data available to show variations for CALD persons or for Aboriginal persons.</p>

Outcomes of the health needs analysis – Priority Theme: *Cancer Care*

		<p>The Cancer Institute NSW has identified bowel cancer screening as a priority tumour to work closely with the primary care sector. The Cancer Institute NSW and NBMLHD are currently collaborating to develop improved patient pathways and identification of best practice for bowel screening and surveillance.</p> <p><i>Cancer Institute NSW Report – Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p>
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ACCESS TO HEALTH SERVICES

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*

Identified Need	Key Issue	Description of Evidence
Limited access to services		
Difficulties with access	Difficulty accessing services.	<p>More than half of Australians aged 15 to 74 years had a level of health literacy that was inadequate. <i>Australia’s health, 2012</i></p> <p>Australians living in rural and remote areas tend to have lower life expectancy, higher rates of disease and injury, and poorer access to and use of health services than people living in major cities. <i>AHW Australia’s Health 2016</i></p> <p>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. <i>Epidemiological Profile of NBMLHD, 2014.</i></p> <p>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:</p>

Outcomes of the health needs analysis – Priority Theme: Access to Health Services

		<ul style="list-style-type: none"> - 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 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. <p><i>NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012</i></p>
Primary health communication		
Limited infrastructure	Inadequate access to secure communication platforms between primary health providers.	<p>Secure electronic platforms for the transfer of information and referrals between primary care providers, acute, community and secondary services is critical in facilitating communication of confidential patient information. This includes those who may be a part of the team care arrangements in the management of a patients care between general practitioner, allied health providers, and other service providers including diagnostic services, aged care facilities, community, Specialist and hospitals.</p> <p>The former NBM Medicare Local undertook extensive consultation with general practice and allied health professionals during 2014 to explore communication needs and mechanisms. 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 between general practice and allied health professionals through the web site, practice visits and CPD events. One important aspect of the study was</p>

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*

	<p>Continued meaningful use of My Health Record across the region to further develop information exchange between health care providers.</p>	<p>investigation of information technology infrastructure in primary care practices across the region. The findings indicated that information technology was widely utilised for email between professionals however electronic exchange of reports was much less largely because of the need for a secure platform. Increased multidisciplinary communication and connectivity, and the development and or strengthening of ‘smooth flowing’ electronic referral pathways would enhance referral and management of chronic conditions that support prevention of hospitalisation for chronic conditions such as diabetes.</p> <p><i>Outcome Solutions, Consultation with General Practice and Allied Health Professionals, 2014. NBMML Diabetes in Primary Care Report, August 2014.</i></p> <p>Since this survey, the My Health Record (MHR) opt-out trial has been conducted across the NBM region during 2016-17 resulting in a less than 2% opt out rate an 98% of the NBM population now having a secure electronic health record. The MHR enables sharing of an individual’s health record between primary care providers including pharmacy and hospitals. This includes an individual’s health summary uploaded by their GP, an individual’s advance care directive uploaded by the individual, and a discharge summary uploaded by the hospital.</p> <p>As one of the MHR trial sites, the NBM region now has 91 General Practices (of the 117 computerised Practices in the region) able to upload shared health summaries. In 2016-17, over 19,120 shared health summaries were uploaded by Practices in the NBM region, 1,413 discharge summaries were viewed and 3,248 shared health summaries have been viewed by others. In the same time period, pharmacies dispensed 291,772 prescriptions.</p> <p><i>Govdex spreadsheets issued by the Department of Health weekly, 2012-17.</i></p> <p>NBM is part of the expansion program for the National Opt-out MHR Program. NBMPHN has percentage increases targeted for the number of General Practices uploading and number of uploads per Practice. <i>Wentworth Health Limited contract with the Australian Digital Health Agency, November 2017.</i></p>
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Outcomes of the health needs analysis – Priority Theme: Access to Health Services

		<p>Diagnostic reports will soon be available as MHR enhancement progresses over the next 12 months. Progression of meaningful use by both primary and acute care including regularly uploading and viewing information will also continue.</p> <p>NBMPHN in partnership with Ernest & Young recently completed a strategic Digital Health Plan for the NBM region for the next 3-years, including a digital maturity review of primary care. Integrating primary and secondary care patient information in real-time remains an ongoing challenge in the NBM region.</p> <p><i>NBMPHN engagement with Ernest & Young, 2017</i></p>
Transport		
<p>Limited transport availability</p>	<p>NBM residents often have difficulty or are unable to travel for health care due to inadequate transport options.</p> <p>NBM residents, particularly persons living in the Hawkesbury or Lithgow LGA, persons from low socioeconomic backgrounds or those with poor mobility frequently experience difficulties accessing health care due to inadequate transport options.</p>	<p>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.</p> <p><i>NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012</i></p> <p>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.</p> <p>The Health Transport Initiative 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.</p>

Outcomes of the health needs analysis – Priority Theme: *Access to Health Services*

		<p>Research identified that 10,438 residents had reported 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. <i>NBMPHN Health Transport Initiative, 2015</i></p> <p>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</p> <p>Health consumers in the NBM cited the following specific issues and challenges experienced with accessing health transport across the region in 2017:</p> <ul style="list-style-type: none"> • Hawkesbury LGA - limited North-South transport options between Hawkesbury and Penrith (Penrith has a relatively higher concentration of specialist services) • Hawkesbury LGA – no direct trains into the city or to Westmead (to access Westmead hospital) • Lithgow LGA – high cost of transport due to long travel distance to Nepean Hospital and high cost of fares via the local private bus company • Lithgow LGA - to get to Lithgow station you have to pay twice due to Opal ticket rules where a bus trip does not count towards the cost of a fare due to rural classification • High relative cost of transport for persons from low socioeconomic backgrounds • Poor transport availability after-hours, e.g. 6am or after hours at night • High number of connections and travel-time required to get to destination • Public transport is often not an option due to illness or mobility limitations • Community transport operators frequently cancel services at short notice due to a lack of drivers
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Outcomes of the health needs analysis – Priority Theme: Access to Health Services

		<ul style="list-style-type: none"> Difficulties in accessing specialists appointments due to inability to find suitable transport <p><i>Health Transport Workshop consultation, NBMPHN and NBMLHD joint Community Advisory Committee meeting, 30 October 2017</i></p>
Health Workforce		
Workforce shortages	General practice workforce shortages.	<p>A large proportion of the NBM region is designated District Workforce Shortage (DWS) for 2017. 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 (i.e. Kurrajong Heights, Ebenezer, Bilpin, Colo, St Albans etc.) designated DWS that represent around 15% of the LGA.</p> <p><i>Department of Health: General Practice Workforce Statistics, 2013-14</i> <i>Department of Health, District Workforce Shortage, 2016.</i></p>
	High levels of attrition of general practice workforce due to aging of NBM workforce.	<p>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.</p> <p>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.</p> <p>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.</p> <p><i>NBMPHN Workforce Consultations 2015-16.</i></p>

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	Inadequate data to support regional planning for primary care workforce	<p>Primary care workforce data for NSW and the NBM region is not currently maintained by a 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. <i>NBMPHN Workforce Consultations 2015-16.</i></p> <p>Obtaining up-to-date regional workforce data via DoH's online data tabulation tool is problematic. Data is currently only available for the NBM region for 2013-2015. The Department of Health's Workforce section have advised NBMPHN that the 2016 data will be released in late 2017.</p>
After Hours General Practice Services		
After hours primary care	Inadequate after-hours primary care may lead to an inappropriate use of critical resources for services that are primarily designed to deal with emergency conditions.	<p>In 2012-13 AIHW estimated that 2.12 million presentations to emergency departments were avoidable, GP-type presentations. 63% of these occurred after hours.</p> <p>It was estimated that 5,100 people in NBMPHN region went to the ED instead of visiting a GP due to time of day/day of week, indicating access to after-hours GP services could reduce non-urgent ED presentations</p>
Coverage limited	The current environment of After Hours services being under review by DoH is	NBMPHN is supporting the continuation of medical deputising services currently operating across the Hawkesbury, Penrith and more recently the Blue Mountains LGAs. Evidence for demonstrating the need for After Hours services in the NBM region was demonstrated in the

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	<p>making the supply of reliable and efficient After Hours services scarce.</p>	<p>NBMPHN 2016 Needs Assessment submission. However there is no deputising service currently operating in the Lithgow LGA, where NBMPHN is supporting an extended hours GP practice.</p> <p>Since the commencement of the 2017-18 financial year, only 2 out of the possible 7 After Hours service providers in the NBM region have signed a funding Agreement with NBMPHN. Five of the possible providers are currently reviewing financial forecasts under the possible new MBS item regime for After Hours GP services.</p> <p>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.</p> <p>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. <i>NBMPHN Workforce Consultations 2015-16.</i></p>
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Populations with Special needs and Individuals at Risk of Poorer Health Outcomes

<p>Support and services for older people</p>	<p>Higher demands for GP services</p> <p>Higher demands for after-hours primary care by RACF residents</p>	<p>Of the 62,300 people aged 65 and plus in NBMPHN region, 55.1% had seen a GP for their own health in the last 12 months. 8% stated that they had needed to see a GP at least once in last 12 months but did not. (SDAC 2015)</p> <p>According to the report provided by the key MDS provider in lower Blue Mountains for the period of July-December 2016, 13.1% of their after-hours visits were to RACF residents and 13.2% were to older people (aged 65+) living in homes. The most common complaints of both cohorts were coughs, temperatures and cold and flu like symptoms, which accounted for 44.3% and 44.4% of the complaints respectively.</p>
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	<p>Potentially avoidable general practitioner (PAGP) type presentations by older persons: older patients are over-represented in emergency departments (ED), with many presenting for conditions that could potentially be managed in general practice</p>	<p>Mazza et al (2017) conducted a retrospective analysis of data comprising ED presentations by patients aged 70 years at public hospitals across metropolitan Melbourne from January 2008 to December 2012. This study found that potentially avoidable general practitioner (PAGP) type presentations, although declining, remain an important component of ED demand. Patients presented for a wide array of conditions during periods that may indicate difficulty accessing a GP.</p> <p><i>Mazza, D., Pearce, C., Joe, A., Turner, L.R., Brijnath, B., Browning, C., Shearer, M. & Lowthian, J. 2017, "Emergency department utilisation by older people in metropolitan Melbourne, 2008-2012: findings from the Reducing Older Patient", Australian Health Review,</i></p>
	<p>Inadequate support and lack of services for aged care and carers</p>	<p>Consumer forums conducted by the NBMML in each of the LGAs during 2012, indicated inadequate support and a lack of services for aged care and carers in all LGAs. The effects of increasing demand for these services due to the aging population were believed to be negatively impacting on access.</p> <p><i>NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012</i></p>
	<p>Transport issues</p>	<p>Approximately 24.2% of people aged 65 and older who travelled to a general practice needed assistance.</p>
	<p>Poor knowledge of available services</p>	<p>During NBMPHN Aged Care Stakeholder’s Forum 2015, it was identified that access to services before crisis point including after-hours support is impeded by a lack of awareness among health professionals, carers and older people. Further, 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 (<i>NBMPHN Aged Care Stakeholder’s Forum, 2015</i>)</p>

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<p>Support and services for people with disability</p>	<p>Unmet need for GP services</p> <p>Transport issues</p>	<p>It was estimated that there were 89,800 people living with disability in the NBMPHN region in 2015 (44k in Penrith LGA, 20.6k in Hawkesbury LGA, 14.4k in Lithgow LGA and 13.3k in Blue Mountains LGA).(SDAC 2015) Their need for GP services was 35 times more than people without disability. (SDAC 2015)</p> <p>However, 23.9% of them needed to see a GP at least once in last 12 months but did not. The top 5 reasons for that were 1) decided not to seek care, 2) too busy or no time (including work, personal, family responsibilities), 3) other, 4) waiting time too long or not available at time required, and 5) cost. (SDAC 2015)</p> <p>Approximately 27.8% of people with disability who travelled to general practice need assistance.</p>
<p>Health literacy</p>	<p>Low health literacy is a risk factor for poor health.</p>	<p>59% of Australians aged 15 to 74 years had a level of health literacy that was inadequate. <i>Australia's health, 2012</i> <i>ABS Health Literacy, Australia 2006</i></p> <p>Low health literacy 'can affect people's ability to do things like navigate the health system, understand medical instructions, and seek support from health professionals. This can increase the risk of people needing emergency care, being hospitalised, mismanaging their medication and not understanding their disease or condition. Low health literacy levels have been shown to impact the safety and quality of healthcare, and contribute to higher healthcare costs'- <i>Healthdirect, 2016</i></p>

CULTURAL AND DEMOGRAPHIC FACTORS INFLUENCING HEALTH STATUS

Outcomes of the health needs analysis – Priority Theme: <i>Cultural and Demographic Factors Influencing Health Status</i>		
Identified Need	Key Issue	Description of Evidence
Aboriginal Health		
Quality And Continuity Of Hospital Care Provided	<p>Left hospital against medical advice.</p> <p>Readmission within 28 days of discharge from hospital.</p>	<p>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.</p> <p>NBM Aboriginal residents had a higher proportion of hospitalisations (4.3%) where the patient left against medical advice, compared to all hospitalisations for non-Aboriginal residents (0.8%).</p> <p>NBM Aboriginal residents had a lower proportion of hospitalisations (7.5%) (6.1%) where the patient was re-admitted within 28 days, compared to all hospitalisations for non-Aboriginal residents of (6.8%).</p> <p><i>Epidemiological Profile of NBMLHD, 2016</i></p>
Access To Hospital Care	Inequitable access to optimal hospital care for Aboriginal people living in the region.	<p>Equitable access to optimal care is an indicator of public health system performance.</p> <p>2013-15 Coronary revascularization procedures. The Aboriginal population in NBM who were admitted to hospital for ischaemic heart disease had 20% lower access to angiography and 32% lower access to percutaneous coronary intervention than the non-Aboriginal population (Australian Health Ministers Advisory Council, 2015).</p> <p>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</p>

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		<p>population was 377 per 100,000. This was nearly half that of the non-Aboriginal population at 713 per 100,000.</p> <p>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 non-Aboriginal population of NBM.</p> <p>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. <i>Epidemiological Profile of NBMLHD, 2016 and 2017</i></p>
<p>Population</p>	<p>High proportion of Aboriginal people living in NBM region, compared to the proportion of the Aboriginal population in other metropolitan health districts.</p>	<p>According to the 2016 Census, in 2016 the population who identified as Aboriginal comprised 3.67% of the total population, representing 13,165 people. This compares to 2.5% of Aboriginal persons in NSW and 1.4% of Aboriginal persons in NSW major urban areas. As a proportion of the total population, NBM region reports the highest among the eight NSW metropolitan LHDs. <i>The Census of Population and Housing, 2016</i> <i>Epidemiological Profile of NBMLHD, 2016</i></p> <p>The number of Aboriginal residents in 2016 for the Penrith LGA was 7,741 or 3.9% of total population, Blue Mountains 1,823 or 2.4% of total population, Hawkesbury 2,393 or 3.7% of total population and Lithgow 1,208 or 5.7% of total population.</p>

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		<p>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. <i>Aboriginal and Torres Strait Islander Health Performance Framework 2014 Report</i></p> <p>Local consultations with Aboriginal people and staff previously involved in the Close The Gap and Healthy For Life programs suggest that the 2015 population estimates for the NBM region were substantially underestimated due to reluctance of some Aboriginal people to formally acknowledge their identity. <i>NBMPHN workforce consultations, 2015</i></p>
Diverse nations	NBM region is made up three different Aboriginal nations as identified by traditional lands and language.	<p>There is considerable diversity of Aboriginal peoples the region.</p> <p>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 people’s land which extends through central NSW. <i>NBM Sharing and Learning Circles, 2014</i></p>
Youth growth	Young and growing population of Aboriginal residents in NBM	<p>The median age of Aboriginal residents in the region was 21 years in 2016. NBM Aboriginal people under 25 years of age represent 54.6% of the total Aboriginal population, compared to 33% of people under 25 years of age in the non-Aboriginal population. The median age of the non-Aboriginal population in 2015 was 36years. <i>Epidemiological Profile of NBMLHD, 2017</i></p>
Social determinants	Aboriginal people have poorer socio-economic status compared to non-Aboriginal people	<p>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</p>

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		<p>largest categories of disparity were: unemployment, no post-school qualifications and rental accommodation. <i>Epidemiological Profile of NBMLHD, 2014</i></p>
<p>Chronic conditions risk</p>	<p>Aboriginal people have higher incidence of risk factors in chronic conditions</p>	<p>The health of Aboriginal and Torres Strait Islander Australians is improving on a number of measures, including significant declines in mortality rates, infant and child mortality and decreases in avoidable mortality related to cardiovascular disease and respiratory diseases. Despite these improvements, significant disparities persist between Indigenous and non-Indigenous Australians. Indigenous Australians continue to have lower life expectancy, increasing mortality rates for cancer, higher rates of chronic and preventable illnesses including respiratory diseases, cardiovascular disease, diabetes, chronic kidney disease and cancer , poorer self-reported health, and a higher likelihood of being hospitalized than non-Indigenous Australians. <i>(Australian Institute of Health and Welfare 2015. The health and welfare of Australia’s Aboriginal and Torres Strait Islander peoples 2015.</i></p> <p>2011-12 NBMLHD hospitalisations attributable to high body mass was 668 hospitalisations per 100,000 population. This was higher than but not significantly different to the non-Aboriginal residents’ rate of 413.3 hospitalisations per 100,000.</p> <p>In 2014, 30% of the NBM Aboriginal population 16 years+ were overweight and 32.2% of the population 16 years + were obese. Obesity rates for non-Aboriginal NBM residents 16 years + was significantly lower at 23.8%</p> <p><i>Epidemiological Profile of NBMLHD 2016</i></p>
<p>Use of the Indigenous health check MBS item</p>	<p>Relatively lower use of the Indigenous health check (MBS item 715) amongst primary care providers in the NBM region compared to Australia</p>	<p>All Aboriginal and Torres Strait Islander people are eligible for an annual Indigenous-specific health check for chronic conditions, and is designed to address the gap between Indigenous and non-Indigenous persons.</p> <p>Although the usage rate of the Indigenous health check item MBS 715 for Indigenous persons by primary care providers in the NBM region increased from 8.6% in 2011-12 to</p>

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		<p>12.8% in 2013-14, these rates were lower than the average uptake of the Indigenous health check item Australia-wide, which was 11.6% in 2011-12 and 17.6% in 2013-14. This means that many Aboriginal and Torres Strait Islander people in the NBM region are missing out on regular health checks for which they are eligible. <i>AIHW Indigenous health check (MBS 715) data tool</i></p> <p>MBS item 715 claims for the 2015-16 financial year for the NBM region indicate 1,893 services were claimed / number of checks completed. This equates to an estimated 14.4% uptake of the Indigenous health check item Indigenous persons in the NBM region. In comparison, a total of 196,755 MBS item 715 claims were claimed across Australia in 2015-16, equating to an estimated 30.3% uptake by Indigenous persons across the country. <i>Medicare Statistics online: Medicare Locals Statistics Reports – Health Assessments July 2015 to June 2016</i> <i>Australian Bureau of Statistics Census 2016 – Aboriginal and Torres Strait Islander Population</i></p>
Immunisation rates	NBM Aboriginal residents have significantly lower rates of immunisation compared to non-Aboriginal people	<p>Recent strategies implemented by the NBMLHD to target an increase in Aboriginal children’s immunisation rates have proved successful. In 2014, 88.8% of 1 year olds were fully immunised and 94.8% of 4 years olds were fully immunised. <i>Epidemiological Profile of NBMLHD, 2016</i></p>
Smoking rates	Aboriginal persons in NSW have a higher prevalence of smoking compared to non-Aboriginal people in NSW.	<p>In 2015, the prevalence of smoking among Aboriginal adults in NSW was 34.9%. This was higher than the prevalence of smoking among all adults in the NBM region (11.6%) and in NSW (13.5%). <i>Cancer Institute NSW. Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p>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.</p>

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		<i>Epidemiological Profile of NBMLHD, 2014</i>
Hospitalisation rates	Hospitalisations from all causes has increased significantly in the NBM Aboriginal population and is higher than the general population	<p>The hospitalisation rate from all causes has increased significantly since 2006-7 in the Aboriginal compared to the non-Aboriginal population.</p> <p>The hospitalisation rate among Aboriginal persons increased from 21,676 per 100,000 persons in 2006-7 to 43,027 per 100,000 persons in 2015-16. This compared to similar hospitalisation rates among non-Aboriginal persons during this timeframe, which was 32,553 per 100,000 persons in 2006-7 and 32,295 per 100,000 persons in 2015-16 <i>NSW Health Online Statistics module 2017: Hospitalisations for all causes by Aboriginality, NBMPHN</i></p> <p>The highest numbers of Aboriginal hospitalisations in 2015-16 were for: Dialysis (911); maternal, neonatal and congenital causes (538); injury and poisoning (319); respiratory diseases (307) and digestive system diseases (294).</p> <p>The NBM rate of 3,830.7 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 2,043.4. It was also significantly lower than for NSW Aboriginal potentially preventable hospitalisations with a rate of 5,223.8 per 100,000 population. <i>Health Statistics NSW online portal – Hospitalisations by Aboriginality, NBMPHN 2015-16; and Potentially Preventable Hospitalisations by Category and Aboriginality, NBMPHN 2015-16.</i></p>
Hospitalisation rates attributable to alcohol	NBM Aboriginal people experience a significantly higher rate of hospitals that is attributable to alcohol, compared to non-Aboriginal people.	<p>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.</p> <p><i>Epidemiological Profile of NBMLHD, 2014</i></p>

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<p>Birth rates</p>	<p>NBM Aboriginal births have a significantly higher proportion that are low birth weight.</p> <p>Aboriginal perinatal mortality is higher than the non-Aboriginal rate.</p> <p>Smoking during pregnancy is significantly higher for Aboriginal mothers.</p> <p>Fewer Aboriginal mothers have their first antenatal visit before 14 weeks gestation.</p>	<p>During 2015, the proportion of low weight births to Aboriginal mothers in NBM was 12.6% This was significantly higher than the proportion of low birth weight births to non-Aboriginal mothers at 7.5% of births.</p> <p>During 2006-2010, the Aboriginal perinatal mortality rate in the NBMLHD 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.</p> <p><i>Epidemiological Profile of NBMLHD, 2014</i></p> <p>In 2014, the proportion of Aboriginal women who smoked during pregnancy was 37.2%. Despite a downward trend, smoking rates during pregnancy remain significantly higher than 12.7% for non-Aboriginal NBM mothers.</p> <p><i>Cancer Institute NSW. Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p>The percentage of women whose first antenatal visit occurred before 14 weeks gestation was lower for Aboriginal women. In 2015 , 44.9% of NBM Aboriginal women achieved this benchmark and for non-Aboriginal women the rate was 55.3%</p> <p><i>NSW Health Online Statistics module 2017: Antenatal care by gestational age, NBMPHN</i></p>
<p>Life expectancy</p>	<p>NBM Aboriginal residents have lower life expectancy than general population residents</p>	<p>In 2012 Aboriginal males had a life expectancy of 71 years. This was 9.3 years lower than the life expectancy for the male general population living in the NBM region.</p> <p>In 2012 Aboriginal females had a life expectancy of 76.4 years. This was 8.5 years lower than for all female residents of the NBM region.</p> <p><i>Epidemiological Profile of NBMLHD, 2016</i></p>
<p>Causes of death</p>	<p>Cardiovascular diseases, malignant neoplasms, injury and poisoning; and</p>	<p>Causes of death for all NSW residents between in 2013 shows that Aboriginal people have higher proportion of death for cardiovascular disease; neoplasms (cancers); injury and</p>

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	<p>respiratory diseases were the four leading causes of death.</p> <p>Injury and poisoning has a higher rate of death for Aboriginal people than for the general population.</p>	<p>poisoning; endocrine, nutritional and metabolic diseases (including diabetes); and diseases of the respiratory system. <i>Australian Indigenous HealthInfoNet – Overview of Aboriginal and Torres Strait Islander health status 2016</i></p> <p>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. <i>Epidemiological Profile of NBMLHD, 2014</i></p>
<p>Capacity Of Services For Aboriginal People</p>	<p>Inadequate capacity of primary health services to respond to Aboriginal health needs</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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 recognises and respects traditional values, norms and preferences, and supports the dignity and cultural identity of each individual.</p>

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		<p>Engagement with services by Aboriginal people: Each community group 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.</p> <p><i>NBM Sharing and Learning Circles, 2015</i></p>
<p>Services needed</p>	<p>Additional services required needed to meet identified needs</p>	<p>Dental services: These services either could not be accessed or were difficult to access by a number of community groups.</p> <p>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.</p> <p>Aboriginal Community Controlled Health Organisation (ACCHO): there is no existing ACCHO available in the NBM region. This continues to have a significant and ongoing negative impact upon how health services are distributed, available for and accessed by NBM local Aboriginal populations.</p> <p>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.</p> <p>Aged Care: The need for increased support for aged people at home including home support services and volunteer services was identified.</p>

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	<p>Loss of service coordination for Aboriginal people living with Chronic conditions in the Blue Mountains</p>	<p>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.</p> <p>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.</p> <p>Paediatric Care: There were also concerns raised regarding a significant shortage of paediatricians in the Lithgow area. The outcome of this situation has been excessive waiting lists including for Aboriginal children who may not be performing well at school.</p> <p>Aboriginal people with Chronic conditions were previously supported in the Blue Mountains by the Healthy For Life Program. In March 2016, the delivery of the Healthy for Life was awarded to Wellington Aboriginal Health Service (WAHS). WAHS expect to re-open services in the Blue Mountains in 2018 for Aboriginal people living with chronic conditions. In the interim, alternate services have had to be sought for this group of patients.</p> <p><i>NBM Sharing and Learning Circles, 2015</i> <i>NBMPHN consultations with Aboriginal and Community Health teams NBMLHD, 2017</i> <i>Department of Health directive – Advice of alternate service provider for Healthy for Life program March 2016.</i></p>
<p>Breast Screening In Aboriginal Women <i>(refer also to Cancer Priority Theme)</i></p>	<p>Screening rates for Aboriginal women are below the state average.</p>	<p>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 29.8% compared to 40.2%. The rates across LGAs varies with Lithgow reporting the lowest at 15.6%. Blue Mountains and Hawkesbury LGAs screening rate of 35.2% and 34.4% are higher than the average for the region at 29.8%.</p> <p><i>Cancer Institute NSW. Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p>

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CALD communities

<p>Quality and Continuity of Hospital Care Provided</p>	<p>Readmission within 28 days of discharge from hospital.</p>	<p>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.</p> <p>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.</p> <p>Hospital readmissions were largely due to extracorporeal dialysis, where NBM residents born overseas had a rate of 53.2% of readmissions compared with 30.6% of readmissions for Australian born residents' readmissions for dialysis.</p> <p>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.</p> <p><i>Epidemiological Profile of NBMLHD, 2014</i></p>
<p>Diversity of high needs CALD communities</p>	<p>Challenges in meeting the health needs of diverse, high needs CALD communities</p> <p>High diversity in the backgrounds of people intending to settle or who have recently settled in the NBM region</p>	<p>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.</p> <p>DIAC data and local stakeholder consultations show that the main backgrounds of people intending to settle in or who have recently settled in the NBM region are from South Sudan, Afghanistan, Syria and Tibet, and that these people have high and complex health needs. Backgrounds of other recently settled migrants include Sudan, Bhutan, Iraq, Iran, Uganda</p>

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		<p>and Tanzania. Many have been away from their homeland for long periods with children born in their first country of refuge. Local settlement services have indicated that approximately 45 Syrian refugee families have settled in the Penrith LGA since March 2016. Looking forward, a change in settlement providers and funding available has led to a reduction in recent intake. In 2018, the Sydney metropolitan area is expected to receive 3,350 refugees.</p> <p>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.</p> <p>There is an emerging Bhutanese refugee community that was captured for the first time in the 2011 census. This community has grown in size to 2016. 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 Bhutanese community leaders bring the figure to approximately 100 Bhutanese refugees who have recently settled in the NBM region.</p> <p>Local stakeholder consultations indicate that other CALD groups moving to and settling in the NBM region include people from Nepal, Tibet, Iran and the Indian sub-continent. There has also been an increasing number of persons from India obtaining citizenship and moving into the NBM region.</p> <p>A total of 42,375 people responded as speaking a language other than English at home in the 2016 census. This represents 11.8% of the total population for the region. Penrith LGA has the largest population at 33,084, followed by the Blue Mountains LGA of 4,707 residents, Hawkesbury LGA with 3,857 residents and Lithgow with 727 residents who reported speaking a language other than English.</p> <p><i>The Census of Population and Housing, 2016</i></p>
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	Underestimate of local CALD populations from the 2016 Census	Local stakeholder consultations indicate that the change in implementation method (from paper-based to online) for the 2016 Census has had an impact upon significantly underestimating the number of persons from CALD communities in the NBM region. Local migrant support services in NBM report that significantly higher numbers of people from CALD backgrounds and with low English literacy levels sought assistance with completing the paper based Census in previous Census years compared to 2016. <i>NBMLHD Multicultural Health Services Unit</i>
Major issues impacting on the health of CALD communities	Low literacy levels, health literacy, gambling, alcohol and other drugs, obesity, chronic disease and access to health services including interpreters identified as major issues impacting on health	Local stakeholder consultations indicate that major issues increasingly impacting on the health of refugee communities in the NBM region, include: <ul style="list-style-type: none"> • Low literacy levels and poor health literacy, with associated challenges in accessing timely and appropriate health services • Problem gambling and misuse of alcohol and other drugs • Increasing levels of obesity and chronic disease within local CALD communities • Access to interpreter and translation services. Local services report increases in the number of people who use AUSLAN, the second highest use of interpreters in the NBM region following Arabic. <i>NBMLHD Multicultural Health Services Unit</i>
Iraqi and Syrian Refugees	Complex health issues including mental and physical health problems due to trauma and complex challenges with settlement	Approximately 100-200 humanitarian refugees arrived 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. <i>NBMLHD Multicultural Services Unit</i> Focus group discussions with persons from Iraqi and Syrian refugee communities in the NBM region identified a number of significant gaps and challenges relating to their health and service needs upon settlement in the NBM region. Key findings from this research include: Common health needs:

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		<ul style="list-style-type: none"> • Mental health issues of sleeplessness, trauma, anxiety, depression and psychological issues • Physical health issues of high blood pressure, obesity and diabetes <p>Health seeking and literacy:</p> <ul style="list-style-type: none"> • Prioritisation of settlement into the new environment over health seeking • Poor awareness and understanding of general health and mental health issues and of the available health services • Social stigma around help seeking for mental health issues and help seeking not encouraged in the family or community <p>Service utilisation:</p> <ul style="list-style-type: none"> • Lack of trust in person’s General Practitioner to discuss mental health issues • Preference of having a doctor of the same sex and similar background • Lack of trust and or familiarity in the health system <p>Settlement and mental health:</p> <ul style="list-style-type: none"> • Settlement challenges and experiences linked to depression, loneliness, isolation and anxiety • Difficulties in finding employment linked to feelings of a lack of purpose and uncertainty which affects wellbeing <p>Experiences with health services:</p> <ul style="list-style-type: none"> • Long waiting times when seeking government health services and poor quality of attention and care except in an emergency • Preference not to see a General Practitioner due to the frequent experience of being referred to a specialist doctor and associated lack of affordability • Feeling that General Practitioners do not allow adequate time to discuss their problems and issues • Poor quality of service such as a lack of follow-up from General Practitioners
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		<ul style="list-style-type: none"> • Expense and lack of affordability for dental and specialist services is a frequent barrier to accessing health care • Lack of availability or poor access to interpreter services with General Practitioner compared to hospital consultations <p><i>Wentworth Healthcare Limited 2016 - Addressing the needs of Syrian and Iraqi refugees in the Nepean Blue Mountains region: a formative assessment of health and community services needs</i></p>
<p>Obesity among refugee children</p>	<p>High prevalence of overweight and obesity among Refugee children</p>	<p>Anecdotal evidence from local consultations indicates that approximately 40% of refugee children accessing the local Refugee Health Clinic primary school program are overweight or obese. These children do not meet referral eligibility criteria for the new family obesity clinic located at Nepean Hospital and are reportedly unable to access referral to specialised assessment and treatment.</p> <p><i>NBMLHD Multicultural Health Services Unit, October 2017</i></p>
<p>Samoan Community</p>	<p>High prevalence of chronic disease with high number of presentations to Emergency Department among Samoan community.</p>	<p>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 was 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.</p> <p>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.</p> <p>The life expectancy for people with a Samoan ancestry 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</p>

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		<p>hospitalisation rates were between two and seven times higher than the general Queensland population.</p> <p>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.</p> <p>The known values and behavioural norms of the Samoan community are:</p> <ul style="list-style-type: none"> - 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 highly respected and the church has considerable influence on the community. <p>Local research indicates that the health issues affecting Samoan communities are:</p> <ul style="list-style-type: none"> - 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. <p>Social and psychological problems and issues identified through local research are:</p> <ul style="list-style-type: none"> - 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. <p><i>NBMLHD Multicultural Health Services Unit, November 2016</i></p>
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<p>Cancer Screening <i>(refer also to Cancer Priority Theme)</i></p>	<p>CALD communities in the region report lower than state average rates, especially Blue Mountains and Penrith LGAs.</p>	<p>In 2014-15, CALD communities in the Blue Mountains, Penrith and Hawkesbury LGAs report lower than state averages for breast screening among CALD communities. The Blue Mountains LGA at 34.6% and Penrith LGA at 42.0% for CALD women aged 50-69 compares poorly to the state average of 46.1%. <i>Cancer Institute NSW. Reporting for Better Cancer Outcomes Performance Report 2016: Nepean Blue Mountains Primary Health Network</i></p> <p>While there is no data available for cervical or bowel cancer screening among CALD communities, it is expected that screening participation for these programs is similarly low among CALD communities in the NBM region.</p>
<p>Mental Health</p>	<p>Access to CALD youth</p>	<p>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. CALD youth that do seek mental health services are reported to frequently travel outside of the NBM region in order to access bi-lingual mental health services. <i>NBMLHD Multicultural Health Services Unit, October 2017</i></p>
<p>Other cultural and demographic factors</p>		
<p>Domestic Violence</p>	<p>High incidence of domestic violence in Penrith LGA</p>	<p>Penrith reported the highest number (1068) and rate (539.6 per 100,000 person) of domestic violence related assaults compared to other LGAs in the NBM region in the 12 months to June 2017. This was higher than the average rate of domestic violence related assaults in NSW (376 per 100,000 persons) <i>NSW Bureau of Crime Statistics quarterly update. June 2017</i></p> <p>Domestic violence related assaults per 100,000 population for each LGAs and rankings for the period July 2016 to June 2017 follow. Note that higher ranking indicates comparatively lower numbers of assaults:</p> <ul style="list-style-type: none"> - Blue Mountains 347.1 assaults and NSW rank 76/140 - Hawkesbury 364.4 assaults and NSW rank 66/140

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		<ul style="list-style-type: none"> - Lithgow 443.6 assaults and NSW rank 54/140 - Penrith 539.6 assaults and NSW rank 38/140 <p><i>NSW Bureau of Crime Statistics quarterly update. June 2017</i></p>
<p>Social Disadvantage & Equity</p>	<p>Increasing levels of disadvantage in all NBM LGAs.</p> <p>High number of disadvantaged residents living in Penrith LGA.</p> <p>Increasing levels of disadvantage in Lithgow LGA.</p>	<p>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:</p> <ul style="list-style-type: none"> - 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. <p>These conditions represent the resources that a society makes available to its members to support and equip them for social wellbeing and a healthy life.</p> <p>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.</p> <p>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).</p> <p>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.</p>

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		<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Lithgow LGA: The 2011 census data shows SEIFA scores in the 1st, 2nd and 3rd deciles. 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.</p> <p>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.</p> <p><i>NBMLHD: Socio-economic Indexes For Areas of NBMLHD in 2011 Census.</i></p>
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Outcomes of the health needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*

		<p>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 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.</p> <p>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.</p> <p>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. <i>Jesuit Social Services: Dropping Off the Edge 2015.</i></p>
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Section 3 – Outcomes of the service needs analysis

CHRONIC AND PREVENTABLE CONDITIONS

Outcomes of the service needs analysis – Priority Theme: <i>Chronic and Preventable Conditions</i>		
Identified Need	Key Issue	Description of Evidence
Diabetes workforce	<p>Indications that services do not adequately assess and manage risk factors.</p> <p>Staff shortages across the NBMLHD.</p> <p>Inconsistency in level of diabetes education of practice nurses in primary care delivering diabetes care.</p>	<p>Consultations and review of epidemiological profiles indicate:</p> <ul style="list-style-type: none"> • 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. <p><i>NBMLHD Epidemiological profile. 2014.</i> <i>NBMML comprehensive needs assessments 2014</i> <i>NBMLHD Aboriginal Health Profile 2016</i> <i>NBMML Allied Health Report 2014</i> <i>Staff consultation, NBMLHD</i> <i>Practice nurse consultations – 2013 NBMML Comdiab education program</i></p>
Cardiovascular Disease risk management	<p>Indications that services do not adequately assess and manage risk factors.</p> <p>Inadequate self-management programs.</p>	<p>Consultations and review of epidemiological profiles indicate:</p> <ul style="list-style-type: none"> • Prevalence of clients who smoke • 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

Outcomes of the service needs analysis – Priority Theme: *Chronic and Preventable Conditions*

		<ul style="list-style-type: none"> • Very few or absence of self-management programs which focus on building health literacy and improving management of risk factors. <p><i>SEIFA</i> <i>Staff consultation, NBMLHD</i> <i>NBMLHD Epidemiological profile 2014</i> <i>NBMLHD health services plan 2012/22</i> <i>PWC Review of community health and outpatients services 2014</i></p>
<p>Obesity</p>	<p>Indications that services have limited focus on exercise therapy as part of management plan Access to health services is difficult for bariatric clients</p>	<p>Consultations and review of epidemiological profiles indicate:</p> <ul style="list-style-type: none"> • 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) <p>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.</p> <p>Further research is needed to explore the approaches to obesity assessment, prevention and management across primary care providers. Investigation needs to assess the tools used, models of care and the range of service providers involved.</p> <p><i>NBMML Allied Health Report 2014</i> <i>Staff consultation, NBMLHD</i> <i>MBS online search MBS 721, 723 explanatory notes</i></p>

Outcomes of the service needs analysis – Priority Theme: *Chronic and Preventable Conditions*

<p>COPD</p>	<p>Lack of existing Pulmonary Rehabilitation services and resources in the Hawkesbury region</p> <p>Timely access and better use of existing spirometry is needed within primary care.</p> <p>Care coordination and self-management for patients with COPD could be enhanced to reduce potentially preventable presentations to ED.</p>	<p>Consultations with a panel of ‘expert’ service providers across the NBM region have indicated that patients in some areas (Hawkesbury LGA) have very few options available for hospital avoidance due to COPD – the ‘safest’ option for them is to present to the local Emergency Department.</p> <p>This is due to a number of reasons:</p> <ul style="list-style-type: none"> • Lack of a broad range local conservative management options (no pulmonary rehabilitation service) • Poor public transport to other services (i.e. Nepean Hospital in Penrith) • No dedicated COPD community health services and no respiratory specialist in-area in the Hawkesbury region <p>Throughout the region timely access to spirometry services and capacity within primary care nurses to use and interpret existing spirometry to full effect could be enhanced.</p> <p>Care coordination services for patients with COPD are limited, resulting in patients attending ED for aspects of care that could otherwise be addressed in part through increased connection to services and aspects of self-management</p> <p><i>Consultations with respiratory and primary care service provider stakeholders in the NBM region, 2017</i></p>
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OLDER PERSONS

Outcomes of the service needs analysis – Priority Theme: *Older Persons*

Identified Need	Key Issue	Description of Evidence
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Outcomes of the service needs analysis – Priority Theme: *Older Persons*

<p>Older Persons - Access To Health Services</p>	<p>Indications that access to services is hindered due to transport issues, cost of transport, waiting lists and operating hours of service.</p> <p>Poor knowledge of local health services and difficult to obtain the information.</p>	<p>Consultations and review of the previous NBM Medicare Local needs assessment 2014 indicate:</p> <ul style="list-style-type: none"> • Poor access due to <ul style="list-style-type: none"> - long wait lists for ACAT/ CHC’s - long wait times, lack of service availability and high demand for: domestic assistance, personal care and respite services - limited parking availability and parking costs - unsuitable and high costs of public transport, in particular private bus company services in Lithgow LGA - limited North-South public transport available between Hawkesbury and Penrith LGAs - unreliable community transport – frequent cancellations due to a lack of drivers - lack of after-hours and weekend services - difficulties navigating available services, including knowledge of who providers are, where they go, eligibility criteria - not having Information Technology (IT) or being IT literate <p>NBMLHD is classified as a District of Workforce Shortage (DWS), particularly in the Upper Blue Mountains, Hawkesbury and Lithgow</p> <p><i>Staff consultation, NBMLHD</i> <i>NBMML comprehensive needs assessments 2014</i> <i>Health Transport Workshop consultation, NBMPHN and NBMLHD joint Community Advisory Committee meeting, 30 October 2017</i></p>
<p>Older Persons – Service Co-ordination</p>	<p>Indications that service provision is poorly coordinated and lacks communication between health providers across multiple treatment settings i.e. acute, community and primary care.</p>	<p>Consultations and review of previous NBMML needs assessment indicate:</p> <ul style="list-style-type: none"> • <i>Poor care coordination</i> • <i>Poor communication between health care providers</i> • <i>Poor holistic case management</i>

Outcomes of the service needs analysis – Priority Theme: *Older Persons*

	<p>Poor knowledge of local health services and difficulty obtaining the information.</p>	<ul style="list-style-type: none"> • <i>Lack of GP referral pathways</i> • <i>Poor knowledge of existing health services in the NBMLHD</i> • <i>The need to strengthen the role of facilitators to enhance coordination of care.</i> <p>NBMLHD is classified as a District of Workforce Shortage (DWS)</p> <p><i>Staff consultation, NBMLHD</i> <i>NBMML comprehensive needs assessments 2014</i></p>
<p>Older Persons – Chronic pain</p>	<p>Indications that there is a lack of community based chronic pain programs and poor management of chronic pain for older persons.</p>	<p>Consultations and review of chronic pain services indicate:</p> <ul style="list-style-type: none"> • 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 <p>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).</p> <p>Further research is needed to explore the approaches to and options for assessment and management across primary care providers.</p> <p><i>NBMML comprehensive needs assessments 2014</i> <i>Ministry of Health Pain Management Taskforce Report 2012</i> <i>The First Australian Atlas of Healthcare Variation 2015</i></p>

Outcomes of the service needs analysis – Priority Theme: *Older Persons*

<p>Older Persons – Residential Aged Care</p>	<p>The number of beds in residential aged care is inadequate for population projected growth</p> <p>Poor access to, representation and utilisation of General Practitioner services among Residential Aged Care Facilities</p>	<p>The NBM region has 28 Residential Aged Care Facilities (RACF) with capacity for around 2,420 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.</p> <p>The number of RACFs and available beds/places in each LGA is: Blue Mountains – 9 facilities; 880 beds Hawkesbury – 6 facilities; 450 beds Lithgow – 3 facilities; 171 beds Penrith – 10 facilities; 920 beds <i>DPS Guide 2017</i> <i>Nepean Blue Mountains Epidemiological Profile 2014</i></p> <p>Interviews with RACF service providers in the NBM region have revealed a number of issues around poor access to and utilisation of General Practitioner services within RACFs. These include:</p> <ul style="list-style-type: none"> • Poor access to General Practitioner services • Under-utilisation of General Practitioner preventive health services, for example low rates of immunisations • Lack of 24-hour access to nursing care and support due to lack of available nursing staff after hours • Increasing patient presentations to hospital ED for minor issues such as wound care, due to shortages in skilled nursing workforce available after hours <p><i>NBMPHN interviews with RACF service providers in the NBM region, 2017</i></p>
<p>Older Persons – Emergency Department Presentations</p>	<p>High representation of older persons to the Emergency Department</p>	<p>Age-specific rates data for the NBM population in 2014/15 indicate that persons 80 years and older were over-represented in presentations to the Emergency Department due to injury and poisoning.</p>

Outcomes of the service needs analysis – Priority Theme: <i>Older Persons</i>		
		<i>Epidemiological Profile in Nepean Blue Mountains Local Health District: Emergency Department presentations by age. 2017</i>
Older Persons – Fall-related ambulance attendances and hospitalisations	<p>Growth in fall-related ambulance attendances and hospitalisations among residential aged care facility residents</p> <p>High rate of Ambulance re-attendances for falls and mortality in persons not being transported for a previous fall</p>	<p>Between 2006 and 2013, rates of ambulance attendances due to falls and fall-related hospitalisations in NSW were similar and continued to increase over time. Aged care facility residents had a higher proportion of injurious fall hospitalisations (86%) compared to community dwelling persons (65%).</p> <p><i>Trends in fall-related ambulance use and hospitalisation among older adults in NSW, 2006– 2013: a retrospective population-based study</i></p> <p>The non-transport rate for falls-related Ambulance NSW calls in 2014 was 19.24%, with the main reason for non-transport being ‘transport refused’. This group is significant as Ambulance NSW report that linked data studies highlight these persons have the highest ambulance re-attendance and 30-day mortality rates. In addition, there is currently no system for prospective regular monitoring of these persons.</p> <p><i>NSW Ambulance Falls Patients: Evaluation of 2014 Activity. Ambulance Service of NSW, 2016.</i></p>

PALLIATIVE AND END OF LIFE CARE

Outcomes of the service needs analysis – Priority Theme: <i>Palliative and End of Life Care</i>		
Identified Need	Key Issue	Description of Evidence
End of Life Care	End of Life Care (EoLC) discussions often commence at a time of crisis	Consultations held with representatives from community and primary health services, hospital services, non for profit providers and people working in policy, management and patient advocacy roles in the NBM

Outcomes of the service needs analysis – Priority Theme: *Palliative and End of Life Care*

	<p>Poor coordination of End of Life Care across the NBM region</p>	<p>region highlighted the EoLC discussions often commence at a time of crisis, rather than when there are initial signs that a person is entering the final phase of their life.</p> <p>Key drivers for this issue identified during consultations include:</p> <ul style="list-style-type: none"> • Many GPs lack training in EoLC • Many health professionals are uncomfortable talking about EoL • Lack of ability to recognise the dying • Junior staff are usually the first contacts with acute patients • Carers are frequently unprepared for or not trained to provide EoLC • Advanced care plans are often given to patients and carers along with other material required by Residential Aged Care Facilities <p>Consequences of this issue identified during consultations include:</p> <ul style="list-style-type: none"> • Advanced care plans are often developed in a time of crisis and in a rush • Frequent kneejerk reactions to crisis, referrals of patients to hospital without understanding of what the hospital can and cannot do • Patients turn up to Emergency Care with little information to guide Emergency Care clinicians • Information provision around Advanced Care Plans are often incorrect • Patients distressed and confused • Unnecessary use of resources <p><i>Caring for People in Their Last Year of Life – Report for Wentworth Healthcare Limited by Synergia, November 2017</i></p>
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Outcomes of the service needs analysis – Priority Theme: *Palliative and End of Life Care*

<p>Use of Advance Care Plans</p>	<p>Poor communication and coordination of Advance Care Plans between care providers, RACFs, carers and patients</p>	<p>Consultations held with representatives from community and primary health services, hospital services, non for profit providers and people working in policy, management and patient advocacy roles in the NBM region highlighted current poor communication and coordination practices with the use of Advance Care Plans between care providers, RACFs, carers and patients including:</p> <ul style="list-style-type: none"> • Poor communication across agencies and often working in isolation. • RACF’s have a vested interest in their own documentation, leading to inconsistencies in format and quality across Advanced Care Plans. • Advanced Care Plans are often given to patients and carers along with other material required by the RACF, with information provided often incorrect. • EoL information given to patients and carers at RACFs is often provided by junior Nurse / someone not skilled or sufficiently experienced to discuss the issues that the document may raise for the patient and or their carers. <p>Consequences of this issue identified during consultations include:</p> <ul style="list-style-type: none"> • Discussions about end-of-life are often late, handled poorly and based on incorrect information. • Advanced Care Plans often being completed far too late and EoL discussions commencing at a time of crisis. • Delays in patient care, or patients being taken to hospital unnecessarily.
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Outcomes of the service needs analysis – Priority Theme: *Palliative and End of Life Care*

	<p>Advance care plans are patient driven on My Health Record often leaving out health care providers in the development and viewing of the ACP</p>	<ul style="list-style-type: none"> • Difficulties in providing best care and correct understanding of medications and allergies by care providers. • Stress for patients and families • Unnecessary use of resources <p>Advance care plans are available also through the My Health Record, however they are patient driven and currently must be uploaded by patients and are not able to be viewed by hospitals. GPs are also not alerted to their existence unless the patient advises. This can leave GPs and other health care providers unaware of the existence of the ACP when required.</p> <p><i>Caring for People in Their Last Year of Life – Report for Wentworth Healthcare Limited by Synergia, November 2017</i></p>
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CANCER CARE

Outcomes of the service needs analysis – Priority Theme: *Cancer Care*

Identified Need	Key Issue	Description of Evidence
<p>Systems for cancer screening results and reminders in primary care</p>	<p>Poor integration of electronic systems for breast, cervical and bowel cancer screening results and reminders in primary care</p>	<p>Extensive consultations with general practices in the NBM region indicate there are multiple layers of poor integration between electronic systems that primary care providers use to receive cancer screening test results, manage recalls and reminders for cancer screening &/or need to seamlessly and accurately identify under-screened or never-screened patients.</p>

Outcomes of the service needs analysis – Priority Theme: *Cancer Care*

		<p>Specific areas of poor integration include:</p> <ul style="list-style-type: none"> • Widespread receipt of paper-based letter results for BreastScreen NSW mammogram results and the National Bowel Cancer Screening Program FOBT results. • Lack of standardisation in electronic ‘coding’ of Pap-test pathology results among pathology providers • Poor or no recording of cancer screening results into relevant ‘fields’ in Practice clinical software systems (that allow for future data extraction and aggregate identification of patients screened / not-screened), without reliance on manual data entry by General Practitioners • Poor quality of practice data on patients screened, never-screened and last attended screening • High levels of difficulty or no ability of General Practitioners to interface with the relevant state-based cancer screening register to identify a patient’s screening history • Difficulties in accurately identifying patients never-screened or overdue for screening using aggregate data within clinical software or external data extraction tools • Reliance on extensive manual data entry for effective use of recall and reminder systems for cancer screening in General Practice <p><i>NBMPHN consultations with General Practices in the NBM region, 2017</i></p>
<p>Access to cervical screening (Refugee women and women from vulnerable groups)</p>	<p>Poor access to cervical cancer screening among newly arrived Refugee women</p>	<p>Consultations with local service provider stakeholders have highlighted issues of poor access to cervical cancer screening among newly arrived Refugee women, women who have experienced trauma and women from</p>

Outcomes of the service needs analysis – Priority Theme: *Cancer Care*

	<p>Poor access to cervical cancer screening among women who have experienced trauma or are from vulnerable groups</p>	<p>vulnerable groups in the NBM region, in particular those settling or living in the Penrith LGA.</p> <p>Reasons cited contributing to poor access include:</p> <ul style="list-style-type: none"> • Limited number of primary care providers that understand and provide trauma informed care • Poor knowledge of screening programs among Refugee women • Limited number of providers who are sensitive to patient histories, have awareness of cultural issues and are perceived as culturally aware and safe (e.g. for Aboriginal and Torres Strait Islander women) • Limited access to female cervical screening providers • Limited use of interpreters within primary care to assist with comprehensive and thorough histories • Limited provision of health promotion among primary care providers that targets health issues for women from CALD backgrounds • Limited provision of long consultations in primary care in particular for addressing women’s health issues including cervical screening • Limited number of providers who proactively address the social determinants of health <p><i>NBMPHN consultations with local women’s health and migrant settlement service providers, 2017</i></p>
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ACCESS TO HEALTH SERVICES

Outcomes of the service needs analysis – Access to Health Services		
Identified Need	Key Issue	Description of Evidence
Access to GP services	Utilisation of GP services	<p>There were 135 general practices in the NBM region as at 14 November 2017. Of these, 2 general practice services were medical deputising services providing access to GP services after hours. The number of general practices in each LGA in the region as 14 November 2017 was:</p> <ul style="list-style-type: none"> • Penrith LGA – 76 • Blue Mountains LGA – 24 • Hawkesbury LGA – 27 • Lithgow LGA - 8 <p><i>Nepean Blue Mountains PHN Customer Relationship Management Database, November 2017</i></p> <p>On average, 18.0% of residents in NBMPHN region visited a GP once for own health in one year; 31.5% 2-3 times, 24.6% 4-11 times and 8.8% 12 or more times. (<i>ABS Patient Experience Survey 2011-12</i>)</p>
	High unmet need for GP services in the NBMPHN region	<p>High demand for GP services is observed in Lithgow LGA. It was estimated that 40.7% residents in Lithgow LGA had seen a GP for own health in last 12 months; compared to 20.1% in Penrith LGA, 18.9% in Hawkesbury LGA and 18.0% in Blue Mountains LGA (SDAC 2015)</p>
	Long waiting time to see a GP for urgent medical care	<p>There is a high level of unmet need for GP services in the NBMPHN region. For people who needed to see a GP in the last 12 months, 29% in Blue Mountains LGA did not on at least one occasion, 29.1% in Hawkesbury LGA, 22.7% in Penrith LGA and 9.1% in Lithgow LGA, compared to 17.7% across NSW.</p> <p><i>Australian Bureau of Statistics – Survey of Disability, Ageing and Carers, 2015</i></p> <p>Consumer forums conducted by the NBMML in each of the LGAs, during 2012, indicate difficulty in access GP service due to limited supply. For Blue Mountains and Lithgow LGAs in particular, GPs often closed their books to new patients, or there was a 2 week plus waiting period. Long waiting</p>

Outcomes of the service needs analysis – Access to Health Services

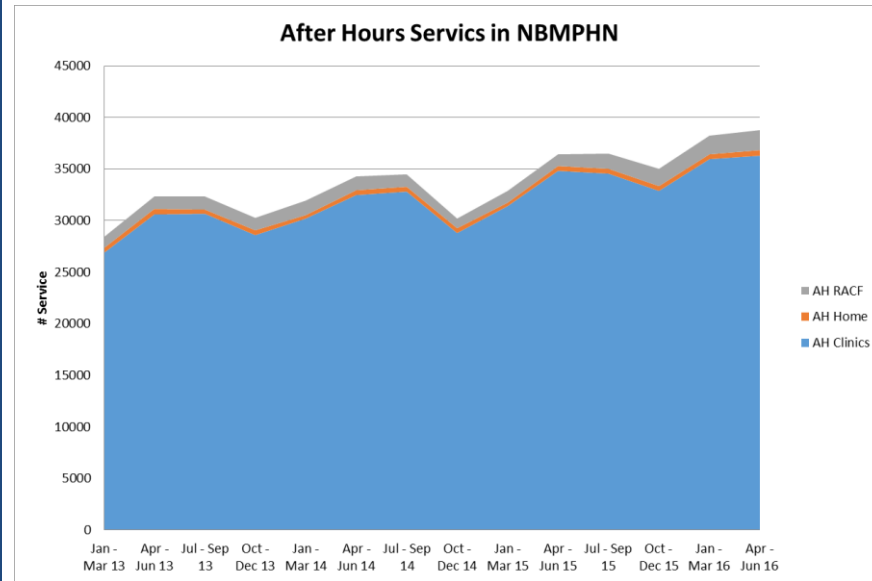
	<p>Attending ED rather than GP services</p> <p>Cost as the barrier to GP services</p>	<p>lists for services were experienced by residents from all LGAs. This mirrors the findings of the <i>ABS Patient Experience Survey 2011-12</i>.</p> <p>The most common reasons that residents in NBMPHN region did not see GP when needed to are 1) waiting time too long or not available at time required (36.6%), 2) decided not to seek care (20.6%), 3) Too busy/ no time (including work, personal, family responsibilities) (17.5%)</p> <p>For most recent, urgent, medical care, there is a substantial length of time between making an appointment and seeing a GP. It was estimated that 10.5% patients needed to wait 2 days or more (but within 6 days) to see a GP for urgent medical care. (63.2% within 4 hours, 18.2% 4 hours or more but within 1 day, 8.1% 1 day or more but within 2 days) <i>ABS Patient Experience Survey 2011-12</i></p> <p>21.6% in Hawkesbury LGA and 19.3% in Penrith LGA felt that a GP could have provided care for the most recent ED visit. <i>Australian Bureau of Statistics – Survey of Disability, Ageing and Carers, 2015</i></p> <p>There was an alarmingly high proportion of people (8.6%) in Hawkesbury LGA who delayed seeing or did not see GP in last 12 months because of the cost (compared to 3.9% in Penrith LGA, 0% in both Lithgow and Blue Mountains LGAs, 4.43% in NSW)</p> <p>For people aged 65 and older, cost is not a barrier to GP services. For people living with disability, cost is ranked within the top five barriers to GP services.</p>
<p>Access to Specialist services</p>	<p>Limited access to specialist services</p>	<p>Consumers reported difficulty to access specialist care (<i>NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012</i>)</p>
<p>Access to after-hours primary care</p>	<p>Utilisation of various after hours primary care in the region</p>	<p>Between January 2013 and June 2016, a large portion of after-hours primary services (94.7%) was carried out at a GP clinic, 4.0% at RACF and 1.3% at home. Figure 1 shows the trends of the after-hours primary care services in the Nepean-Blue Mountains region. There is a steady growth in the service number, with higher numbers observed in the quarters including flu seasons (April – June and July – September)</p>

Outcomes of the service needs analysis – Access to Health Services

Coverage limited - Inadequate coverage for After Hours General Practice across the NBM region

The average annual growth rate was 6.8% for the years 2013, 2014 and 2015.

Figure 1. Trends of after-hours primary care services in the Nepean-Blue Mountains region



Medicare Statistics Online Portal – Medicare Locals Statistics Reports: General Practitioner After Hours item number services January 2013 – June 2016

Local GPs contribute significantly to after-hours services. Currently in 2017, 36 general practices are participating in Level 1 After Hours PIP, 9 in Level 2, 10 in Level 3, none in Level 4 and 23 in Level 5. (Medicare Statistics)

Table 1 below provides a summary of the length of after-hours services provided by each practice (assuming one GP per practice) in each LGA and divided by the number of local population. Table 1

Outcomes of the service needs analysis – Access to Health Services

sets out the distribution of after-hours services per 1,000 people. On average, Lithgow residents have the least amount of after-hours GP services during weekdays, whilst Blue Mountains residents have the least amount of after-hours GP services on weekends

Table 1. Length of after-hours services in the NBM region by LGA, for Weekdays, Saturdays and Sundays, as at November 2017

	Weekday (minutes per 1,000 people)	Saturday (minutes per 1,000 people)	Sunday (minutes per 1,000 people)
Penrith	7.8	26.0	34.4
Blue Mountains	6.7	7.8	7.8
Hawkesbury	13.5	29.7	36.2
Lithgow	5.7	14.2	22.8

Utilisation of after-hours home visits by local residents

- Increased workforce participation rates may lead to people seeking more after hours primary care

Figure 2 shows the utilisation of the after-hours home visits services by age group in the NBMPHN region and in NSW in the financial year 2014/15.

In NBMPHN, a high portion of home visit services was provided to children aged 0-4 (34.0%); followed by children aged 5-14 (14.8%) and adults aged 25-34 (11.9%) (*Data provided by the largest MDS provider in the region*).

In NSW, most home visit services were equally accessed by young and old, with 14.5% of children aged 0-4, 14.4% of old people aged 85+, and 14.2 % of people aged 75-84.

It is interesting to note that the 25-34 age group are the third most frequent users of after-hours home visits in NBMPHN region. This cohort may be working during the day or look after young children during normal business hours. Families with multiple children and structured working requirements report difficulties in seeking care during in-hours periods. (*Deloitte 2016*)

Figure 2. After hours home visits in Financial Year 2014/15 – age distribution (%)

Outcomes of the service needs analysis – Access to Health Services

Utilisation of after hours RACF visits

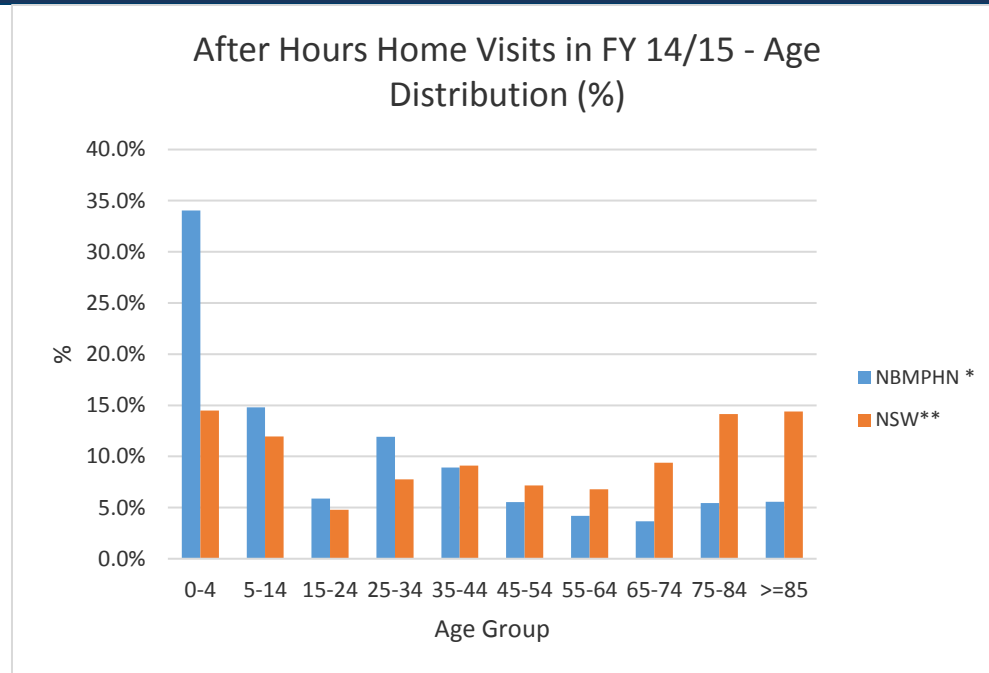


Figure 3 presents the number of after-hours RACF visits in the Nepean-Blue Mountains region. There was relatively small growth in RACF after-hours services (1.5%) from 2013 to 2014 and a significant growth (11.0%) from 2014 to 2015. This could be a result of National Home Doctor Services (NHDS) (a large corporation owned MDS) active engagement with the RACFs in 2014 and the establishment of After Hours GP Service Blue Mountains (a VR-GP owned MDS) in 2015.

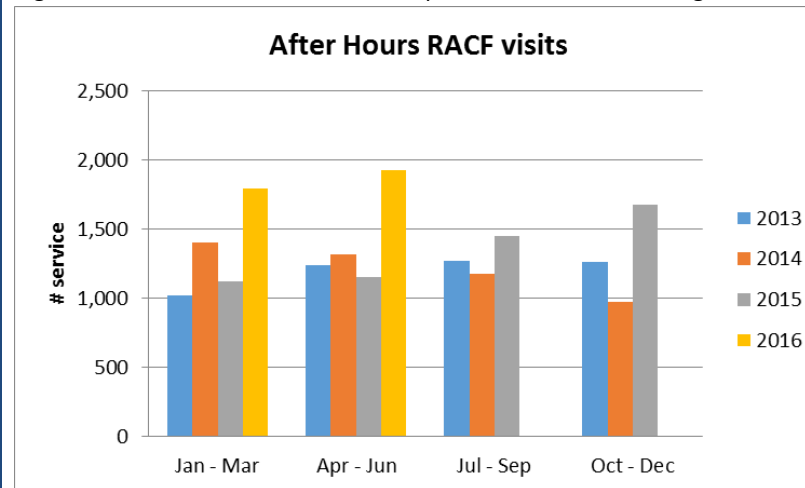
In 2016, After Hours GP Service Blue Mountains provided 387 after hours RACF visits in the Upper Mountains, compared to NHSD's 139 RACF visits in Lower Mountains. In September 2017, Dr Grewal (owner of After Hours GP Service Blue Mountains) verbally reported that he had 120 patients in five RACFs across the Upper Mountains whom he visited regularly. @HomeGP verbally

Outcomes of the service needs analysis – Access to Health Services

Medical Deputising Services may pose a problem to continuity of care for older people

reported visits to approximately 50-100 residents in four RACFs in the Hawkesbury area during 2016-17.

Figure 3. After Hours RACF visits in Nepean-Blue Mountains Regions



Medicare Statistics Online Portal – Medicare Locals Statistics Reports, GP Attendances: Consultations at an After Hours Facility January 2013 – June 2016

In October 2015, NBMPHN interviewed 15 RACFs across the region to understand what actions were commonly taken when the residents require medical care during after hours. Most RACFs call residents’ regular GPs first; except four RACFs call NHDS. Three out of these four RACFs are located in Penrith. RACFs located in upper Blue Mountains often contact Dr Grewal at After Hours GP Service Blue Mountains if residents’ regular GPs are not available. They also utilise services provided by RACF Liaison Officer, a Nurse Practitioner employed by Blue Mountains Hospital. *NBMPHN interviews with RACF service providers in the NBM region, 2017*

There is some concern Nationally regarding RACF visits provided by MDS doctors who do not have any long term relationship with RACF residents. Pond (2016) reviewed 357,112 bookings logged by

Outcomes of the service needs analysis – Access to Health Services

	<p>Local GPs’ unwillingness to visit RACF residents after hours</p> <p>Factors that influence after hours GP workforce</p>	<p>a MDS in Melbourne, with a particular focus on services provided to older people. Findings indicated that MDS doctors “are not equipped to care for these complex elderly patients in an optimal manner; they do not necessarily have a postgraduate qualification, they do not know the patient, and they are not supported by staff who are well trained and familiar with the medical conditions of each patient”. Pond further pointed out that ‘older people have high rates of dementia and may not be able to fully communicate their history. It takes time to trawl through medical notes in RAC facilities. This potentially reduces the quality of service compared with attendance by the patient’s own GP, who knows them and their medical history well. <i>Pond (2016). After-hours medical deputising services for older people. Medical Journal of Australia; 205(9): 395-396</i></p> <p>One of the RACFs in Penrith reported that residents’ GPs do not ‘do after hours’. In fact, only 48% of the BEACH GP sample in 2014–15 had visited an RAC facility in the previous month. Pond (2017) summarized the barriers to GPs visiting RACF residents, including ‘poor level of GP remuneration, increased time seeing patients, difficulty in finding staff (or indeed the patient), and staff with training below the levels of registered or enrolled nurse who are unable to hand over the patient history in a manner that makes medical sense’. An examples of handover comments include “Mrs Smith is a bit behavioural today”. <i>Britt H, Miller GC, Henderson J, et al General practice activity in Australia 2014-15. Sydney: Sydney University Press, 2015.</i> <i>Pond (2016). After-hours medical deputising services for older people. Medical Journal of Australia; 205(9): 395-396</i></p> <p>Workforce shortage is one of the key challenges to delivering after hours primary care services in the NBMPHN region. Most areas in the region are currently classified as District of Workforce Shortage (DWS), evidencing the need for more GPs. The shortfall of doctors and the trend for doctors to prioritise work-life balance in the interests of sustainable practice and professional longevity are putting pressure on the provision of after-hours services.</p> <p>The annual collection of data on 100,000 GP consultations in Australia known as the BEACH study has revealed a GP workforce that is “more feminised, older ... and worked fewer hours per week”.</p>
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Outcomes of the service needs analysis – Access to Health Services

	<p>Types of after-hours GP services in the region</p>	<p>Other factors might include the dangers of after-hours visiting, stretched GP workforces, and a trend among GPs toward a better work–life balance. <i>Britt H, Miller GC, Henderson J, et al General practice activity in Australia 2014-15. Sydney: Sydney University Press, 2015.</i></p> <p>Similarly, in 2015 General practitioners had the highest proportion aged 55 or older (40.5%) of all clinician groups in 2015. The proportion of general practitioners who were women increased from 36.5% in 2005 to 42.1% in 2015. <i>AIHW Medical Practitioners Workforce Report, 2015</i></p> <p>After hours general practice coverage has been a long standing concern for the NBMPHN. There are various after hours GP services available to the local residents.</p> <p>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 NBM Medicare Local (NBMML) and now the NBM PHN to support after-hours GP coverage for the Penrith LGA, and to reduce the number of presentations 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. In FY 2016/17, 5,235 patients attended Nepean After Hours GP Clinic. This clinic was commissioned on 30 June 2017 and patients have been directed to a new after-hours GP clinic “Penrith After Hours Doctors”.</p> <p>Additionally the NBMPHN supports the conduct of another after hours GP clinic in the Hawkesbury, as a part of Hawkesbury hospital. In FY 2016/17, 8,450 patients attended Hawkesbury After Hours GP Clinic. 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.</p> <p>The NBMML has supported the establishment of deputising services currently operating across the Hawkesbury, Penrith and the Blue Mountains LGAs. However there is no deputising service currently operating in the Lithgow LGA.</p>
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Outcomes of the service needs analysis – Access to Health Services

	<p>Financial constraint for sustainability of After Hours GP Clinic</p> <p>Utilisation of telephone triage and advice services</p>	<p>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.</p> <p>There is wide variety in the type of <u>MBS consultations</u> that take place after-hours. This makes it difficult to interpret MBS data for informing after-hours service planning. <i>NBMPHN Workforce Consultations 2015-16.</i></p> <p>The Hawkesbury After Hours GP Clinic requires ongoing financial supports. Ongoing financial viability of the After Hours GP Clinic will continue to be challenged due to the constraints of the current Medicare rebate, and limited opportunities to reduce costs or increase revenue. External financial support is required to ensure the service sustainability.</p> <p>In 2015, 18,184 calls were made to the Healthdirect Nurse Triage Helpline from NBMPHN region. 2,554 of these calls were later transferred to the After Hours GP Helpline. Callers to the Nurse Triage Helpline firstly speak with a registered nurse, who assesses their situation and advises what to do next. From 1 July 2014 to 30 June 2015, 32.3% of callers were advised to see doctor immediately (within 4 hours), 26.2% activate 000 or attend ED (despite 36.1% of people originally calling with this intention), 18.4% see doctor within 24 hours, 16.0% home/self-care, 5% see doctor within 72 hours; 1.6% call Poison Info Centre immediately, 0.2% see Dentist, and 0.2% see mental health provider immediately.</p> <p>People called the service because they wanted to find a doctor/health provider (24.9%) or they did not know what to do (20.8%). <i>HealthDirect Healthmap, accessed October 2017</i></p> <p>Lake et al. (2017) conducted a systematic review on the quality, safety and governance of telephone triage and advice services (TTAS). This review suggested that ‘patient satisfaction with TTAS was generally high and there is some consistency of evidence of the ability of TTAS to reduce</p>
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Outcomes of the service needs analysis – Access to Health Services

	<p>Users’ satisfaction with telephone triage and advice services</p>	<p>clinical workload. Similarly, McKenzie (2016) reported satisfaction with the Healthdirect after hours GP helpline was high, although awareness of the service was low.</p> <p><i>Lake, R., Georgiou, A., Li, J., Li, L., Byrne, M., Robinson, M. & Westbrook, J.I. 2017, "The quality, safety and governance of telephone triage and advice services - an overview of evidence from systematic reviews", BMC Health Services Research, vol. 17.</i></p> <p><i>McKenzie, R. 2016, "Consumer awareness, satisfaction, motivation and perceived benefits from using an after-hours GP helpline - a mixed methods study", Australian Family Physician, vol. 45, no. 7, pp. 512-517</i></p>
<p>Service coordination</p>	<p>Inadequate service coordination</p>	<p>Of those who saw more than 3 health professionals for 1 condition in the last 12 months, 73.8% in the Blue Mountains LGA felt their health professionals did not help coordinate care, 52.3% in Hawkesbury LGA, 34.5% in Penrith LGA and none in Lithgow LGA; compared to 29.1% across NSW. <i>Australian Bureau of Statistics – Survey of Disability, Ageing and Carers, 2015</i></p>
<p>Health Information</p>	<p>Poor knowledge of local health services and difficulties in obtaining information</p>	<p>During FY 2014/15, 14,350 calls were made to the HealthDirect Nurse Triage Helpline from NBMPHN region. 20.8% of the callers did not know what to do and 16.8% were seeking advice for home/self-care. <i>HealthDirect, HealthMap 2016</i></p> <p>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 also experienced similar difficulties obtaining up to date knowledge of available services and eligibility requirements</p> <p><i>NBMML Community Forums on Health (Penrith, Hawkesbury, Blue Mountains, Lithgow) 2012</i></p>

Outcomes of the service needs analysis – Access to Health Services

	<p>Lack of health information may result in unnecessary ED visits</p> <p>Online information on health symptoms has the potential to reduce medically unnecessary use</p>	<p>In 2014, 13,600 medication-related calls were made to the national After Hours GP Helpline. For 86.6% of calls, GPs advised callers to either self-care only, or self-care overnight and see their GP during business hours. Of the 1,442 calls where the caller had originally intended to visit the emergency department (ED), 76.7% were advised by GPs to self-care, and only 5.5% were advised to call 000 or visit an ED. Overall, less than 2.3% of callers were directed to the ED, despite 10.6% of people originally calling with this intention. <i>HealthDirect, HealthMap 2017</i></p> <p>The Healthdirect Symptom Check offers online information on health symptoms and is available to every Australian free of charge.</p> <p>A study in the Netherlands found that the valid online advice led to more medically appropriate decision-making for both non-urgent and urgent case scenarios. Its results indicated that online advice has the highest potential to reduce medically unnecessary use compared to other demand management strategies such as co-payment, overview medical costs and GP appointment next morning. Furthermore it enhanced safety of parents' decisions on seeking help for their young children during out-of-hours primary care. The authors concluded that valid online information on health symptoms for patients should be promoted.</p> <p><i>Giessen, M., Keizer, E., Pol, J.v.d., Knoben, J., Wensing, M.J.P. & Giessen, P. 2017, "The impact of demand management strategies on parents' decision-making for out-of-hours primary care: Findings from a survey in the Netherlands", BMJ Open, vol. 7, no. 5.</i></p>
<p>Transport Services</p>	<p>Transport as a barrier to health services</p>	<p>During the <i>NBMML Community Forums on Health</i> in 2012, transport including availability, long distances especially for outlying areas and costs were identified as dominant issues for all LGAs.</p> <p>Lithgow Health Consumer Working Group flagged community transport costs from Lithgow to Penrith as an issue. Evidence from two transportation workshops held by NCOSS in 2012 also confirmed that people who live in regional areas (such as the Upper Blue Mountains and Lithgow) often experience difficulties when travelling to health services that are centralized in metropolitan</p>

Outcomes of the service needs analysis – Access to Health Services

		<p>areas (such as Penrith). A visit to a medical specialist from Lithgow to Penrith may require travelling more than 2 hours via public transport. <i>Health Transport Workshop consultation, NBMPHN and NBMLHD joint Community Advisory Committee meeting, 30 October 2017</i></p> <p>Transport/distance was an issue for 4.9 % residents across NBMPHN region, who did not see a GP when they needed to. <i>Australian Bureau of Statistics – Patient Experience Survey 2011-12</i></p> <p>29% residents in Lithgow LGA, 13% in Hawkesbury LGA, 3% in Penrith LGA and 0% from Blue Mountains LGA indicated that there was no public transport available in their area <i>Australian Bureau of Statistics – Survey of Disability, Ageing and Carers, 2015</i></p> <p>Inadequate after-hours public transport in the region makes access difficult for patients without private transport.</p> <p>Transport to health services poses particular challenges for many Aboriginal people due to low levels of car ownership, and difficulties obtaining licences. <i>Australian Institute of Family Studies (2011). The relationship between transport and disadvantage in Australia, Canberra, Australia.</i></p> <p>Discrimination and a lack of cultural understanding can also make it more difficult for Aboriginal people to use the limited public and community transport services that may be available. <i>Provided there's transport: Transport as a barrier to accessing health care in NSW, NCOSS 2012.</i></p> <p>The transport choices for many people with disability are limited, particularly for those people who are unable to drive, and who find travelling on public transport difficult or impossible <i>NCOSS 2012</i></p> <p>In NBMPH region, approximately 27.8% of people with disability who travelled to general practice need assistance.</p>
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Outcomes of the service needs analysis – Access to Health Services

		<i>Australian Bureau of Statistics – Survey of Disability, Ageing and Carers, 2015</i>																																				
Private health insurance	A lower uptake rate of private health insurance in the region.	<p>The estimated percentage of people aged 18 years and over with private health insurance hospital cover is currently 49.4% across NBMMPHN region, compared to 51.5% in NSW. Breakdown by LGA: 58.7% in Blue Mountains, 54.0% in Hawkesbury LGA, 39.3% in Lithgow LGA and 44.9% in Penrith LGA.</p> <p><i>Public Health Information Development Unit – Social Health Atlas of Australia, 2017</i></p>																																				
GP Workforce	A shortage of GP workforce	<p>The rate of supply of GPs in each LGA remained relatively steady between 2013 and 2017 (Table 2). The estimated number of GPs per 100,000 population in 2015 was 104 in Blue Mountains LGA, 88 in Penrith LGA, 142 in Lithgow LGA and 110 in Hawkesbury LGA; this compared to 114 in Australia.</p> <p><i>AIHW Medical Practitioners Workforce Report, 2015</i></p> <p>Table 2. Number of General Practitioners in the four Nepean Blue Mountains PHN region LGAs in 2013-2017</p> <table border="1"> <thead> <tr> <th></th> <th>Blue Mountains</th> <th>Penrith</th> <th>Lithgow</th> <th>Hawkesbury</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>82</td> <td>171</td> <td>26</td> <td>75</td> <td>354</td> </tr> <tr> <td>2014</td> <td>79</td> <td>177</td> <td>29</td> <td>71</td> <td>356</td> </tr> <tr> <td>2015</td> <td>85</td> <td>183</td> <td>30</td> <td>75</td> <td>373</td> </tr> <tr> <td>2017</td> <td>92</td> <td>240</td> <td>32</td> <td>82</td> <td>446</td> </tr> <tr> <td>2017 GP per 100,000 population</td> <td>112</td> <td>116</td> <td>152</td> <td>120</td> <td>118</td> </tr> </tbody> </table> <p><i>Health Workforce Data tool http://data.hwa.gov.au/datatool.html</i></p> <p><i>Nepean Blue Mountains PHN Customer Relationship Database, as at 1 November 2017</i></p>		Blue Mountains	Penrith	Lithgow	Hawkesbury	Total	2013	82	171	26	75	354	2014	79	177	29	71	356	2015	85	183	30	75	373	2017	92	240	32	82	446	2017 GP per 100,000 population	112	116	152	120	118
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Outcomes of the service needs analysis – Access to Health Services

		<p>A large proportion of the NBM region is designated District Workforce Shortage (DWS) for 2017. 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 (i.e. Kurrajong Heights, Ebenezer, Bilpin, Colo, St Albans etc.) designated DWS that represent around 15% of the LGA.</p> <p><i>Department of Health: General Practice Workforce Statistics, 2013-14</i> <i>Department of Health, District Workforce Shortage, 2016.</i></p>
	<p>High levels of attrition of general practice workforce due to aging of NBM workforce.</p>	<p>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 Upper Blue Mountains, and may also be indicated by the recent re-designation of the Blue Mountains region as DWS.</p> <p><i>NBMPHN Clinical Council Meeting, November 2016</i></p> <p>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.</p> <p>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.</p> <p><i>NBMPHN Workforce Consultations 2015-16.</i></p> <p>The cessation of the Outer Metropolitan Incentive Grant (OMRIG) has imposed further challenges on retaining GP registrar in the region.</p> <p><i>NBMPHN Clinical Council Meeting, November 2016.</i></p>

Outcomes of the service needs analysis – Access to Health Services

General Practice Nursing Workforce:
Practice nurses play a critical role in delivering continuous care to patients at general practice. The shortage in nursing workforce is likely to impact the quality of patient care.

Table 3 presents the number of practice nurses practising in the four NBM LGAs. Between 2005 and 2007, the number of practice nurse increased by 59% and now represents the fastest growing specialty of nursing in Australia.

Table 3. Number of practice nurses in in the four Nepean Blue Mountains PHN region LGAs in 2013-2017

	Blue Mountains	Lithgow	Penrith	Hawkesbury	Total
2013	32	15	57	21	125
2014	33	11	77	22	143
2015	36	14	65	22	137
2017	36	15	71	28	150

Health Workforce Data tool <http://data.hwa.gov.au/datatool.html>

Nepean Blue Mountains PHN Customer Relationship Database, as at 1 November 2017

As at 1 November 2017, 68 (50.4%) of General Practices in the NBM region employed at least one nurse. This compared to 63% across Australia in 2012.

Australian Medicare Local Alliance – General Practice Nurse National Survey Report, 2012.

Nepean Blue Mountains PHN Customer Relationship Database, as at 1 November 2017

Nurses in general practice are an essential part of the primary health care workforce solution. However, there are no standardized position descriptions or agreed set of competencies or accreditation requirements for general practice nurses. The lack of a clear career path into general practice makes it difficult to sustain future growth in demand.

Keleher, H., Joyce, C.M., Parker, R. & Piterman, L. 2007, "Practice nurses in Australia: current issues and future directions", Medical Journal of Australia, vol. 187, no. 2, pp. 108

Afzali et al. (2014) conducted a 3-year observational study in Australia to estimate costs and outcomes associated with increased practice nurse involvement in clinical-based activities for the management of diabetes and obesity. Their findings suggested that the active involvement of

Outcomes of the service needs analysis – Access to Health Services

		<p>practice nurses in collaborative clinical-based activities is cost-effective, as well as addressing general practice workforce issues.</p> <p><i>Afzali, H.H.A., Karnon, J., Beilby, J., Gray, J., Holton, C. & Banham, D. 2014, "Practice nurse involvement in general practice clinical care: policy and funding issues need resolution", Australian health review : a publication of the Australian Hospital Association, vol. 38, no. 3, pp. 301.</i></p>
<p>Diabetes workforce</p>	<p>Indications that services do not adequately assess and manage risk factors.</p> <p>Staff shortages across the LHD.</p> <p>Inconsistency in level of diabetes education of practice nurses in primary care delivering diabetes care.</p>	<p>Consultations and review of epidemiological profiles indicate:</p> <ul style="list-style-type: none"> • 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. <p><i>NBMLHD Epidemiological profile. 2014.</i> <i>NBMML comprehensive needs assessments 2014</i> <i>NBMLHD Aboriginal Health Profile 2016</i> <i>NBMML Allied Health Report 2014</i> <i>Staff consultation, NBMLHD</i> <i>Practice nurse consultations – 2013 NBMML Comdiab education program</i></p>
<p>Mental health workforce</p>	<p>There is a general view that workforce capacity for mental health in the region could be substantially improved with training and skills development.</p>	<p>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:</p> <ul style="list-style-type: none"> • 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.

Outcomes of the service needs analysis – Access to Health Services

		<ul style="list-style-type: none"> • 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 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. <p><i>NBMPHN Mental Health Stakeholder Forum 23/2/16</i> <i>NBMPHN GP and AHP Consultations March 2016</i> <i>PIR Consumer Group Consultation 23/3/16</i></p>
<p>Health workforce for CALD Populations</p>	<p>Need for enhanced workforce training to support special needs of CALD populations with mental illness.</p>	<p>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 consultation is required to establish the main CALD groups of concern and options for providing enhanced training and support to the workforce.</p> <p>The concerns raised in preliminary stakeholder consultation include the following:</p> <ul style="list-style-type: none"> • 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. <p><i>NBMPHN Mental Health Stakeholder Forum 23/2/16</i> <i>Stakeholder Consultation, NGO 11/3/16</i></p>

CULTURAL AND DEMOGRAPHIC FACTORS INFLUENCING HEALTH STATUS

Outcomes of the service needs analysis – Priority Theme: <i>Cultural and Demographic Factors Influencing Health Status</i>		
Identified Need	Key Issue	Description of Evidence
Poor Access to culturally appropriate health services	Indications that access is poor due to an ongoing lack of Aboriginal Medical Services in the NBMLHD	<p>Consultation and review of access to services indicate:</p> <ul style="list-style-type: none"> • A lack of culturally appropriate services in NBMLHD • Inequitable access to health services <p>The health of the Aboriginal population is poorer compared to non-Aboriginal population <i>NBMLHD Aboriginal Health Profile 2016</i> <i>NBMLHD Health Services Plan 2012/2022</i> <i>NBMLHD Development Proposal for Aboriginal Medical Service 2015</i></p>
	Defunding of the Healthy for Life Service for Aboriginal persons living in the Blue Mountains LGA	<p>The Healthy for Life Service for Aboriginal persons, operated by Wentworth Healthcare Ltd. (WHL) was defunded on 31 March 2017, with the view that this service would transfer to and continue to be delivered by Wellington Aboriginal Corporation Health Service (WACHS). This service has not yet re-commenced to date. WHL has received no indication or commitment from WACHS if or when this previously highly valued service may continue to operate in the Blue Mountains.</p>
	Poor access to the Aboriginal Medical Service operating in our neighbouring region	<p>Anecdotal reports suggest that Aboriginal people living in Penrith and Hawkesbury have experienced discrimination in accessing culturally appropriate care via limited access to the WACHS Aboriginal Medical Service located in Mt Druitt. An increasing number of Aboriginal persons have been refused access to care due to having inadequate paperwork proving their cultural identify.</p>

Outcomes of the service needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*

	<p>Poor access to Aboriginal Health workers in the NBM region</p>	<p><i>NBMPHN and NBMLHD joint Aboriginal Mental Health and AOD Advisory Committee, 2017</i></p> <p>There is a severe and chronic shortage of Aboriginal Health Workers in the NBM region, in particular in the Hawkesbury and Lithgow LGAs. This exacerbates challenges for the local Aboriginal communities in accessing culturally safe and appropriate local health services. Currently only one Aboriginal Health Worker is available in the Hawkesbury LGA and one Aboriginal Health & Community worker available who covers Lithgow and the Blue Mountains. This situation additionally adds to significant overwork and stress upon the few Aboriginal Health Workers themselves, who report they are at a heightened risk of burnout.</p> <p><i>NBMPHN consultations with Aboriginal and Community Health teams NBMLHD, 2017</i></p>
	<p>Poor career mentoring, development and support for the Aboriginal Health Workforce</p>	<p>Local workforce consultations reveal that poor levels of support, mentoring and career development is currently provided for Aboriginal Health Workers in the Lithgow area, in particular for younger Aboriginal persons &/or health workers who may be considering working in the area, or who are at risk of moving away from and working out of the area. Support and mentoring that engages Aboriginal Health Workers about issues and situations that are affecting them personally or the Aboriginal community are needed to promote a sustainable local Aboriginal Health Workforce.</p> <p><i>NBMPHN consultations with Aboriginal and Community Health teams NBMLHD, 2017</i></p>

Outcomes of the service needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*

<p>Transport</p>	<p>Poor access to transport to health services for Aboriginal people</p>	<p>Poor access to transport to health services, particularly for Aboriginal people living in the Hawkesbury region with disability, mobility issues and or multiple chronic health issues is reportedly a major and ongoing issue. In the Lithgow LGA, the private bus company does not accept Opal cards including Concession Opal cards, which prohibits travel for disadvantaged Aboriginal people with low incomes.</p> <p><i>NBMPHN consultations with Aboriginal and Community Health teams NBMLHD, 2017</i></p>
<p>Experiences of Hospital care for Aboriginal People</p>	<p>Aboriginal persons reported poorer experiences of care while in hospital in the NBMLHD</p>	<p>The Australian Bureau of Health Information Survey of hospital care for admitted patients – Aboriginal people in the NBMLHD, revealed that Aboriginal people reported poorer experiences of care compared to non-Aboriginal persons and to Aboriginal patients elsewhere in NSW.</p> <p>Survey questions where Aboriginal patients in NBM reported significantly poorer experiences of care include:</p> <ul style="list-style-type: none"> • ‘Always’ got the opportunity to talk to a nurse when needed • Nurses were ‘always’ kind and caring • ‘Definitely’ involved in decisions about care and treatment • ‘Always’ given enough privacy when being examined or treated • ‘Always’ given enough privacy when discussing condition or treatment • Nurses were ‘always’ polite and courteous <p><i>Bureau of Health Information. Patient Perspectives – Hospital care for Aboriginal people: Nepean Blue Mountains LHD profile. 2016</i></p>

Outcomes of the service needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*

<p>Poor Management of Risk Factors That Lead to Chronic Disease</p>	<p>Aboriginal people have poorer health and lower life expectancy than non-Aboriginal people.</p>	<p>Consultation and review of Aboriginal health profiles indicate:</p> <ul style="list-style-type: none"> • 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 <p><i>NBMLHD Aboriginal Health Profile 2016</i> <i>NBMLHD Health Services Plan 2012/2022</i></p>
<p>Iraqi and Syrian refugees</p>	<p>Significant challenges in meeting the growing demands of the diverse refugee populations</p>	<p>Interviews with service providers who provide health, mental health, and community and settlement services to Syrian and Iraqi migrants and refugees in the NBM region identified a number of significant challenges in meeting the growing demands of the diverse populations. Key findings from this research include:</p> <p>Common health needs:</p> <ul style="list-style-type: none"> • Physical health needs including diabetes, dental health, women’s sexual and reproductive health, diet related issues such as malnutrition and changing food patterns post-migration leading to obesity • Limited time for or provision of health check-ups • Mental health issues including trauma from issues of torture, post-traumatic stress disorder; headaches and stomach aches; and depression, anxiety and separation anxiety in children <p>Barriers to health seeking:</p>

Outcomes of the service needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*

		<ul style="list-style-type: none"> • Lack of seeking physical and mental health services • Poor awareness of physical and mental health issues • Poor knowledge of English language • Lack of cultural appropriateness or modification to meet the needs of refugee communities among some services • Cases of breaches in client confidentiality by interpreters • Fear of being diagnosed with a mental illness <p>Enablers of health seeking:</p> <ul style="list-style-type: none"> • Need for more time, attention and unhurried engagement at services sought by migrants and refugees • Preference to see General Practitioners and services who provide enough time and are sensitive to their background and culture <p>Health service provision:</p> <ul style="list-style-type: none"> • Existing health service staff under constant pressure, overworked and understaffed • Under resourcing a reason for lack of modification of services to increase outreach and close engagement with migrant and refugee communities • Most services provided in English and limited use of interpretation services • Poor cultural awareness among General Practitioners and lack of awareness of settlement services for referral purposes • Poor patient follow-up and mechanisms for recording patient background information • Poor communication and engagement among service providers
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Outcomes of the service needs analysis – Priority Theme: *Cultural and Demographic Factors Influencing Health Status*

		<ul style="list-style-type: none"> • Need to identify General Practitioners who are committed and interested in working closely with refugees <p><i>Wentworth Healthcare Limited 2016 - Addressing the needs of Syrian and Iraqi refugees in the Nepean Blue Mountains region: a formative assessment of health and community services needs</i></p>
Cost of Interpreter Services	High cost of Interpreter services	<p>Interpreter services for accessing Allied Health services is not funded by any source. Serviced providers who can access a funded priority line include GPs, Pharmacists and Real Estate Agents. It is therefore cost-prohibitive to access Allied Health services by persons who do not speak English well or do not speak English at all.</p> <p><i>NBMPHN Allied Health Advisory Committee, 2017</i></p>

