

Health Needs Assessment

2022–2025

Acknowledgement of Country

Healthy North Coast acknowledges the traditional custodians of the lands across our region, which includes the Githabul, Bundjalung, Yaegl, Gumbayngirr, Dunghutti and Birpai nations. We pay respect to the Elders past, present and emerging. We recognise these lands were never ceded and acknowledge the continuation of culture and connection to land, sky and sea. We acknowledge Aboriginal and Torres Strait Islander peoples as Australia's First Peoples and honour the rich diversity of the world's oldest living culture.

Approval

This version of the North Coast PHN Needs Assessment 2022–2025 has been approved for publication.

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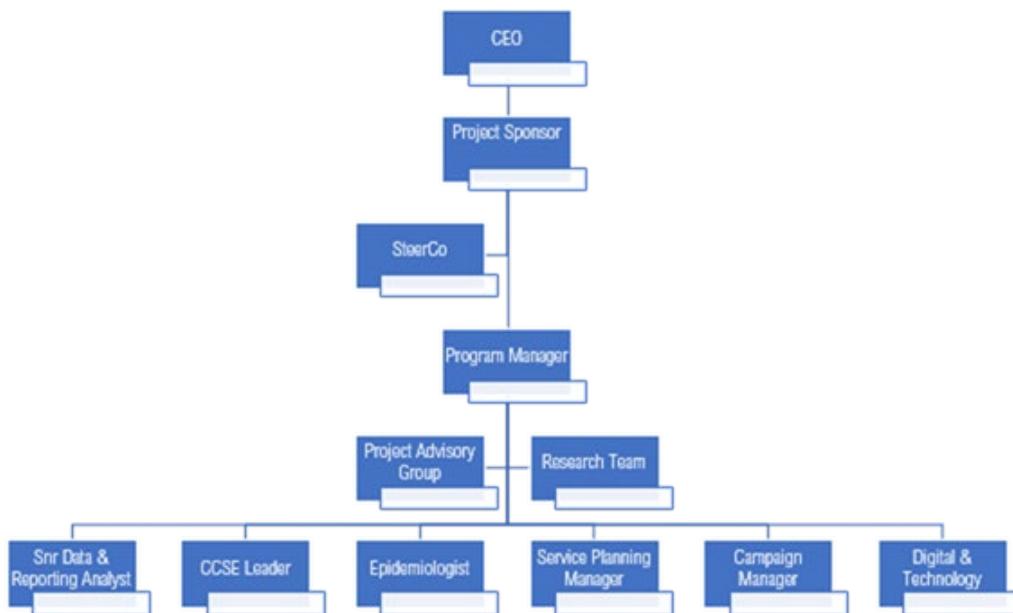
Narrative

The process for the 2021 Health Needs Assessment (HNA) continued to build upon work undertaken for previous HNAs, particularly the comprehensive HNA undertaken in 2018. Key components of the 2021 HNA include the engagement of a research partner and external consultant, consolidation of data sources into a data matrix, and development of a robust prioritisation framework, supported by widespread community consultation and stakeholder engagement.

The development of the HNA is a cyclical process, which includes ongoing review and collection of data, and stakeholder and community consultation to identify any new or emerging needs. The focus of this HNA is on highlighting the specific health and service needs of the North Coast PHN (NCPHN) region and identifying the priority areas that will guide planning and commissioning over the next 3 years.

The development of the 2021 HNA has been led by a project team since early 2021 and comprised of NCPHN employees/contractors involved in service planning, data management, epidemiology, community and stakeholder engagement, and campaign management. Governance and consultation forums were established. A steering committee (SteerCo) which comprised of several NCPHN executives, provided governance throughout the project. The Project Advisory Group (PAG), comprised of representatives from each NCPHN directorate, provided advice to the project team. In addition, a Research Team, consisting of representatives from NCPHN, University of Newcastle (UON) and Rebbeck Consulting was established to provide expert research advice, data analysis, needs prioritisation and a quality review of this document (see Figure 1).

Figure 1.



NCPHN continues to consider it important to collect information about health inequalities in the region and to have a focus on those groups who are disadvantaged or vulnerable (priority populations). There are priority populations in the NCPHN region that are at greater risk of poor physical, psychological and/or social health status and health care access. For these priority populations there is a need to understand the link between the social, cultural, economic and environmental determinants of health and how these affect health outcomes.

Stakeholder engagement in relation to issues for priority populations will be ongoing as part of the commissioning process. We will also continue to work closely with the Mid North Coast (MNC) and Northern NSW (NNSW) Local Health Districts (LHDs) to ensure we have the maximum possible alignment of priorities and to support an integrated approach to improving health outcomes in our region.

Communication, Consultation & Stakeholder Engagement Plan

A Communication, Consultation and Stakeholder Engagement (CCSE) Plan was developed by the HNA Project Team. The CCSE Plan was developed to identify the information needs of stakeholders, community groups/organisations and the broader community. The Plan included a CCSE strategy and activities, the development of consistent messaging and communication resources that would leverage existing relationships to facilitate involvement in all phases of the HNA. The stakeholder register, impact analysis, key messaging, action plans, KPIs and expected benefits were key elements of the CCSE plan.

Existing relationships with community groups/organisations were reinforced and new relationships were formed with targeted groups including: the LGBTQ+ community, culturally and linguistically diverse (CALD) communities, young people, local councils and the business sector.

Community consultation

Community consultation for the 2021 HNA consisted of the SpeakUp campaign. SpeakUp is a Community Survey conducted every 3 years by NCPHN across the region, to support the development of the HNA. The survey tool was comprised of questions about health status, health determinants and health system. The inclusion of validated survey scales in the survey tool was designed to increase validity, reliability, comparison of results, and improve the quality of the research. The inclusion of qualitative information and community perspectives in the data gathering process provided local contextual information that increases understanding of local health issues.

The COVID-19 pandemic and resulting regional lockdowns had a significant impact on planned community consultation. For example, face to face engagement was not possible in the lead up to and throughout the SpeakUp 2021 campaign period, which reduced opportunities to engage with the community in general and with priority populations in particular. In addition to this, community members were not out and about and active in the community, therefore reducing exposure to traditional community marketing activities. Consequently, Speak Up was only available via a digital platform in 2021 and via paper surveys for Aboriginal and Torres Strait Islander communities who had limited access to the internet and/or digital devices. A planned approach to facilitate this

process was underpinned by a series of guidance documents, including the CCSE Plan, Marketing Plan, Aboriginal Promotional Strategy and the HNA Stakeholder Register.

SpeakUp 2021 yielded 2,786 responses, which included 1,894 completed responses, equating to a 68% completion rate. A CCSE Evaluation Report is currently in development to review the effectiveness of communications, community consultation and stakeholder engagement activities.

Community consultation is an ongoing process and will continue to occur beyond the needs assessment process, as it is essential to ensure that population health needs are accurately reflected and that plans and actions are appropriate.

Identification of health and service needs

A data consolidation process for the 2021 HNA commenced with a review of the quantitative data sources from the 2018 HNA. Data which demonstrated no change or indicated deterioration in health outcomes were uploaded to a data table referred to as the data matrix. Additional health data identified during the review process were added to the data matrix, to create a single source of truth for data sources referenced in the HNA.

The data in the data matrix were sourced primarily from publicly available data sets, where the data is collected consistently over time, and benchmarks are used to facilitate comparison with other PHNs, NSW state and national benchmarks. Where possible, data were also analysed by the 12 LGAs and 7 SA3 areas aligned to the NCPHN region. The data matrix was linked to Power BI, providing an analytic report that provided the main evidence base for the needs prioritisation process.

A Working Group was established to identify the health and service needs, consisting of representatives from NCPHN, UON and Rebbeck Consulting. The Working Group developed a list of hypothesised health and service needs based on the 2018 HNA and the Working Group's existing understanding of health and service issues experienced by cohorts in the NCPHN region. These hypotheses were tested and validated using the data matrix, Community Survey data, and supplementary data/information from other public sources. In addition to this deductive approach, an inductive approach was taken to identify additional health and service needs based on insights observed from analyses of the data matrix.

Hypothesised health and service needs were further validated and refined through using data analysis and consultation with the different NCPHN directorates. As a result, several the health and service needs were added, removed, and amended. Based on this validation process, a 'clean' list of needs was developed for the prioritisation process. Some of the potential needs were removed if there was not enough data/information for evidence and further investigation was required.

An Aboriginal academic from UON joined the Working Group for a session to review the list of Aboriginal and Torres Strait Islander health and service needs. The academic provided valuable information about articulating Aboriginal health needs using culturally sensitive language and integrating health, social and wellbeing needs.

Health and Service Needs Planning Workshops were held in September and October 2021 for the PAG to develop and endorse the approach, process and methodology for the health and service needs identification.

Prioritisation process

The Working Group undertook a robust prioritisation process. Priorities were identified and categorised based on the 7 PHN National Priority Areas:

- Population health
- Mental health
- Aboriginal and Torres Strait Islander Health
- Aged Care
- Alcohol and other drugs
- Workforce
- Digital health

Each member of the Prioritisation Working Group individually scored the needs based on a modified version of the Hanlon Method (Hanlon, 1984), with criteria definitions adjusted to apply to Service Needs. This process included the application of 3 evidence-based criteria:

- prevalence/Incidence – size and frequency of need
- seriousness – severity of need
- addressability within PHN scope/amenable to primary care intervention

In addition, the Working Group considered other enablers, such as, is the potential intervention strategically aligned or do mature relationships with other lead agencies exist.

Each Working Group member individually scored the identified health and service needs. The Working Group then reviewed scores and discussed any outlying scores, which were those scores with a high variance from the mean.

A Needs Prioritisation Outcomes Workshop was held in December 2021 to present to the PAG and several NCPHN Executives, HNA prioritisation outcomes and the robust process used to identify and prioritise the health and service needs from across the region.

Additional data needs and gaps

There continue to be data gaps when undertaking the HNA process. Available localised data for certain population groups is essential to identifying the region's health and service needs, however this data is often challenging to find.

The ability to obtain comprehensive data on target and priority populations at the sub-regional level (or local government area) in MNC and NNSW LHDs is a challenge, as is the ability to access recent data and in particular data that brings together health data with social and community services data to provide a more detailed view about the impact of the social determinants of health (SDoH).

SDoH affect a wide range of health, functioning and quality-of-life outcomes and risks. Issues such as housing, education, income, race, ethnicity, language and literacy skills have a major impact on people's health, well-being and quality of life. To address the SDoH, it is crucial to have access to linked data to integrate socio-economic information with health and human services information. The ability to source linked administrative and clinical data sets is also important as it provides much more valuable information about the health and wellbeing of the region's population.

Comprehensive data on patterns of health care utilisation for Aboriginal and Torres Strait Islander people are not currently available. Access to hospital data is challenging and there is a need for improvement in the identification of Aboriginal and Torres Strait Islander status. Data in relation to issues such as domestic and family violence, incidence of dementia, homelessness, end of life care and young people is also difficult to source. In addition to this, it is difficult to source reliable and real time workforce data calculated in a consistent manner. If we could fill these data gaps, it would greatly improve our ability to effectively plan and deliver services to support our population's needs.

Filling data gaps can also improve the health of the NCPHN's population by highlighting SDoH dynamics as these impact upon the health outcomes of communities. Data about communities, provided by members of those communities, are also essential to filling some of the data gaps and to understanding the connections between patients, health care and the lived experience of community residents.

Where possible, representatives from NCPHN have attended the Primary Health Impact (PHI) HNA Community of Practice (CoP) meetings which are a good forum for networking with other PHNs in relation to the use of health data and to hear about what others are doing regarding sourcing, analysing, managing, and presenting their data.

Additional comments or feedback

Engagement with stakeholders is crucial in the HNA process and this has been challenging during the COVID-19 pandemic and lockdown in the North Coast region. Building on the successes and opportunities that arose from the impact of the COVID-19 pandemic will be a focus for NCPHN and the ongoing need for agility and flexibility of our operations and planning.

Maintaining active engagement with isolated areas in the region is always challenging, as the NCPHN region spans a large geographic area, from Port Macquarie in the south to the Queensland border in the north and west to the Great Dividing Range. Due to the COVID-19 pandemic this engagement was made even more challenging. The pandemic has highlighted health issues and needs in the NCPHN region, including existing and future challenges for some priority populations.

The development of the comprehensive data matrix and robust needs prioritisation framework for this HNA will support the streamlined delivery of future HNAs.

Further engagement with key stakeholders to discuss the high-level findings and priorities determined by the HNA is currently underway. Following this, there will be additional community consultation and stakeholder engagement. The HNA project evaluation framework has been

developed and following the completion of the HNA project, an independent evaluation will be undertaken.

The NCPHN Needs Assessment 2021 is presented as a comprehensive analysis of health and service needs, organised under the 7 PHN national priority areas. The PHN faces many challenges in trying to commission services to address the needs of its population, including geographical challenges, workforce issues and maintaining engagement with the region's communities living in remote or isolated areas.

Based on the identified health and service needs listed in this document, NCPHN recognises several key focus areas for the region:

- chronic disease prevention and management, including care navigation
- mental health and suicide prevention
- Aboriginal and Torres Strait Islander social and emotional wellbeing
- Impact of COVID-19
- health service access, including culturally safe services
- alcohol and other drugs, particularly illicit drug use
- an ageing population within the PHN catchment placing pressure on access to health services to support healthy ageing and provide adequate services for those with complex needs
- strengthening partnerships with Aboriginal Community Controlled Organisations to ensure services are based on self-determination and meet the needs of local Aboriginal and Torres Strait Islander communities
- potentially preventable hospitalisations, which remain high across the catchment.

The critical factors or enablers that will help NCPHN address these focus areas are:

- systems integration and collaboration, including co-design and co-production of health services and resources
- workforce development
- leadership and governance including clinical governance
- digital technology.

Outcomes of the health needs analysis

Key issues

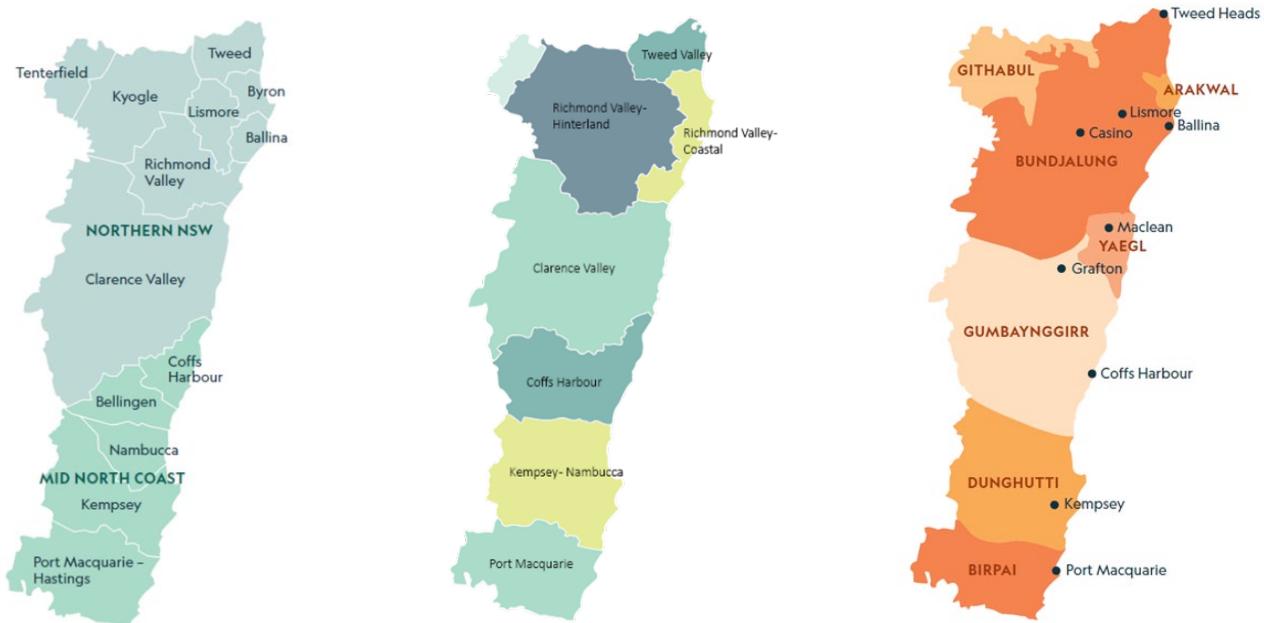
There is a larger proportion of Aboriginal and Torres Strait Islander people in the region than the NSW average. There is a high proportion of residents 65 years and older in the region.

Demographics

Healthy North Coast (NCPHN), trading as North Coast Primary Health Network, covers a geographic region of 32,767 km², extending from Port Macquarie in the South to Tweed Heads in the north of New South Wales and west to the Great Dividing Range. The region has a population of 533,940 people ^[1].

NCPHN refers to an area comprising of 2 Local Health Districts (LHDs), 7 Statistical Area level 3 regions (SA3) and 12 Local Government Areas (LGAs). Throughout this report the data has been presented by LGA, LHD or SA3.

The NCPHN region includes a small portion of the Tenterfield LGA, the population of this area in 2016 was less than 450. Data is not always available and has not been used in the needs below.



Population density, estimated residential population 2020 [1].

LGA	Population	Population Density persons/km2	
Ballina	45,217	93.2	↑
Bellingen	13,141	8.2	↓
Byron	35,773	63.2	↑
Clarence Valley	51,730	5.0	↓
Coffs Harbour	77,648	66.2	↑
Kempsey	29,921	8.9	↓
Kyogle	8,788	2.5	↓
Lismore	43,667	33.9	↑
Nambucca Valley	19,861	13.3	↑
Port Macquarie–Hastings	85,952	23.3	↑
Richmond Valley	23,490	7.7	↓
Tweed	98,382	75.2	↑
NCPHN	533,570	NA	
NSW	8,167,532	10.2	
Australia	25,697,298	3.3	

Aboriginal and Torres Strait Islander, estimated residential population 2016 [1].

LGA	Aboriginal and Torres Strait Islander population	% of LGA population	% of NCPHN Aboriginal population
Ballina	1,708	4.0%	5.5%
Bellingen	549	4.2%	1.8%
Byron	774	2.3%	2.5%
Clarence Valley	3,961	7.7%	12.8%
Coffs Harbour	4,454	6.0%	14.4%
Kempsey	4,174	14.2%	13.5%
Kyogle	468	5.1%	1.5%
Lismore	2,650	6.0%	8.6%
Nambucca Valley	1,794	9.2%	5.8%
Port Macquarie–Hastings	3,874	4.8%	12.5%
Richmond Valley	2,021	8.7%	6.5%
Tweed	4,468	4.8%	14.5%
NCPHN	30,895	6.0%	
NSW	160,431	2.1%	
Australia	798,365	3.3%	

Culturally and linguistically diverse (CALD) population 2016 [2].

LGA	Speaks other language and speaks English – not well	Speaks other language and speaks English – not at all	% of LGA population with poor English proficiency
Ballina	86	31	0.3%
Bellingen	14	6	0.2%
Byron	85	34	0.4%
Clarence Valley	82	29	0.2%
Coffs Harbour	793	284	1.5%
Kempsey	77	23	0.3%
Kyogle	18	5	0.3%
Lismore	169	70	0.6%
Nambucca Valley	23	8	0.2%
Port Macquarie–Hastings	173	59	0.3%
Richmond Valley	40	12	0.2%
Tweed	293	119	0.5%
NCPHN	1,850	703	0.5%
NSW	256,560	79,844	4.5%
Australia	626,885	193,036	3.5%

Life expectancy

Longer life expectancy mainly results from reduced deaths in infancy, better treatment for common diseases which extend lives and a healthier older population. Health strategies in all these areas are necessary to improve life expectancy in all age cohorts in a population, throughout the socio-economic strata and in Aboriginal and/or Torres Strait Islander and CALD groups [3].

Life expectancy by LGA, persons at birth, NSW, 2018 [3].

LGA	Female (years)	Male (years)	Persons (years)
Ballina	85.9	80.5	83.4
Bellingen	84.6	80.3	82.4
Byron	85.0	80.9	83.2
Clarence Valley	85.0	80.4	82.8
Coffs Harbour	84.9	80.9	83.0
Kempsey	83.8	79.7	81.1
Kyogle	85.0	80.4	82.6
Lismore	85.2	80.4	82.6
Nambucca	84.1	80.0	81.8
Port Macquarie–Hastings	84.5	80.9	82.8
Richmond Valley	85.5	80.5	83.1
Tweed	84.8	80.7	82.7
Healthy North Coast	84.3	79.6	81.9
NSW	85.7	81.5	83.6

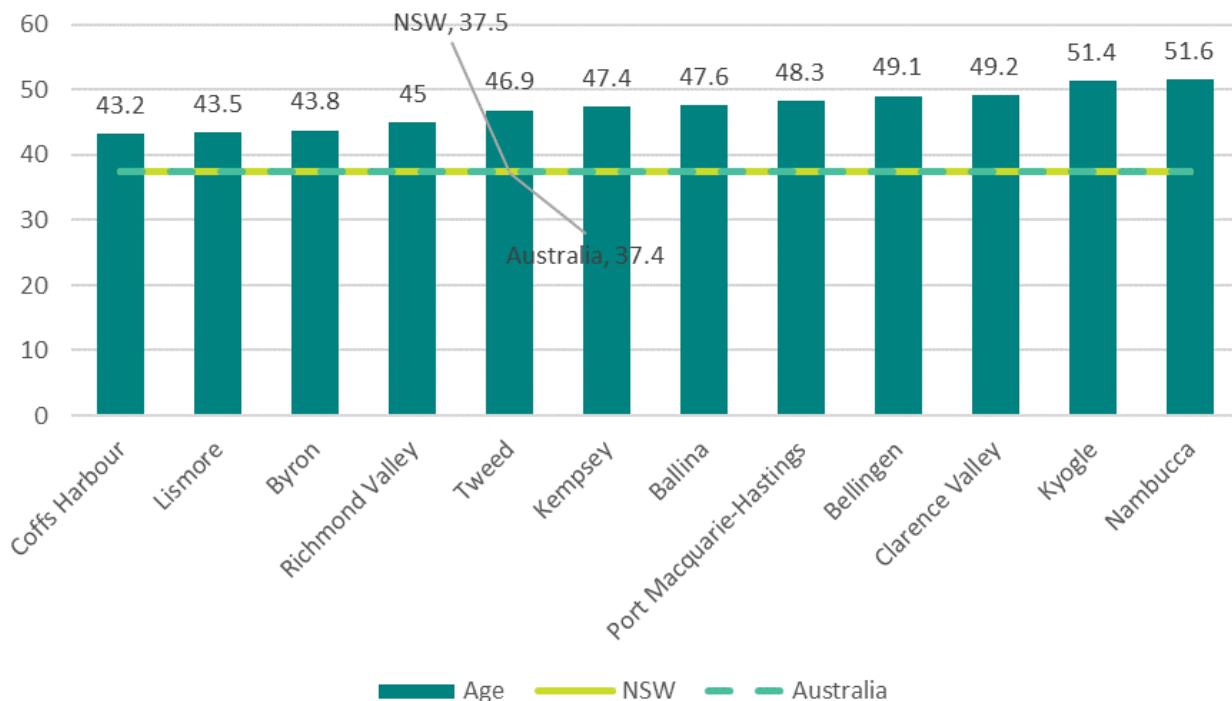
Life expectancy by Aboriginality 2015 – 2017 [3].

Location		non-Aboriginal (years)	Aboriginal (years)	Difference (years)
NSW	Female	83.5	75.9	7.6 years
	Male	80.2	70.9	9.3 years
Australia	Female	83.4	75.6	7.8 years
	Male	80.2	71.6	8.6 years

Median age

The median age is defined as the age at which half the population is older and half is younger.

Median age, by LGA, 2019^[1].



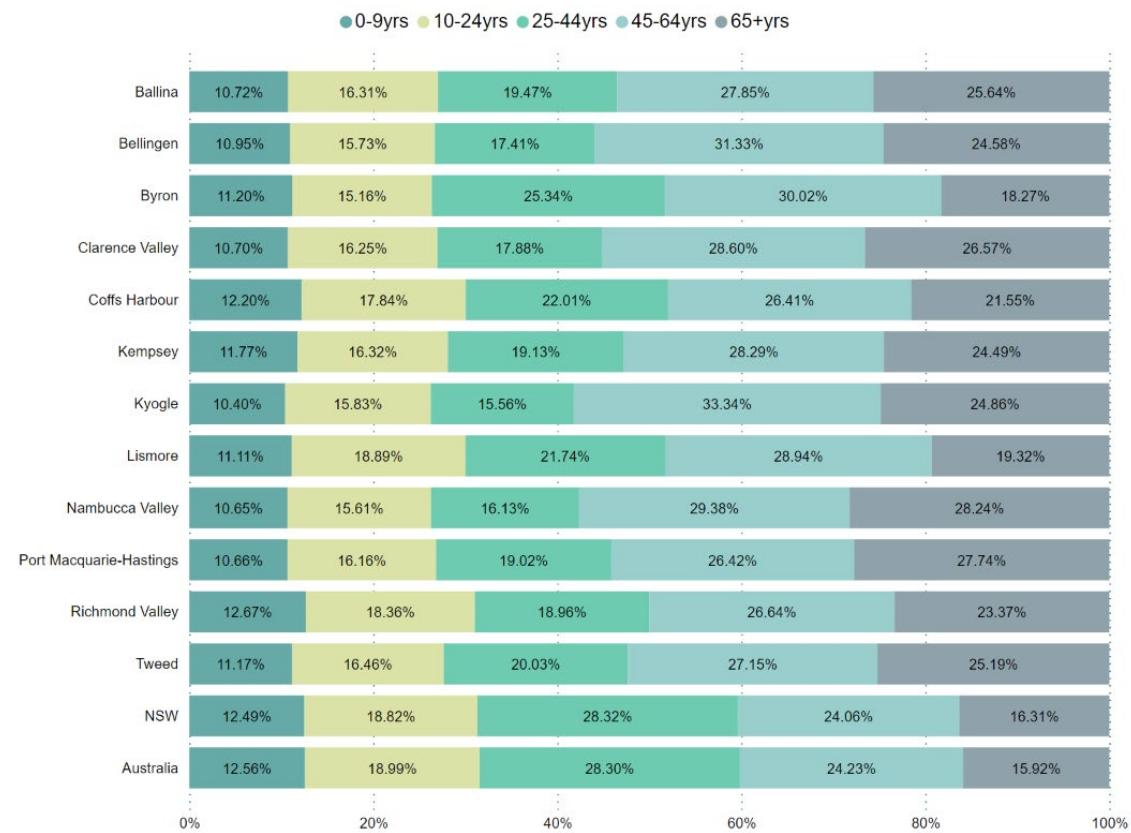
Population growth

The population of the NCPHN region is expected to grow by 6.4% to a total of 549,979 by 2026 with the highest proportion of growth expected in the 65+ age group. This indicates that the 65+ aged population will continue to be the highest proportion of the NCPHN population^[4].

NCPHN projected population growth % 2016 to 2026

LGA	0–9	10–24	25–44	45–64	65+	Total
Ballina	-17.6%	2.9%	0.9%	-2.9%	23.3%	5.2%
Bellingen	-13.0%	-3.2%	4.3%	-16.4%	23.3%	1.4%
Byron	2.7%	1.4%	-1.0%	-5.2%	36.3%	7.4%
Clarence Valley	-17.0%	-2.1%	6.9%	-13.3%	22.2%	3.0%
Coffs Harbour	-2.1%	5.9%	11.9%	-1.9%	25.3%	9.3%
Kempsey	-10.3%	-4.8%	4.3%	-19.3%	19.8%	0.0%
Kyogle	-25.1%	-26.2%	-8.0%	-28.3%	26.3%	-7.0%
Lismore	-11.8%	-7.9%	2.7%	-7.8%	30.8%	3.5%
Nambucca Valley	-10.0%	0.5%	8.9%	-13.8%	18.2%	3.0%
Port Macquarie-Hastings	-7.3%	7.9%	9.6%	2.1%	22.4%	9.9%
Richmond Valley	-15.7%	-8.1%	3.0%	-7.2%	23.4%	2.2%
Tweed	-8.0%	7.7%	6.3%	2.0%	24.5%	9.4%
NCPHN	-9.0%	2.0%	6.1%	-4.8%	24.4%	6.4%
NSW	11.5%	9.0%	15.3%	9.1%	25.9%	14.2%

Age distribution, LGA, NSW, Australia, 2019 [1]



Social determinants of health

Social determinants of health are the non-medical factors that influence health outcomes and focus on the social and economic conditions impacting health at a community-level. They are the conditions in which people are born, grow, work, live, age, and the wider forces and systems impacting the conditions of daily life such as: income, education, housing, unemployment, early childhood development and social inclusion.

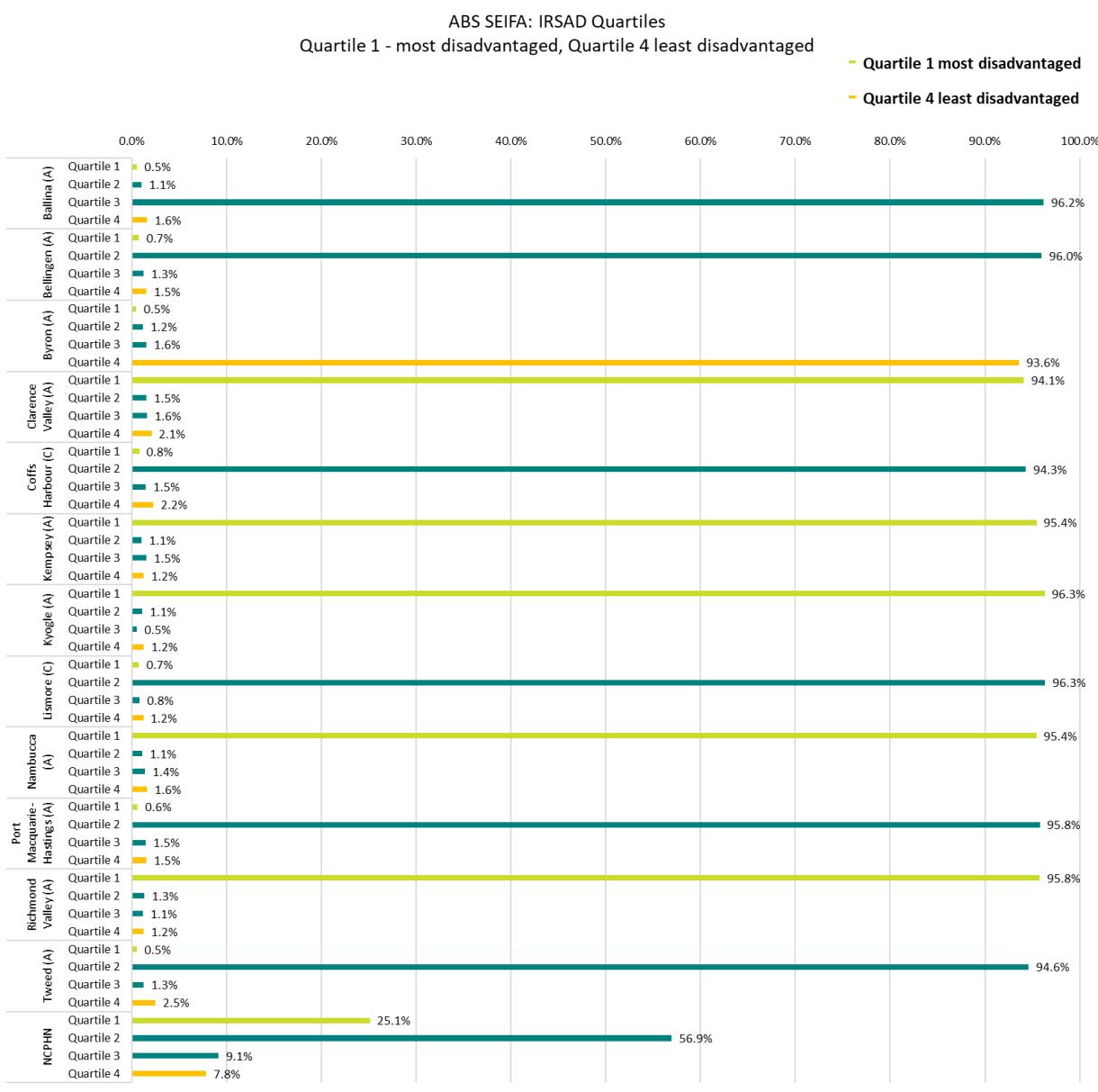
Social determinants can strengthen or undermine the health of individuals and communities.

The NCPHN region is more disadvantaged when compared with NSW. Disadvantage indicators include high ageing, Aboriginal and Torres Strait Islander, remote and unemployed populations.

Index of relative socio-economic advantage and disadvantage [5]

In 2016, 25.1% of the NCPHN population was in the most disadvantaged quartile, while only 7.8% of the population was in the most advantaged quartile.

The LGAs with the largest proportion of the population in the most disadvantaged quartile were Kyogle (96.3%), Richmond Valley (95.8%), Kempsey (95.4%), Nambucca (95.4%) and Clarence Valley (94.1%) (see graph below).



The following table and maps show the Socio-Economic Indexes for Areas (SEIFA) score for all LGAs in the NCPHN region using the Index of Relative Socio-economic Disadvantage (IRSD). The IRSD identifies and ranks areas in terms of their relative socio-economic disadvantage.

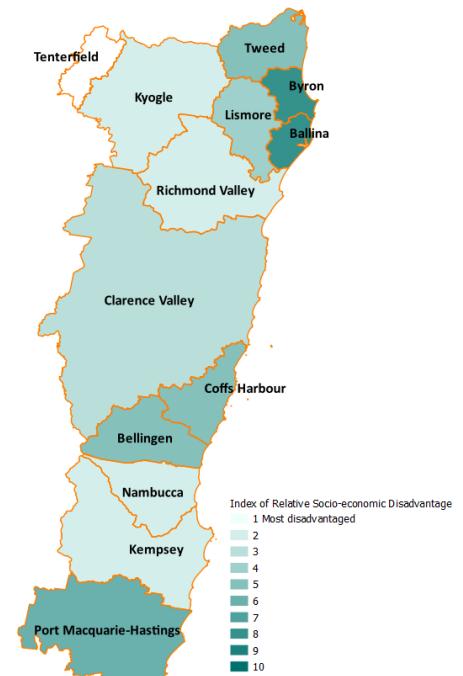
A low score indicates relatively greater disadvantage in general. A high score indicates a relative lack of disadvantage in general.

Although some of the LGAs in the NCPHN region are less disadvantaged, there are often smaller geographical regions, such as suburbs, that sit in the LGAs that are more disadvantaged compared to the LGA or other suburbs in the LGA.

An example of this is the suburb of Ballina within the Ballina LGA. The suburb of Ballina has an IRSD score of 918 and has a decile score of 2 (1 being the most disadvantaged) compared to the Ballina LGA with an IRSD score of 1003 and a decile score of 8.

Socio-economic disadvantage is more usefully applied to determining need, when analysing smaller geographical regions.

LGA	SEIFA IRSD Score	Rank in NSW	Rank in Australia	Decile score
Ballina	1003	98	386	8
Bellingen	966	60	236	5
Byron	1003	99	387	8
Clarence Valley	926	23	113	3
Coffs Harbour	967	61	239	5
Kempsey	888	6	56	2
Kyogle	910	12	79	2
Lismore	954	46	197	4
Nambucca Valley	907	10	76	2
Port Macquarie–Hastings	976	71	273	6
Richmond Valley	902	8	69	2
Tweed	973	67	261	5



Income

Income and wealth play important roles in socio-economic position, and therefore in health. In addition to improving socio-economic position, a higher income allows for greater access to goods and services that provide health benefits, such as better food and housing, additional health care options, and greater choice in healthy pursuits [101].

All LGAs in NCPHN, have a lower median employee income than NSW and Australia [1].

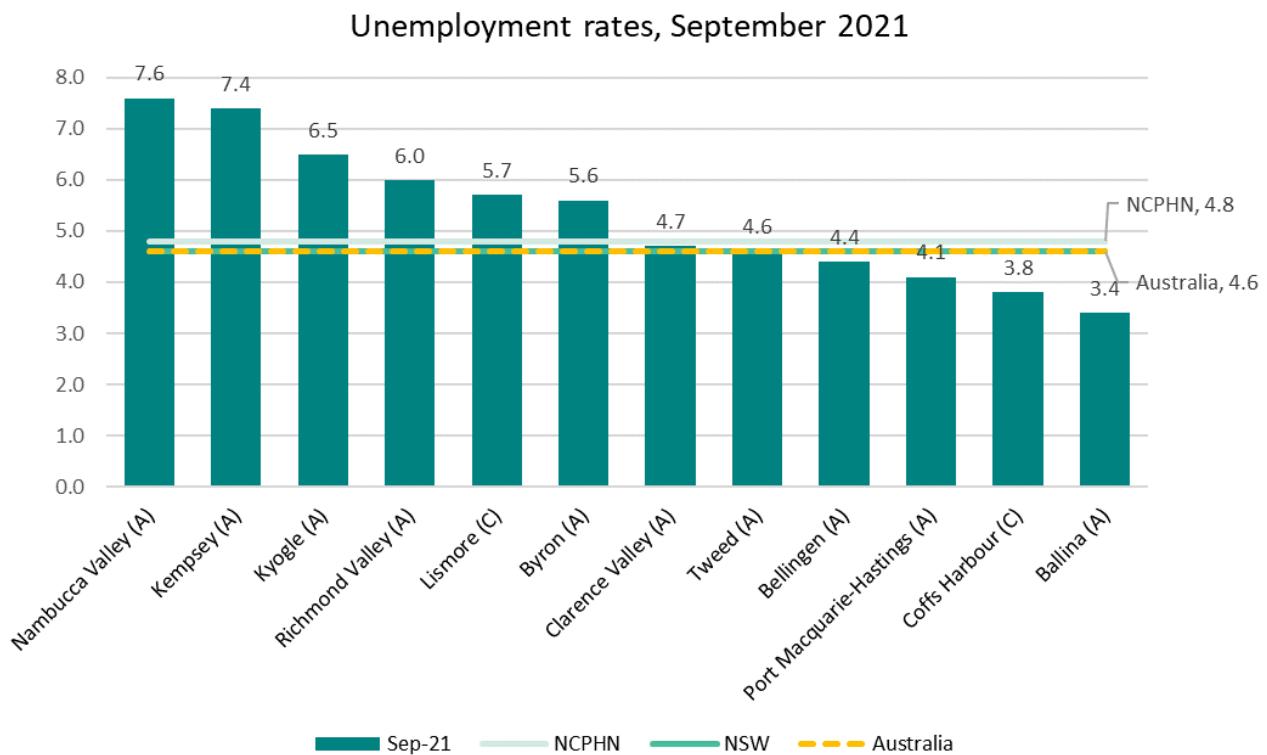
LGA	Median employee income excl. Government pensions and allowances
	2018
Ballina	\$42,246
Bellingen	\$35,924
Byron	\$35,180
Clarence Valley	\$39,211
Coffs Harbour	\$41,618
Kempsey	\$37,679
Kyogle	\$31,959
Lismore	\$41,716
Nambucca Valley	\$35,870
Port Macquarie–Hastings	\$40,615

LGA	Median employee income excl. Government pensions and allowances 2018
Richmond Valley	\$40,719
Tweed	\$40,994
NSW	\$50,153
Australia	\$49,805

Unemployment

Those who are unemployed have a higher risk of death and have more illness and disability than those of similar age who are employed (Mathers & Schofield, 1998). The psychosocial stress caused by unemployment has a strong impact on physical and mental health and wellbeing [100]. For some, unemployment is caused by illness, but for many it is unemployment itself that causes health problems through its psychological consequences and the financial problems it brings.

7 of the 12 LGAs in NCPHN have an unemployment rate higher than the NSW and Australian rate (4.6) (see graph below) [7].



Internet access

Internet access is considered a social determinant of health, given the growing role that the internet plays in connecting people to health care. Disparities in access to the Internet should be treated as a public health issue because they affect the health of people and communities.

Priority populations face specific challenges related to inadequate access to affordable and consistent high-speed Internet.

People particularly at-risk of not having Internet access include older people, Aboriginal and Torres Strait Islander people, people living in rural and remote areas, and people with disability. These communities also have higher incidences of chronic health conditions or are at greater risk of mental health issues.

In 2016, 19.3% of private dwellings in NCPHN did not access the internet, making it the 7th highest rate in Australia, compared to 14.1% in Australia and 14.7% in NSW (see graph below)^[8].

Internet not accessed from private dwellings, 2016



Source

PHIDU

Early childhood development

Early childhood development and education are key determinants of future health and wellbeing.

The determinants of childhood health disparities include poverty, unequal access to health care, poor environmental conditions, and educational inequities.

The AEDC provides a national measurement to monitor Australian children's development. The AEDC results give a snapshot of children's development, and the results can support an understanding of the local levels of developmental vulnerability and where that vulnerability exists within the community (<https://www.aedc.gov.au/>).

In the NCPHN region, more than half the LGAs have higher percentages of children who are considered vulnerable on two or more domains, compared to NSW.

The Australian Early Development Census (AEDC) measures whether children are on track, at risk or developmentally vulnerable across each of the 5 following domains:

- physical health and wellbeing
- social competence
- emotional maturity
- language and cognitive
- communication skills and general knowledge.

Children that are developmentally vulnerable demonstrate much lower than average competencies in that domain.

Percentage of children developmentally vulnerable, 2018 [9].

LGA	Vulnerable on one or more domains of the AEDC	Vulnerable on two or more domains of the AEDC
Ballina	18.2	10.5
Bellingen	13.7	5.2
Byron	14.4	3.6
Clarence Valley	18.3	8.3
Coffs Harbour	20.2	10.8
Kempsey	28.8	15.5
Kyogle	28.6	13.3
Lismore	20.5	10.8
Nambucca Valley	21.1	13.7
Port Macquarie–Hastings	21.0	11.0
Richmond Valley	28.6	14.6
Tweed	18.0	8.4
NSW	19.9	9.6
Australia	21.7	11.0

Education

Higher educational achievement can play a major role in shaping employment opportunities, and it can also increase the capacity for better decision-making regarding health and provide capacity for increasing social and personal resources that are vital for physical and mental health.

Higher education has been associated with higher levels of health literacy and the ability to appraise health information and navigate the healthcare system.

Strong links between education and health outcomes have been shown to exist, favouring the survival and health of children born to educated parents, especially mothers.

Highest level of schooling

LGAs with a higher proportion of people who did not go to school or complete year 8 or lower were: Richmond Valley (8.7%), Kempsey (8%), Kyogle (7.7%), Clarence Valley (7.1%) and Nambucca Valley (7%) [1].

LGA	Did not go to school or Year 8 or below	Year 9 or 10 or equivalent	Year 11 or 12 or equivalent
Ballina	5.1	36.8	48.5
Bellingen	5.2	37.8	47.6
Byron	2.8	25.1	57.8
Clarence Valley	7.1	44.9	37.0
Coffs Harbour	5.8	38.2	46.2
Kempsey	8.0	44.1	33.4
Kyogle	7.7	42.7	37.7
Lismore	5.5	37.1	47.4
Nambucca Valley	7.0	44.3	37.2
Port Macquarie–Hastings	5.4	41.2	43.7
Richmond Valley	8.7	46.1	34.0
Tweed	5.6	38.0	46.0
NSW	5.6	27.9	57.9
Australia	5.7	24.8	61.0

Mother's education

In 2016, 11 of the 12 LGAs in NCPHN had higher rates of children in families where the mother had low educational attainment [10].

LGA	% Children in families where the mother has low educational attainment
Ballina	19.7
Bellingen	21.9
Byron	11.2
Clarence Valley	31.9
Coffs Harbour	27.0
Kempsey	34.8
Kyogle	25.8
Lismore	26.0
Nambucca Valley	31.4
Port Macquarie-Hastings	25.2
Richmond Valley	34.5
Tweed	23.2
NCPHN	25.7
NSW	19.6
Australia	17.0

Homelessness

Homelessness is not just the result of too few houses. Its causes are many and varied. Domestic violence, a shortage of affordable housing, unemployment, mental illness, family breakdown and drug and alcohol abuse all contribute to the level of homelessness in Australia.

Homelessness is one of the most potent examples of disadvantage in the community, and one of the most important markers of social exclusion.

People experiencing homelessness, and those at risk of homelessness, are among the most socially and economically disadvantaged.

In the NCPHN region, there were 2,349 people who were classified as being homeless on Census night 2016.

The homeless rate in NCPHN, was 47.4 people for every 10,000 people in the Census. Compared to 48.7 people in NSW (see graph below) [11].

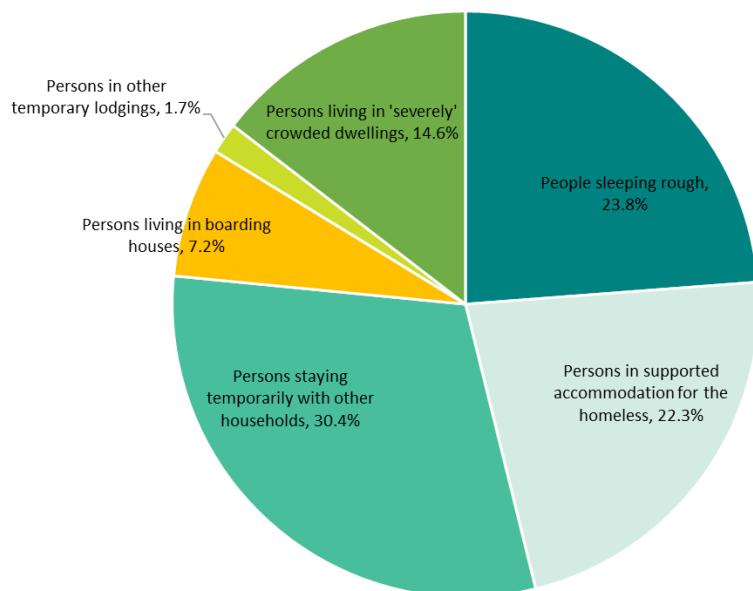
Homeless persons, by place of enumeration, LGA, per 10,000, 2016 Census



Many people who become homeless do not show up in official statistics – this is known as hidden homelessness. This includes people who become homeless but find a temporary solution by staying with family members or friends, living in squats or other insecure accommodation. The everchanging and fluid nature of the homeless population presents great methodological challenges in obtaining an accurate measure of its size.

Where people were staying [11]:

Homelessness in NCPHN, 2016



Housing

Affordable, secure and safe housing is fundamental to one's health and wellbeing. There is a lack of social housing and affordable housing in the NCPHN region.

Financial housing stress

In 2016, an estimated 25.1% of low-income households in NCPHN experienced financial stress from mortgage or rent.

The highest levels of financial stress were experienced in Byron (32.6%), Lismore (28.7%) and Coffs Harbour (28.4%) LGAs^[10].

Social housing

Social housing is secure and affordable rental housing for people on low incomes with housing needs. It includes public, community and Aboriginal housing.

The percentage of social housing dwellings in 10 of the 12 LGAs in NCPHN was lower than the percentage for NSW. There were 8 LGAs were lower than the percentage for Australia (see table below)^[10].

LGA	social housing dwellings	% of social housing (proportion of all private dwellings)
Ballina	686	4.2
Bellingen	120	2.4
Byron	220	1.9
Clarence Valley	597	3.0
Coffs Harbour	1,309	4.8
Kempsey	437	4.1
Kyogle	62	1.8
Lismore	651	4.0
Nambucca Valley	375	4.9
Port Macquarie-Hastings	1,142	3.7
Richmond Valley	354	4.1
Tweed	1,054	3.0
NCPHN	7,001	3.6
NSW	122,317	4.7
Australia	351,020	4.2

Identified health needs

Population health (chronic illness)

People in the NCPHN region have a high rate of chronic illness that leads to hospitalisation and/or death.

**Chronic conditions are the leading cause of illness,
disability and death in Australia.**

(Australian Government Department of Health, 2020).

GP Chronic Disease Management Plan (CDMP)

In 2020–21, NCPHN had the highest rate (72.9) per 100 people for GP Chronic Disease Management Plan (CDMP) services in Australia. This was 1.8 times the Australian rate (40.4). This equated to 25.4% of the population in NCPHN receiving this service (135,773 patients divided by the Estimated Resident Population of the PHN region).

This was the highest rate compared to all PHNs in Australia, the closest PHN with 53.97 services per 100^[12].

Potentially preventable hospitalisations (PPH) are hospital admissions that could have been prevented by timely and adequate health care.

For more information see:

- [Population Health \(Potentially Preventable Hospitalisations\)](#)
- [Population Health \(Diabetes\)](#)

Conditions

Chronic kidney disease

Between 2013–17, the rate of death from chronic kidney disease in men aged over 75 years in NCPHN was the 2nd highest in Australia. NCPHN rate per 100,000 was 1,147.8 compared to 1,000.7 in Australia. For the same period, the rate of death from chronic kidney disease in females aged over 75 years in NCPHN was the 3rd highest in Australia, with a rate of 888.6 compared to 753.7 in Australia^[13].

Chronic Obstructive Pulmonary Disease (COPD)

The NCPHN 2021 Community Survey revealed 4.7% of respondents said they currently experience COPD^[14].

In 2018–19, the rate per 100,000 of hospitalisations for COPD in NCPHN for all people, was the 4th highest in NSW. The rate for NCPHN (259.3) was higher than the NSW rate (224.8).

The rate of COPD hospitalisations was higher for people aged over 65 years. In NCPHN the rate was 1362.5, compared to the NSW rate of 1351.9^[15].

Arthritis

28% of survey respondents in the NCPHN 2021 Community Survey said they currently experience arthritis^[14].

In 2017–18 arthritis was experienced by approximately 15% of the Australian population^[16].

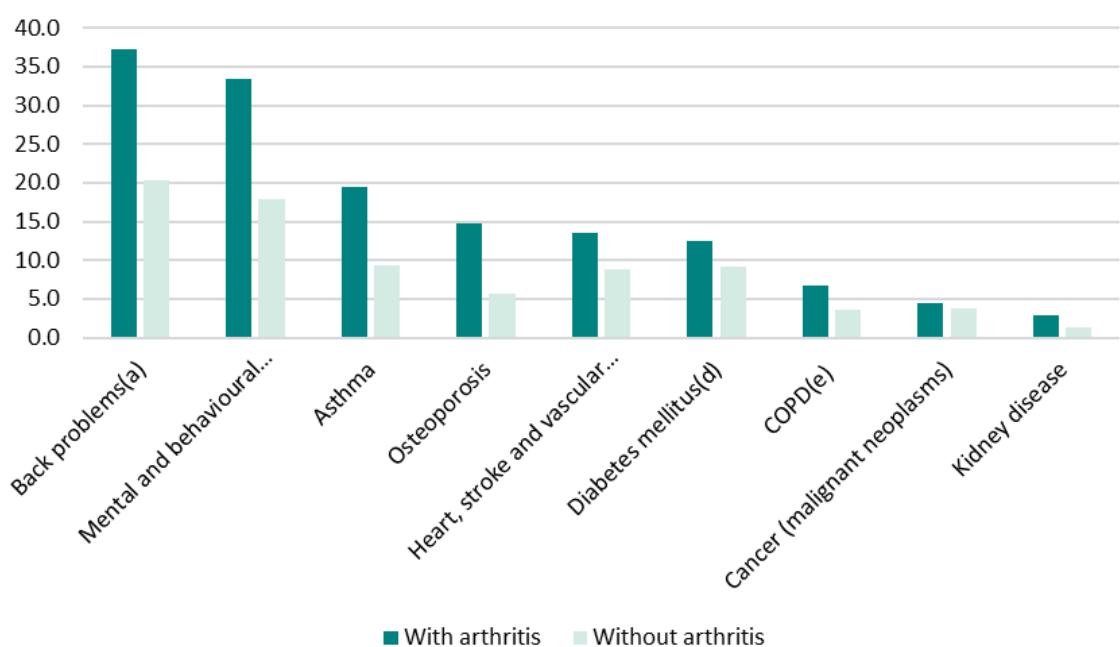
Arthritis is a term used for a range of inflammatory conditions affecting the bones, muscles and joints. Arthritis is a common condition particularly among older Australians, contributing to illness, pain and disability.

Arthritis can have a significant impact on a person's physical health, due to the pain and physical limitations associated with the disease.

People with arthritis often have other chronic diseases and long-term conditions. This is referred to as 'comorbidity', where two or more health problems occur at the same time.

In 2017–18, 3 out of 4 (75%) people aged 45 and over with arthritis had at least one other chronic condition. Back problems was the most common comorbidity (36%), followed by mental and behavioural conditions (30%) and asthma (18%). These are also among the most common chronic conditions experienced by people without arthritis but those with arthritis experience them at higher rates (see graph below)^[17].

Prevalence of chronic conditions in people aged 45 and over with and without arthritis, 2017–18



Asthma

15.8% of survey respondents in the NCPHN 2021 Community Survey said they currently experience asthma [14].

During 2018–2019, the rate of PPH for asthma was higher in MNC LHD than in NSW. MNC rate was 115.5 per 100,000 compared to 114.9 for NSW [18].

Back pain

Approximately 16% of the Australian population experience back pain [17].

33.3% of survey respondents in the NCPHN 2021 Community Survey said they currently experience back pain [14].

Cardiovascular disease (CVD)

Between 2015–16 and 2017–18, NCPHN had the 10th highest rate (2145.1 per 100,000) of hospitalisations attributable to CVD amongst Australian PHNs. The Australian rate was 2016.5.

Between 2015 – 2017, the age-standardised rate of death per 100,000 due to CVD in NCPHN was 156.2 compared to the Australian average 144.5 [13].

7.6% of survey respondents in the NCPHN 2021 Community Survey said they currently experience cardiovascular disease [14].

Osteoporosis

Osteoporosis is under-diagnosed and so it is difficult to estimate the true prevalence. However, nearly 1 million Australians are known to live with osteoporosis which includes approximately 20% of people in the 75+ age group.

For more information on conditions see:

- **Cancer:** Population Health (cancer)
- **Mental health:** Mental Health (mental health or behavioural condition)
- **Diabetes:** Population Health (diabetes)

Risk factors

The Australian Burden of Disease Study 2011 found the single leading risks factors contributing to disease burden were:

1. tobacco use – accounting for 9.0% of the total burden
2. high body mass index (BMI) is related to overweight and obesity – 7.0% based on enhanced analysis by the AIHW published in 2017 which used updated evidence of diseases associated with overweight and obesity and enhanced modelling techniques
3. alcohol use (5.1%)
4. physical inactivity (5.0%)
5. high blood pressure (4.9%) [19].

You will find more information on the following risk factors throughout this report

Smoking

see Population Health (smoking related illnesses)

Obesity and overweight

see Population Health (overweight and obesity)

Alcohol

see:

- Aboriginal and Torres Strait Islander Health (substance abuse)
- Aboriginal and Torres Strait Islander Health (alcohol consumption)
- Alcohol and Other Drugs (illicit drug use)
- Alcohol and Other Drugs (excessive alcohol consumption)
- Alcohol and Other Drugs (access to services)
- Alcohol and Other Drugs (access to detox)

Poor diet

Only 48.2% of the NCPHN population had adequate fruit intake, this was the 4th lowest proportion in Australia [8].

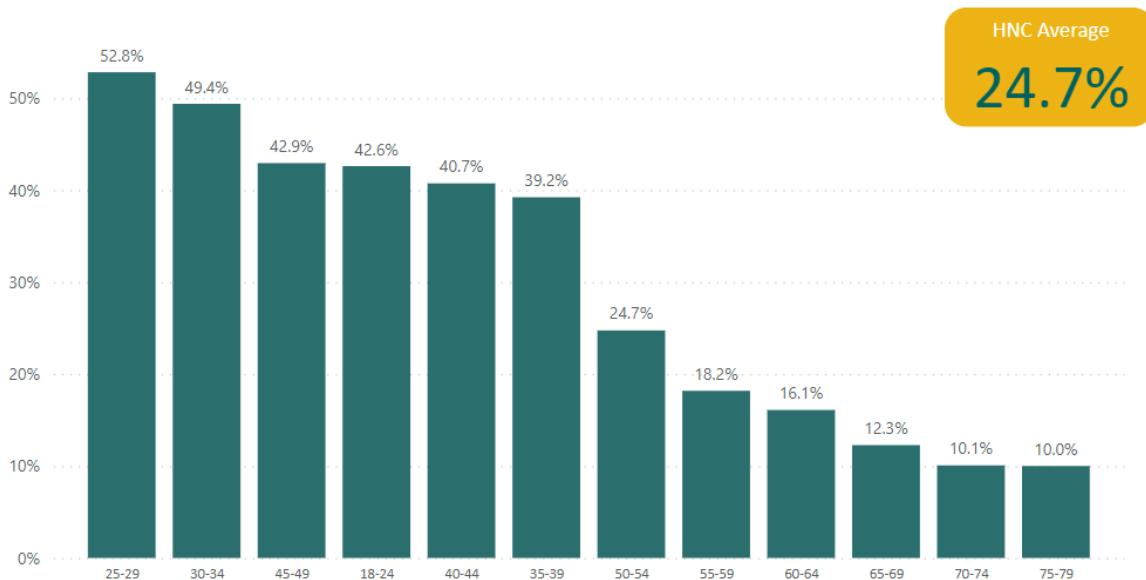
49.9% of the NCPHN 2021 Community Survey respondents said that in the last month they ate at least 5 servings of vegetables a day, and 24.7% said they ate takeaway food more than once a week [14].

More than half of the NCPHN 2021 Community Survey respondents aged between 25–29 said they ate takeaway food more than once a week, and 30.2% said they ate at least 5 servings of vegetables each day (see graph below).

40.5% of respondents who identified as Aboriginal said they ate at least 5 servings of vegetables each day compared to 50.8% non-Aboriginal respondents.

48.8% of respondents who identified as Aboriginal said they ate takeaway food more than once a week, compared to 22.3% of non-Aboriginal respondents [14].

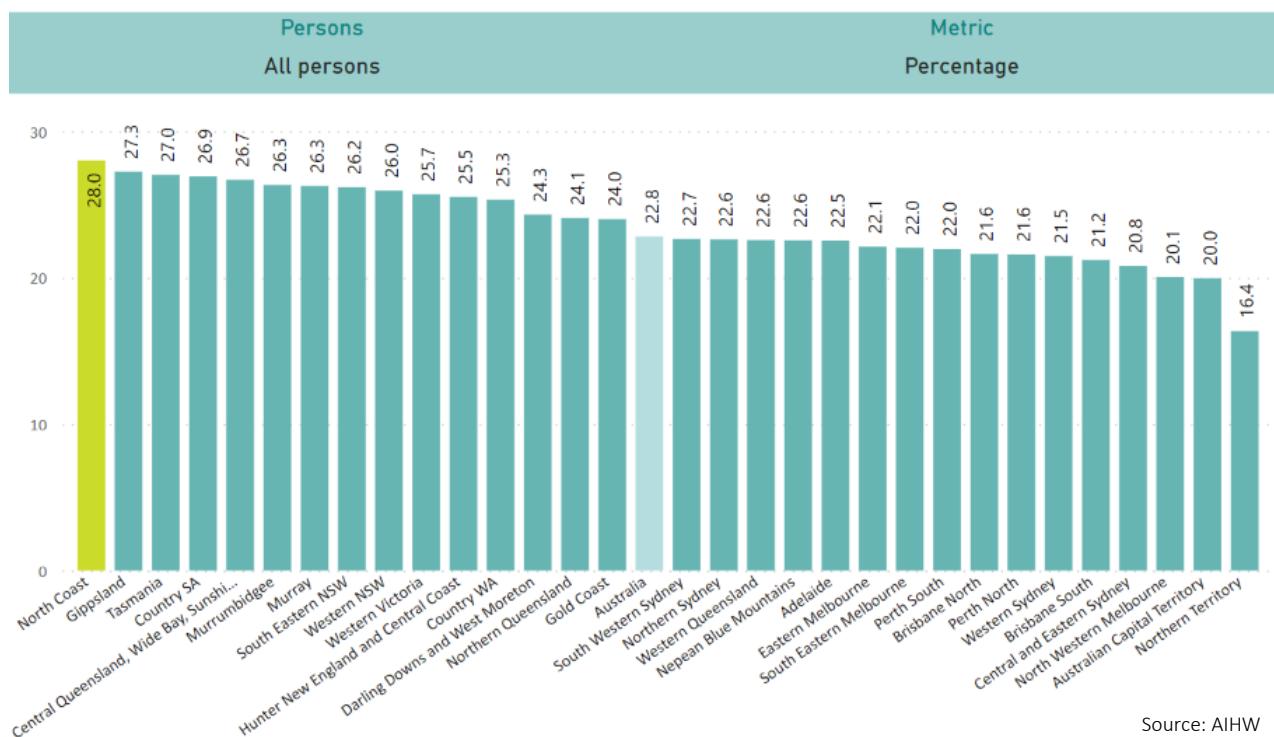
I ate takeaway food more than once a week



High blood pressure

According to the Geographical Variation in Disease Web report by the AIHW, NCPHN had the highest proportion of adults with uncontrollable high blood pressure in Australia 2017–18 (see graph below)^[13].

Modelled prevalence of uncontrolled high blood pressure among adults aged 18 years and over, PHN 2017–18



Source: AIHW

Insufficient physical activity

In 2019, there was a higher percentage (46.6%) of people aged 16 years and over in the MNC Local Health District with insufficient physical activity compared to the NSW rate (38.5%) [20].

Data from the NCPHN 2021 Community Survey tells us that, 64.4% of survey respondents said they exercised at least 2.5 hours per week during the past month. The LGAs in NCPHN with a rate lower than the NCPHN average were: Kempsey (64.3%), Port Macquarie (64.2%), Clarence Valley (60.8%), Richmond Valley (60.0%), Lismore (55.3%) and Kyogle (42.9%) [14].

Population health (COVID-19)

People in the NCPHN region are at risk of contracting COVID-19 infection leading to respiratory difficulty, chronic fatigue, long COVID and death. There are several groups of people at higher risk of contracting COVID-19, including those who are unvaccinated and those with a chronic condition. People with chronic conditions are more vulnerable to complications and death from COVID-19, and they experience indirect health effects from disruptions in essential care such as cancer diagnoses, chemotherapy appointments, number of visits to practices.

Several conditions have been shown to increase the risk of death due to COVID-19, such as cancer, chronic kidney disease, type 2 diabetes, respiratory disease, heart disease and hypertension [21].

ABS reports that between January 2020 and July 2021:

- most COVID-19 deaths had acute respiratory symptoms such as viral pneumonia or acute respiratory distress syndrome listed as a consequence of the virus.
- 73.4% of people who died from COVID-19 had pre-existing chronic conditions certified on the death certificate.
- Dementia was the most common pre-existing chronic condition for those who died from COVID-19.
- most deaths due to COVID-19 have other conditions listed on the death certificate (88.8%).
- on average, deaths due to COVID-19 had 2.5 other diseases and conditions certified alongside the virus [22]

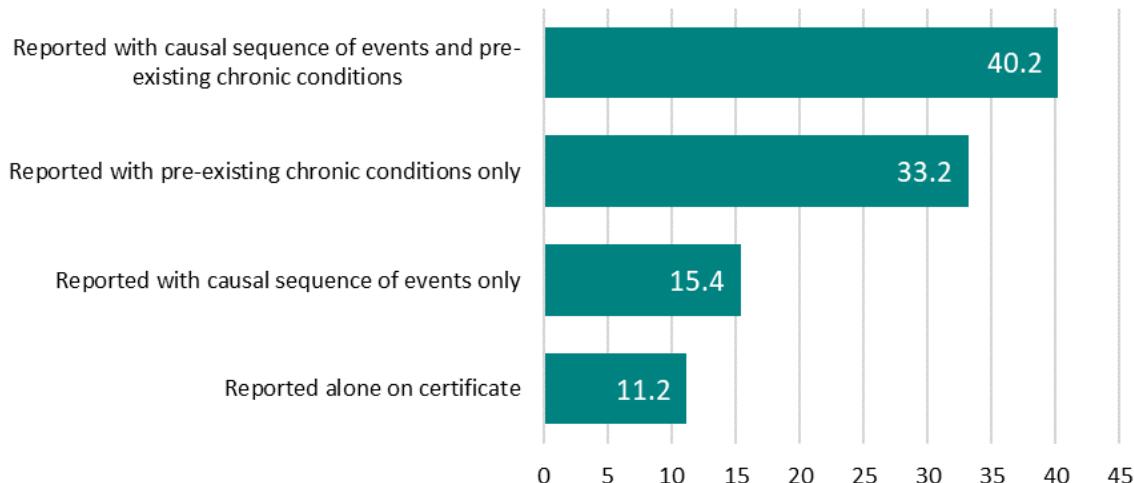
The World Health Organisation (WHO) defines the underlying cause of death as the disease or condition that initiated the train of morbid events leading to death. Diseases and conditions reported on the Medical Certificate of Cause of Death (MCCD) that are not the underlying cause of death are referred to as associated causes. Associated causes can be either:

- conditions listed in the causal sequence (the chain of events leading to death) or
- pre-existing chronic conditions, often listed in Part II of the MCCD as ‘other conditions relevant to the death’

Examining conditions in the causal sequence can provide insights into how a disease progresses and leads to death. Examining pre-existing chronic conditions provides an understanding of risk

factors that might contribute to death from a particular disease. Both can inform health prevention and intervention policies (see graph below) [22] .

Percentage of deaths in Australia due to COVID-19 that had associated conditions, deaths that occurred by 31 July 2021



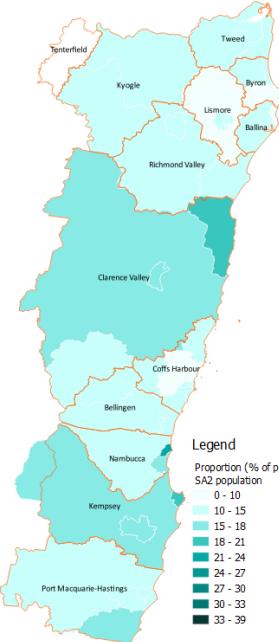
WHO considers people with the following chronic health conditions to be at risk from COVID-19:

- 3 or more chronic conditions
- heart, stroke or vascular disease
- Diabetes mellitus
- Asthma

The maps below, show the geographic distribution of people with 3 or more chronic conditions across different age groups, by Statistical Area Level 2 (SA2) of residence. Data was not available for the proportion of the Tenterfield LGA that aligns to NCPHN [17] .

All ages

Impacts of COVID-19
At risk populations - People with three or more chronic conditions
Persons all ages 2017-18



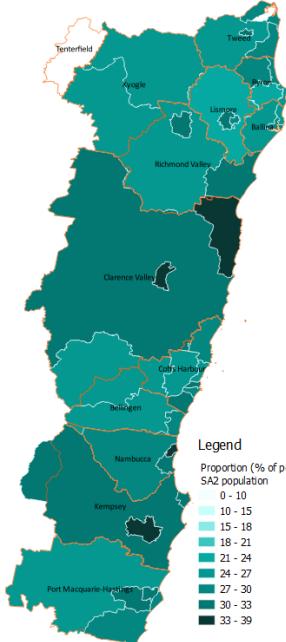
60 years and over

Impacts of COVID-19
At risk populations - People with three or more chronic conditions
Persons aged 60 years and over 2017-18



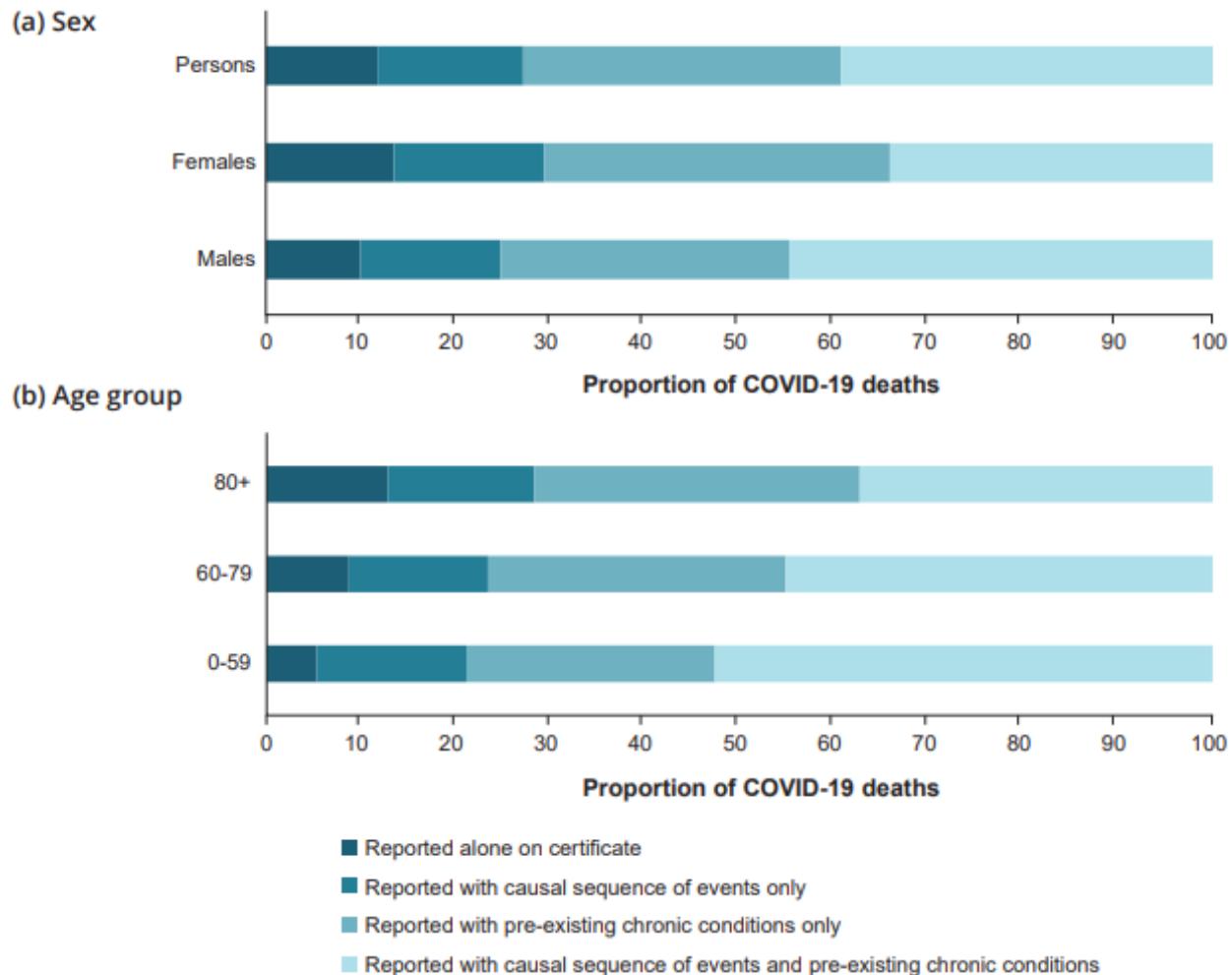
70 years and over

Impacts of COVID-19
At risk populations - People with three or more chronic conditions
Persons aged 70 years and over 2017-18



A higher proportion of COVID-19 deaths in males had associated causes reported compared with females—mainly driven by a higher proportion of deaths reported with both a causal sequence of events and pre-existing chronic diseases (see graph below). A similar pattern was evident by age, with higher proportions of COVID-19 deaths having associated causes of death in the younger age groups compared with the older age groups (see graph below) [23].

Proportion of COVID-19 deaths that had associated causes of death, by sex (a) and broad age group (b), 2020



Note: Data for those aged 0-59 should be interpreted with caution due to the small number of COVID-19 deaths reported for this age-group.

Source: AIHW analysis of ABS Provisional Mortality Statistics: Customised Report.

In 2021, the Organisation for Economic Co-operation and Development (OECD) reports that, consultations with international and national patient federations via the PARIS Patient Advisory Panel have highlighted both the supply and demand side indirect effects of the COVID-19 crisis on patients living with chronic conditions.

Consulted patient groups and individual patient respondents noted the below indirect effects of the COVID-19 crisis on patients living with chronic conditions:

- decreased financial security
- increased stress on informal caregivers
- challenges with protections of individuals with disabilities

- absenteeism of home care workers
- delays in care or treatment for chronic conditions
- reluctance to visit health care settings in person (including primary health care and emergency care)
- lack of follow-up or appropriate resources for self-management.

Indirect effects emerging as greatest concern to patients included the following:

- impacts on mobility due to confinement
- concerns about drug shortages and access to pharmacies
- concerns about accessing or using masks, and face coverings for those who have difficulty breathing
- distress and burnout of health care workforce
- health disparities based on socio-economic status
- lack of involvement of patient partners in policy decisions ^[24].

Up to the end of 2020, there were around 28,500 cases of COVID-19, with 2 distinct peaks (or ‘waves’)—one in March to April (affecting all states and territories with most infections being acquired overseas) and the second in June to September. The waves appear to correlate with a reduction in cancer screening ^[23].

Breast screening, cervical screening and bowel screening all showed significant reductions in the rate of screenings undertaken between 2018 and 2020. If screening is delayed or missed, it is possible that a precancerous abnormality may progress to cancer, or a cancer may develop to a stage that is more difficult to treat ^[25].

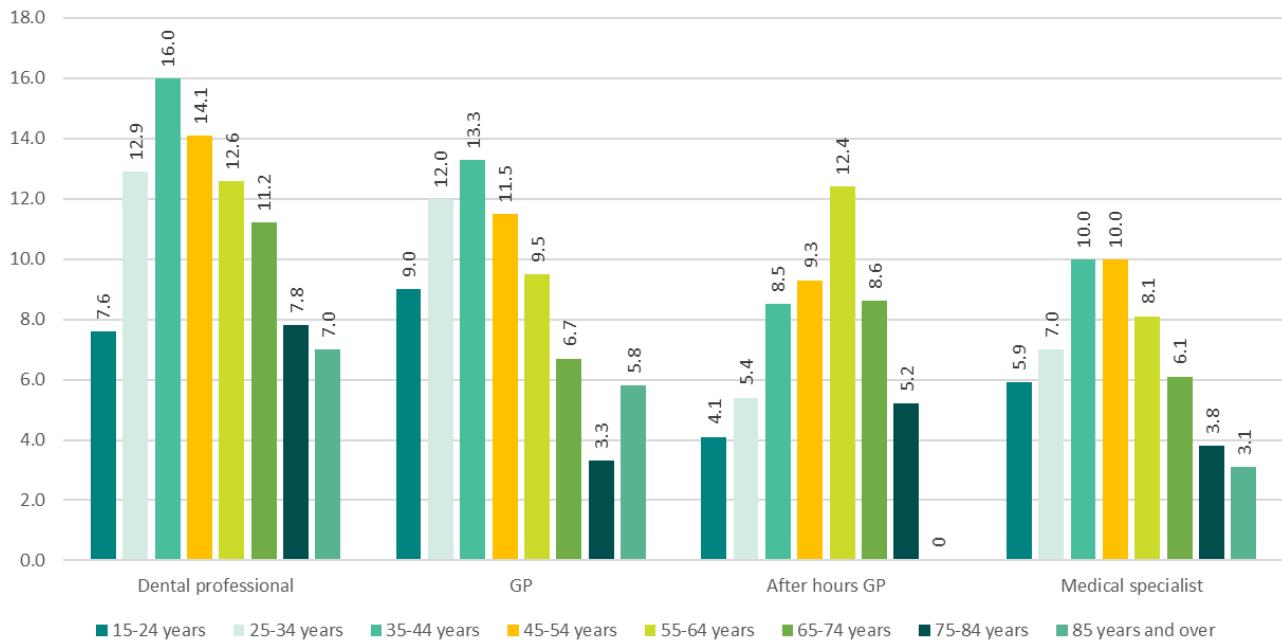
Impact of COVID-19 on health service use

The 2020–21 Patient Experience Survey of People in Australia, included new questions about those who delayed or did not use health services when needed, or cancelled or paused their private health insurance cover, at any time in the last 12 months due to COVID-19.

People with a long-term health condition were more likely to delay or not use the following health services when needed due to COVID-19 than those without a long-term health condition:

- dental professionals (13.5% compared to 10.5%)
- GPs (12.0% compared to 6.7%)
- after hours GPs (9.3% compared to 3.8%)
- medical specialists (7.9% compared to 5.7%) ^[26].

Proportion of people 15 years and over, delayed or did not use health services when needed due to COVID-19 in the last 12 months



Population health (smoking-related illnesses)

There is a high rate of smoking among adults in NNSW and MNC leading to smoking related illnesses such as COPD and cancer).

In 2020 the rate of daily smoking in adults in the Mid North Coast (MNC) has increased since 2019. In 2020, the rate of daily smoking in MNC (16.8%) is higher than NSW (13.2%), NNSW is lower with 9.4% which has decreased since 2019 [27].

In 2017–18, all LGAs in NCPHN, except Ballina had a higher age-standardised rate of smoking per 100 persons than both the NSW and Australian rate. NCPHN had the 7th highest rate (17.9%) of current daily smokers compared to all PHNs in Australia. Australian rate: 13.9% [10] .

For more information on COPD see:

- Population Health (Chronic illness)

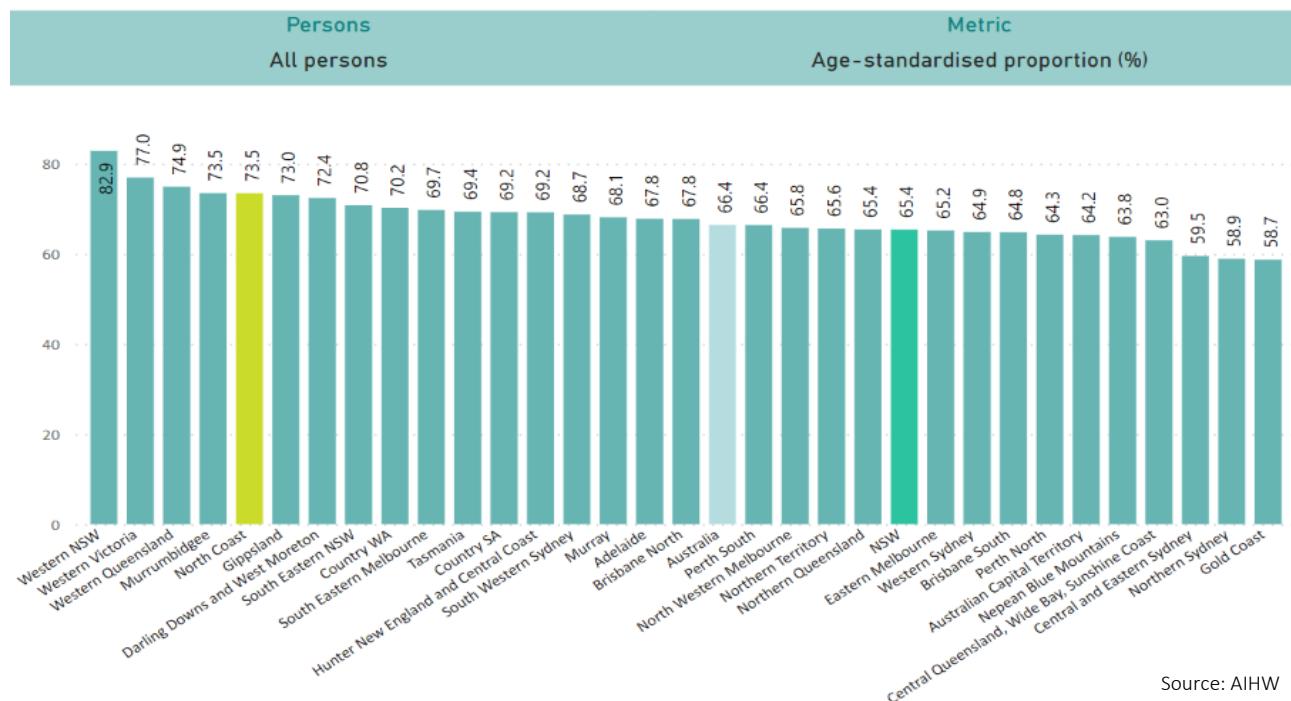
Population Health (overweight and obesity)

A poor diet and low levels of physical activity contribute to high BMI, overweight and obesity, that can lead to hospitalisation and complications that limit the length and quality of life

According to PHIDU 2017–18 data, 11 of the 12 LGAs in NCPHN have a higher age-standardised rate of obesity than the NSW (30.9%) and Australian (31.3%) rates. The highest being Richmond Valley (42.2%), Kempsey (41.3%) and Nambucca (40.1%). The rate for Tweed (29.7%) was below Aust & NSW rate [10] .

According to the Australian Health Performance Framework, in 2017–18, the prevalence of overweight and obesity of all people in NCPHN was 73.5 per cent, making it the 5 highest rate in Australia, higher than the NSW rate (65.4%) and Australian rate (66.4%) (see graph below)^[28,104].

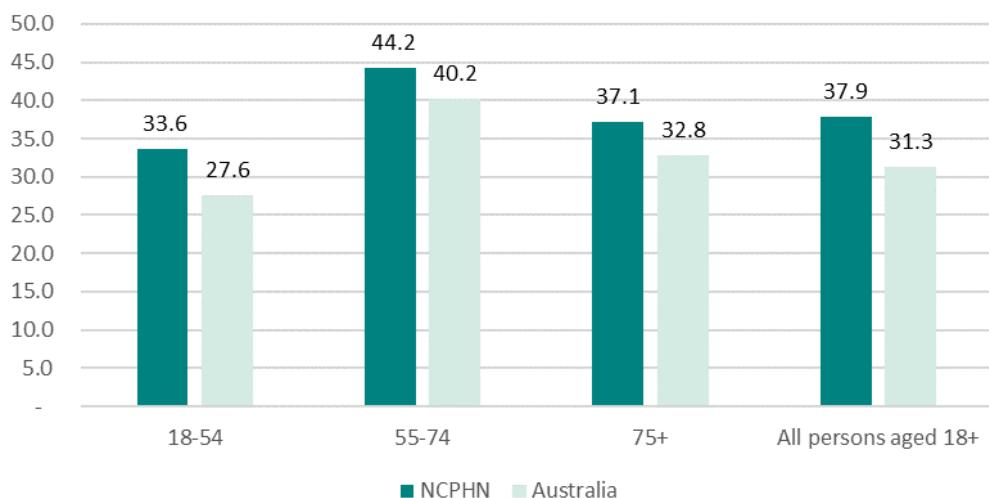
Prevalance of overweight and obesity, all people, 2017-18, AHPFramework



Source: AIHW

According to the Geographical Variation in Disease Web report by the AIHW, in 2017–18 the proportion of the population aged 55–74 years who were obese was 44.2%, compared to the Australian proportion of people aged 55–74 years (40.2%). For people aged 75+ in NCPHN 37.1%, in Australia 32.8%. For people aged 18–54 years in NCPHN 33.6%, in Australia 27.6% (see graph below)^[13].

Estimated adult population who are obese, proportion (%)
2017-18



For more information:

- **Population health (chronic illness) – risks**
 - Poor diet
 - Insufficient physical activity

Population health (COVID)

People in the NCPHN region are at risk of becoming COVID-19 positive as a result of new variants and waning vaccine effectiveness requiring various supports to manage their condition while preventing spread of infection (i.e., the need for booster vaccinations and primary care support for COVID-19 positive patients).

There are several steps outlined under phases B and C of the National Plan to transition Australia's National COVID-19 Response. These include:

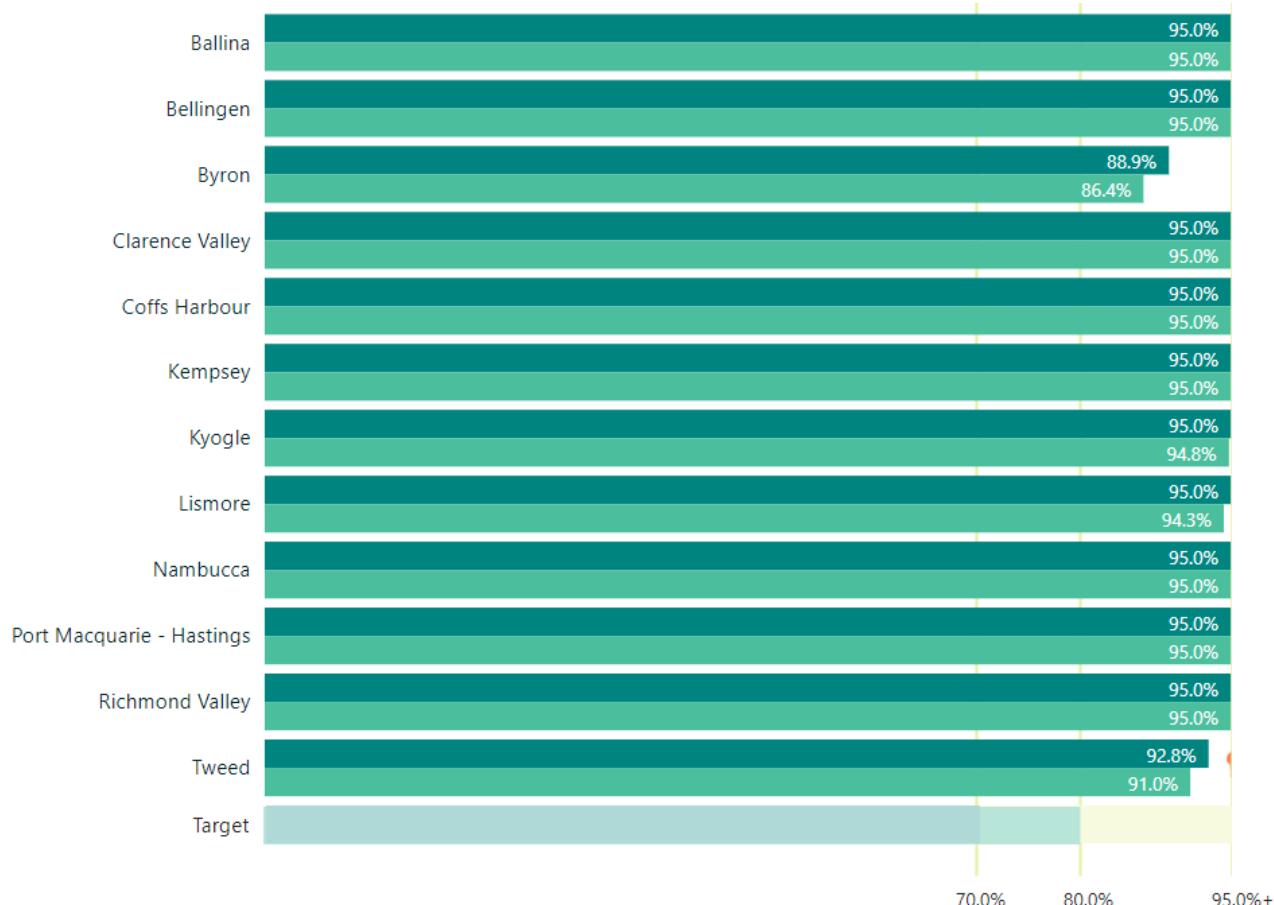
- National COVID-19 Triage, Management and Escalation Infrastructure
- COVID-19 community Care Pathways
- Additional MBS item for general practitioners
- Home visits for patients recovering at home
- National Medical Stockpile supplies to support primary health care
- General Practice Respiratory Clinics (GPRCs)
- COVID-19 Management Guidelines
- Continued dispensing arrangements [29]

Improvements in COVID-19 vaccination rates required in the Byron and Tweed LGAs. (January 2022 rates in graph below). (Aust. Gov. Dept of Health, 2022)

Healthy North Coast NSW COVID-19 vaccination rate by LGA 30 January 2022

% of doses for ages 15+

● 1 Dose ● 2 Doses



Population health (diabetes)

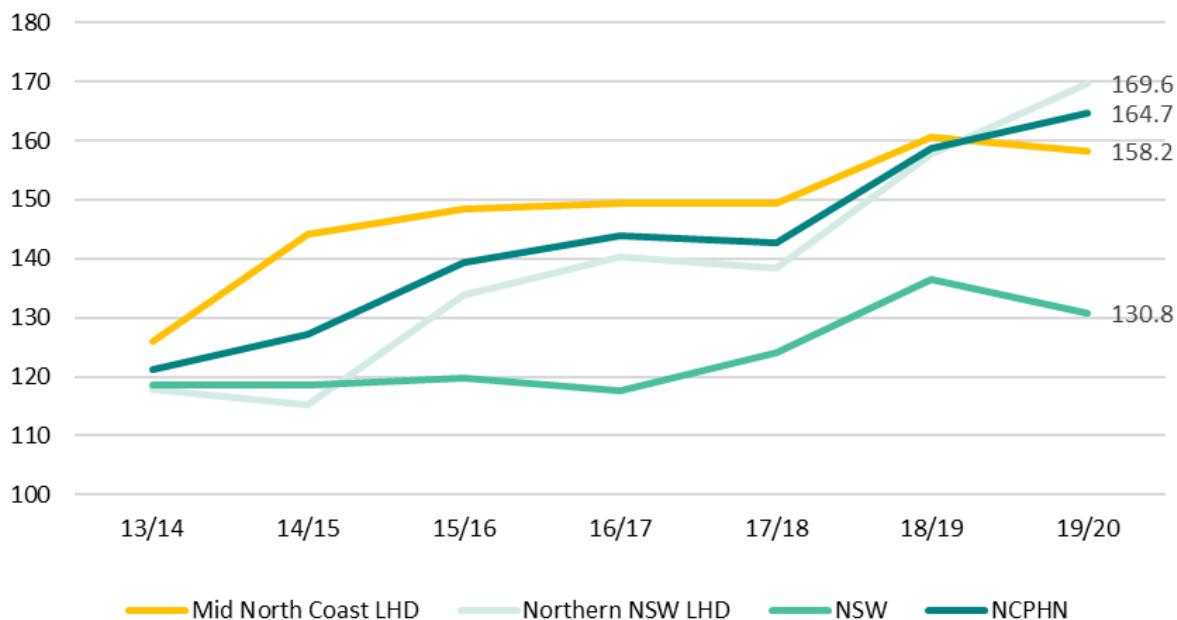
Patients with poorly controlled diabetes are at risk of hospitalisations and complications leading to loss of sight, limbs and mobility.

Diabetes is the leading cause of blindness in working age adults, it is a leading cause of kidney failure and dialysis. It increases the risk of heart attacks and stroke by up to 4 times and is a major cause of limb amputations and affects mental health as well as physical health. Depression, anxiety and distress occur in more than 30% of all people with diabetes^[30].

During 2019–20, the rate of potentially preventable hospitalisations per 100,000 population for diabetes complications in the NCPHN region were as follows:

NCPHN (164.7), NNSW (169.6) and MNC (158.2) all of which were higher than NSW (130.8) (see graph below)^[18].

PPH for diabetes complications, NCPHN, LHDs



In 2019, 11.6% of people in NCPHN had diabetes, compared to 11.3% in NSW^[18].

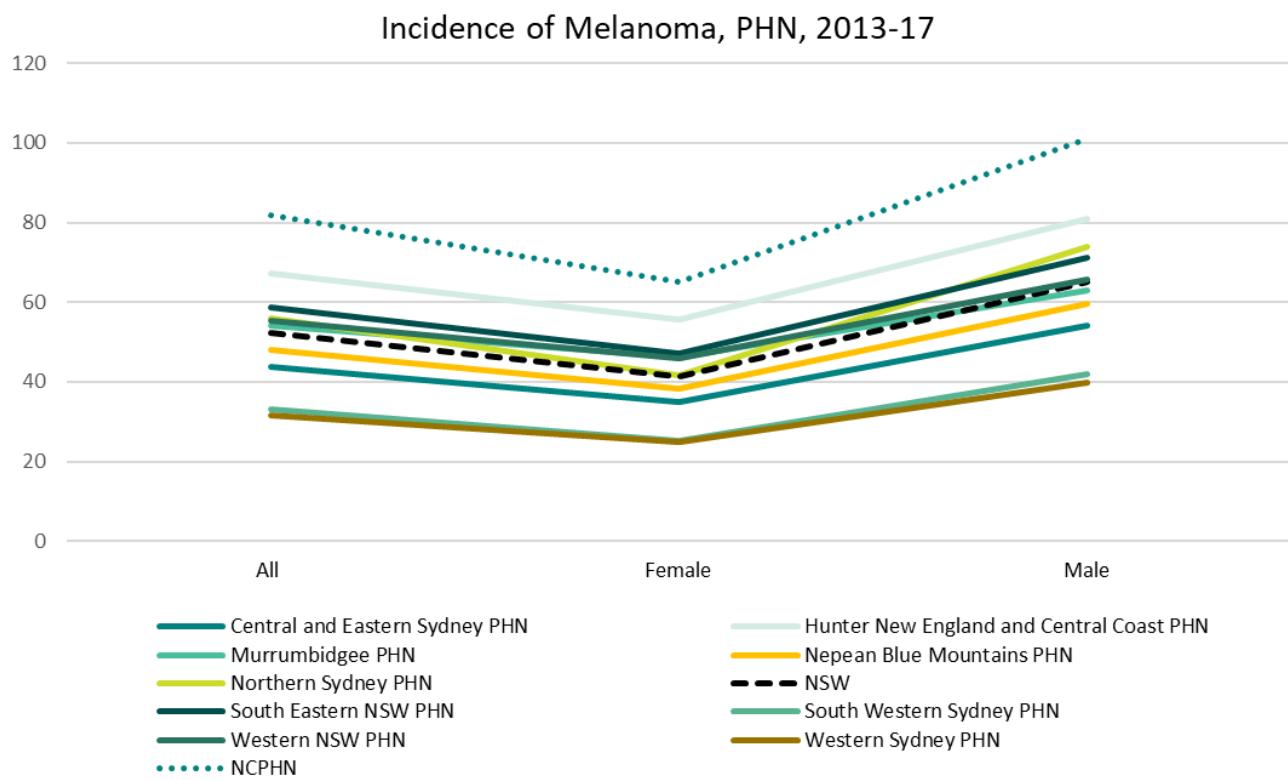
8% of survey respondents in the NCPHN 2021 Community Survey said they currently experience diabetes^[14].

Population health (cancer)

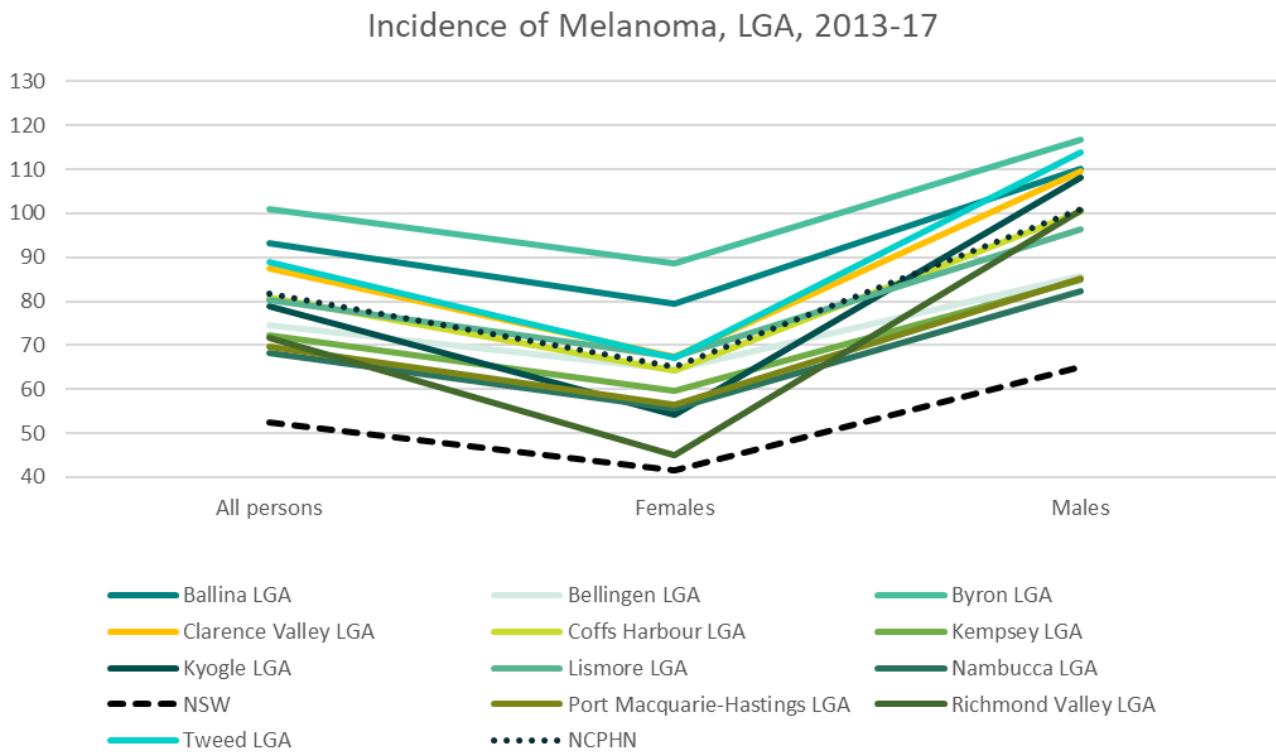
People in the NCPHN region experience the highest rate of Melanoma in Australia.

Between 2005 – 2014, the rate of incidence of melanoma in people in NCPHN was the highest in Australia at a rate of 84.4 per 100,000 people compared to the Australian rate of 49.7^[31].

Between 2013–2017 NCPHN had the highest rate of Melanoma incidence in NSW for all persons (see graph below).



Byron LGA had the highest age-standardised incidence rate of melanoma per 100,000 for all persons in NSW (101). Other LGAs in the region had high rates: Ballina 3rd (93.1) Tweed 4th (88.9) and Clarence Valley 5th (87.5) highest rates in NSW (52.3). The incidence rate of melanoma for males was higher, with Byron (116.8) having the highest, followed by Tweed 2nd (113.9), Ballina 3rd (110.1), Clarence Valley 4th (109.5) and Kyogle 5th (108.1) highest rates in NSW (65). Byron LGA had the 4th highest incidence rate of melanoma in females in NSW (see graph below) [32] .



Only 51.6% of survey participants in the NCPHN 2021 Community Survey said they used sunscreen and/or protective clothing when they went out in the sun in the past month. The rate was lowest in participants aged 25–29 (34.0%) and 80–84 (34.3) [14].

Population health (potentially preventable hospitalisations)

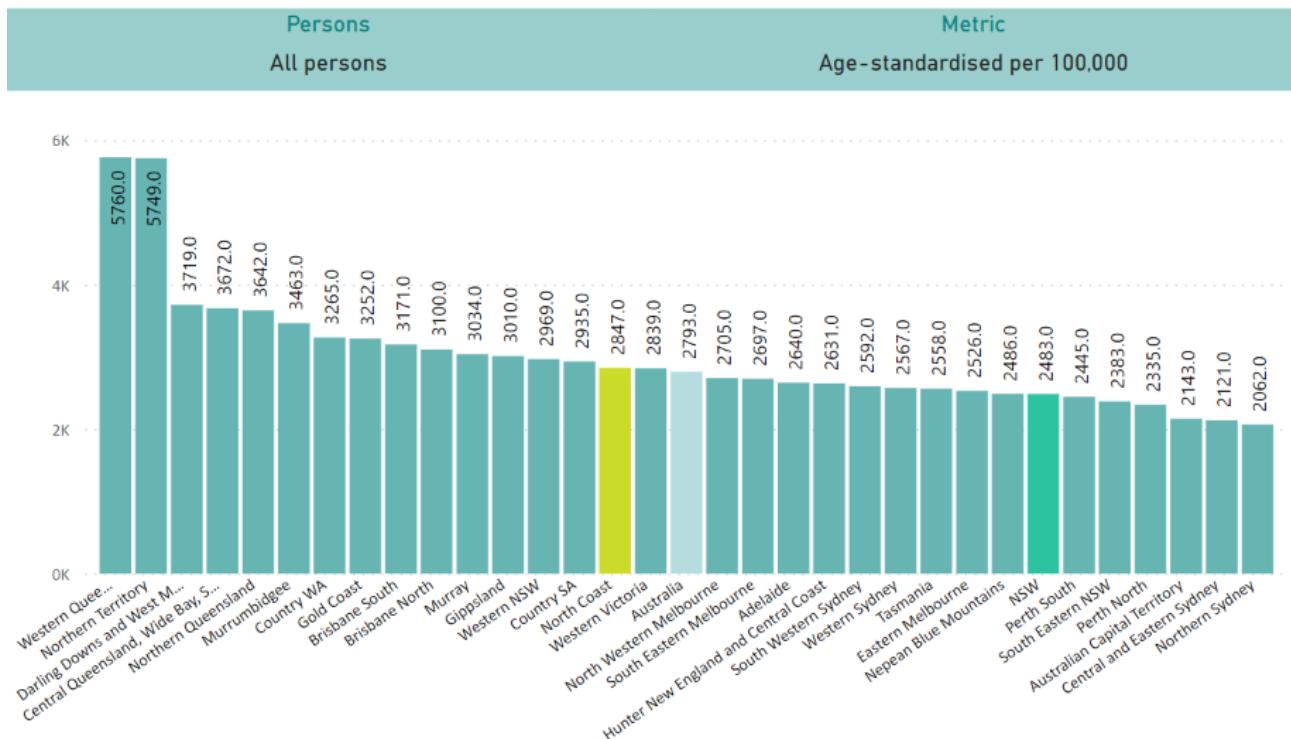
NCPHN has a high rate of PPH for a wide range of conditions: iron deficiency anaemia, pelvic inflammatory disease, rheumatic heart disease, bronchiectasis, convulsions and epilepsy, pneumonia (not vaccine preventable), pneumonia and influenza (vaccine preventable), urinary tract infections, cellulitis, diabetes complications and COPD).

In 2019/20 the rate per 100,000 population for potentially preventable hospitalisations in NCPHN was 2228.7 compared to 1988.9 in NSW. NCPHN had the 3rd highest rate in NSW [33].

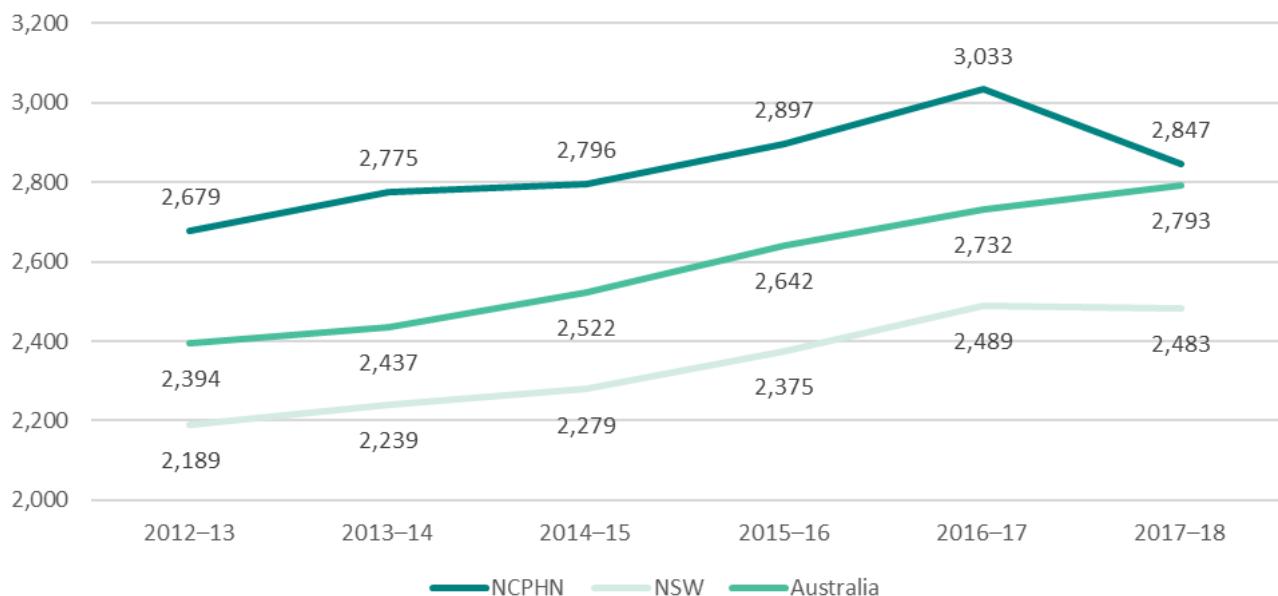
PPH are those considered as potentially able to be prevented through timely and accessible, quality primary and community-based care.

Between 2016–17 and 2017–18 there was a decrease in the rate of PPH in NCPHN, the rate however remains higher than the NSW and Australia rates (see graphs below) [34].

Potentially Preventable Hospitalisations - Total, 2017-18, AIHW



Total Potentially Preventable Hospitalisations, per 100,000 (ASR), 2012-13 to 2017-18



In 2018–19 in NCPHN, there were high rates (per 100,000 population) of potentially preventable hospitalisations for conditions such as:

- Cellulitis: NCPHN 305.4 (4th highest in NSW), NSW 268.6
- Urinary tract infections: NCPHN 249.3 (3rd highest in NSW), NSW 223.9
- COPD: NCPHN 234.3, NSW 201.6
- Iron deficiency: NCPHN 222.4 (highest in NSW), NSW 159.3
- Ear, nose and throat infections: NCPHN 174.9, NSW 168.9
- Diabetes complications: NCPHN 159.6 (4th highest in NSW)
- Convulsions and epilepsy: NCPHN 140.9 (3rd highest in NSW), NSW 125.0
- Pneumonia and influenza (vaccine-preventable): NCPHN 117.4 (3rd highest in NSW), NSW 107.8
- Bronchiectasis: NCPHN 22.0 (highest in NSW), NSW 18.4
- Pelvic inflammatory disease: NCPHN 20.8 (highest in NSW), NSW 14.4
- Rheumatic heart diseases: NCPHN 11.5 (highest in NSW), NSW 9
- Pneumonia (not vaccine-preventable): NCPHN 12.9 (3rd highest in NSW), NSW 10.4 ^[18]

For more PPH see:

- Population Health – (Chronic Illness)
 - Diabetes
 - COPD
- Population Health (Diabetes)

Population Health (climate change)

People living within the Healthy North Coast footprint are likely to experience negative impacts to their health, social and emotional wellbeing due to extreme weather events caused by climate change, including increases in vector-borne diseases, respiratory illness, heat-related illness, exacerbating existing chronic conditions, mental health burden, food insecurity, hospital admissions and altered patterns of infectious diseases.

Flooding

In March 2021 the Mid North Coast experienced severe flooding; 18,000 people were evacuated which included 1,000 flood rescues ^[35].

Populations living in the Lismore Town Centre flood footprint in 2017 exhibited significantly higher levels of social vulnerability over a range of factors; in particular, almost 82% resided in the most disadvantaged socio-economic quintile neighbourhoods ^[36].

The 45 and Up study showed participants residing in the Lismore Town Centre flood footprint had significantly higher rates of riskier lifestyle-related behaviours (smoking, alcohol consumption), pre-existing mental health conditions (depression and anxiety) and poorer health ^[36].

Bushfires

In the 2019–20 bushfires in NSW, LGAs in the NCPHN region were directly affected, with property damaged and destroyed.

In some areas of the NCPHN region, bushfires were experienced from August 2019 through to September 2020.

The NSW Rural Fire Service Building Impact Assessment shows that in NCPHN there were:

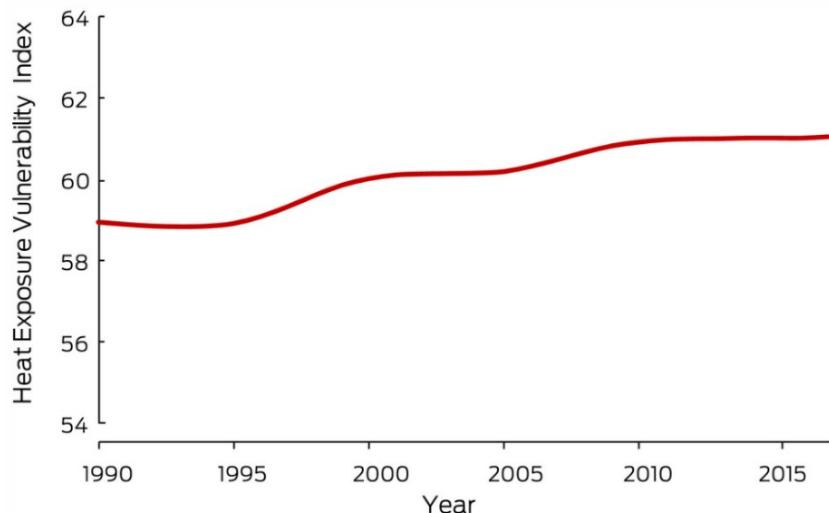
- 410 destroyed houses,
- 143 damaged houses
- 26 destroyed facilities
- 2 damaged facilities
- 971 destroyed outbuildings and 399 damaged outbuildings. (NSW Office of Emergency Management – data provided to NCPHN)

Resilience

Most of the NCPHN region is classed as having ‘moderate’ disaster resilience. Moderate disaster resilience means there is some capacity to use available resources to cope with adverse events, and some capacity to adjust to change through learning, adaptation, and transformation. Factors contributing to moderate disaster resilience may include things such as moderate levels of economic capital, moderate provision of and access to services, moderate community cohesion and variable encouragement for adaptive learning and problem solving. Whereas factors contributing to high disaster resilience may include employment, education, income, good access to or provision of resources and service, strong community cohesion and many opportunities for adaptive learning and problem solving^[37].

Heat exposure

Adults aged over 65 years and people with underlying cardiovascular diseases, diabetes and chronic respiratory diseases are particularly vulnerable to heat-related morbidity and mortality. One of the impacts of an upward trend in ‘Heat Exposure Vulnerability Index’ in Australia (see graph on the right), will be the increase in heat-related hospital presentations, among those that are vulnerable and disadvantaged^[38].



Under climate change, the intensity and/or frequency of heat waves and drought and the number of days with fire weather conditions has increased and is projected to continue increasing (BOM & CSIRO 2018). Without adaptation and mitigation, the health impacts of these events are also likely to increase [38, 39].

Population Health (CALD; cancer)

Women from CALD backgrounds are having worse outcomes from breast, bowel and cervical cancer due to late detection.

4.2% of CALD women reported they currently have a cancer condition, compared to 3.3% of the general population of women [14].

In 2019–20, 40.4% of CALD women participated in breast screening in Northern NSW and 47.6% on the Mid North Coast. The rate of screening among CALD women in both regions is lower than the NSW rate for all women 49.4%.

In 9 of the 12 LGAs in the NCPHN region the rate of participation in breast screening by CALD women aged 50–74 years, is higher than the participation rate in NSW (39.3%) for CALD women. However, there are lower rates in the LGAs of Kyogle (38.5%), Byron (32.83%) and Lismore (32.6%) [32] .

Population Health (COVID-19; cancer)

People with undiagnosed or late diagnosis of cancer as a result of a reduction in cancer screenings due to COVID-19 pandemic.

Up to the end of 2020, there were around 28,500 cases of COVID-19, with 2 distinct peaks (or ‘waves’)—one in March/April (affecting all states and territories with most infections being acquired overseas) and the other in June to September. The ‘waves’ appear to correlate with a reduction in cancer screening [23] .

Breast screening, cervical screening and bowel screening all showed significant reductions in the rate of screenings undertaken between 2018 and 2020. If screening is delayed or missed, it is possible that a precancerous abnormality may progress to cancer, or a cancer may develop to a stage that is more difficult to treat [25] .

Breast screening:

In Australia, in 2020, between January and September, the greatest impact of COVID-19 was noticed in April, where 1,116 screening mammograms were performed, compared to 74,5452 in April 2018.

In NSW, in April 2020 there were no screening mammograms performed, compared to 23,495 in April 2018 [25] .

Cervical screening:

In Australia, in 2020, between January and September, the greatest impact of COVID-19 was noticed in April, where 29,177 cervical screening tests were performed, compared to 118,554 in April 2018.

In NSW, in April 2020, 9,304 cervical screening tests were performed compared to 36,322 in April 2018 [25].

Bowel screening

In Australia in 2020, between January and September, the greatest impact of COVID-19 was noticed in August, where 94,309 bowel screening tests were performed, compared to 163,973.

In NSW, in 2020, the most impact was noticed in February, where 16,341 bowel screening tests were performed compared to 36,878 in February 2018 [25].

The long-term effects of delayed screening during the COVID-19 pandemic will not be known for some time. It will be important to continue monitoring the effects of this changing situation on cancer screening and other health services into the future [25].

Population Health (domestic and family violence)

People in NCPHN have been experiencing increasing incidence of domestic and family violence which has been exacerbated by the COVID-19 pandemic.

1 in 6 women have experienced physical or sexual violence by a current or former partner, while for men it is 1 in 16.

75% of victims of domestic violence reported the perpetrator as male, while 25% reported the perpetrator as female [40].

Between 2010–11 to 2018–19, Females were more likely to have a FDV hospital stay due to a partner (76% of stays) than males (30% of stays), while males were more likely to have a hospital stay due to ‘other family member’ (55%) than females (18%) [41].

1 in 3 clients (29% or about 82,300 clients) seeking assistance from homelessness services stated domestic and family violence was the most common main reason identified for seeking help.

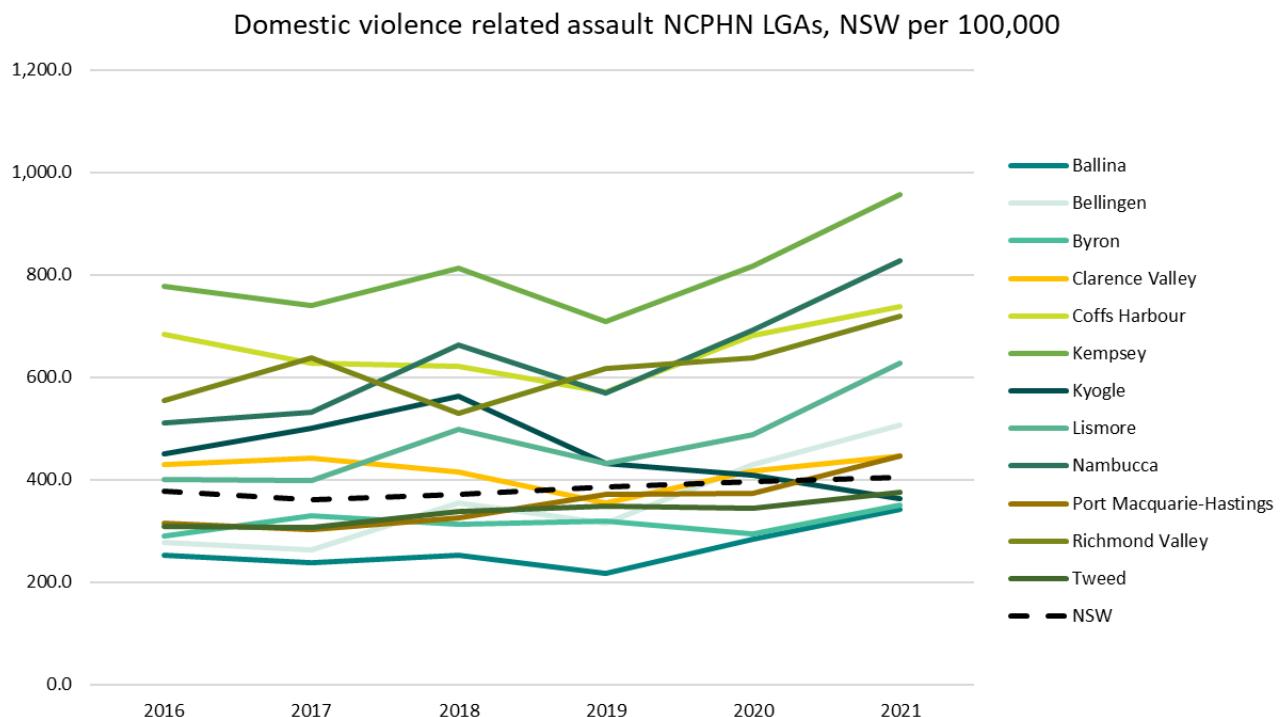
Aboriginal and/or Torres Strait Islander people were 32 times more likely to be hospitalised for family violence as non-Aboriginal people.

1 in 6 women and 1 in 9 men experience physical or sexual abuse before the age of 15 [42].

In September 2021, Kempsey, Nambucca, Coffs Harbour, Richmond Valley, Lismore, Clarence Valley and Port Macquarie LGAs had rates of domestic violence related assault that were higher than the rate for NSW.

According to a 5-year trend analysis between September 2017 and September 2021 Lismore, Nambucca & Port Macquarie-Hastings LGAs have experienced a significant increase in domestic violence related assaults.

For the same time, the rates of domestic violence by juvenile offenders in NCPHN LGAs (where calculated) were all higher than the rate for NSW, albeit with no significant increase shown in a 5-year trend analysis (see graph below) ^[43].

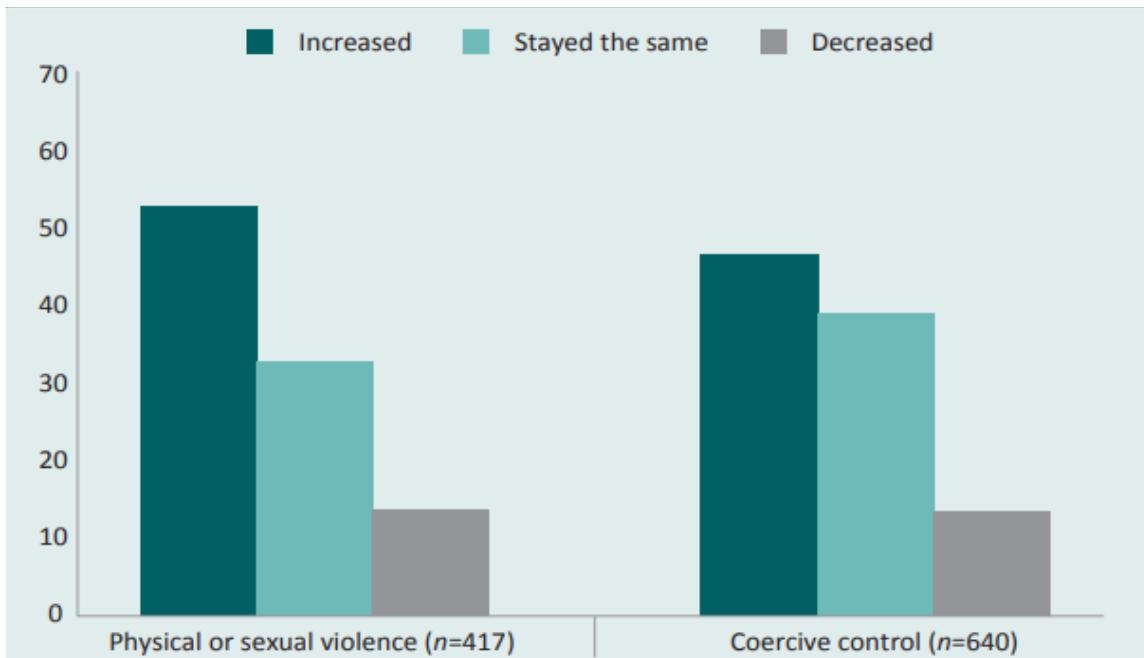


Factors that have been identified as contributing to a potential increase in both the prevalence and severity of domestic violence during the COVID-19 pandemic include:

- victims and offenders spending more time together
- increased social isolation and decreased social movement, which may restrict avenues for women to seek help
- increased situational stressors associated with domestic violence (e.g., financial stress and job insecurity)
- offenders feeling out of control due to situational factors and using violence and abuse as a means of creating a sense of control
- increased alcohol consumption among domestic violence perpetrators

Given the majority of women experiencing violence and abuse within their relationships do not engage with police or government or non-government agencies—particularly while they remain in a relationship with their abuser—this is a significant gap in knowledge ^[97].

Changes in the frequency or severity of physical or sexual violence or coercive control among women who had experienced prior domestic violence, by type of violence experienced in the last three months (weighted data) (%)



Note: Limited to women who reported they were in a cohabiting relationship in the past 12 months, had experienced domestic violence in the three months prior to the survey and had experienced violence or abuse from their partner prior to February 2020. Respondents could report experiencing both physical or sexual violence and coercive control

Source: Impact of COVID-19 on domestic violence survey, AIC [computer file]

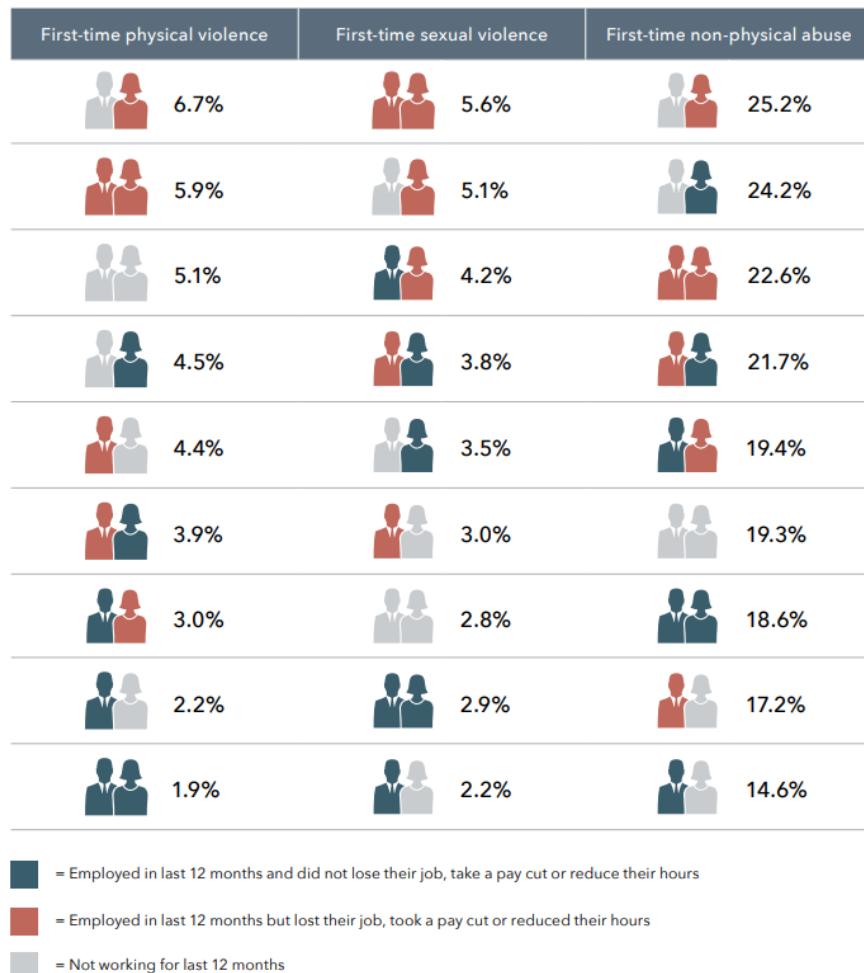
The impact of the COVID-19 pandemic on intimate partner violence

According to the results of an online survey conducted between February and April 2021, of more than 10,000 adult women aged 18 years and over in Australia who had been in a relationship for more than 12 months:

- 57.1% of respondents who experienced physical violence from their current or most recent partner in the 12 months prior to the survey had experienced either violence for the first time, or an escalation in the frequency and severity of ongoing violence
- 61.1% of respondents who experienced sexual violence from their current or most recent partner in the 12 months prior to the survey had experienced either violence for the first time, or an escalation in the frequency and severity of ongoing violence
- 66.2% of respondents who experienced emotionally abusive, harassing or controlling behaviours from their current or most recent partner in the 12 months prior to the survey said that they had either experienced these behaviours by that partner for the first time, or that the abuse had escalated ^[44].

Changes in financial status and their impact on patterns of violence and abuse experienced by women

The figure below presents the economic disparity in the occurrence of first-time intimate partner violence [45].



Population Health (immunisation)

The NCPHN region has a very low rate of childhood full immunisation, which places the children at risk of infectious disease to themselves and others. In particular the SA3 regions of most concern are Richmond Valley–Coastal, Tweed Valley & Richmond Valley Hinterland. All with lower rates than the NCPHN rate.

In September 2021, NCPHN had the lowest rate of childhood immunisation in Australia for:

- 12–15-month-old children –NCPHN 90.1%, NSW 94.8%, Aust. 94.8%,
- 24–27-month-old children– NCPHN 88.3%, NSW 92.5%, Aust. 92.6%
- 60–63-month-old children: NCPHN 92.1%, NSW 95.0%, Aust. 95.1%

The SA3 regions of most concern are Richmond Valley–Coastal, Tweed Valley & Richmond Valley–Hinterland [46].

Mental Health (mental health or behavioural condition)

People in the NCPHN region have a high rate of experiencing a mental health or behavioural condition and have low self-rated mental health. This correlates with comparative burden of the social determinants of health, especially in priority population groups.

The National Health Survey 2017–18 estimated that:

1 in 5 (20%, or 4.8 million) Australians reported that they had a mental or behavioural condition during the collection period (July 2017 to June 2018)

- females reported a higher proportion of mental or behavioural conditions (22%) than males (18%)
- overall, 15–24 year olds had the highest proportion of mental or behavioural conditions (26%) and 0–14 year olds had the lowest (11%).
- of those participants who had a severe disability, 58% had a mental or behavioural condition compared with 14% of people with no disability or long-term restrictive health condition [16]

22.1% of respondents in the NCPHN 2021 Community Survey, said they have a mental health or behavioural condition.

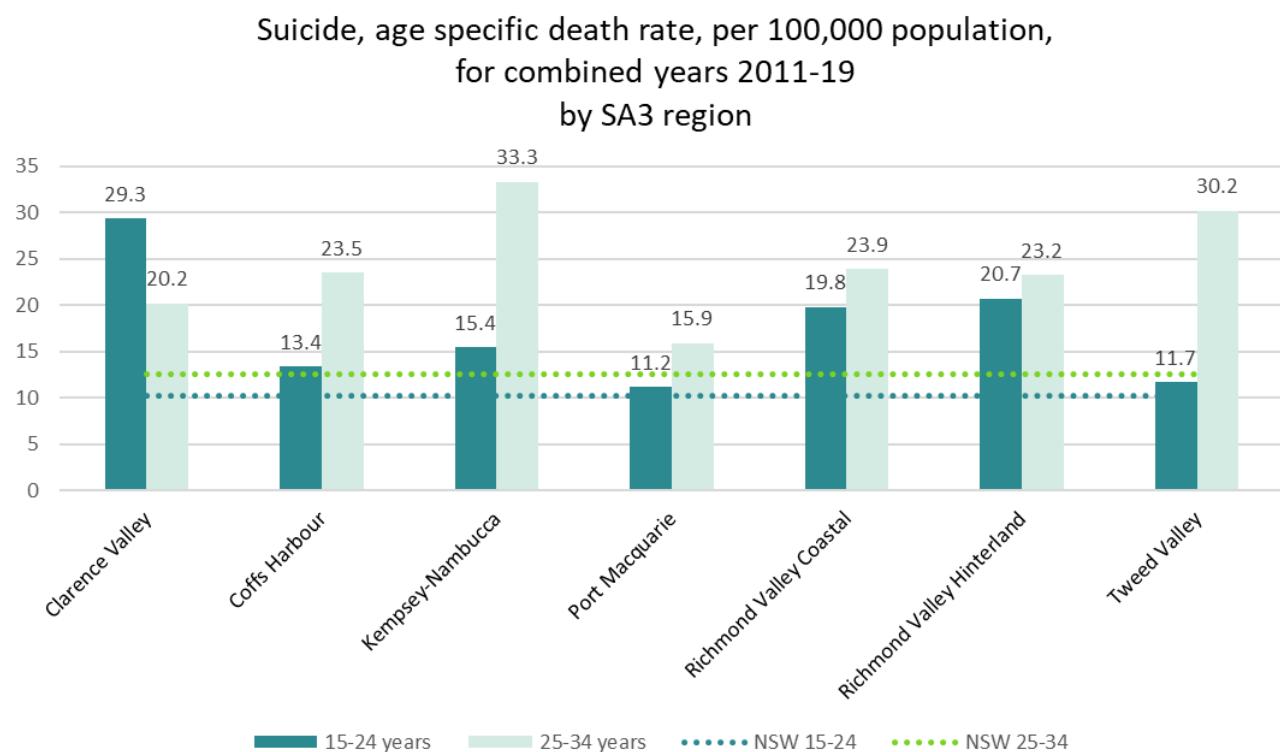
41.2% of respondents rated their mental health as poor or fair. 57.1% of Aboriginal respondents and over 60% of respondents aged between 18–29 rated their mental health as poor or fair^[14].

In 2018–19 there was an estimated rate per 100 of 13.6 people aged 18 years and over with high or very high psychological distress, based on Kessler 10 Scale. This was the 7th highest rate in Australia^[8].

Mental Health (suicide)

The suicide rate in the NCPHN region is consistently high and above the NSW average.

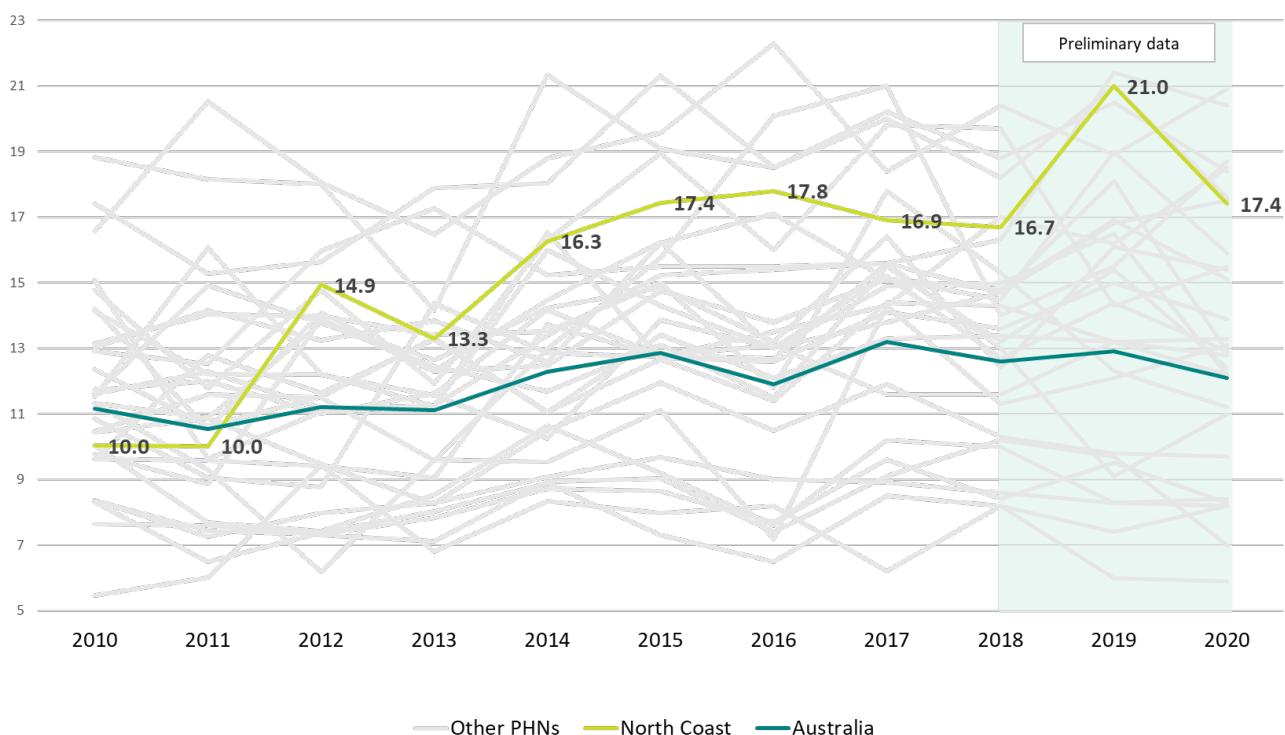
All SA3 regions in NCPHN have a higher rate of deaths by suicide than the rate in NSW (see graph below) ^[47].



In NCPHN, the crude rate per 100,000 of deaths by suicide is higher for males (15.2) than females (7.2) ^[48].

The suicide rate in the NCPHN region is consistently high and above the NSW average (see graph below) ^[49].

Suicide deaths by Primary Health Network areas, Australia, 2010 to 2020,
Age-standardised rate (per 100,000)



In 2021, self-harm or suicidal ideation presentations to NSW emergency departments were up 16% in MNC, and 5% in NNSW from 2020.

The highest increase was experienced in the 12–17-year-old age group with a 37% increase in NNSW and 27% increase in MNC^[50].

Mental Health (impact of COVID-19)

People with existing mental health challenges have faced increased severity of their condition due to the impacts of COVID-19 and severe flooding in March 2021.

At the start of the COVID-19 pandemic, the total number of MBS mental health services increased from 238,044 in the week beginning 16 March 2020 to 297,631 in the week beginning 7 December 2020 with a low of 63,115 services in the week beginning 28 December 2020^[51].

Data from the 2020–21 Patient Experience Survey tells us that 17.3% of people needed to see a health professional for their mental health and, of these, 34.3% delayed or did not see one when needed^[26].

For more information see:

Population Health (climate change)

Mental Health (coexisting physical illness)

People experiencing mental health challenges have poorer overall physical health compared to those with no mental health challenges, due to lack of screening, access issues and lack of integrated care.

4 out of 5 people living with mental health issues have a coexisting physical illness. Compared with the general population, people with significant mental health issues have a life expectancy of 14–23 years shorter, 2–3 times more likely to have type 2 diabetes, 6 times more likely to die from cardiovascular disease, 50% higher prevalence of smoking [52].

22.1% of respondents in the NCPHN 2021 Community Survey, said they have a mental health or behavioural condition [14].

56.6% of people with a mental health or behavioural condition rated their physical health as poor or fair compared to 28.2% of people without a mental health or behavioural condition [14].

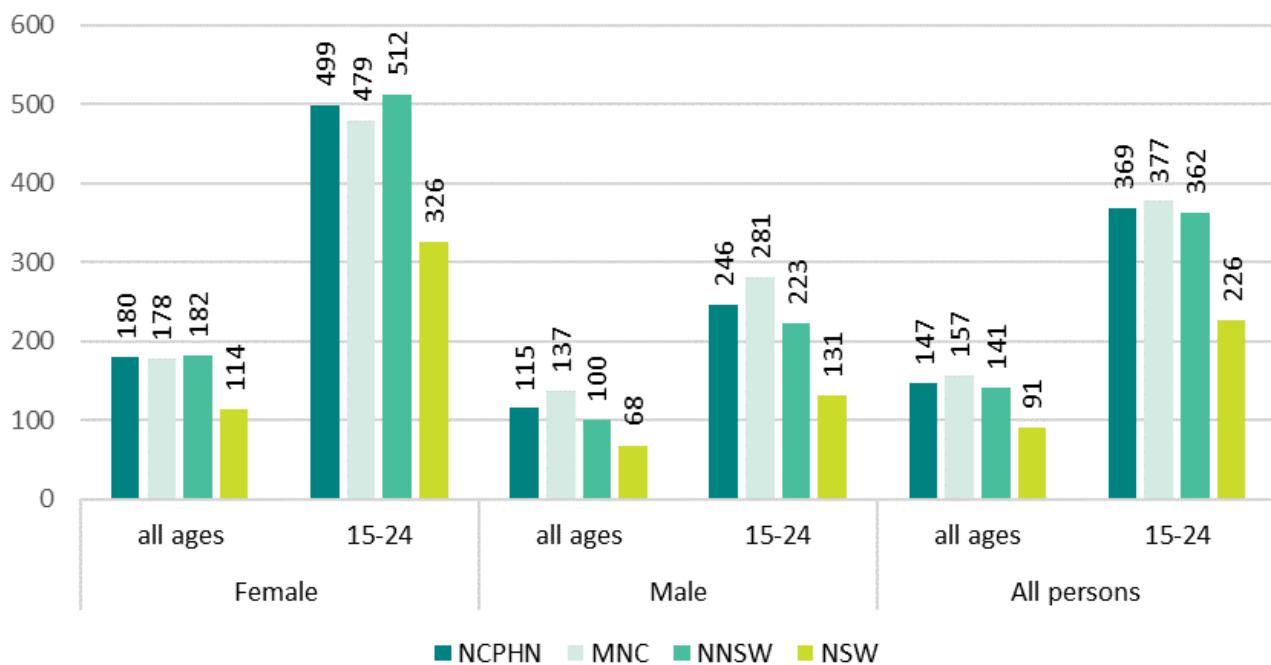
Mental Health (self-harm)

People in the NCPHN region are experiencing a high rate of hospitalisations due to self-harm.

In 2018–19 Healthstats presented self-harm hospitalisation data by LHD, sex and age. At that time NCPHN had the highest rate of self-harm hospitalisations in NSW.

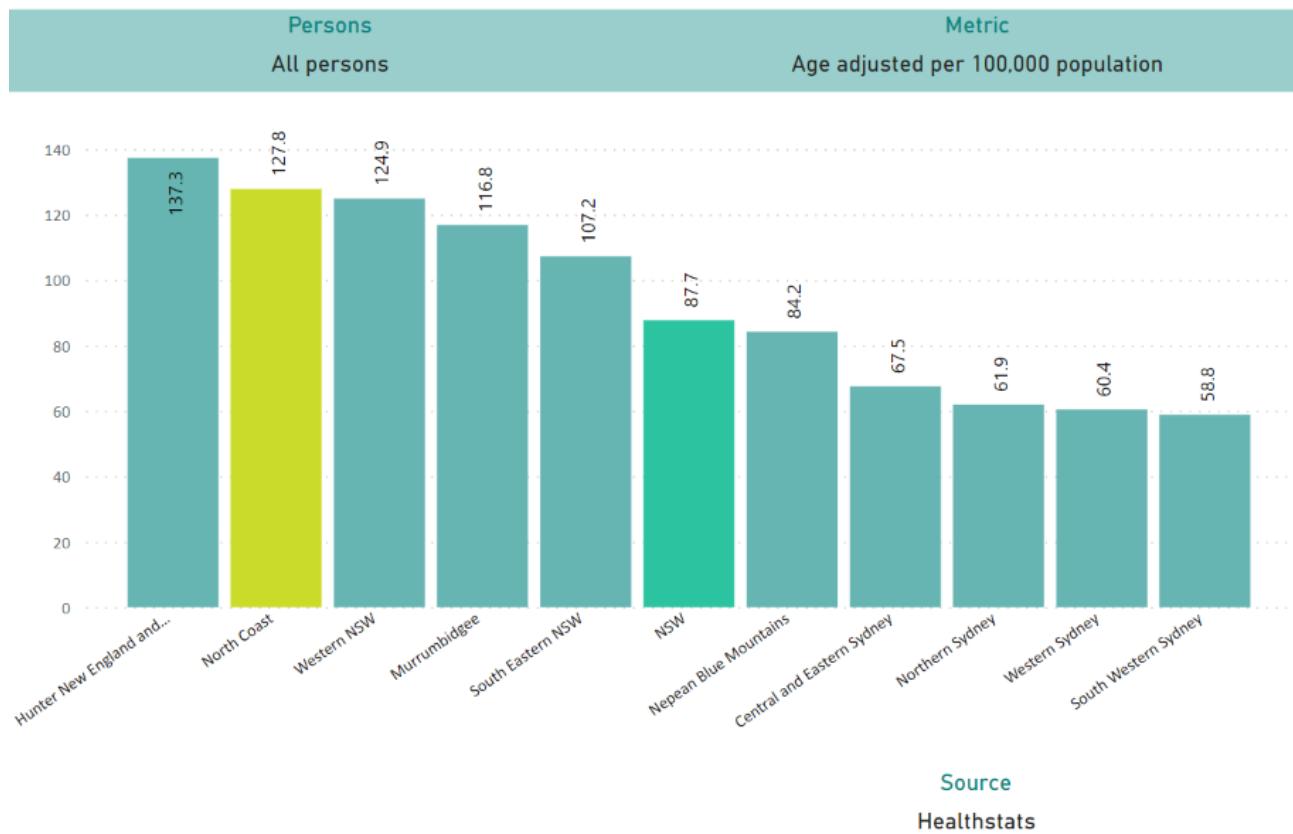
Although the rate of self-harm hospitalisations is higher in females, the rate of self-harm hospitalisations for Males in MNC is more than double the NSW rate (see graph below) [53].

Self-harm hospitalisations, NCPHN, LHD, NSW, 2018-19



In 2019–20, the rate of self-harm hospitalisations in NCPHN was 127.8 per 100,000 compared to 87.7 in NSW (see graph below) [54] .

Intentional self-harm hospitalisations by PHN, 2019–20



In 2019–20 in NCPHN, self-harm hospitalisation rates remain higher than the NSW rate. Rates remain highest in females in our region.

Aboriginal and Torres Strait Islander Health (suicide)

15–44-year-old Aboriginal and Torres Strait Islander males are dying from suicide at a high rate.

Stolen Generations survivors have endured a lifetime of trauma, grief and loss, and as a result they carry a significant burden of health, wellbeing, social, and economic disadvantage. They are growing older, and many live with disabilities and complex health problems, including poor mental health. They have increasingly complex and overlapping needs yet face personal and systemic barriers to accessing services. They are worried about the future of their families.

The trauma caused by the forced removal of Aboriginal and Torres Strait Islander children has been passed on to subsequent generations. It is reflected in the higher levels of disadvantage borne by Stolen Generations descendants and in the dangerous levels of child removals and incarceration suffered by many Aboriginal and Torres Strait Islander communities today [105] .

Aboriginal and/or Torres Strait Islander respondents to the NCPHN 2021 Community Survey told us:

- 63.2% said they don't regularly go back to country
- 69.1% said that connection to country and community is important to their wellbeing [14].

From 2016 – 2020, 25–44-year-old Aboriginal and Torres Strait Islander males had a suicide rate of 45.7 per 100,000, compared to 25–44-year-old non-Aboriginal and Torres Strait Islander males, who had a suicide rate of 16.4 per 100,000 2.8 times higher.

Although the rate (16.7 per 100,000) of suicide for 0–24-year-old Aboriginal and Torres Strait Islander males was lower than the 25–44 group, the rate was 3.2 times higher than 0–24-year-old non-Aboriginal males [55].

Key issue: Aboriginal and Torres Strait Islander Health (chronic illness)

Aboriginal and Torres Strait Islander people have high rates of chronic illness, which leads to hospitalisations and complications and a high burden of care for relatives. These illnesses include diabetes, cardiovascular disease, and high body mass index.

A total of 67,444 hospitalisations were attributed to overweight and obesity in NSW in 2019–20, which was approximately 2.3% of all hospitalisations. The rate per 100,000 population of overweight and obesity attributable hospitalisations for Aboriginal people was 1017.6 compared to non-Aboriginal people 659.1 [56].

About 80% of the mortality gap between Aboriginal and Torres Strait Islander people and other Australians aged 35–74 years is due to chronic diseases. Of the gap due to chronic disease, the main contributors are:

- ischaemic heart diseases (22%)
- diabetes mellitus (12%)
- diseases of liver (mainly from alcoholic liver disease) (11%)
- other forms of heart disease (such as heart failure and cardiomyopathy) (6%)
- chronic lower respiratory diseases (mainly chronic obstructive pulmonary disease) (6%)
- cerebrovascular diseases (5%).

Cancer is also an important contributor, the most prominent being cancer of the respiratory and intrathoracic organs (4%), cancer of the digestive organs (4%) and cancer of the lip, oral cavity and pharynx (2%) [57].

The leading specific cause of death for Aboriginal and/or Torres Strait Islander Australians overall in 2020 was Ischaemic Heart Disease, accounting for 401 deaths (11.1% of all deaths).

Diabetes was the second leading specific cause of death of Aboriginal and/or Torres Strait Islander people, accounting for 266 deaths (7.4% of all deaths), at a rate of 74.8 deaths per 100,000 in 2020 compared to a rate of 15.2 deaths per 100,000 for non-Aboriginal.

Aboriginal and Torres Strait Islander people had rates 5 times higher than non-Aboriginal people for diabetes, and three times higher for chronic lower respiratory diseases, liver diseases and urinary diseases^[48].

The rate per 100,000 population of cardiovascular disease hospitalisations for Aboriginal people in NSW (2521.3) was higher than the rate for non-Aboriginal people (1541.7)^[58].

In 2019–20, the leading category of cause of hospitalisations in NSW was dialysis. The percentage of hospitalisations for Aboriginal people (26.2%) was higher than the percentage for non-Aboriginal people (14.1)^[59].

In 2016, 15.8% of Aboriginal persons aged 15 years and over in the NCPHN region provided assistance to persons with a disability. NCPHN had the second highest rate in Australia^[60].

42.2% of Aboriginal respondents in the NCPHN 2021 Community Survey said they provided carer support for someone with a health issue in the past year. 22% of these respondents cared for someone with a Mental or Behavioural condition. 11.3% for someone with diabetes^[14].

Aboriginal and Torres Strait Islander Health (self-harm)

Young Aboriginal and Torres Strait Islander people are being hospitalised for self-harm at a high rate, particularly females.

Deliberate self-harm is an immediate and intentional form of harm to ones-self. It is not intended to result in death, and it is often a repeated behaviour. It can include cutting, burning or substance use, often due to poor social and emotional wellbeing (SEWB) and an inability to cope. Other terms for these kinds of behaviours include self-injury and non-suicidal behaviour^[61].

In 2018–19:

- Intentional self-harm hospitalisations for 15–24-year-old Aboriginal females (499.5 per 100,000) were higher than 15–24-year-old non-Aboriginal females (324).
- Intentional self-harm hospitalisations for 15–24-year-old Aboriginal people (411 per 100,000) were higher than 15–24-year-old non-Aboriginal people (222.8).
- Intentional self-harm hospitalisations for 15–24-year-old Aboriginal males (311.9 per 100,000) were more than double that for 15–24-year-old non-Aboriginal males (126.4)^[53].

For more information see:

Aboriginal and Torres Strait Islander Health (social and emotional wellbeing)

Aboriginal and Torres Strait Islander Health (social and emotional wellbeing)

A high proportion of Aboriginal and Torres Strait Islander people experience poor social and emotional wellbeing, which can affect mental health conditions and functioning, especially when additional complexities, including housing and employment, are involved.

The term social and emotional wellbeing (SEWB) is used by many Aboriginal and Torres Strait Islander people to describe the social, emotional, spiritual and cultural wellbeing of a person. The

term recognises their connection to land, sea, culture, spirituality, family and community which are important to people and impact on their wellbeing. It also recognises that a person's SEWB is influenced by policies and past events.

Another term that is often used when discussing wellbeing is mental health. Mental health is a term that has been used to describe how people think and feel, and how they cope with and take part in everyday life. Many Aboriginal and Torres Strait Islander people observe mental health and mental illness as medical terms that focus too much on problems and do not properly describe all the factors that make up and influence wellbeing. Because of this, most Aboriginal and Torres Strait Islander people prefer the term SEWB as it fits well within a holistic view of health ^[61].

There is a substantial difference in the burden of mental health on Aboriginal and Torres Strait Islander Australians compared with non-Aboriginal Australians. In 2011, the years of healthy life lost per 1,000 people due to mental and substance use disorders among Aboriginal and/or Torres Strait Islander Australians was 2.4 times the rate for non- Aboriginal and/or Torres Strait Islander Australians (57.8 compared with 23.6) ^[98].

57.3% of Aboriginal and Torres Strait Islander respondents in the NCPHN 2021 Community Survey, rated their mental health as poor or fair, compared to 39.7% for non-Aboriginal respondents ^[14].

Aboriginal and/or Torres Strait Islander respondents to the NCPHN 2021 Community Survey told us:

- 63.2% said they don't regularly go back to country
- 69.1% said that connection to country and community is important to their wellbeing
- 31.5% said they currently experience a mental or behaviour condition (compared to 21.1% for non-Aboriginal people)
- 6.5% said they didn't know where their mob is from ^[14].

Unemployment and lack of opportunities for employment in community settings are described as two of the many risk factors to connection to mind and emotions, and connection to community for Aboriginal people. (Mental Health Branch, NSW Government Department of Health, 2020).

In 2016, 17.9% of the Aboriginal workforce in NCPHN was unemployed, compared to 15.3% in NSW ^[8].

On Census night in 2011, Aboriginal households in Australia were 3 times more likely as other households to be overcrowded.

Among Aboriginal households, the rate of overcrowding was highest among those living in social housing ^[62].

Social housing (rented dwellings with Aboriginal households)



In 2016 the NCPHN region had the 7th highest rate in Australia of Aboriginal households requiring extra bedrooms, 9.6%. The rate in Australia was 8.2% [60].

For more information see:

- Aboriginal and Torres Strait Islander Health (suicide)
- Aboriginal and Torres Strait Islander Health (self-harm)

Aboriginal and Torres Strait Islander Health (physical violence)

Aboriginal and Torres Strait Islander women are experiencing physical violence at a high rate.

In 2014–15, 1 in 7 (14%) Aboriginal and/or Torres Strait Islander women in Australia experienced physical violence in the previous year [40].

Aboriginal and/or Torres Strait Islander women are five times more likely to experience physical violence than non-Aboriginal women [41].

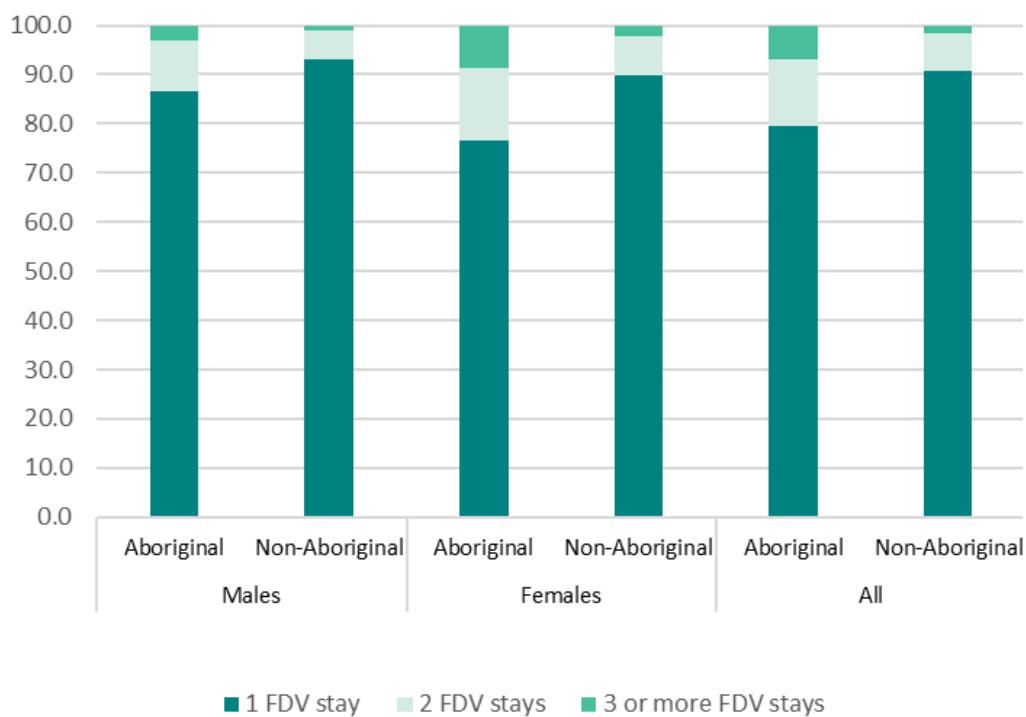
26% of Aboriginal and/or Torres Strait Islander respondents to the NCPHN 2021 Community Survey said they, their family and/or their community had experienced family violence [14].

When compared with Aboriginal and/or Torres Strait women who had not experienced any physical violence in the previous 12 months, Aboriginal and/or Torres Strait women who had experienced family and domestic violence were:

- more likely to report high or very high levels of psychological distress (69% compared with 34%)
- more likely to have a mental health condition (53% compared with 31%)
- more likely to report they had experienced homelessness at some time in their life (55% compared with 26%)
- less likely to trust police in their local area (44% compared with 62%)
- just as likely to trust their own doctor (77% compared with 83%)
- just as likely to report being able to get support outside the household in a time of crisis (88% compared with 92%)^[63].

Aboriginal and/or Torres Strait Islanders were more likely to experience more than one FDV hospital stay than non-Aboriginal Australians (20% compared with 9%). Of Aboriginal and/or Torres Strait Islander females who had at least one FDV hospital stay, almost 1 in 4 had multiple FDV stays (23%), compared with 1 in 10 non-Aboriginal females (10%) (see graph below)^[41].

Repeat FDV hospital stays by sex and Aboriginal status, 2011-11 to 2018-19, %



For more information on physical violence see:

- Population Health (domestic and family violence)

Aboriginal and Torres Strait Islander Health (substance abuse)

Aboriginal people across age groups, particularly men, have a higher level of substance abuse than non-Aboriginal people – this includes methamphetamine use, resulting in individual, family, and community harm.

In 2019, 23.3% of Aboriginal and/or Torres Strait Islanders were recent users of an illicit drug in the previous 12 months, higher than for non-Aboriginal Australians 16.6%.

20.3% of Aboriginal and/or Torres Strait Islanders were classed in the highest category of risk “Risky” when measuring lifetime risk of consumption of alcohol, compared to 16.6% for non-Aboriginal Australians^[64].

The rate of methamphetamine-related hospitalisations in NSW increased rapidly from 12.2 per 100,000 population in 2010–11 to 154.5 per 100,000 population in 2019–20. The rate has stabilised slightly from 2015–16 onwards. Methamphetamine-related hospitalisation rates were higher in males, Aboriginal people, people aged 25–44 and people living outside of major cities.

The rate per 100,000 population of Aboriginal people for Methamphetamine-related hospitalisations in NSW (951.5) was 7.4 times higher than for non-Aboriginal people (126.9)^[65].

For more information see:

Aboriginal and Torres Strait Islander Health (alcohol consumption)

Aboriginal and Torres Strait Islander Health (alcohol consumption)

Aboriginal people are experiencing high rates of hospitalisation and ill health due to excessive alcohol intake.

In 2018–19 alcohol attributable hospitalisations were higher for Aboriginal people compared to non-Aboriginal people. Rates were particularly higher in men:

- Males: Aboriginal: 1281.2, non-Aboriginal 621.2
- Females: Aboriginal: 593.2, non-Aboriginal 392.2
- All persons: Aboriginal: 923, non-Aboriginal 503.3^[66].

In 2020, 41.5% of Aboriginal adults aged 16 years and over in NSW consumed more than 2 standard alcoholic drinks on a day when they drank alcohol, compared to 32.1% for non-Aboriginal people 16 years and over in NSW^[67].

In 2019, 20.3% of Aboriginal and/or Torres Strait Islanders were classed in the highest category of risk “Risky” when measuring lifetime risk of consumption of alcohol, compared to 16.6% for non-Aboriginal Australians^[68].

The rate of alcohol attributable hospitalisations among Aboriginal people in NNSW was more than 3.1 times that of non-Aboriginal people in NNSW LHD (NNSW Integrated Aboriginal Health and Wellbeing Plan 2015–2020).

Aboriginal and Torres Strait Islander Health (ENT conditions)

Otitis Media and more broadly ear, nose and throat conditions are a substantial health issue for Aboriginal and Torres Strait Islander children, affecting long term health and learning outcomes.

Self-reported ear or hearing problems in Aboriginal and/or Torres Strait Islanders children aged 0–14 was estimated to be over twice the rate for non-Aboriginal children (6.9% compared with 3%) in 2018–19. 43% of Aboriginal and/or Torres Strait Islanders aged 7 years and over had measured hearing loss in one or both ears in 2018–19^[57].

Hearing loss, especially in childhood, can lead to linguistic, social and learning difficulties and behavioural problems in school. Such difficulties may reduce educational achievements and have lifelong consequences for wellbeing, employment, income, social success, contact with the criminal justice system and attaining future potential^[99]. Children with hearing problems may be at risk of developing mental health disorders, without appropriate intervention^[69].

Overcrowded housing has been identified as a significant risk factor for otitis media, and exposure to campfire and tobacco smoke are also risk factors for early otitis media in infants^[70].

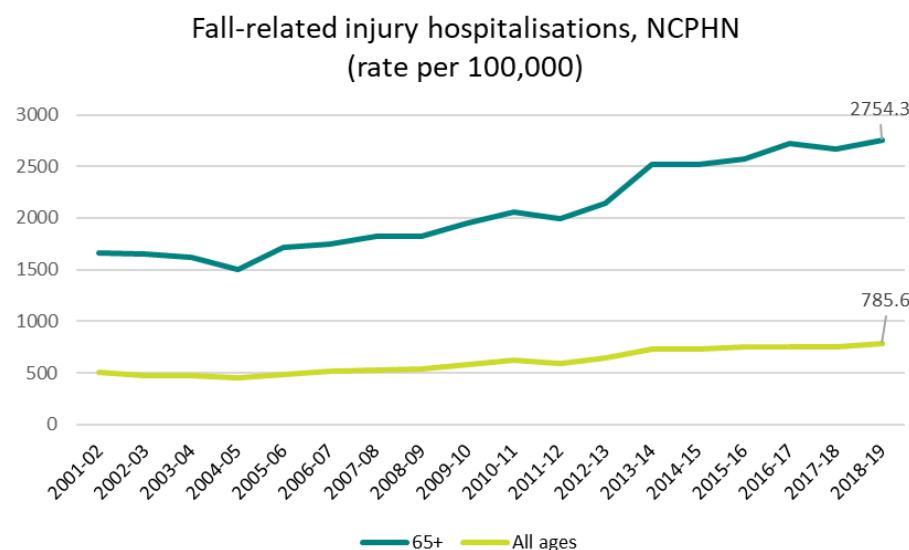
In 2016 the NCPHN region had the 7th highest rate in Australia of Aboriginal households requiring extra bedrooms, 9.6%. The rate in NSW was 8.2%^[60].

In 2020, 85.6% of Aboriginal adults aged 16 years and over in NSW reported they do not allow people to smoke in their home, compared to 93.2% of non-Aboriginal people^[71].

Older people (falls)

Older people in the NCPHN region are hospitalised frequently as a result of falls.

Although the age adjusted rate of fall-related injury hospitalisations for people aged 65+ in NCPHN (2,754.3 per 100,000 population) is lower than the rate for NSW (2,996.7). The rate has been steadily increasing (see graph below).



Key points:

- More than one in 5 persons aged 65 years and over report having a fall each year
- Falls are the most commonly identified cause of injury-related hospitalisations
- Males and females have similar rates of fall-related hospitalisations, except among older people where females have higher rates
- The rate of fall-related hospitalisations for persons aged 65+ years has been increasing since 2002–03 [72].

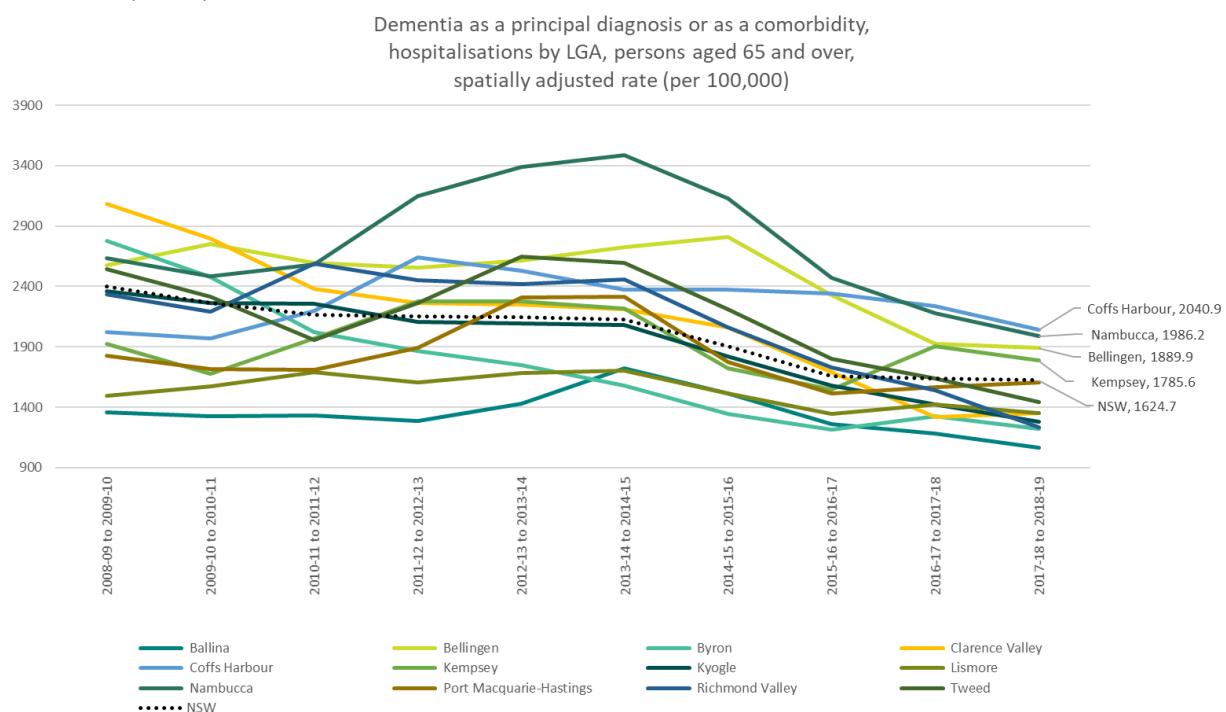
Older people (dementia)

Older people with dementia experience confusion and distress which can lead to hospitalisation.

Between 2012–13 and 2016–17 the rate of hospitalisations for dementia were higher than the rate in NSW. Since 2016–17 the rate of hospitalisations for dementia in NCPHN, have followed the same downward trend as NSW rates, and have dropped below the rate for NSW.

Between 2017–18 to 2018–19, although the rate of hospitalisations for dementia (as a principal diagnosis or as a comorbidity) for people 65+ years in NCPHN was lower than the NSW rate, there were 4 LGAs in the NCPHN region that had rates higher than the NSW rate (see graph below).

- Coffs Harbour (2040.9) – significantly higher
- Nambucca (1986.2)
- Bellingen (1889.9)
- Kempsey (1785.6)
- NSW (1624) [73]



Hospitalisation data is not sufficient to demonstrate the burden on the community. Not all people living with dementia have contact with the hospital system.

According to the GEN Aged Care Data Portal, 53.5% of people using permanent residential care in the NCPHN region on 30 June 2020 had a diagnosis of dementia [74].

At 30 June 2020, people with dementia were more likely to be assessed as having higher care needs than people without dementia for cognition and behaviour (80% and 46% respectively) and activities of daily living (67% and 58% respectively). The smallest difference in care need ratings was for complex health care, where 55% of people without dementia received a high rating compared with 52% of people with dementia [75].

The AIHW estimates for 2021 indicate that there are around 386,200 people living with dementia in Australia, including 243,200 women and 143,000 men. This is equivalent to 15 people with dementia per 1,000 Australians (18 per 1,000 women and 11 per 1,000 men) [75].

Dementia is the second leading cause of death in Australia in 2019, accounting for 9.5% of all deaths.

Dementia is the leading cause of death in Australia for women aged 75 years and over.

Dementia was the 3rd leading cause of disease burden in Australia in 2018 [75].

High levels of education, physical activity and social engagement are all protective against developing dementia, while smoking, hearing loss, depression, diabetes, hypertension, and obesity are all linked to an increased risk of developing dementia [76].

Emerging evidence suggests the incidence and prevalence rate of dementia is declining in several high-income countries due to improvements in the prevention and management of vascular risk factors for dementia (i.e., high blood pressure and cardiovascular disease) [77]. However, it is not currently known whether rates in Australia are also declining.

The Australian Government accepts recommendation 26 of the Royal Commission into Aged Care Quality and Safety: Improved public awareness of aged care.

Primary Health Networks will be funded to better plan for ageing and aged care needs in their communities and increase awareness of local resources available to community members and medical professionals.

This includes provision of localised aged care and dementia specific referral information for general practitioners and other

health practitioners to support their patients with health advice and information on assessment, condition management, and local referral and support opportunities [82].

Alcohol and Other Drugs (illicit drug use)

The NCPHN region has a very high percentage of illicit drug use in people aged 14 years and over, which is causing high levels of service use, hospitalisations and death.

In 2019 NCPHN had the highest age-standardised percentage of illicit drug use by people aged 14 and over in Australia. NCPHN: 25.7%, Aust: 16.8% ^[64].

The National Drug Strategy Household Survey 2019 reports that compared with people their age in 2001, today's young people are less likely to smoke, drink and use illicit drugs. This may be due to the young people of 2001 carrying on similar habits as they age, today's young people having different habits from past generations, or a combination.

In 2001, people in their 20s were most likely to have used an illicit drug in their lifetime, but by 2019 it was people in their 40s. While rates of illicit drug use rose among older age groups over this period, rates remained stable for people in their 30s and fell for people under 30.

In 2001, people in their 20s were also the most likely to smoke daily, but in 2019 it was people in their 40s and 50s. Older people were also the most likely to drink alcohol daily in 2019, with the highest rates seen among people aged 70+ years (12.6%). Just 1.2% of people aged 20–29 drank daily. Younger people are also now more likely to abstain from alcohol than they were 18 years ago. For example, the proportion of people in their 20s abstaining from alcohol increased from 8.9% in 2001 to 22% in 2019 ^[64].

Alcohol and Other Drugs (excessive alcohol consumption)

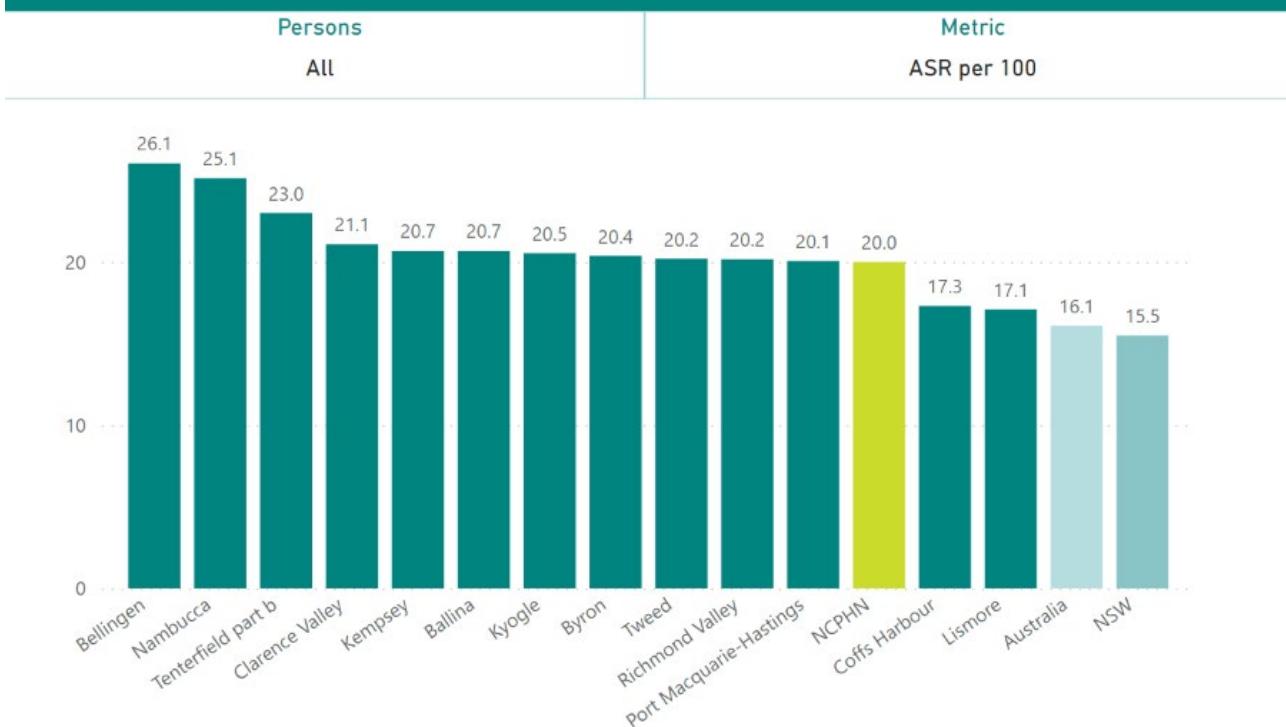
A large proportion of the NCPHN region's population, particularly in the Mid-North Coast region, consumes alcohol at levels that pose a lifetime risk to health.

Between 2017 to 2018, the age-standardised rate per 100, of people in NCPHN aged 18 years and over, who consumed more than two standard alcoholic drinks per day was 20.0, this was higher than the Australian rate of 16.1 and NSW rate of 15.5. NCPHN had the 6th highest rate in Australia compared to all PHNs. Rates were more than double for males (29.4) in NCPHN compared to females (11.0) ^[8].

In 2017–18, All LGAs in NCPHN had higher rates of people aged 18 years and over, who consumed more than two standard alcoholic drinks per day than the Australian and NSW rates (see graph below) ^[10].

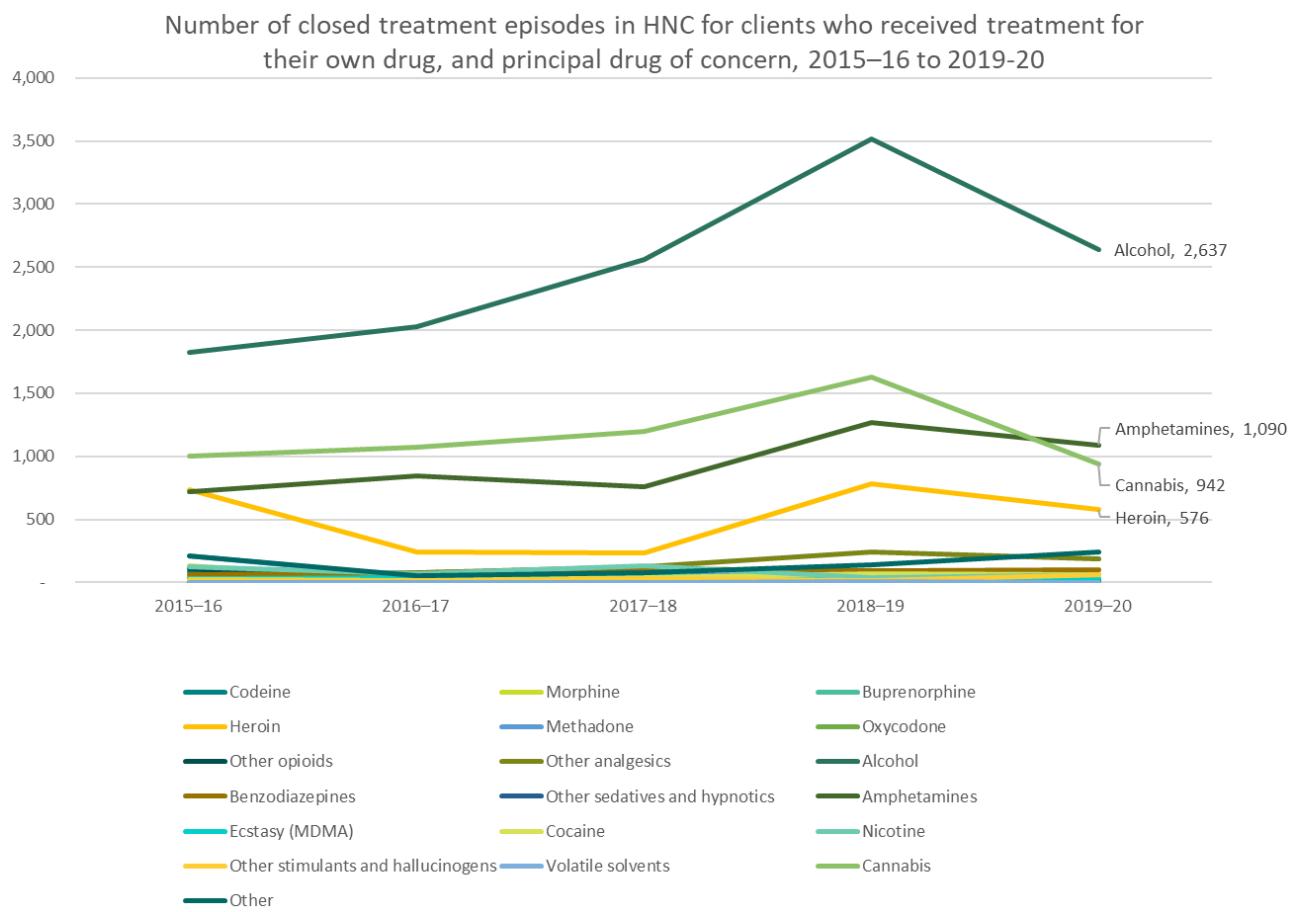
Estimated number of people aged 18 years and over who consumed more than two standard alcoholic drinks per day on average (modelled estimates)

2017-18

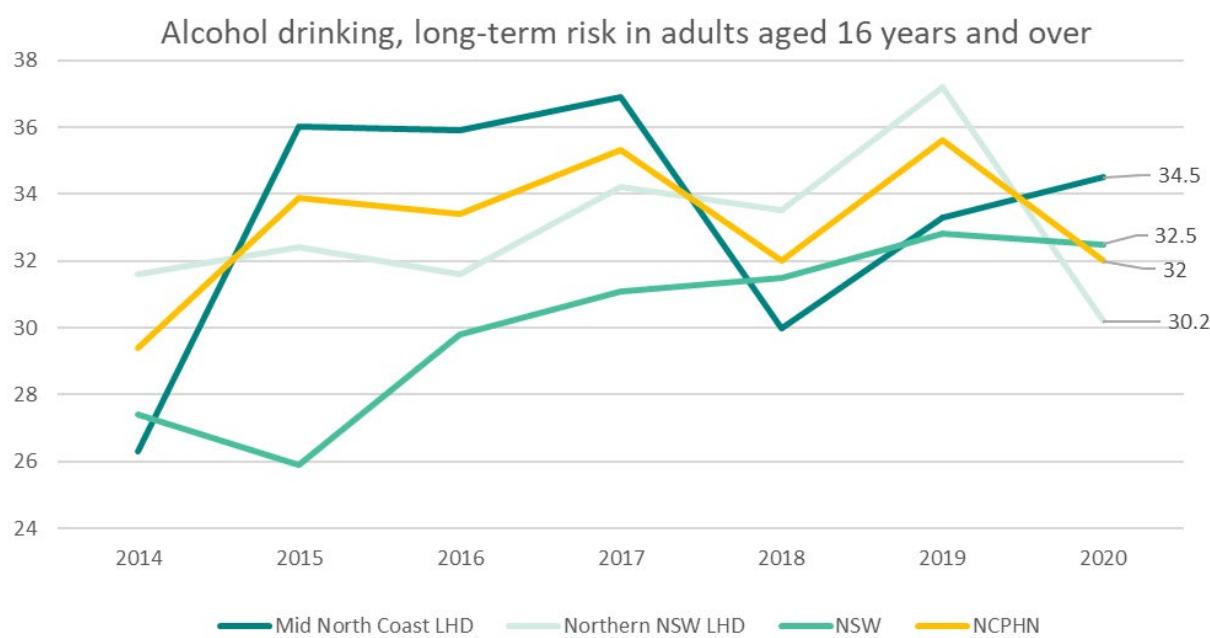


Data from the AODTS–NMDS shows the proportion of clients receiving treatment for their own drug use, with alcohol as the principal drug of concern in NCPHN was 40% in 2019–20. This was the 6th highest proportion in Australia and was higher than the Australian proportion of 32.7%.

AODTS–NMDS data indicates that across the NCPHN region, alcohol represents the principal drug of concern with the highest proportion of all closed treatment episodes in 2019–20, equating to 43% (see graph below) [78].



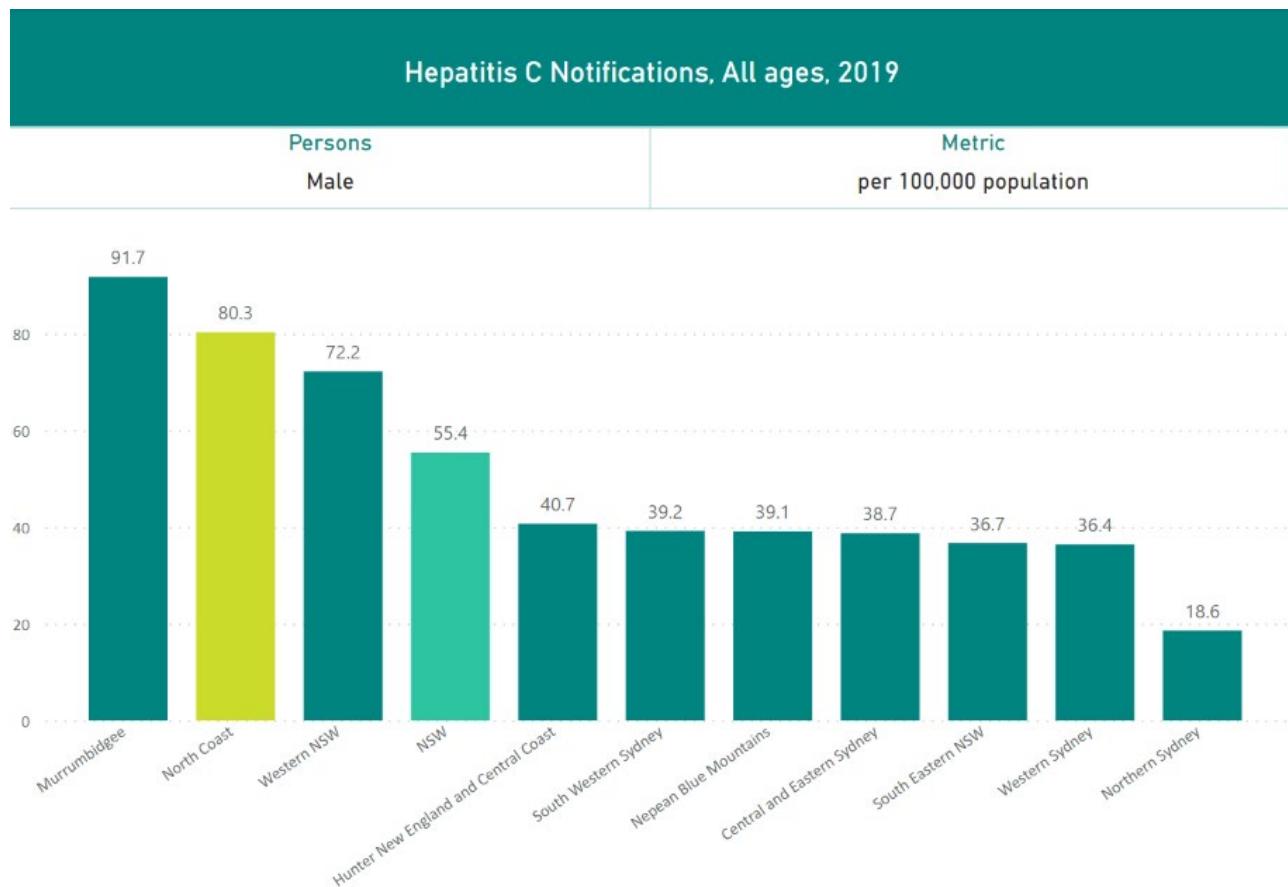
In 2020 the percentage of adults aged 16 years and over who consumed more than 2 standard drinks on a day when they drink alcohol: NCPHN: 32.0%, NNSW: 30.2%, MNC: 34.5%, NSW: 32.5% (see graph below) [79].



Alcohol and Other Drugs (Hepatitis C)

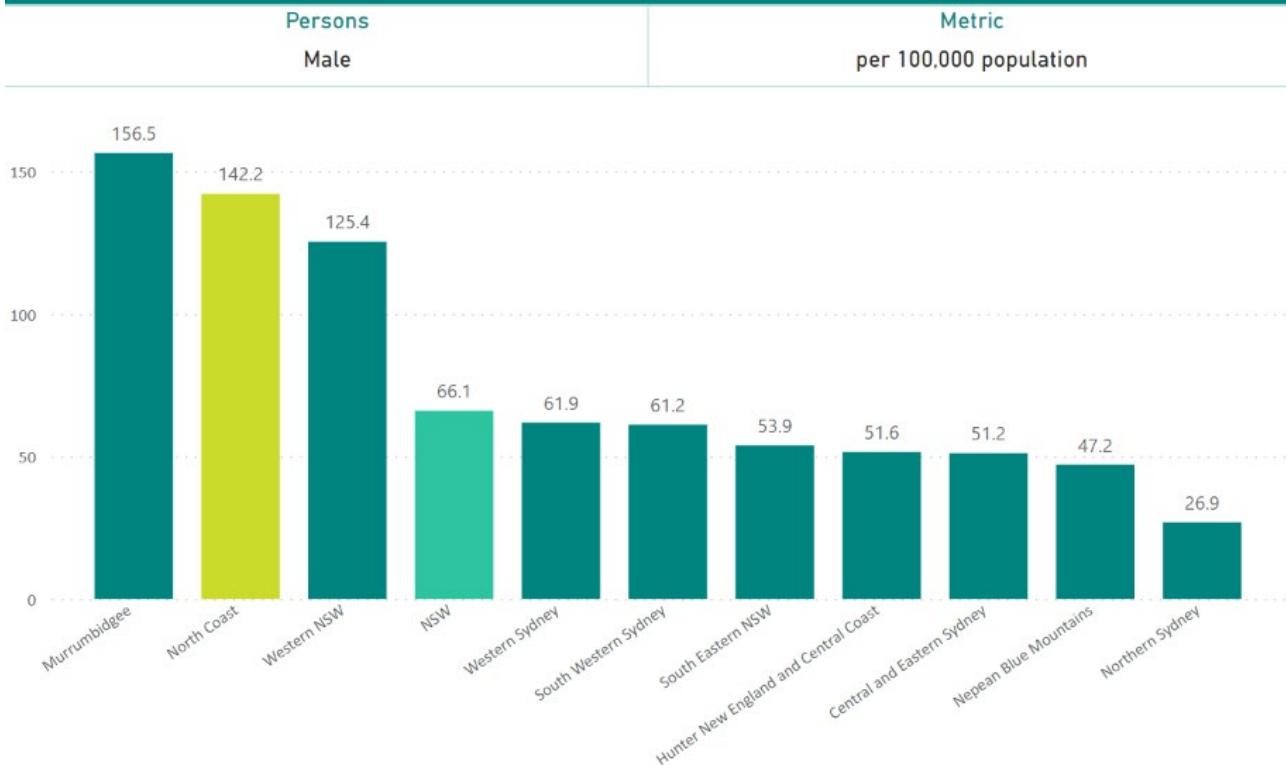
Males in the NCPHN region have a higher rate of Hepatitis C notifications in all ages compared to the NSW average. In Australia, hepatitis C occurs predominantly amongst people with a history of injecting drug use.

In 2019, the rate of Hepatitis C Notifications per 100,000 population (80.3) for males of all ages in NCPHN was higher than the rate for NSW (55.4). NCPHN had the second highest rate of all PHNs in NSW (see graph below) ^[80].



In 25–44-year-old males in NCPHN the rate of Hepatitis C notifications per 100,000 (142.2) is more than double the rate than 25–44-year-old males in NSW (66.1) (see graph below) ^[80].

Hepatitis C Notifications, 25-44, 2019



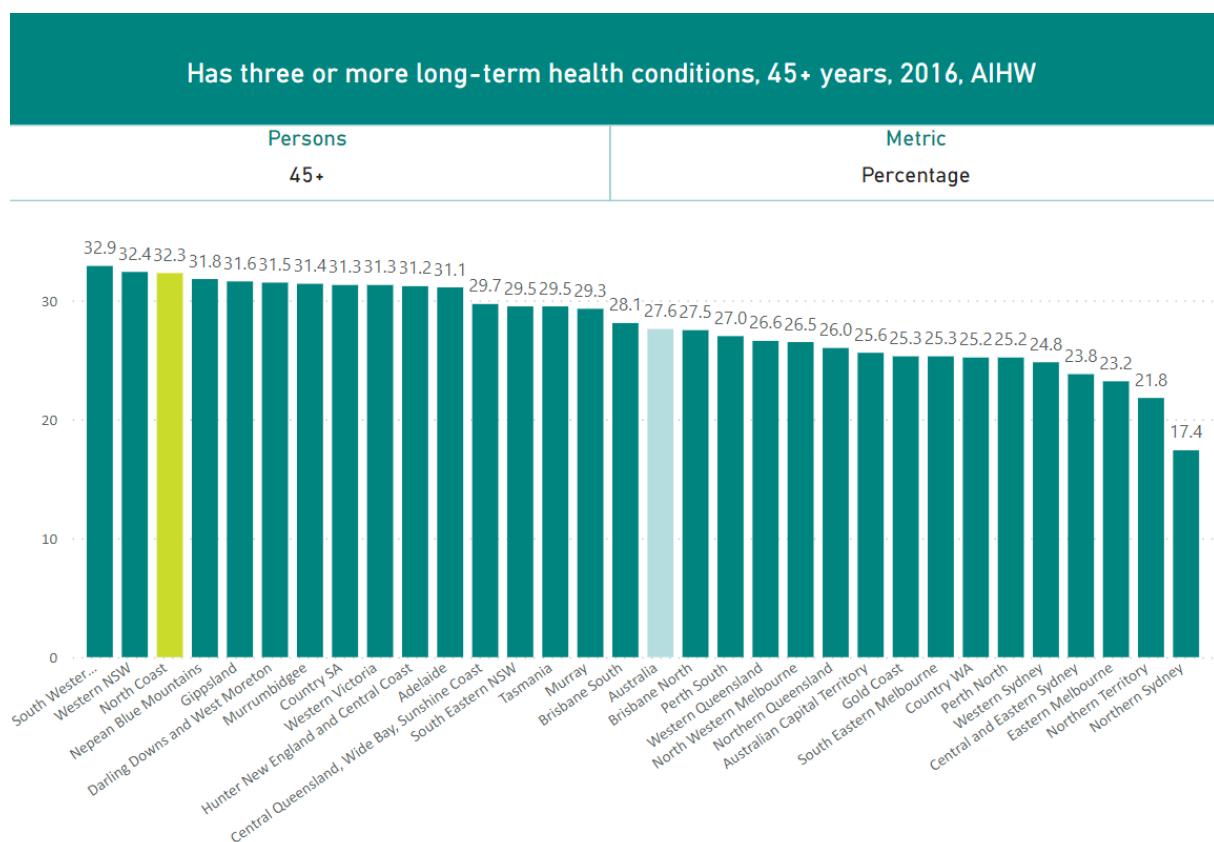
The rate of Hepatitis C notifications for females in NCPHN (38.4) is much lower than males but when compared to females in NSW, the rate for NCPHN is higher than the rate for NSW (25.1). NCPHN had the 3rd highest rate of all PHNs in NSW. The rate for females aged 25–44 in NCPHN (64.3) was higher than all ages, and the rate of females 25–44 in NSW (41.7) [80] .

Outcomes of the service needs analysis

Population Health (chronic illness)

The NCPHN region has a high rate of chronic illness which is reflected through a high uptake of GP assessment and management plans, however there is a need for a comprehensive and integrated chronic disease prevention and management model of care, due to continuing high rates of PPHs related to chronic illness management.

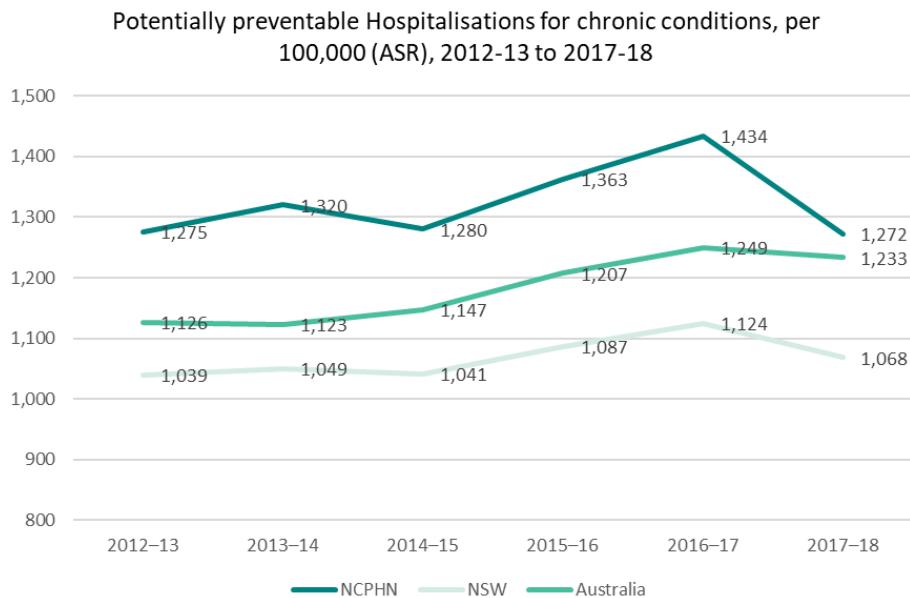
Data from the ABS 2016 Survey of healthcare shows that 32.3% of people in NCPHN aged 45 years and over had three or more long-term conditions compared to 27.6% in Australia. This was the 3rd highest rate in Australia (see graph below) [81].



According to Medicare Benefits Schedule (MBS) claims data for 2020–21:

- NCPHN had the highest rate (72.9) per 100 people for GP Chronic Disease Management Plan services. This was 1.8 times the Australian rate (40.4)
- NCPHN had the 6 highest rate (6.9) per 100 people for GP Health Assessments. This was higher than the Australian rate (4.24) [12]

Although there is a high uptake of the above-mentioned services, there continues to be a high number of potentially preventable hospitalisations for chronic conditions in NCPHN, with rates remaining above the Australian rate between 2012–13 and 2017–18 (see graph below) [34].



In 2017–18, 46% of all PPH were for people aged 65+ years. Of these PPH, the majority (61%) were for chronic conditions, most commonly COPD, Congestive cardiac failure, Iron deficiency anaemia and type 2 Diabetes complications. The most common Acute conditions PPH were UTIs and Cellulitis [34].

Population Health (care navigation)

People in the NCPHN region require improved care navigation tools to locate social and health services (27.0)

Care navigation is a way of supporting coordinated, person-centred care, playing a crucial role in helping people get the right support in the right place at the right time.

In the NCPHN 2021 Community Survey, 63.5% of respondents said they stopped or delayed getting health care because they prefer to manage themselves.

On average 21.9% of survey respondents said they don't feel they receive enough health information to be well informed about health issues relevant to them, from their usual source of information.

12.4% of respondents who had contact with telehealth services, said they had contact with 'other' professionals (not health professionals), such as a social worker, occupational therapist or counsellor [14].

Older people in NCPHN

Government response to the Royal Commission into Aged Care Quality and Safety.

Recommendation 29

- Care finders to support navigation of aged care

Recommendation 30:

- Designing for diversity, difference, complexity and individuality^[82].

Population Health (access to primary care)

Adults of NCPHN region have difficulty accessing a GP, mainly due to it taking too long to get an appointment.

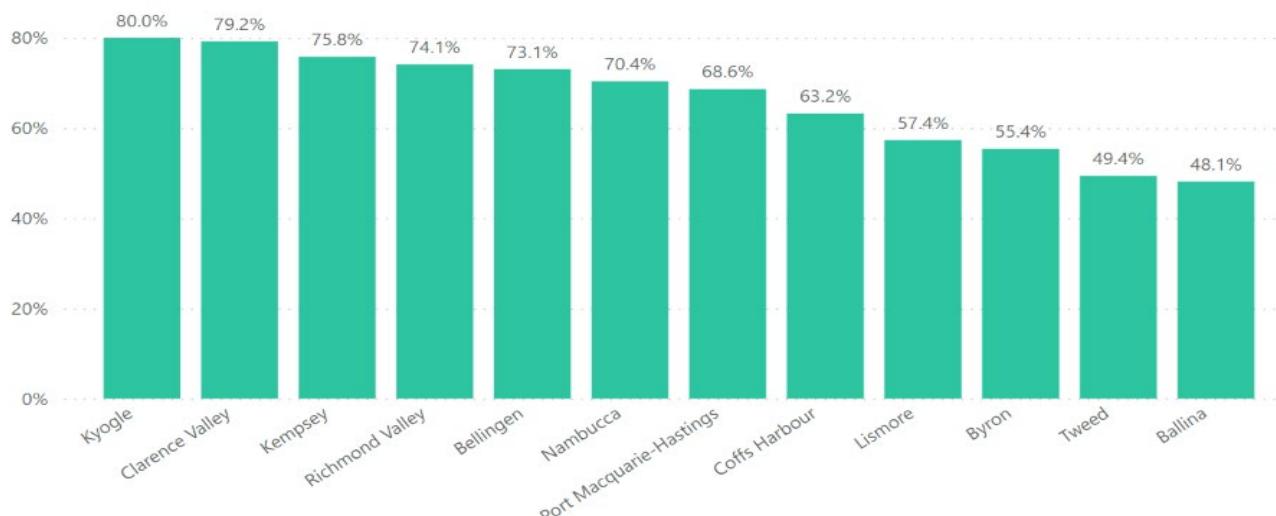
Barriers to accessing GP services

In 2019–20, 19.9% of adults from the NCPHN region reported that they felt they waited longer than acceptable to get an appointment with a GP, which was higher than the Australian rate of 18.8%^[26].

The most common barriers that stopped or delayed survey participants in the NCPHN region getting health care were:

- It takes too long to get an appointment 64.6%
- I prefer to manage myself 63.5%
- I couldn't afford to pay for the service 45.5%^[14].

The percentage of survey respondents who said it takes too long to get an appointment, by LGA^[14]:



The percentage of survey respondents who said it takes too long to get an appointment, by age [14]



There has been a significant increase in the general practitioner workforce in the NCPHN region in recent years. This positive trend is expected to continue, with the region remaining an attractive work destination for health professionals over the short term.

However, as with many health professions, general practitioners are not evenly distributed across the NCPHN Region. Over half of general practitioners in the region work in the larger service hubs of Port Macquarie–Hastings, Tweed and Coffs Harbour where the region's main hospitals are located. At the same time, major shortages in the supply of General Practitioners exist in Richmond Valley, Kempsey and Clarence Valley. These shortages appear to be contributing to an increase in non-urgent ED presentations at some of the region's hospitals.

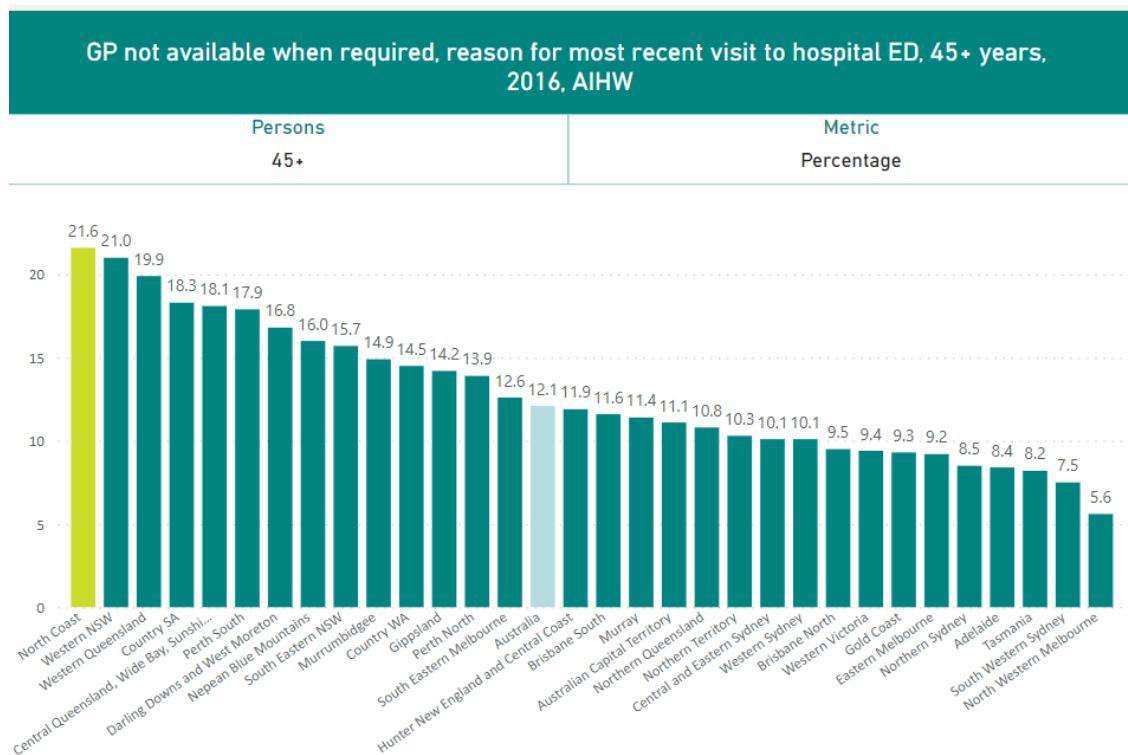
In 2019, the service centres of Port Macquarie–Hastings, Tweed and Coffs Harbour accounted for 52.3% of the region's general practitioner workforce:

- in per capita terms, Byron had the highest rate of general practitioners in the region at around 2.0 per 1,000 population or 1.4 times higher than the rate for the region overall
- Richmond Valley, Kempsey and Clarence Valley had the lowest per capita rates of general practitioners in the region [83].

Emergency department presentations

Emergency departments (EDs) are a vital part of Australia's health care system; they provide care for people who require urgent, and often life-saving, medical attention. However, many people present to the ED for health conditions that may be managed more appropriately and effectively in a different health care setting, such as through their general practitioner (GP) or a community walk-in clinic. Understanding who uses emergency care services can inform health care planning, coordination and delivery to ensure that people receive the right care, in the right place, at the right time.

Data from the Coordination of Health Care Study for Primary Health Networks shows that in 2016, NCPHN had the highest percentage of people aged 45 and over who said the main reason for their most recent visit to an emergency department was because a GP was not available when required, NCPHN 21.6%, Australia 12.1% (see graph below) [81].



Lower urgency emergency department presentations

ED presentations that are lower urgency are sometimes used as a proxy measure of access to primary health care. Higher presentation rates may suggest a lack of access to GPs or other primary health services, which may have been better placed to manage a person's health condition [84].

Lower urgency emergency presentations – in hours

In 2018–19 NCPHN had the 2nd highest age-standardised rate (163.9) per 1,000 people, for use of ED for lower urgency care (In-hours) for all people.

Lower urgency emergency presentations – all hours

In 2018–19, NCPHN had the 2nd highest age-standardised rate (288.3) per 1,000 people for use of ED for lower urgency care (all-hours) for all people.

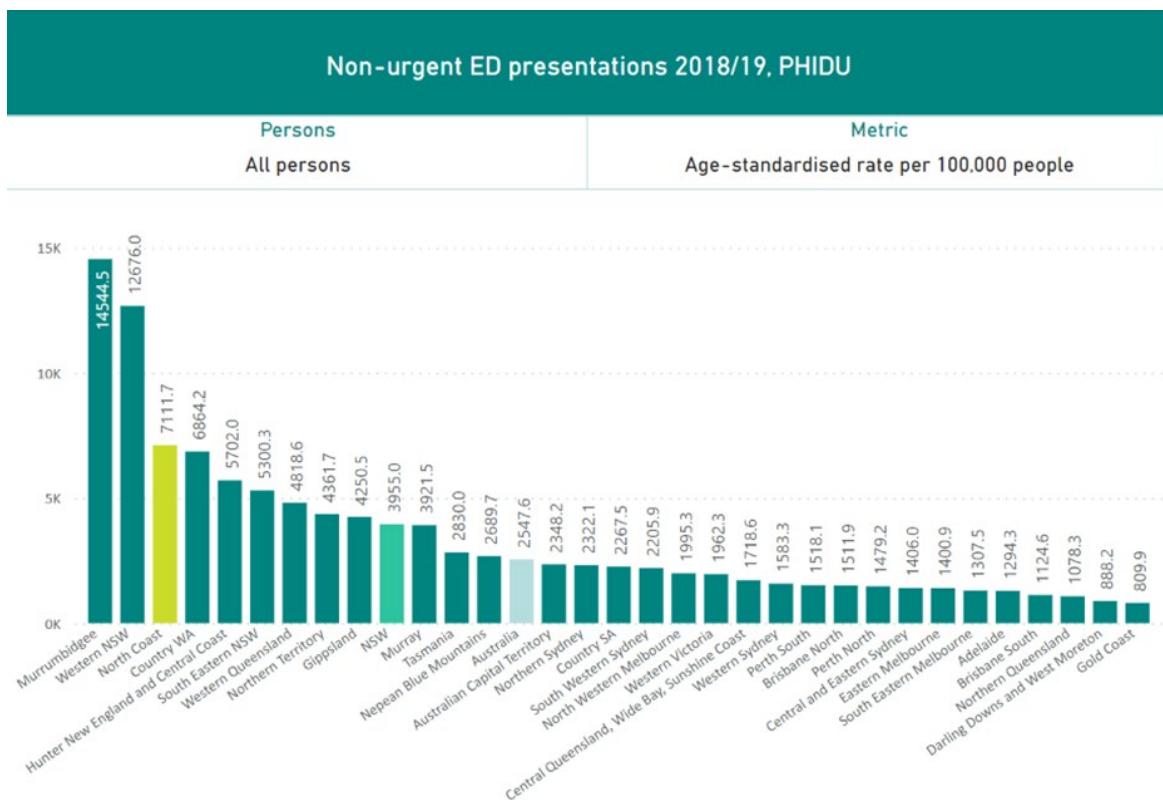
Lower urgency emergency presentations – after hours

In 2018–19, NCPHN had the 3rd highest crude rate per 1,000 (110.4) for use of ED for lower urgency care (after-hours) for all people. This was just below double the rate in Australia (55.8)^[84].

The crude rates for use of ED for lower urgency care were highest in the 15–24-year-old group: NCPHN (349.2) Australia (143.5), this was second highest in Australia for this age group.

These were followed by the 0–14-year-old group: NCPHN (335.3) compared to Australia (181.2), this was second highest in Australia for this age group^[84].

PHIDU rates (age-standardised per 100,000) for non-urgent ED presentations, show NCPHN has the third highest rate in Australia (see graph below)^[8].



GP after-hours MBS items

There are low rates of people in NCPHN accessing GP After-hours MBS items. The rate of people accessing Medicare subsidised services, GP After-hours in NCPHN (18.1 per 100) was half the rate for Australia (49). The rate of Medicare benefits paid in NCPHN (\$1,185) for GP After-hours in 2018–19 was the 4th lowest in Australia and was half the rate for Australia (\$2992)^[12].

In 2018–19 the rate of GP After-hours (non-urgent) MBS services per 100 in NCPHN (16) was the 4th lowest in Australia, and less than half the rate for Australia (44.2), whereas the rate of GP

After-hours (urgent) MBS services in NCPHN (2.1), was the 5th lowest rate in Australia, and less than half the rate for Australia (4.8)^[12].

Potentially preventable hospitalisations are a proxy measure of primary care effectiveness. For more information see:

- Population Health (potentially preventable hospitalisations)
- Population Health (chronic illness)

Population Health (health literacy)

There is a low level of health literacy in people across NCPHN, which impacts on ability to care for oneself and interact and communicate with health services.

In a cross-sectional study to investigate the impact of health literacy on health-related quality of life in Australian patients from primary care, was conducted to determine whether the difference in health-related quality of life between low health literacy and high health literacy groups was clinically significant.

Findings:

Low literacy patients were more likely to:

- smoke (12% vs 6%)
- undertake insufficient physical activity (63% v 47%)
- be overweight (68% vs 52%)
- have lower physical health and lower mental health
- have lower levels of formal education
- be unemployed.

Smoking patients with low health literacy reported worse physical health^[85].

For more see:

- Social Determinants of health
 - Education

2.4% of survey participants in the NCPHN 2021 Community Survey, said they had no school qualification or other qualifications.

The LGAs with higher rates were Richmond Valley (4.7%), Nambucca (4.6%), Lismore (3.9%), Tweed (3.1%) and Kyogle (2.9%).

People who said they had no school qualification or other qualification:

- 14.3% people aged 85 and over
- 6.5% of Aboriginal participants (compared to 2.0% non-Aboriginal)
- 5.7% people aged 80–84
- 5.6% Males (compared to 1.7% females)

- 4.0% people aged 70–74
- 3.8% people aged 25–29 & people aged 75–79
- 3.6% people aged 30–34
- 3.3% of CALD respondents (compared to 2.2% not-CALD) ^[14].

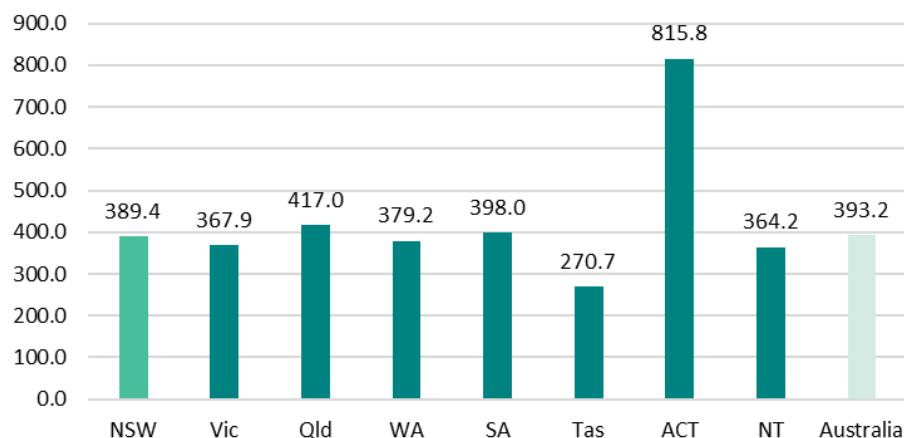
Mental Health (community support services)

GPs need to be supported to direct people with a mental health challenge to appropriate community support services.

In the 2018 NCPHN Community Survey, 26.9% of people with a mental health challenge said GPs do not give advice on other relevant community support services ^[86].

Data to 18 March 2021 shows that in NSW, there was a 4% drop, in community clients compared to 2020 numbers for a ‘last 4 week’ average (see graphs below)^[50].

Community mental health care service contacts, by state and territories, 2019-20, rate per 1,000



Community mental health care patients, by states and territories, 2019–20, rate per 1,000 population



For more information see:

Mental Health (suicide)

Mental Health (access to services)

Costs and long wait times to see a specialist (inc. psychiatrists and psychologists) is a significant barrier for people with a mental health challenge.

NCPHN 2021 Community Survey participants with a mental health or behaviour condition reported the following reasons for stopping or delaying contacting a health service:

- I couldn't afford to pay 30.0%
- It takes too long to get an appointment 27.6%
- It costs too much to get there 14.7% ^[14].

In the 2018 NCPHN Community Survey, participants who said they had a mental health challenge (45.2%) reported they found it 'very difficult' or 'difficult' to see a specialist psychiatrist. The most reported barriers were:

- cost 66.1%
- long wait 58.7%
- distance of travel required 52.7%
- lack of specialists in the area 52.3%
- transport 19.6% ^[86].



Mental Health (access to services)

Cost of mental health services is seen as a barrier for LGBTIQ+ people.

43.9% of NCPHN 2021 Community Survey participants who said they were gay or lesbian, said the reason they stopped or delayed getting health care was that they couldn't afford to pay for health services.

44.4% of survey participants who said they were gay, or lesbian said that being unable to find a LGBTIQ+ friendly service was the reason they stopped or delayed getting health care^[14].

In the 2018 NCPHN Community Survey, 50.1% of LGBTQ+ participants reported they found it 'very difficult' or 'difficult' to access mental health services. The most reported barriers were:

- Cost 57.2%^[86]

Aboriginal and Torres Strait Islander Health (access to services)

Aboriginal and Torres Strait Islander people require access to culturally safe services that positively address their social and emotional wellbeing.

In the NCPHN 2021 Community Survey, only 56.4% of Aboriginal and/or Torres Strait Islanders said they feel as though they are respected as an Aboriginal and/or Torres Strait Islander person when they access health services.

Aboriginal and/or Torres Strait Islander people were asked what makes them feel culturally safe when they access health services the most commonly selected option was being respected (81.1%) followed by a welcoming building/environment (72.2%) and Aboriginal staff (69.8%).

Aboriginal and/or Torres Strait Islander participants were asked what kind of programs they would like more of to keep them healthy and strong, the most reported were:

- Exercise and fitness programs 76.6%
- Cultural programs 66.9%
- Yarning circles 59.1%
- Men's/women's groups 57.8%^[14].

For more information see:

- Aboriginal and Torres Strait Islander Health (social and emotional wellbeing)

Aboriginal and Torres Strait Islander Health (access to services)

There is a lack of culturally safe and culturally capable mental health services available for Aboriginal and Torres Strait Islander people which adds to existing barriers for accessing support such as poor experiences in the past.

31.9% of Aboriginal and/or Torres Strait Islander participants in the NCPHN 2021 Community Survey, said they stopped or delayed getting health care because they were unable to access culturally safe services [14] .

In the 2018 NCPHN Community Survey, 56.5% of Aboriginal and/or Torres Strait Islander participants reported they found it 'very difficult' or 'difficult' to access mental health services. The most reported barriers were:

- Lack of services 30.7%
- Poor experience in the past 22.8%
- Quality of services available 21.7% [86]

For more information see:

- Aboriginal and Torres Strait Islander health (access to services)
 - Aboriginal people find it difficult to access health services

Aboriginal and Torres Strait Islander Health (access to services)

Aboriginal people find it difficult to access health services.

Results from the NCPHN 2021 Community Survey:

- 51.2% of Aboriginal and/or Torres Strait Islander participants said it was important to have Aboriginal and/or Torres Strait Islander health professionals involved in their care.
- Only 35.2% of Aboriginal and/or Torres Strait Islander participants said they have access to any of the programs they would like more of to keep them healthy and strong.
- 25.6% of Aboriginal and/or Torres Strait Islander participants said they didn't get as much help as they needed when they used a health service in the past year.
- 33.6% of Aboriginal and/or Torres Strait Islander participants said they stopped or delayed getting health care because they were unable to access Aboriginal services.

Other reasons Aboriginal and/or Torres Strait Islander participants stopped or delayed getting health care:

69.1%	I prefer to manage myself
67.7%	It takes too long to get an appointment
53.7%	I couldn't afford to pay for the service
45.3%	I asked but didn't get help
44.4%	I didn't think anything would help

41.0%	I have responsibilities caring for someone else
39.8%	I feel like my problems won't stay private
39.4%	It is too far to travel
37.7%	I can't get time away from work
37.3%	It costs too much to get there
33.6%	I am unable to access Aboriginal services
32.7%	I was afraid to ask for help, or what others would think of me if I did
31.9%	I am unable to access culturally safe services
30.4%	Getting transport there is hard for me
28.0%	There is not enough opportunity for my carer/support network to be involved
11.8%	Other
11.7%	I am unable to find a LGBTQ+ friendly service to access

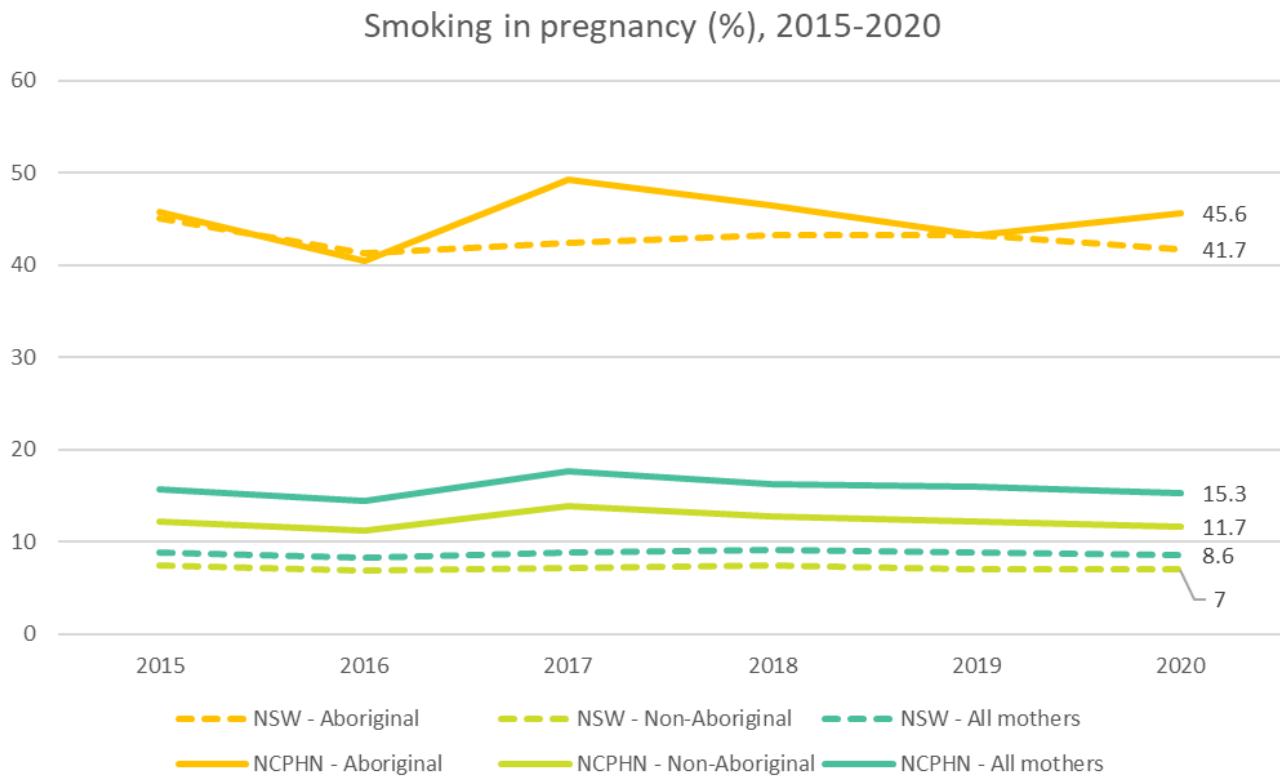
89.3% of Aboriginal and/or Torres Strait Islander participants accessed a GP at least once in the past 12 months compared to 93.4% of non-Aboriginal participants [14].

Aboriginal and Torres Strait Islander Health (pre- and postnatal care)

Holistic health and wellbeing care and support during and after pregnancy will see a continued improvement in the cessation of Aboriginal mothers smoking during pregnancy, and a reduction in other health issues.

Between 2016–2018 the proportion of Aboriginal and/or Torres Strait Islander mothers in NCPHN who smoked during pregnancy was 45.3% compared to the proportion of Aboriginal and/or Torres Strait Islander mothers in NSW (43.4%) [60].

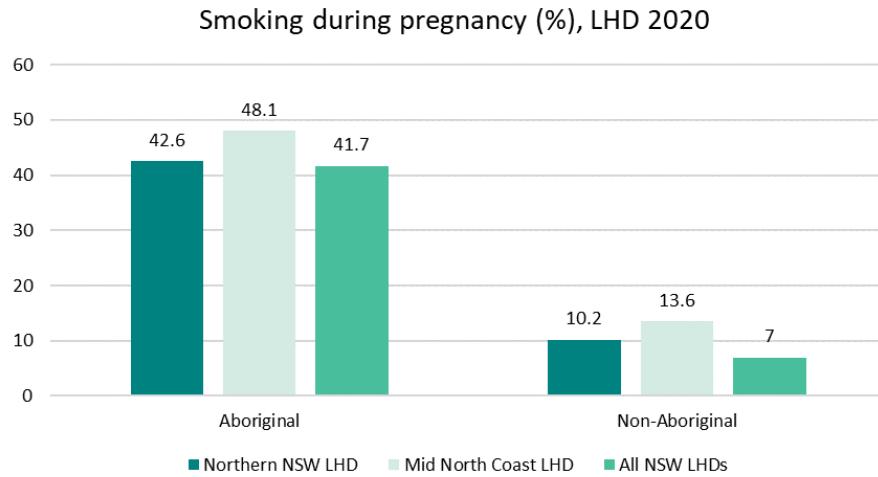
According to Healthstats data, the proportion of Aboriginal and/or Torres Strait Islander mothers in NCPHN smoking during pregnancy in 2020 was 45.6%, compared to Aboriginal and/or Torres Strait Islander mothers in NSW 41.7%. The rate of Aboriginal and/or Torres Strait Islander mothers smoking in NCPHN is 3.9 times the rate of non-Aboriginal mothers in NCPHN smoking during pregnancy (see graph below) [87].



In the NCPHN region, smoking during pregnancy by Aboriginal and/or Torres Strait Islander mothers, has increased between the years 2019 to 2020, whereas a decrease in smoking during pregnancy was experienced by Aboriginal and/or Torres Strait Islander mothers in NSW and non-Aboriginal mothers in NCPHN & NSW [87].

48.1% of Aboriginal and/or Torres Strait Islander mothers in Mid North Coast LHD smoked during pregnancy, which was 3.5 times higher than non-Aboriginal mothers in MNC LHD 13.6%.

Although the rate in NNSW LHD 42.6% of Aboriginal and/or Torres Strait Islander mothers smoking during pregnancy was lower than the rate in Mid North Coast, it was more than 4 times higher than the rate of non-Aboriginal mothers smoking during pregnancy in NNSW LHD 10.2% (see graph below) [87].

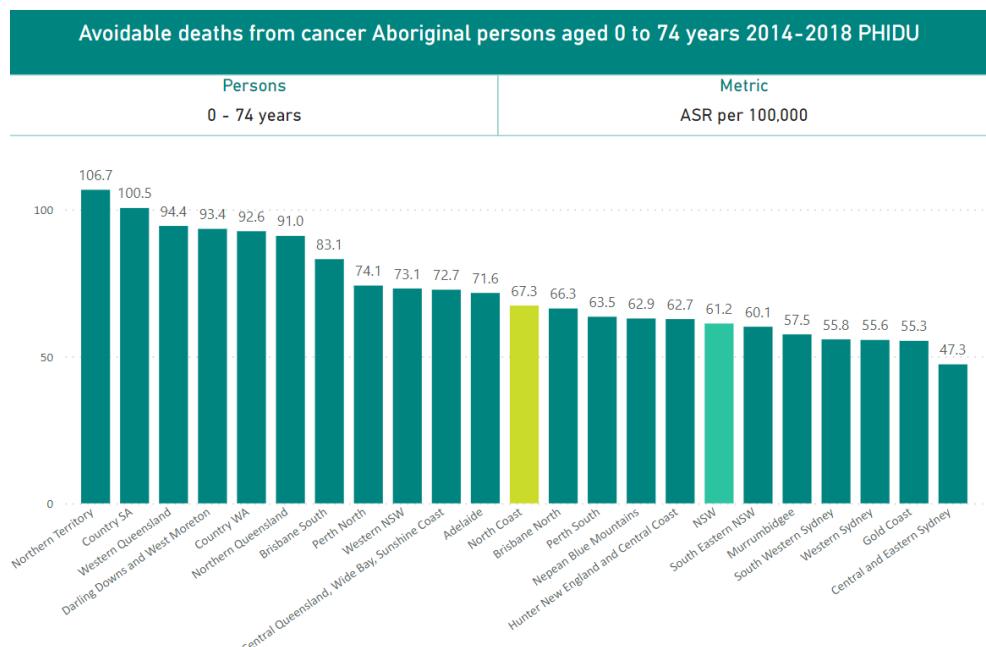


Aboriginal and Torres Strait Islander Health (cancer screening)

Aboriginal and Torres Strait Islander people have low rates of participation in cancer screening and cancer treatment.

Avoidable deaths from cancer – Aboriginal persons aged 0 to 74 years 2014 – 2018

In NCPHN between 2014–2018, the age-standardised rate (67.3 per 100,000) of avoidable deaths from cancer for Aboriginal people aged 0 to 74 years, was higher than the rate for NSW (61.2) (see graph below) [60].



Bowel screening

In Australia, the percentage of Aboriginal people participating in bowel cancer screening, 27.3% was lower than for non-Aboriginal people 42.6% ^[25].

Aboriginal people also experience higher positivity rates. Higher positivity rates; Aboriginal 10% non-Aboriginal 7% (see table below) ^[88].

	Aboriginal	Non-Aboriginal
Participation rate	27.3%	42.6%
Screening positivity rate	10%	7%
Time between positive scan and diagnostic assessment	62 days	49 days
Bowel cancer incidence rate	111 per 100,000	119 per 100,000
Bowel cancer mortality rate	38 per 100,000	30 per 100,000

Breast screening

According to The Cancer Institute of NSW, in 2019–20, the participation rate in breast screening by Aboriginal women aged 50–74 years in NCPHN (48.6%) was higher than the NSW rate (44%) for Aboriginal women aged 50–74 years. However, the rates were lower than NSW in 3 of the NCPHN LGAs, Nambucca (43.7%), Kempsey (40.6%) and Byron (40.4%) ^[32].

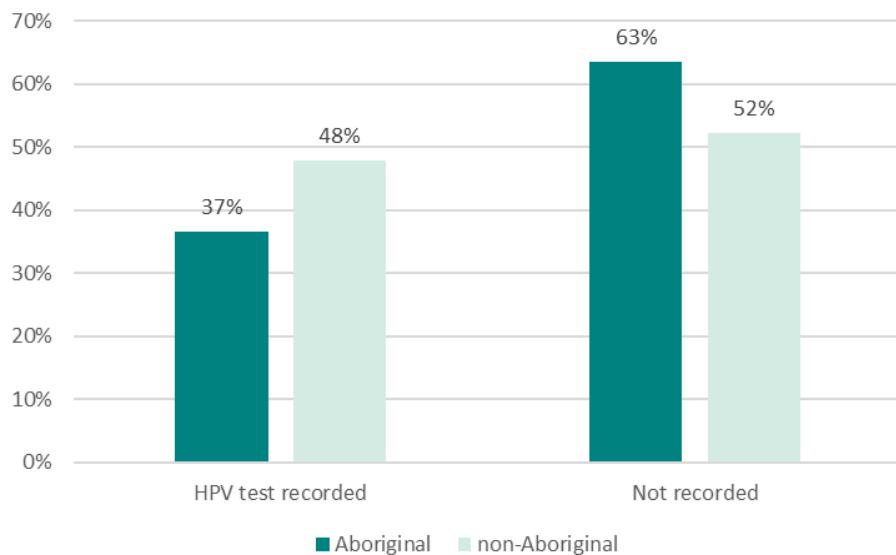
Cervical screening

National Incidence of cervical cancer in Aboriginal and Torres Strait Islander women is more than 2 times that of non-Aboriginal women, and mortality more than 3 times the non-Aboriginal rate.

National cervical screening rates for Aboriginal and/or Torres Strait Islander women are not available, as Aboriginal and/or Torres Strait Islander status information is not collected on pathology forms in all jurisdictions, however there is evidence from a range of sources that Aboriginal and/or Torres Strait Islander women are under-screened ^[89].

North Coast general practice data for the reporting period November 2021 to January 2022 shows that for the PIP QI measure QIM 09: Cervical Screening Recorded in the past 5 years, shows that there are lower rates of having a HPV test recorded for Aboriginal women. (see graph below) ^[90].

QIM 09: Cervical Screening Recorded in the past 5 years,
HNC, Reporting period Nov 21 - Jan 22



Aboriginal and Torres Strait Islander Health (access to services)

Dental issues are more prevalent in Aboriginal children than non-Aboriginal children as a result of financial barriers and long wait times.

Aboriginal and/or Torres Strait Islander children aged 0–4 were hospitalised for dental conditions at 1.7 times the rate of non-Aboriginal children between July 2015 and June 2017.

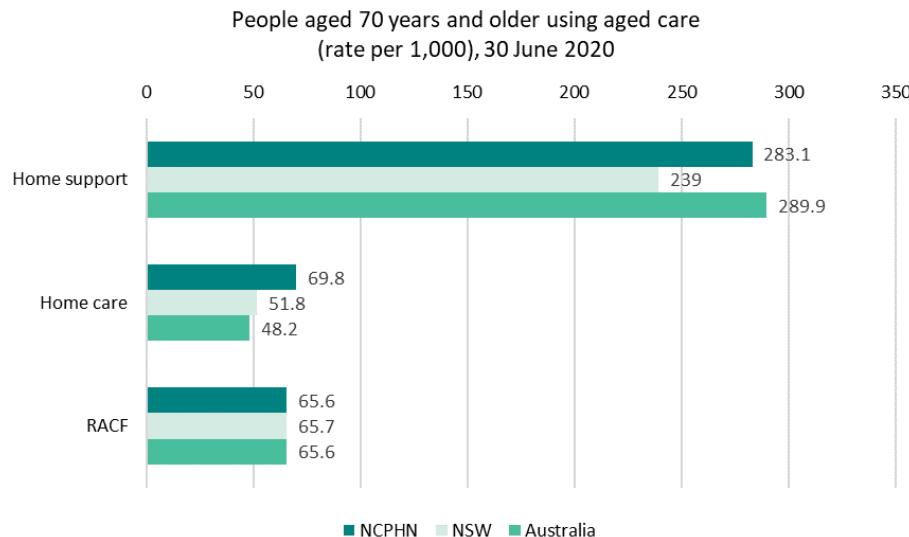
In 2018–19, 3% of Aboriginal and Torres Strait Islander people children aged 0–14 were reported as needing to go to the dentist in the past 12 months but did not. The most common reasons parents attributed this to were:

- cost (32%)
- disliked service or professional or felt embarrassed or afraid (17%)
- too busy (16%)
- waiting time or an appointment not available at the time required (13%)^[57].

Older People (aged care services)

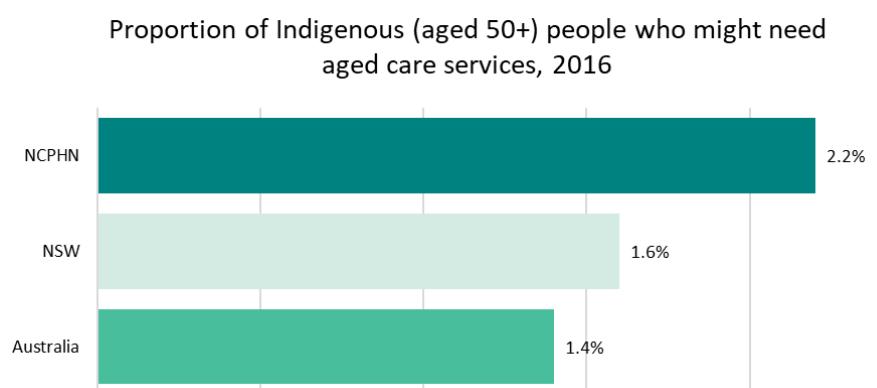
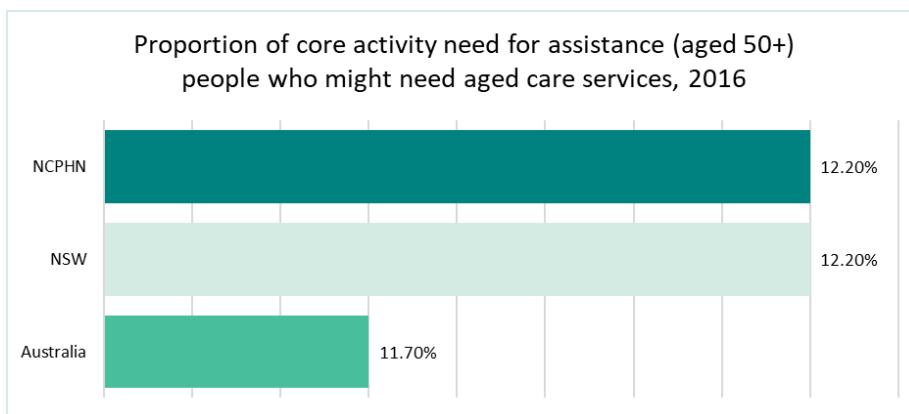
The NCPHN region has a high percentage of people aged 50+ who may require aged care services, especially Aboriginal people, those living alone or who need support for core activities.

According to the GEN Aged Care Data Portal, at 30 June 2020, there were 80 residential care services, 88 Home care services and 109 Home care support services in the NCPHN region .

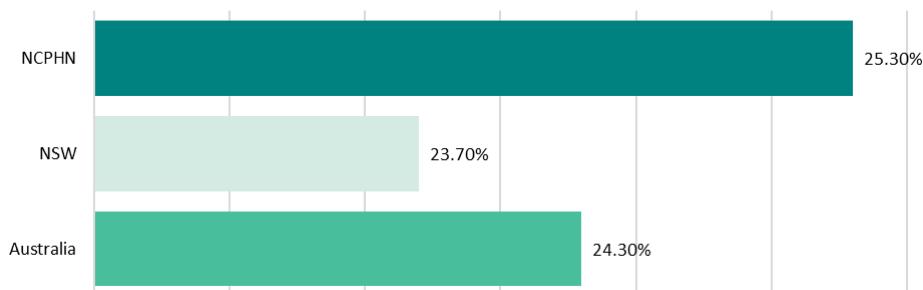


In the NCPHN region, the proportion of people who might need aged care services are higher than NSW & Australia (see graphs below) [74].

Comparisons by PHN, NSW and Australia.



Proportion of people who live alone (aged 65+) who might need aged care services, 2016



The Royal Commission into Aged Care Quality and Safety – recommendation 56: A new primary care model to improve access.

The Government supports the delivery of high-quality health care for senior Australians and will be investing significantly in enhancing the primary care in-reach model to residential aged care facilities and supporting better transitions between aged care and health care settings.

Initiatives include:

- Additional funding for the Primary Health Networks to expand access to palliative care services, support best practice on-site care and accessible telehealth care in residential aged care facilities, and enhanced out-of-hours support.
- Implementation of an electronic National Residential Medication Chart (eNRMC) and the adoption of the My Health Record in residential aged care facilities, by June 2023^[87]

Older People (end-of-life care)

There is a lack of access to end of life services in the NCPHN region to support people who express a wish to die at home.

Palliative care is provided to meet the needs of patients living with or dying from a life limiting illness and their families. There is a need for population-based planning of palliative care service provision. It has been estimated that, in high-income countries, 69%–82% of those who die need palliative care^[91].

Within our healthcare systems, evidence illustrates that fundamental care is delivered inconsistently or not at all. Up to 50% of hospital patients are: not assisted to eat or brush their teeth, unable to reach water, left in soiled bedclothes, and unbathed for lengthy periods. For many patients, death and dying take place in open or shared spaces, creating challenges for the achievement of privacy and respect. Distressingly, studies have shown that up to 40% of nurses report being unable to talk with patients during a shift.

Research has shown that what matters most for people experiencing palliative and end-of-life care is that: their physical and non-physical needs are met, their wishes are fulfilled, they communicate and develop relationships with the people caring for them, and their families are involved in their care [92].

Almost 160,000 people died in Australia in 2015. Many of these deaths were expected, with the leading causes of death being chronic diseases. As the Australian population ages, the number of people dying with chronic diseases, and in many cases complex needs, will increase. Estimates of the proportion of people that may benefit from palliative care vary from 50 to 90 per cent but even conservative estimates identify that around 80,000 people may benefit from palliative care each year [93].

In response to recommendation 35 of the Royal Commission into Aged Care Quality and Safety – Care at home category, the Government is committed to building on investment to strengthen and improve palliative care co-ordination and linkages across the health and aged care systems. Through the expansion of the Greater Choice for at Home Palliative Care measure, Primary Health Networks will create and foster linkages with local hospitals, general practitioners, palliative care and aged care providers, to implement innovative and locally appropriate activities supporting improved access to safe, quality palliative care for senior Australians living at home or in residential aged care [82].

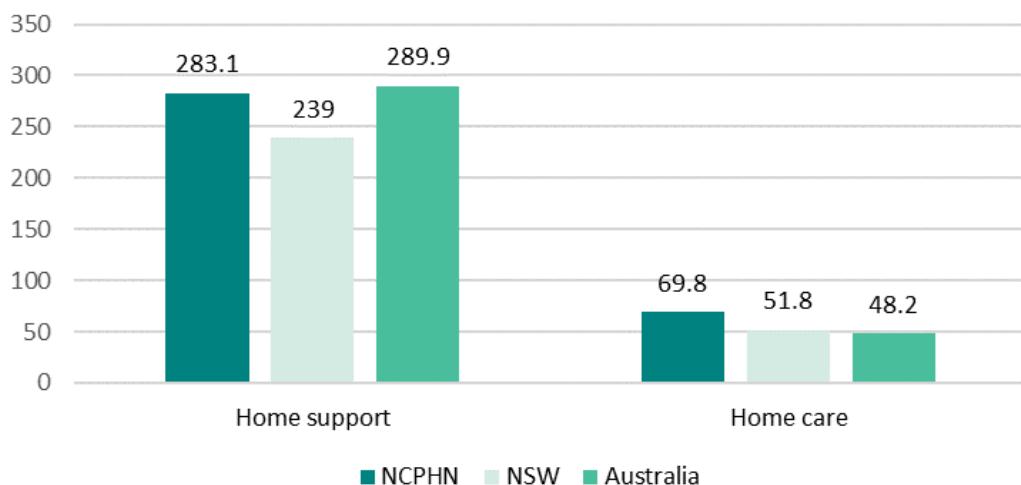
Older People (access to care)

Older people find it difficult to access care packages / funding due to cost and being difficult to organise.

Home care and home support services

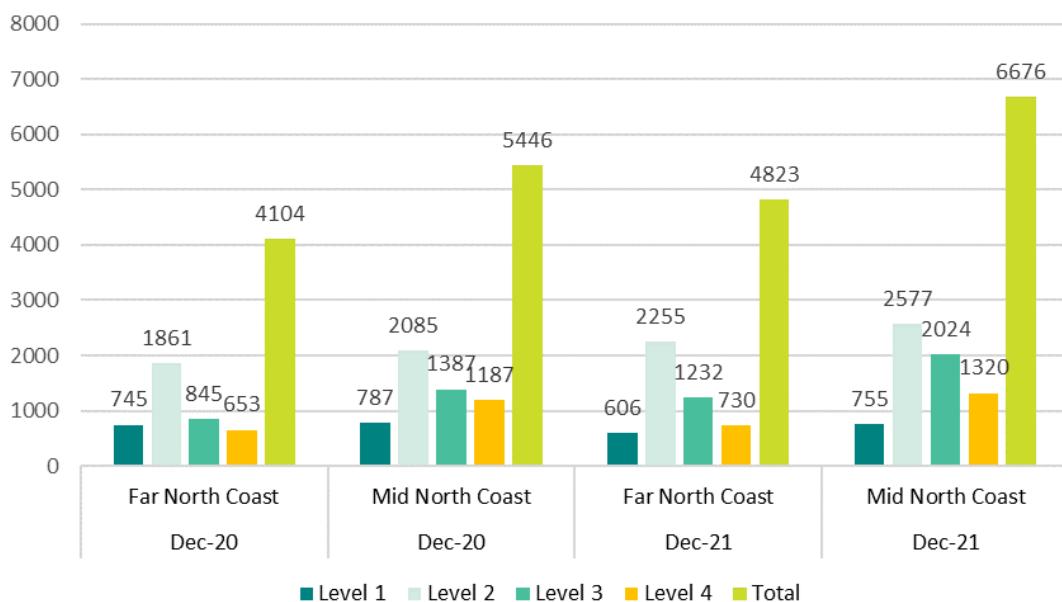
At 30 June there were an estimated 88 home care support outlets with a rate of 69.8 home care recipients per 1,000 and 109 home support services, with a rate of 283.1 home support recipients per 1,000 (see graphs below) [74].

Rate of home care and home support recipients per 1,000 people aged 70 years and older

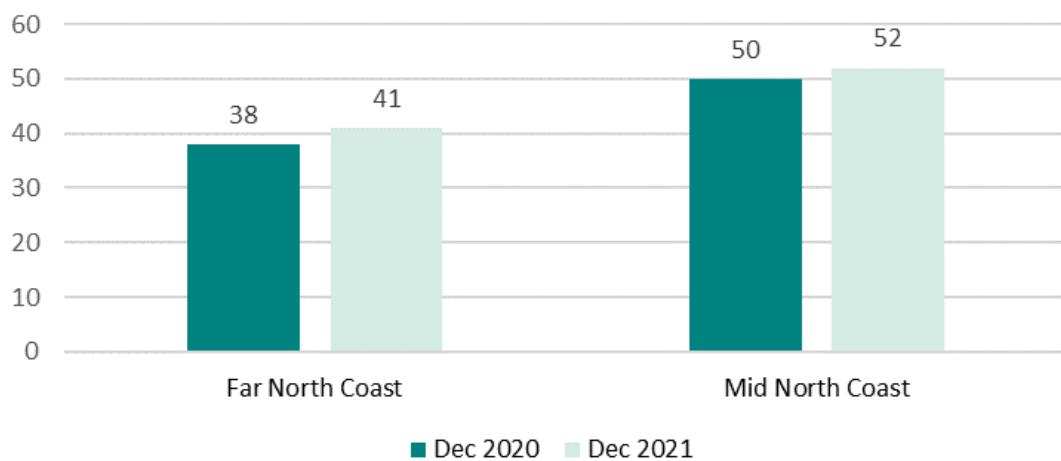


Home care packages

Number of people in a home care package (HCP), by aged care planning region (ACPR)



Number of approved HCP providers that have indicated in My Aged Care that they can provide services at each of the four HCP levels



In the NCPHN 2018 Community Survey, older people reported the following as being 'hard to access':

- care packages/ funding (38.1%)
- in-home domestic support e.g., cleaning, meals (26.9%)
- general wellness support/ social groups (21.7%)
- doctor (GP) with knowledge/ skills in aged care (21.7%)
- in-home medical care (18.1%)

The most reported barriers were cost (44.3%), not sure what is available (35.2%) and difficult to organise (31.1%) [86].

Older People (residential aged care)

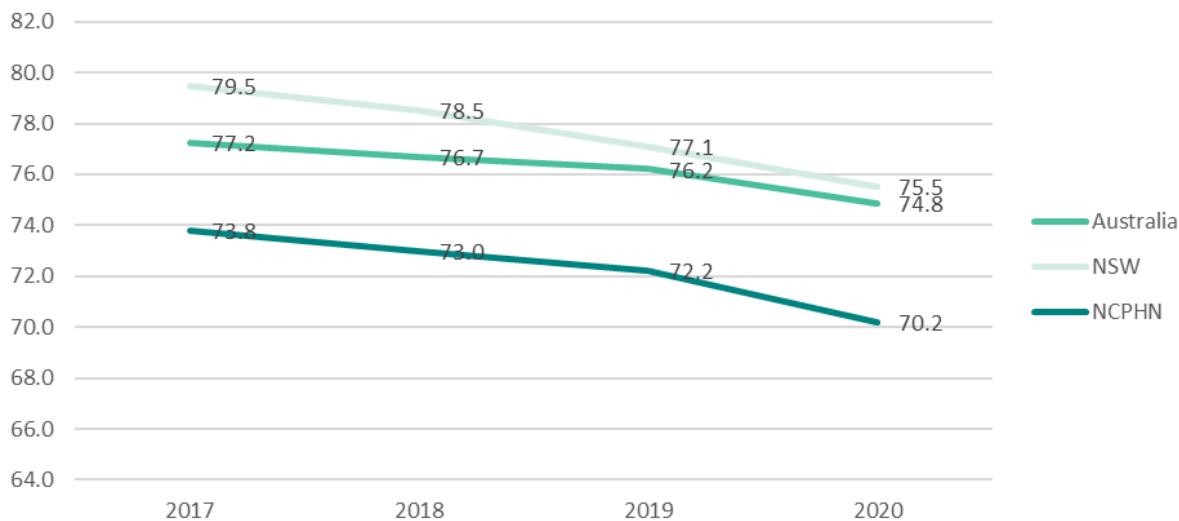
NCPHN has a lower availability of residential aged care than needed.

In June 2020 the NCPHN had an estimated 80 Residential Aged Care Facility (RACF) services. The occupancy rate for residential aged care was 89.4%.

There were 70.2 places in residential care per 1,000 persons aged 70 years and over; which was lower than the NSW state average of 75.5 per 1,000 and also lower than the Australian national average of 74.8 per 1,000.

The figures have been consistently trending downwards, indicating supply is not meeting the demand of an increasing older-aged population (see graph below) [74].

Places in residential care per 1,000 people aged 70 years or older across North Coast PHN, state and Australia



Alcohol and Other Drugs (access to services)

People with AOD challenges, including those from priority populations, find it difficult to get help with AOD challenges when needed due to stigma/shame, lack of services, cost, and worry about lack of confidentiality.

In the 2018 North Coast Community Survey, 32.6% of respondents with a self-reported alcohol and/or other drug challenge, found it difficult to access Alcohol and Other Drugs (AOD) services. The most reported barriers:

- stigma/shame 41.1%
- lack of services 38.0%
- Cost 34.5%

AOD services that were hard to access by respondents with a self-reported AOD challenge:

- counselling (41.2%)
- rehab (35.1%)
- detox (32.5%)
- GP with knowledge in AOD (27.7%)
- Community support groups (24.5%)

Mental Health services that are hard to access by people with an AOD challenge:

- counselling (50.0%)
- NSW Health community mental health (47.9%)
- doctor (GP) with knowledge in mental health (37.9%)

- psychiatry (22.2%)
- Youth-specific services (14.0%)

According to the results of the NCPHN 2018 Community Survey, 43.7% of Aboriginal respondents found it ‘very difficult’ (16.6%) or ‘difficult’ (20.0%) to get help from Alcohol and Other Drug services when needed.

The most commonly reported barriers for Aboriginal people to access AOD services were:

- lack of services (75.6%)
- worry about lack of confidentiality (47.8%)
- stigma/shame (47.6%)
- transport (46.6%)
- cost (45.9%)^[86]

Alcohol and Other Drugs (access to detox)

There is a lack of access and/or long wait times for AOD detox in the NCPHN region, including in-home detox programs.

In the 2018 NCPHN Community Survey, the following groups with an AOD challenge said Detox was ‘hard to access’:

- 51.3% of Aboriginal and/or Torres Strait Islander survey respondents,
- 45.5% of survey respondents who said they had a mental health challenge
- 43.1% of survey respondents who identified as LGBTQ+
- 41.8% of survey respondents aged 25–64 years
- 36.8% of survey respondents aged 65+ years
- 32.5% of all survey respondents who said they had an AOD challenge
- 30.0% of survey respondents aged 15–24 years^[86].

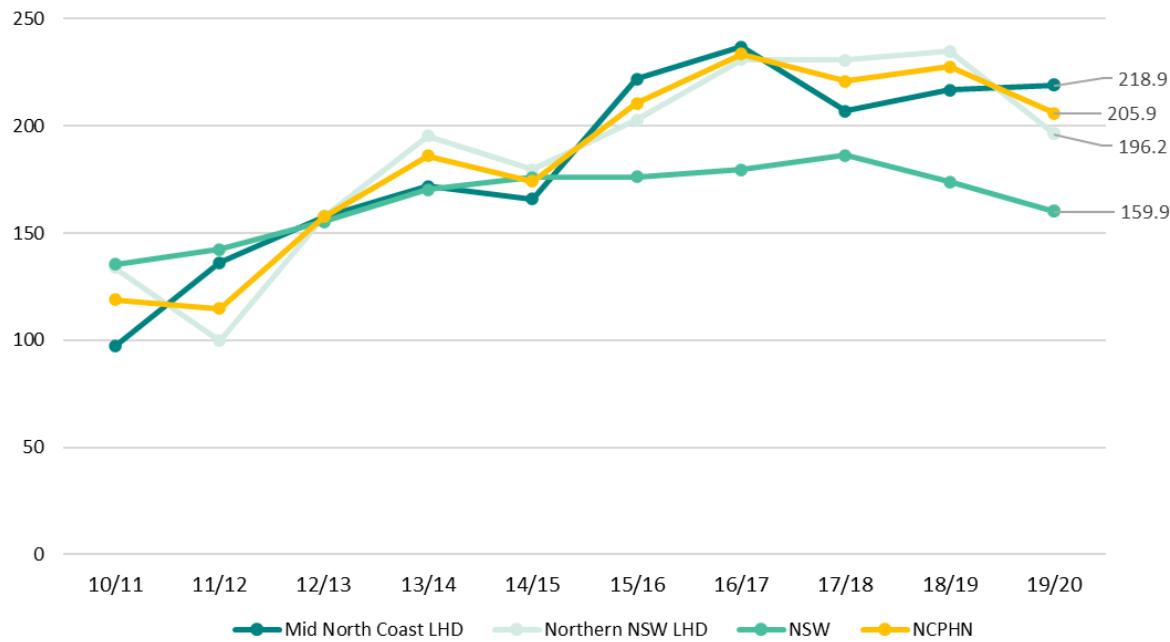
Alcohol and Other Drugs (opioid treatment)

Support GPs to find alternatives to opioid prescribing for non-cancer pain management.

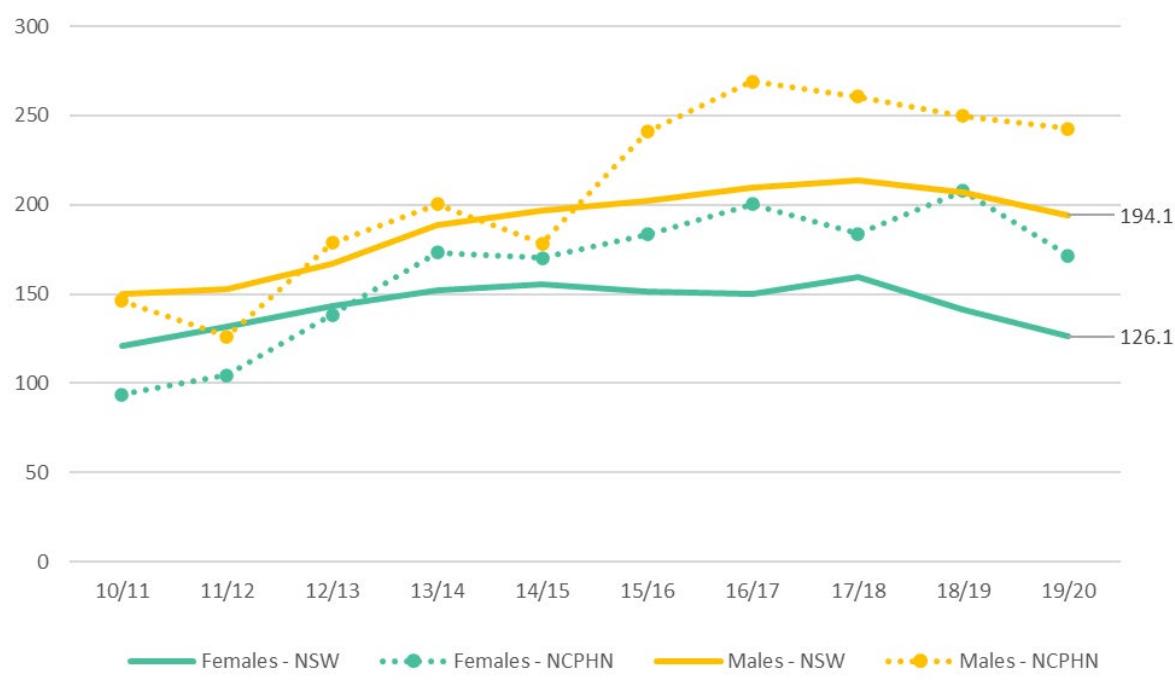
In 2019–20, the rate of Opioid-related hospitalisations in NCPHN (205.9) are higher compared to the NSW rate (159.9) and has remained higher since 2014–15. Between 2018–19 and 2019–2020 there was a decrease experienced in the NCPHN region and NNSW, whereas an increase was experienced in MNC LHD.

Although the rate in NCPHN was higher than NSW, there was a decrease between 2018–19 to 2019–20. This drop was experienced in NNSW LHD whereas an increase was experienced in MNC LHD (see graphs below)^[94].

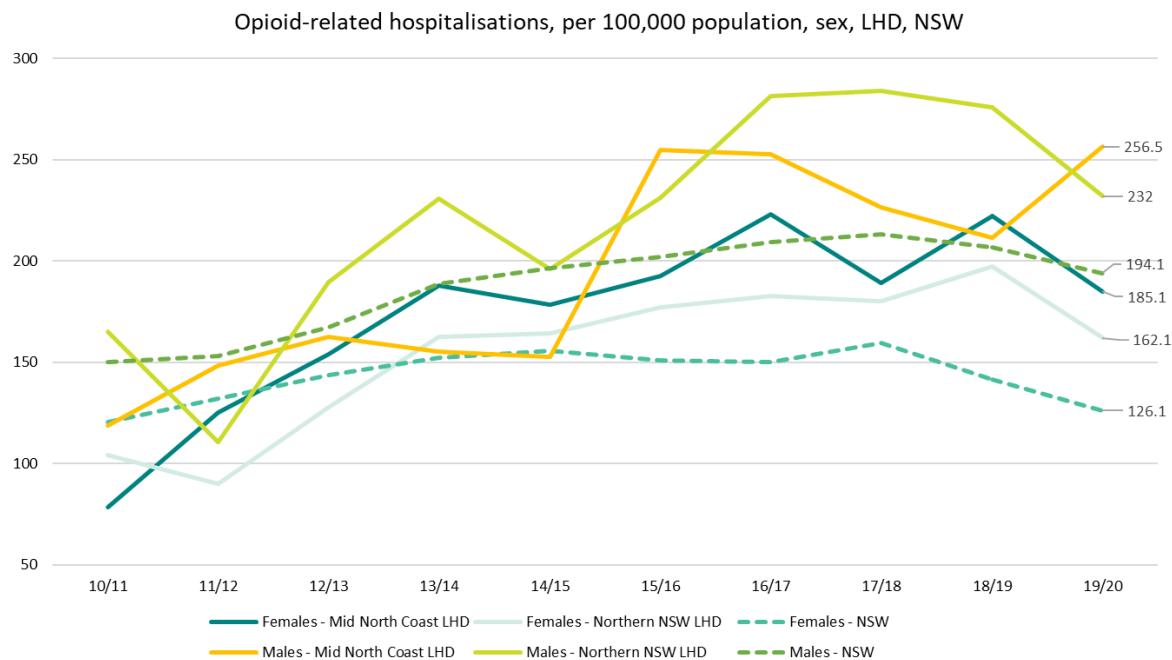
Opioid-related hospitalisations, per 100,000 population, NSW



Opioid-related hospitalisations, per 100,000 population, sex, NSW



Where the rate of opioid-related hospitalisations has decreased (but remains higher than NSW) for females in MNC, the rate for males has increased from 211.4 in 2018–19 to 256.5 in 2019–20 (see graph below) [94].



In Australia, Pharmaceutical Benefits Scheme (PBS) – subsidised opioid prescriptions rose from 2.4 million in 1992 to 7.5 million in 2012, with associated increases observed in pharmaceutical opioid-related deaths [95].

Workforce (sustainable workforce)

There is maldistribution of the workforce across the NCPHN region which may contribute to health workforce shortages in disadvantaged areas such as Richmond Valley, Kempsey and Clarence Valley.

Lack of access to quality health care providers is one of the primary root causes of health inequity and is disproportionately experienced by people living in remote and rural communities (WHO 2010). However, adequate health workforce alone will not ensure optimal health service access.

Health workforce presents a challenge for health policy makers and service planners, particularly in rural and remote Australia. The challenges of geographic spread, low population density, limited infrastructure and the higher costs of delivering healthcare in rural and remote Australia can impact adversely on access. At the same time, health workforce oversupply can result in the provision of services above levels where it is likely to improve health outcomes. Currently, imbalances exist in Australia's health workforce resulting in maldistribution across metropolitan, regional, rural and remote areas. For all registered health professions, the number of employed FTE clinicians decreased with remoteness, a trend evidenced each year since 2013. There are more registered health professions in major cities than in all regional and remote areas of Australia combined. In 2018, there were more than 347,000 FTE clinicians working in major cities compared with 115,000 in all other geographic locations.

Key Findings from the Healthy North Coast Health Workforce Trends and Forecast Report [83]:

- overall, the region's health workforce has grown significantly over recent years, and this is expected to continue over the short to medium-term
- the majority of health professionals are employed in the acute and primary health care sectors
- the midwifery workforce is in long-term decline
- there is maldistribution of the workforce across the region with registered health professionals concentrated in the larger population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore
- this imbalance may have contributed to health workforce shortages in disadvantaged areas such as Richmond Valley, Kempsey and Clarence Valley
- the Aboriginal and Torres Strait Islander health workforce across the region remains small but has experienced strong growth in recent years
- Aboriginal and Torres Strait Islander health professionals are concentrated in the primary health care sector.

GP workforce [83]

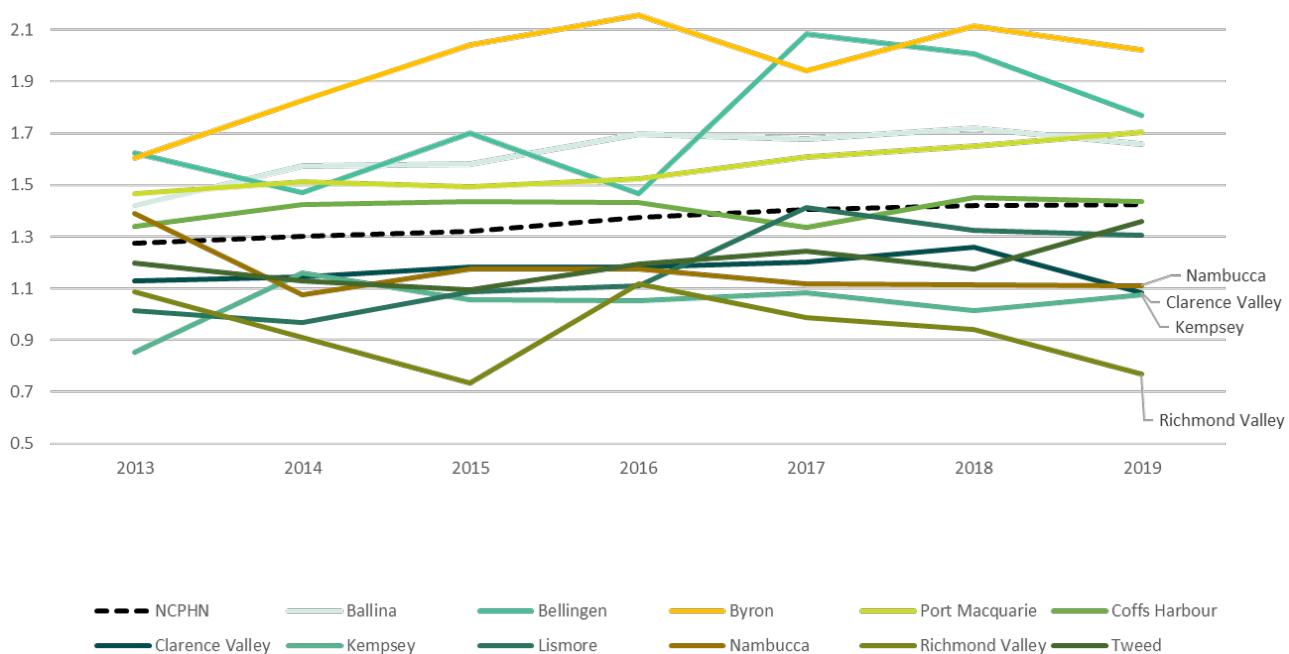
The GP workforce across the region is growing strongly; a trend that is expected to continue over the medium-term. On a per capita basis, the number of GPs across the region is above relevant NSW and Australian averages. GPs are not evenly distributed across the region with 52% located in the larger regional population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore. There are relative shortfalls in the Richmond Valley, Kempsey and Clarence Valley LGAs.

Distribution of the GP workforce

- In 2019, 52.3% of the region's GP workforce were located in the larger population centres including: Tweed, Port Macquarie, Coffs Harbour and Lismore (see table below)
- In per capita terms, Byron had the highest rate of GPs in the region at around 2.0 per 1,000 population or 1.4 times higher than the rate for the region overall, while Richmond Valley, Kempsey and Clarence Valley recorded the lowest per capita rates of GPs from across the region (see graph below) [83].

LGA	GPs	GP Distribution by LGA	Population Distribution by LGA
Ballina	74	10.0%	8.6%
Bellingen	23	3.1%	2.5%
Byron	71	9.6%	6.7%
Clarence Valley	56	7.6%	9.9%
Coffs Harbour	111	15%	14.9%
Kempsey	32	4.3%	5.7%
Lismore	57	7.7%	8.4%
Nambucca	22	3.0%	3.8%
Port Macquarie–Hastings	144	19.5%	16.3%
Richmond Valley	18	2.4%	4.5%
Tweed	132	17.8%	18.7%

General practitioners per 1,000 population, NCPHN Region compared with LGAs, 2013-2019



Specialist medical workforce [83]

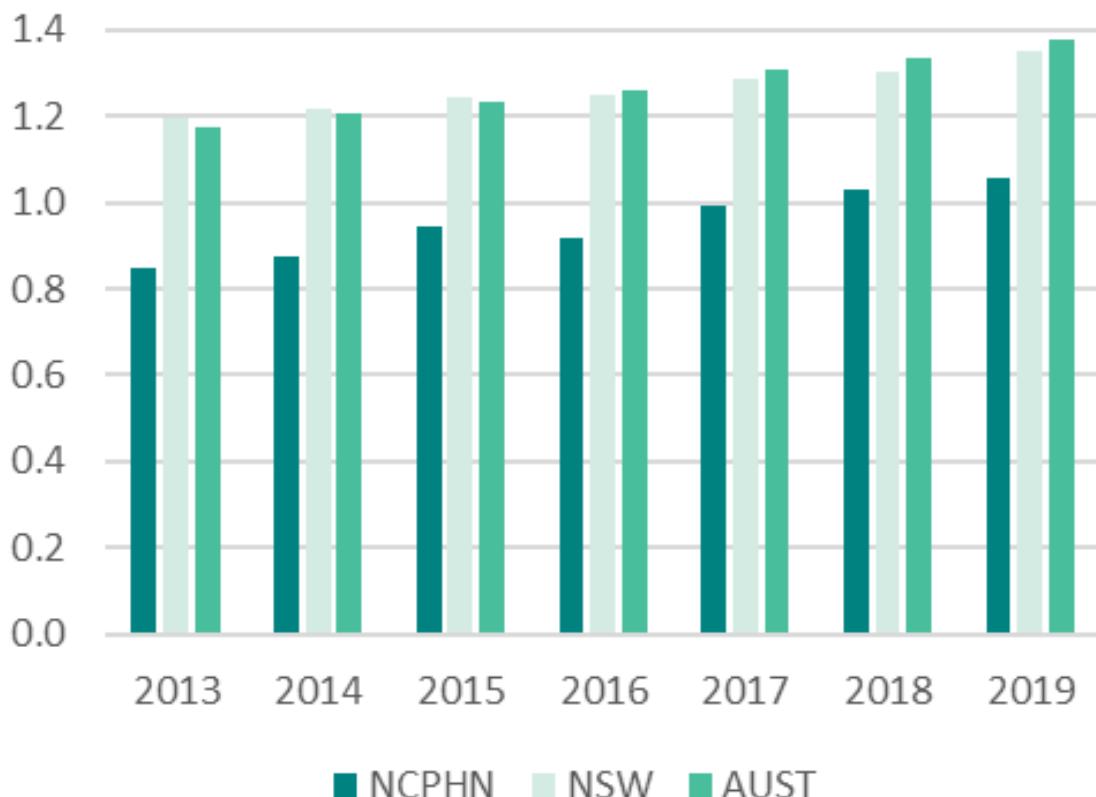
The specialist medical workforce across the region is growing very strongly; a trend that is expected to continue over the medium-term. However, on a per capita basis, the number of medical specialists remains below relevant NSW & Australian averages. Medical specialists are

located in close proximity to larger referral hospitals and health infrastructure; 86% are based in the larger population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore.

Recent trend

- On a per capita basis, the number of medical specialists across the region has increased from 0.8 per 1,000 (2013) to 1.1 per 1,000 (in 2019) (see graph below), but has remained below the relevant NSW and Australian averages.

Medical Specialists per 1,000 Population, NCPHN, 2013–2019



Distribution of specialists across the NCPHN region

- Medical specialists are located in close proximity to larger referral hospitals and health infrastructure
- In 2019, 86% of medical specialists were located in the larger regional population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore (see table below)
- In per capita terms, Lismore had the highest rate of medical specialists in 2019 at 3.5 per 1,000 population; this was 3.2 times higher than the rate for the region overall
- Richmond Valley, Nambucca, Kempsey and Ballina had the lowest per capita rates of medical specialists from across the region.

LGA	Medical Specialists	Medical Specialist Distribution by LGA	Population Distribution by LGA
Ballina	18	3.3	8.6
Bellingen	3	0.5	2.5
Byron	13	2.4	6.7
Clarence Valley	28	5.1	9.9
Coffs Harbour	121	22.0	14.9
Kempsey	11	2.0	5.7
Lismore	154	28.0	8.4
Nambucca	4	0.7	3.8
Port Macquarie–Hastings	123	22.4	16.3
Richmond Valley	0	0	4.5
Tweed	74	13.5	18.7

Nursing workforce ^[83]

The nursing workforce across the region is growing strongly; a trend is expected to continue over the medium-term. On a per capita basis, the number of nurses has remained above relevant NSW and Australian averages. Nurses are not evenly distributed across the region. Approximately 72% of the nursing workforce is located in the larger population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore, while Ballina, Bellingen, Byron, Clarence Valley, Kempsey, and Richmond Valley LGAs experience nursing workforce densities below the regional average.

Distribution of the nursing workforce

- In 2019, 72% of the region's nursing workforce were located in the larger population centres including: Tweed, Port Macquarie, Coffs Harbour and Lismore (see table below)
- In per capita terms, Lismore had the highest rate of nurses in the region at 28.5 per 1,000 population, or 2 times higher than the rate for the region overall.
- Richmond Valley and Byron recorded the lowest per capita rates of nurses from across the region

LGA	Nurses	Nurse Distribution by LGA	Population Distribution by LGA
Ballina	394	5.7	8.6
Bellingen	129	1.9	2.5
Byron	224	3.2	6.7
Clarence Valley	531	7.6	9.9
Coffs Harbour	1200	17.2	14.9
Kempsey	350	5.0	5.7
Lismore	1247	17.9	8.4
Nambucca	182	2.6	3.8
Port Macquarie–Hastings	1228	17.6	16.3
Richmond Valley	138	2.0	4.5
Tweed	1337	19.2	18.7

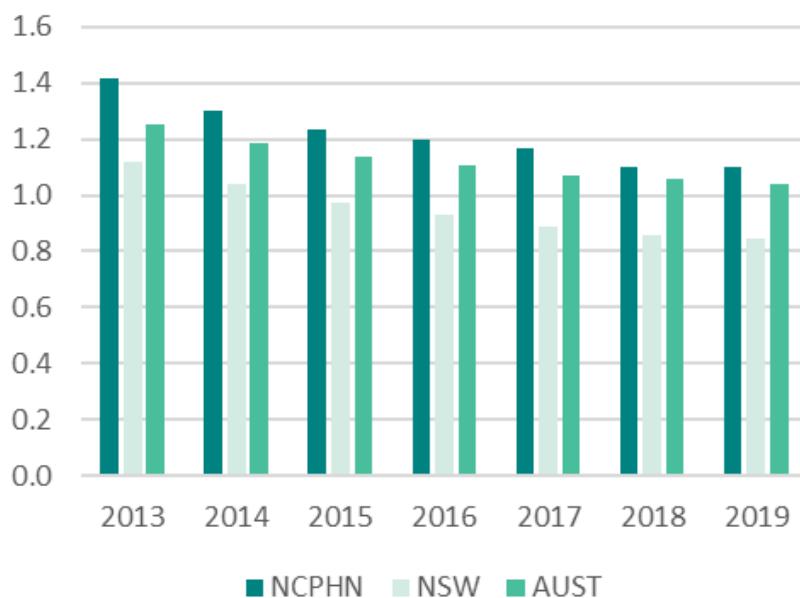
Midwifery workforce [83]

The midwifery workforce is in long-term decline across Australia; a trend that is expected to continue over the short to medium-term. On a per capita basis, the number of midwives across the region has remained above relevant NSW and Australian averages. Midwives are also not evenly distributed across the region. Approximately 76% of the nursing workforce is located in the larger population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore, while Ballina, Bellingen, Byron, Clarence Valley, Kempsey and Richmond Valley LGAs experience midwifery workforce densities below the regional average.

Recent trend

On a per capita basis, the number of midwives across the region has decreased from 1.4 per 1,000 (2013) to 1.1 per 1,000 (in 2019), which is above the relevant NSW and Australian averages (see graph below) but reflects an underlying declining trend across the region, NSW and Australia.

Midwives per 1,000 population, NCPHN, 2013–2019



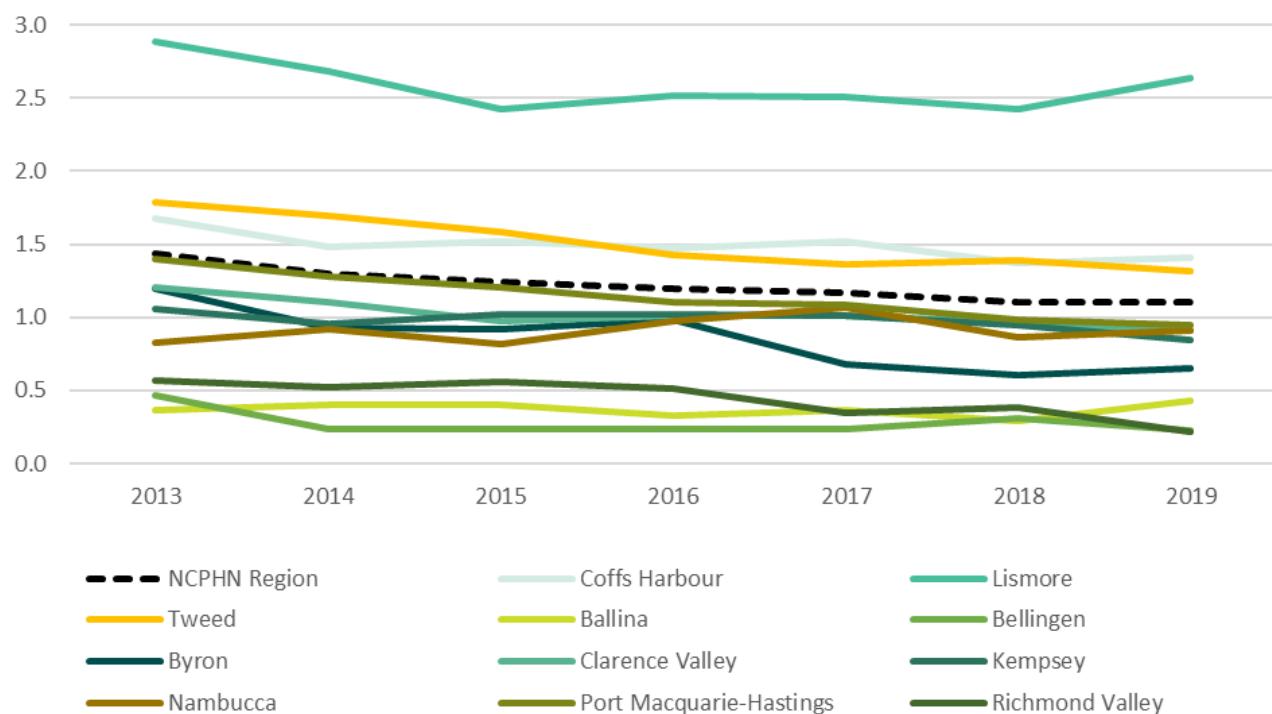
Distribution of the midwifery workforce

- In 2019, 75.6% of the region's midwifery workforce was located in the larger population centres including: Tweed, Port Macquarie, Coffs Harbour and Lismore (see table below)
- In per capita terms, Lismore had the highest rate of midwives in the region at 2.6 per 1,000 population, or greater than 2 times higher than the rate for the region overall (see graph below)
- Ballina, Bellingen and Richmond Valley recorded the lowest per capita rates of midwives from across the region (see graph below).

-

LGA	Midwives	Midwife Distribution by LGA	Population Distribution by LGA
Ballina	19	3.3	8.6
Bellingen	3	0.5	2.5
Byron	23	4.0	6.7
Clarence Valley	47	8.2	9.9
Coffs Harbour	109	19.1	14.9
Kempsey	25	4.4	5.7
Lismore	115	20.1	8.4
Nambucca	18	3.1	3.8
Port Macquarie–Hastings	80	14.0	16.3
Richmond Valley	5	0.9	4.5
Tweed	128	22.4	18.7

Midwives per 1,000 Population by LGA, NCPHN, 2013 –2019



Allied health workforce [83]

Allied health professionals are health practitioners that are not part of the medical, dental or nursing/midwifery professions. They are typically university-qualified with specialised expertise in preventing, diagnosing and treating a range of conditions and illnesses. Not all allied health professionals are AHPRA-registered, which limits a comprehensive, comparable analysis of the allied health workforce. For this reason, this analysis includes an overview of six selected AHPRA-registered allied health professions i.e., Occupational Therapists, Pharmacists, Physiotherapists, Podiatrists, Psychologists and Aboriginal Health Practitioners.

There has been a significant increase in the number of selected allied health professionals working across the region between 2013 to 2019; a trend that is expected to continue in the short to medium-term. Over the forecast period, Occupational Therapists, Physiotherapists and Psychologists are forecast to experience the highest growth rates. The selected allied health professionals are not evenly distributed across the region. Approximately 66% of the selected allied health workforce is located in the larger population centres of Tweed, Port Macquarie, Coffs Harbour and Lismore, while the density of the selected allied health professions is lower in the Bellingen, Nambucca and Richmond Valley LGAs.

Distribution of the allied health workforce

- In 2019, approximately 64% of the region's selected allied health workforce was located in the larger population centres including: Tweed, Port Macquarie, Coffs Harbour and Lismore (see table below)
- In per capita terms, Lismore had the highest rate of the selected allied health professions in the region at 2.6 per 1,000 population, or greater than 2 times higher than the rate for the region overall
- Bellingen, Nambucca and Richmond Valley recorded the lowest per capita rates of selected allied health professionals from across the region

LGA	Occupational Therapists	Pharmacists	Physiotherapists	Podiatrists	Psychologists
Ballina	44	37	49	15	46
Bellingen	7	10	10	0	8
Byron	21	26	52	3	78
Clarence Valley	32	40	53	10	39
Coffs Harbour	62	68	91	18	111
Kempsey	4	23	16	3	28
Lismore	53	52	63	6	82
Nambucca	5	17	14	0	8
Port Macquarie-Hastings	70	69	107	16	60
Richmond Valley	3	19	12	0	10
Tweed	72	76	119	21	98

Aboriginal & Torres Strait Islander wealth workforce [83]

Recent trends in Aboriginal & Torres Strait Islander Health Workforce:

- NHWDS reveals that the number of Aboriginal and/or Torres Strait Islander-identified health workforce across the region increased from 142 in 2013 to 261 in 2019 (see table below)
- This equates to a 84% increase over the period, which easily exceeds projected population growth of 5.4%, but from a low base
- The largest number of Aboriginal and/or Torres Strait Islander-identified health professionals were employed as nurse and/or midwife 188 (72%); allied health professional 62 (24%); and medical practitioner 11 (4%)
- The largest growth in Aboriginal and/or Torres Strait-identified health professionals occurred in the nursing and midwifery workforce (60%)
- Females accounted for 75% of AHPRA-registered health professionals identifying as Aboriginal and/or Torres Strait Islander; Aboriginal and/or Torres Strait Islander females were more likely to be employed as Nurse/Midwife, Psychologist or Occupational Therapist, while Aboriginal and/or Torres Strait Islander males were more likely to be employed as Medical Practitioner, Physiotherapists or Podiatrists
- Across age groups, the largest number of Aboriginal and/or Torres Strait Islander-identified health professionals were in the 25–34 and 45–54-year age groups.

Aboriginal and/or Torres Strait Islander Health Professionals, NCPHN, 2013–2019

Principal Place of Practice	2013	2014	2015	2016	2017	2018	2019
GPs	3	6	6	6	3	0	3
Medical Practitioners	0	3	0	0	0	3	3
Nurse/Midwife	118	123	124	152	154	167	188
Aboriginal Health Practitioner	3	0	11	12	9	10	12
Occupational Therapist	0	0	3	0	0	0	5
Pharmacist	0	0	3	0	6	6	6
Physiotherapist	3	3	3	3	9	3	12
Podiatrist	3	0	3	3	0	0	0
Psychologists	6	9	3	6	9	6	9

(Healthy North Coast 2021)

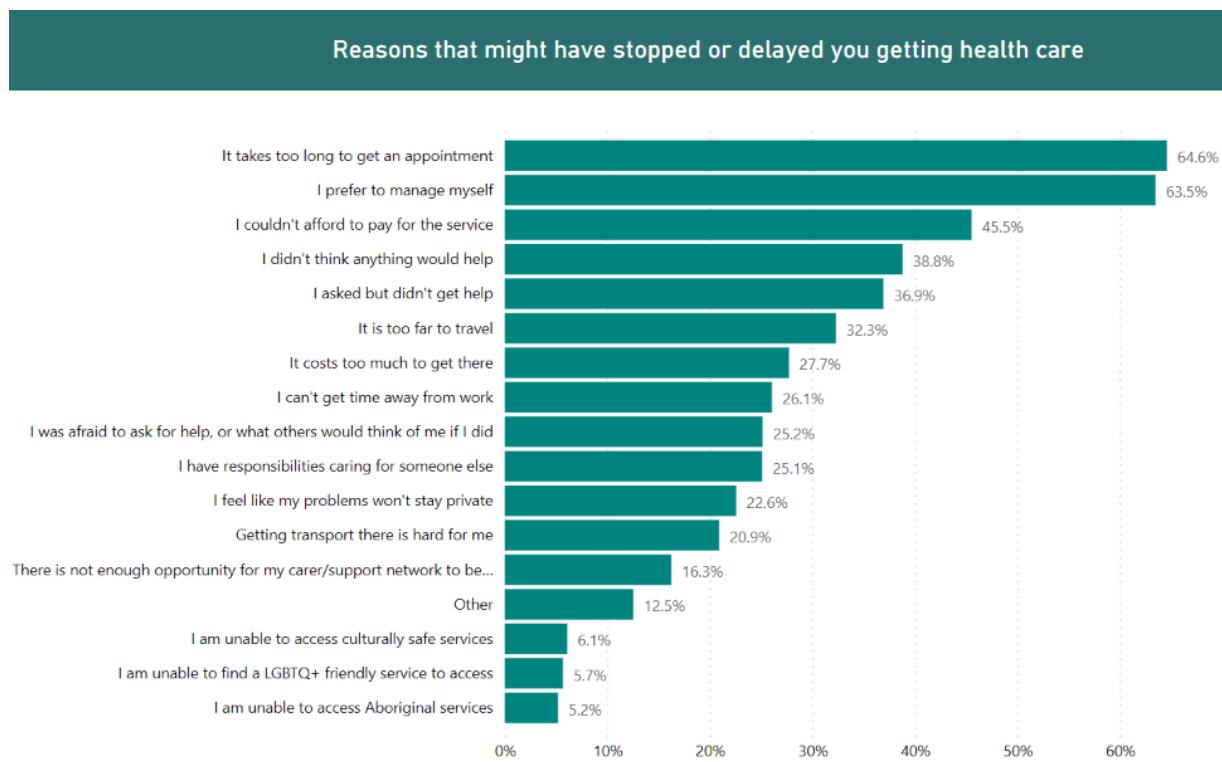
Digital health (access to services and chronic disease management)

There is a need to support the use of digital health technologies as key tools for improved chronic disease management (integrated care) that allow people to self-manage their health more effectively, reduce hospital admissions and to support a focus on prevention.

Digital technology is an enabler of improved equitable access to health services, information and resources and can assist in addressing the region's primary health care workforce maldistribution.

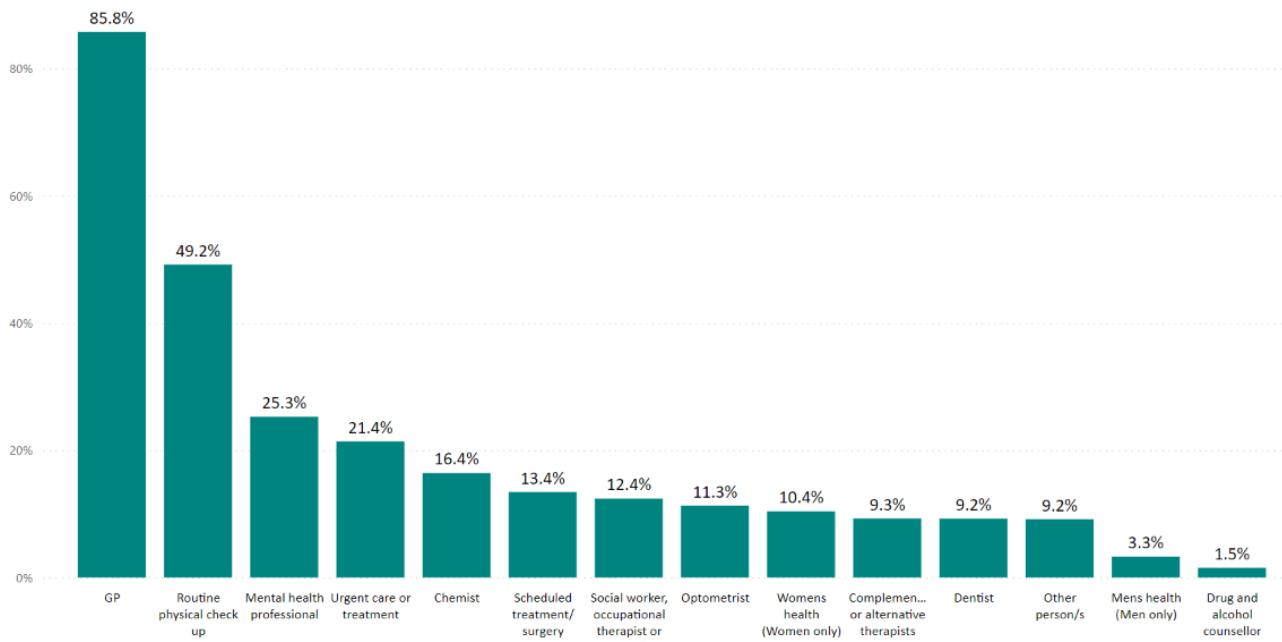
Barriers for people accessing health care

63.5% of survey respondents said they stopped or delayed getting health care because they prefer to manage themselves. 32.3% said it was too far to travel, 26.1% said they couldn't get time away from work (see graph below).



52.8% of NCPHN 2021 Community Survey participants responded that they had had contact with services via telehealth in the past 12 months. 85.8% of these participants had contact with a GP via telehealth (see graph below) [14].

Services survey respondents had contact with via telehealth in the past 12 months



72.7% of respondents said they get most of their health information from General practice. 52.1% said Internet.

Results from the National Digital Health Strategy survey tell us that:

88% of the general public said they want to access their personal health information digitally.

People said the digital health solutions they will use more of in the future would be:

- Booking online appts
- Online payment services.

The most common challenges people face when wanting to use digital health tools:

- Accessibility
- Lack of use by healthcare providers
- Affordability.

The top 4 reasons people used digital health services and technologies within the past 12 months:

1. Administration for bookings and payments
2. Health tools and technologies
3. Healthcare services including receiving results
4. External communication

Healthcare providers said the areas with the greatest potential to improve are:

- Primary prevention and maximising wellbeing
- Quality use of medicines and medicines safety

- Mental ill-health.

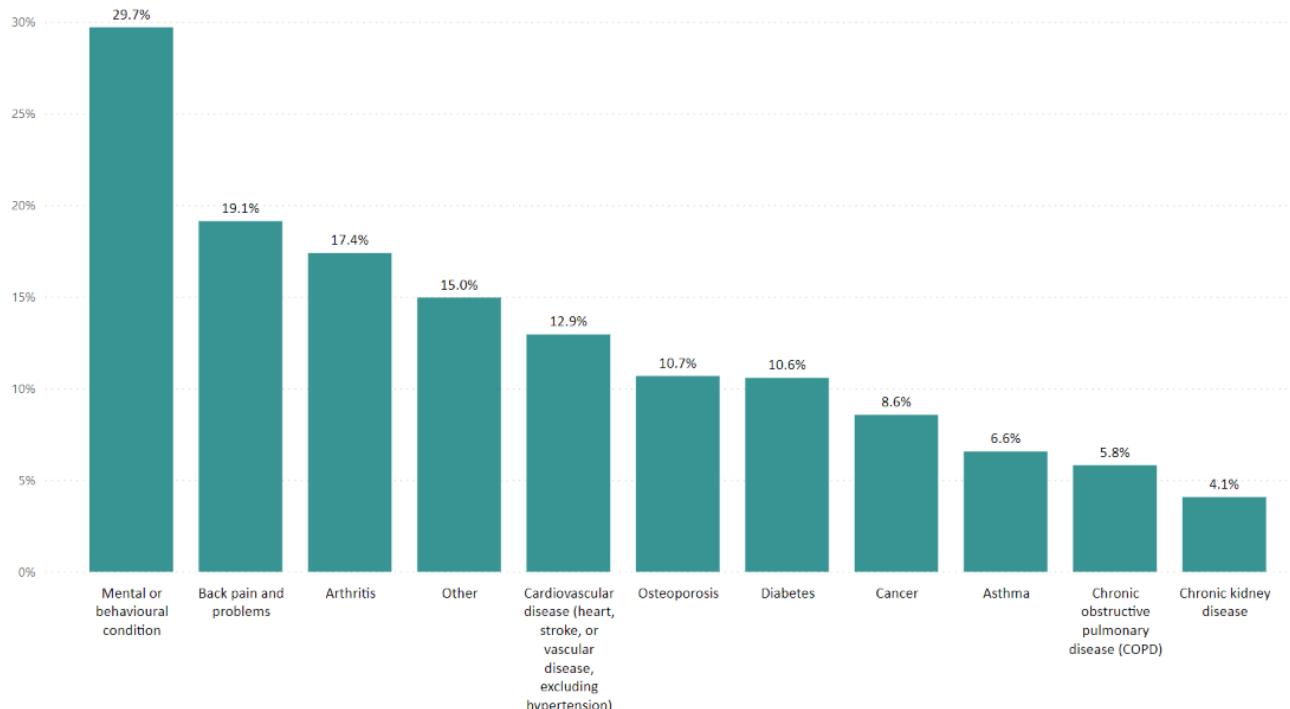
Healthcare providers want digital health to achieve (in the next 5 years):

- Integrated and high-quality health care services
- Enhanced access to health information
- Patient self-management of ongoing conditions
- Reduced duplication of services ^[96].

To see more data:

- Social Determinants of Health:
 - Internet access
 - Index of Relative Socio-economic Advantage and Disadvantage
- Alcohol and Other Drugs: (access to services)
- Aboriginal & Torres Strait Islander health (access to services)
- Older People (aged care services)
- Population Health (Chronic illness)
- Population Health (Potentially preventable hospitalisations)
- Population Health (Diabetes)

In the NCPHN 2021 Community Survey, people were asked what issues they would like more information about (see graph below) ^[14].



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Healthy North Coast is an independent, not-for-profit organisation proudly delivering the PHN program in North Coast NSW. We are committed to improving the health of our communities through quality primary health care.

The PHN program is an Australian Government Initiative.

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