Submission No 478

INQUIRY INTO HEALTH OUTCOMES AND ACCESS TO HEALTH AND HOSPITAL SERVICES IN RURAL, REGIONAL AND REMOTE NEW SOUTH WALES

Organisation: National Rural Health Alliance

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Submission – Inquiry into health outcomes and access to health and hospital services in rural, regional and remote New South Wales

Table of Contents

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Introduction

The National Rural Health Alliance (the Alliance) welcomes the opportunity to present a submission to the Parliament of New South Wales Portfolio Committee No. 2 - Health inquiry, *Health outcomes and access to health and hospital services in rural, regional and remote New South Wales*.

The Alliance comprises 44 national member organisations and is focused on improving the health and wellbeing of the 7 million people residing outside our major cities. Our members include health consumers, health care professionals, service providers, health educators, students, and the Indigenous health sector. Well-rounded representation of the rural health sector enables us to work toward our vision of 'healthy and sustainable rural, regional and remote communities'.

Looking back on 2020, it was an extremely difficult year for health and hospital services across the country[1]. Within NSW, these struggles were magnified by the extent of the summer bushfires across the State as well as by the ongoing impact of the COVID-19 pandemic. Turning our focus to rural, regional and remote parts of the State, access to health services is worse than in its major cities. This leaves these communities vulnerable to another wave of the pandemic, which could further increase the inequity in their health outcomes.

In 2014, the NSW Government released its 'NSW Rural Health Plan: Towards 2021', which "aims to strengthen the capacity of rural health services to provide world class connected and seamless care for people living in regional, rural and remote NSW."[2] Now that we are in 2021, it is vital that we take stock.

Recent media reports have highlighted examples of inappropriate clinical decision making and support, inadequate staffing and lack of availability to essential medicines for patients in regional and remote areas of NSW[3,4,5,6]. This submission will examine the continued significant disparities in the health outcomes of rural people compared to their counterparts in major cities. The reality is that when viewed over the long term, there is no evidence of these disparities improving over time.

The disparities in current and expected health outcomes and access for patients in rural, regional and remote NSW are persistent, and the Alliance views this situation as unacceptable. Health equity is a right that cannot be dismissed for these communities, and every effort needs to be made to achieve equitable outcomes.

1A) and 1B) Health outcomes in NSW – comparison between rural and metropolitan areas

Across Australia, rural, regional and remote people experience poorer health outcomes than people in metropolitan areas[i], in large part due to poorer access to primary health care, specialists and hospital services[12]. They also face disadvantages in terms of their social determinants of health, particularly income, education and employment pathways. Risky behaviours including tobacco smoking, alcohol and illicit drug

[i] Several methods may be used to mark out geographic boundaries and designate remoteness. For the purpose of this submission, the Alliance has used the Statistical Area Level 3 (SA3) classification from the Australian Bureau of Statistics[7] for geographic boundaries, and the University of Adelaide's Accessibility/Remoteness Index of Australia Plus (ARIA+ 2016) to define remoteness[8]. Remoteness designations for SA3 regions can be found in the Australian Atlas of Healthcare Variation 2018 Workbooks of the Australian Commission for Safety and Quality in Health Care[9,10]. The only remote SA3 area in NSW extends across Bourke, Cobar and Coonamble, covering 16.3 million hectares, or over 20% of the total land area of NSW[11]. Remaining SA3 areas of the State are classified as major cities, inner regional and outer regional.

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use are also more prevalent in these areas[13], as well as occupational and physical risks due to the types of work (e.g., agricultural)[12]. There are higher rates of family, domestic and sexual violence in rural, regional and remote Australia, with hospitalisations for domestic violence *24 times more likely* in remote and very remote areas than in major cities[14].

Life expectancy and burden of disease

Australians in remote areas are expected to have both shorter lives and fewer years in full health compared with their counterparts in major cities. Focusing on NSW, the average life expectancy is 80.7 years for males and 85.0 years for females[15]. In the most regional and remote areas of NSW, the average life expectancy is lower than the State average. The lowest life expectancy is observed in the region that covers the State's most remote areas: Far West and Orana, where the male life expectancy is 77.2 years and the female life expectancy is 81.9 years. Compare this to the North Sydney and Hornsby region, which has males enjoying a life expectancy of 85.4 years and females of 87.8 years – a full 8.2 years and 5.9 years longer respectively than in the most remote part of the State[15].

Looking at years lived in full health (health-adjusted life expectancy; HALE)[ii], the figures highlight the disadvantages for regional and remote communities. Using Australia-wide data, the HALE for males in major cities is 72.4 years, while in remote and very remote areas it is 67.2 years (5.2 years difference). The HALE for females is 75.1 years and 69.3 years respectively (5.8 years difference).

The burden of disease in Australia increases with the degree of remoteness, with a clear trend for cardiovascular disease, diabetes, chronic obstructive pulmonary disease, some cancers, and suicide[18].

Mortality

The NSW Government publishes data on the total rates of death due to different causes, split up into the broad remoteness categories of major cities, inner regional and outer regional and remote[19].

During 2017-2018, the rate of overall deaths per 100,000 NSW residents was 620.5 in outer regional and remote areas, 571.7 in inner regional areas and 506.5 in major cities. Outer regional and remote areas have the highest, and/or major cities have the lowest rates of death from cancers and diseases of many bodily systems, including the cardiovascular, respiratory and endocrine systems[19].

On the whole, mental and behavioural disorders do not appear to increase with increasing remoteness, yet the rate of suicide does. Per 100,000 people, major cities have 11 suicides, remote areas have 19 suicides and very remote areas have 24 suicides. It is among the top 10 leading causes of death in outer regional, remote and very remote parts of the country[20].

This shows that outer regional and remote NSW has a greater rate of deaths than inner regional and major cities for most causes, as well as overall. This is a call to action to target the causes of death in regional and remote communities to achieve health equity.

[ii] HALE is defined as "Any of a number of summary measures which use explicit weights to combine health expectancies for a set of discrete health states into a single indicator estimating the expectation of equivalent years of good health".[16] The Australian Institute of Health and Welfare (AIHW) summarises this as "the average length of time an individual can expect to live without disease or injury".[17]

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1.C) Access to health and hospital services

Australia-wide evidence shows that:

- Accessing primary care, dental care, allied health and specialist services is more difficult and, in many regions, requires greater time and expense on travel and accommodation.
- Shortages of health professionals, including doctors, allied health professionals, pharmacists and dentists, become more pronounced with remoteness.
- It is difficult to attract and retain health professionals in rural and remote areas, particularly those who study and train in metropolitan areas.
- Infrastructure in rural and remote areas for health services and health-related activity is limited and being further eroded by a lack of ongoing investment.
- The viability of many rural hospitals is uncertain and there has been a serious loss of capacity for maternity services and other procedural care in rural areas.[21]

The Alliance is concerned that access to health and hospital services in rural, regional and remote NSW has been historically poorer than in major cities, and there is evidence that there has been no improvement over time. This includes in-patient and out-patient hospital services and medical specialist services. It also includes primary health care services delivered by general practitioners (GPs), allied health providers, pharmacists, and other community health professionals.

The geographical divide in access to health services has been heightened by the extensive "Black Summer" bushfires of 2019-20. These bushfires have had (in the short term) a significant public health impact[22,23,24]. They have also exacerbated the existing difficulties in obtaining health services in rural and remote areas, as well as worsening the burden on the health system[25] and adding enormous strain on government budgets[26]. The geographical disparity in health outcomes and services has also been worsened by the COVID-19 pandemic and consequent lockdowns, which have added to the pre-existing strain on public hospitals and primary health care services across the country.

1.D) Quality of care: avoidable hospitalisations and waiting times

Potentially preventable hospitalisations

Potentially preventable hospitalisations are a health system performance indicator of the quality and accessibility of primary health care (i.e., non-hospital care)[27,28].

Across NSW, the rate of potentially preventable hospitalisations (PPHs) increases with degree of remoteness[28]. The type of SA3 region in NSW with the highest rate of PPHs is the remote Bourke - Cobar - Coonamble region with 4,475 age-standardised PPHs per 100,000 people. As shown in the table below, the rate of PPHs increases with increasing remoteness.

	Population	Average age-standardised PPHs per 100,000
Major cities	5,975,406	2,396
Inner regional	1,515,788	2,770
Outer regional	345,437	3,059
Remote	24,618	4,475

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In Australia, five conditions cause 47% of PPHs: chronic obstructive pulmonary disease (COPD), heart failure, cellulitis, kidney infections and urinary tract infections (UTIs), and diabetes complications[29]. The Australian Commission on Safety and Quality in Health Care reports in the Australian Atlas of Healthcare Variation 2017 that of these five conditions, the regions with the highest rates in NSW for each of these conditions were as follows[30]:

- COPD: Bourke - Cobar - Coonamble (remote)
- Heart failure: Mount Druitt (major city)
- Cellulitis: Bourke - Cobar - Coonamble (remote)
- Kidney infections and UTIs: Tumut - Tumbarumba (inner regional)
- Diabetes complications: Moree - Narrabri (outer regional)

This shows that for four of the five leading causes of PPHs, regional and remote areas of NSW lead the State with the highest rates. Additionally, the areas with the lowest rates of each of these conditions in NSW were in major cities, except kidney infections and UTIs (Shoalhaven, inner regional).

Waiting times

Waiting times for hospital services across NSW vary by region and by type of service. For emergency department patients, 78.9% of patients across NSW started treatment on time between July and September 2020. In contrast, in the State's most remote hospital, Broken Hill Base Hospital, only 61.1% of emergency department patients started treatment on time[31].

The NSW Government boasts the best on-time elective surgery performance in Australia[32]. Despite this, waiting times for elective surgeries across Australia have been worsened by the COVID-19 pandemic. Strong restrictions on selected elective surgeries in NSW from 25 March 2020 to 26 April 2020 were implemented to support the health system capacity to deal with the pandemic. This had an impact on elective surgery waiting lists, with removals from these waiting lists 8% lower in 2019-20 than in 2018-19[33]. In rural, regional and remote areas of NSW, waiting times for elective surgeries are generally longer than for the State as a whole. For example, from July to September 2020, only 63.1% of elective surgery procedures in Dubbo Base Hospital were performed on time, compared with 79.8% for NSW more broadly[31]. This disparity demonstrates the vulnerability of health and hospital services in rural NSW. They are more likely to fall short of meeting the needs of their communities in times of crisis.

All these figures demonstrate the importance of addressing the divide between rural and remote Australians and their metropolitan counterparts. The Alliance believes it is vital that we invest more in improving health outcomes and access to health services for rural, regional and remote communities. In comparing these people with city-dwellers, there remains a lot of work to be done.

1.E) Planning systems for NSW health services

Integrated funding models

The Alliance considers that the NSW Government's planning for health services in rural, regional and remote NSW needs to be better integrated with the Commonwealth's health service planning and funding.

An example of a state-wide, integrated funding model for health services in NSW is the $146 million HealthOne NSW model, which (since 2006-7) has been bringing Commonwealth-funded general practice and

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state-funded primary and community health care together. HealthOne NSW aims to create a stronger and more efficient primary health care system. Its objectives include building a sustainable model of health care delivery and reducing hospital admissions[34].

While this model demonstrates that pooled funding and shared service planning can take place between the NSW and Commonwealth Governments, the amount invested in this model is small. To provide a comparison, the total funding that NSW has spent through activity based funding, block funding and public health funding in the five years from 2015-16 to 2019-20 was $35.3 billion. Even if the NSW Government's total funding towards HealthOne NSW was spent solely over this same five-year period, it would still represent only 0.004% of the total funding they provide to their public hospital system as a whole.

More investment is needed in rural, regional and remote NSW in trialling models such as HealthOne NSW, and in measuring and evaluating their outcomes at both the patient and system level. The models that show the best outcomes should be expanded further across other regional centres, with the ultimate aim being to develop the most effective mix of funding models to best support patient outcomes and health system sustainability in rural, regional and remote parts of the state.

Collaboration between State Local Health Districts and the Commonwealth

Alliance believes that communities in rural and remote NSW would benefit from greater collaboration between its Local Health Districts (LHDs) and the Commonwealth's Primary Health Networks (PHNs).

Across NSW, hospitals and other State-managed health services are organised into 15 LHDs and three specialty networks, including seven LHDs covering rural, regional and remote NSW[35]. The rural LHDs comprise a total population of 2.18 million, representing 28% of the total NSW population[36]. This size indicates the importance of having ongoing significant investments in the hospital and health services in these regions.

In 2015, 31 PHNs were established by the Commonwealth to commission health services within their geographical boundaries. The aim of this commissioning is two-fold: 1) to improve the efficiency and effectiveness of medical services for patients; and 2) to better coordinate patient care, particularly by supporting the role of general practice[37].

Although the establishment of PHNs initially received mixed support from the health care sector, they are an enabler for reforming primary care and integrating general practice with hospital services in a patient-centred manner. Seven PHNs serve the communities within rural, regional and remote NSW. To support these communities, there are opportunities for NSW LHDs to collaborate more with the PHN covering their region to support effective 'patient-centred' care.

A locally driven example of this collaboration being successful is the appointment of several General Practitioner Liaison Officers, undertaken jointly between the South Eastern NSW PHN (Coordinare) and the Southern NSW LHD (SWLHD)[38]. These positions are co-funded by the NSW and Commonwealth Governments to facilitate GP engagement in planning health services and coordinating care in order to improve health outcomes. Coordinare also circulates information and publications produced by the SWLHD to help improve the understanding of general practices and their patients, such as when it is appropriate to present to the emergency department[39], or intellectual disability services[40].

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These examples show the opportunities available to enhance patient care and deliver services suitable to need. They also demonstrate how coordination can occur using effective working relationships between LHDs, PHNs and GPs, with relatively small amounts of funding and organisational change.

1.F) Funding across NSW hospitals and health services

National Health Funding Pool

Through the National Health Funding Pool, public hospitals across NSW are funded through a combination of State and Commonwealth funding. The combination of these is split between LHDs, enabling the breakdown of public hospital funding to rural, regional and remote NSW as a proportion of total NSW public hospital funding to be generally derived. In 2019-20, a total of $14.2 billion in Commonwealth and State funding went towards NSW public hospitals. Of this amount, $4.5 billion was provided to the seven LHDs covering rural, regional and remote NSW, representing 32% of spending[41].

The greater amount of public hospital funding per capita in LHDs covering rural, regional and remote NSW could indicate that the NSW Government is investing in health and hospital services within rural, regional and remote NSW. However, it could also indicate that rural, regional and remote NSW has a greater number of hospital admissions per capita, or that the smaller size of their hospitals results in fewer economies of scale.

The Alliance believes that more investigation and evidence are required to understand the nature of this hospital spending. As a starting point, there is evidence showing rural, regional and remote parts of Australia have a greater amount of hospital admissions per capita – for example, in 2017-18, people living in very remote areas were hospitalised at almost twice the rate as those living in major cities[13]. National data from 2017-18 also showed that compared to major cities, the rate of potentially preventable hospitalisations was 2.5 times as high in very remote areas, 1.7 times as high in remote areas, and slightly higher in regional areas[28].

The available funding data for NSW LHDs may suggest that patients in regional NSW are more likely to wait to visit the hospital until they are in an emergency, rather than receive the type of care that could prevent such hospitalisation. The seven LHDs covering rural, regional and remote communities receive 35% of total emergency department funding, but only 25% of total funding for sub-acute services, which includes non-acute care[iii].

1.G) Staffing challenges

Workforce shortages

Across Australia, there is a significant disparity in the distribution of the health workforce depending on remoteness[13]. This is consistent across a large number of health professional groups, including allied health, nurses, GPs, general surgeons, general physicians, emergency specialists and paramedics[43]. The difficulties

[iii] The Independent Hospital Pricing Authority defines subacute care as "specialised multidisciplinary care in which the primary need for care is optimisation of the patient's functioning and quality of life." For the purpose of public hospital funding, the IHPA classifies sub-acute care as comprising rehabilitation care, palliative care, geriatric evaluation and management care, psychogeriatric care and non-acute care[42].

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attracting and retaining health professionals to rural locations are long-standing and despite numerous programs and initiatives, it remains a critical barrier to improving health outcomes.

The access to health professionals across remoteness is usually described using full-time equivalents (FTEs) per 100,000 population. While this can provide useful inter-regional comparisons, they do not take into account the greater need for health services for people living in rural and remote areas, nor the need for a broader scope of practice by health professionals in these areas. Consequently, similar FTEs per 100,000 population across remote and non-remote areas does not mean that access to health services is similar between them. More health workers per head of population are needed in areas with greater need due to poorer health. The same is true in areas where the workforce is isolated and therefore divided across a greater total area. Having more health care professionals per head of population in rural, regional and remote areas would be necessary to ensure that access to their services is equitable compared to major cities[44].

These large-scale workforce shortages perpetuate disparities in health outcomes, access and quality of care for people living in rural, regional and remote NSW compared to those living in metropolitan areas. Rural health workforce development is vital to address current health service needs and to improve health outcomes in these areas.

The Australian Government, state and territory governments and medical professional colleges should coordinate their policy responses in order to prioritise support more effectively for rural workforce training and development. The Australian Government has supported an increase in medical graduate numbers, including investing in rural clinical schools, training pathways and a focus on rural entry priority. This needs to be coordinated with state government postgraduate training pathways and medical professional colleges to ensure that there is scope for training outside of metropolitan areas, and that training is appropriate to meet the diversity of skillsets essential to rural and remote communities. There is clear evidence that training health professionals rurally can be successful in encouraging them to choose to live and work rurally.

The NSW Government needs to approach its health workforce issues by aligning workforce initiatives with workforce programs being driven by other levels of government. An example of an effective rural workforce initiative currently underway is the Australian Government's Rural Health Multidisciplinary Training (RHMT) Program, which supports health students to undertake rural training through a network of rural clinical schools, university departments of rural health, dental faculties offering extended rural placements, and the Northern Territory Medical Program. The program also supports 26 regional training hubs in building medical training pathways and supporting students and trainees[45]. An evaluation of the RHMT Program completed in May 2020 concluded that it was an important contributor to addressing rural health workforce shortages[46].

Rural primary health care professionals

In addition to collaboration between NSW and Commonwealth Governments (as per section 1.E), collaborating directly with the various primary health care professionals would help ease the burden on staff in rural, regional and remote hospitals. Primary health care professionals include GPs, allied health professionals, dental professionals, nurses and nurse practitioners.

NSW Health could potentially achieve lower rates of preventable hospitalisations by promoting the role of allied health professionals in rural, regional and remote areas, including community pharmacists,

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psychologists, exercise physiologists and speech pathologists (to name a few). For example, there are 250,000 medication-related hospitalisations per annum in Australia, with over 50% of these cases being preventable[47]. This strongly indicates that increased involvement from community pharmacies could help to reduce this burden on hospitals and GPs and help address gaps in health service access in regional, rural and remote communities.

Surge capacity

Australia's experience throughout the current pandemic has shed light on the need to be prepared to recruit the surge capacity of the health workforce to attend to outbreaks involving community transmission. At present, Australian research on the impact of COVID-19 on the health workforce is limited. However, the available research suggests that both intensive care units and aeromedical services may not be adequate to match the potential demand of an outbreak in rural, regional and remote Australia[48,49]. This has significant repercussions on the ability of the health system to meet the workforce challenges in rural, regional and remote areas. It is as though the workforce in these areas is already at surge capacity, that it has no "fifth gear" to go into. Not only is this an issue in the context of pandemic preparedness, but it is also an issue relevant to emergency response planning more broadly, including extreme natural disasters, biological hazards and nuclear threats[50].

1.H) Ambulance services

In 2015, the NSW Government announced that 17 ambulance stations across rural, regional and remote NSW would be upgraded, built or rebuilt through the $122 million Rural Ambulance Infrastructure Reconfiguration (RAIR) Program[51]. Since its initial announcement, 53 media releases have been made on the RAIR Program website for infrastructure updates. At the time this submission was prepared, 24 stations were assigned for construction over the next ten years, with construction completed on all but three sites[52]. In late-2020, additional funding of $100 million was announced for ambulance infrastructure under Stage 2 of the program[53].

While the ambulance infrastructure funding under the RAIR Program is to be commended, the benefit this investment will have in terms of ongoing provision of ambulance services is unclear. The recruitment of paramedics is not directly linked to the RAIR Program, nor are emergency department personnel such as emergency medicine physicians and nurses. Furthermore, emergency call centre staff are not direct beneficiaries of the Program.

The Alliance believes the provision of timely, reliable ambulance services is still lacking in rural, regional and remote areas. In an emergency, every minute is critical to the life of the patient. The NSW Government publishes data on ambulance response times[54], however there is concern among the academic community as to the usefulness of this indicator as a standard of performance due to the conflicting evidence demonstrating its relationship with the quality of patient care and health outcomes[55]. The earlier critical window begins from the moment of the incident, to when members of the public call for assistance, commence basic first aid and patient life support, before the ambulance arrives on the scene. Shortening each step in the entire emergency response pathway needs the community to be better informed, and better prepared.

The NSW Ambulance's publication, *NSW Ambulance Strategic Plan 2015-17*, states that ambulance services in NSW will take an active role in preventative health and community management. One of the priorities of

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NSW Ambulance is "taking an active role in disease prevention and health promotion programs" in order to achieve "a reduction in calls made by frequent users"[56]. The more recent publication, *NSW Ambulance Strategic Priorities 2018-2019*, does not extend this focus on population health. Of greater concern, neither document explores how NSW Ambulance will support rural and remote communities going into the future. This highlights a gap in the strategic direction of ambulance services in NSW when it comes to addressing the primary health care needs of its rural and remote population.

The Alliance recommends that the strategic direction of NSW Ambulance pivot away from treating patients in the hospital (emergency department), and instead move towards preventing hospitalisations in the community. In particular, NSW Ambulance should explore ways to reorient ambulance care and paramedic services to support the overall health and wellness outcomes of rural, regional and remote NSW communities. This would also help to alleviate any resourcing discrepancy for intensive care services between remoteness areas.

Paramedicine

Different models of service delivery, such as community paramedicine, should be developed, implemented and evaluated. Paramedics in rural, regional and remote communities could play a greater role in influencing patient outcomes by having a greater presence in primary health care, whilst still working within their scope of practice in either the public or private sectors. The direct community involvement could potentially improve patient outcomes. For example, 95% of patients who go into sudden cardiac arrest die before reaching the hospital. Having paramedics closer to the patient would enable them to step in and care for the patient earlier within the chain of survival, offering the opportunity to increase survival rates significantly[57].

Paramedic graduates in Australia are not in short supply[58,59]. Adequate scope exists to utilise the skills and knowledge of these registered paramedic graduates to fill gaps in areas of need. They could play a greater role in mental health, palliative care, aged care, particularly in educating community members in the application of first aid measures and the chain of survival.

Within NSW, 1,158 paramedics (26% of total paramedics) do not work in an ambulance service[60]. The remainder are employed for aeromedical retrieval, surf live-saving, resource and mining companies, event first aid providers, universities and the Defence Force. The Alliance recommends that the NSW Government review how these registered paramedics can work to their full scope of practice outside the ambulance service more easily. For example, paramedics in the United Kingdom work in hospital clinics and GP practices[61]. Research is underway to evaluate and determine the success of this approach[62,63,64,65]. The NSW Government could do more to trial this type of model, particularly using the paramedic workforce in rural, regional and remote areas where there is poorer access to a hospital emergency department.

Although paramedics do not experience a clear workforce shortage, the available data shows that the hours worked by paramedics each week increases (above standard full-time hours) with remoteness, from 43 hours in major cities, to 44 hours (inner regional), 46 hours (outer regional), 51 hours (remote) and 54 hours (very remote)[43]. This is likely to result in fatigue and poor sleep quality, particularly amongst paramedic shift workers[66]. Fatigue increases the risk of safety compromising behaviours, worker injury, medical errors and adverse events, not to mention burnout, which is prevalent within the paramedic workforce[67].

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1.I) Access to oncology treatment

There is evidence of significant disparities in health outcomes for cancer patients in NSW based on socioeconomic differences, including the impact of geographic remoteness[68,69,70,71]. In 2010-2014, the average incidence rate for all cancers combined in NSW (per 100,000 people; age-standardised) was 498.4 in the major cities, increasing with remoteness up to 534.2 in the remote areas of the State[72].

Looking at the survival rate for patients with cancer, the 5-year survival rate for all cancers combined decreases with patient remoteness, from 62% in major cities to 55% in very remote areas in 2010-2014[73]. Factors contributing to lower survival rates for people with cancer in rural, regional and remote areas include:

- Less availability of diagnostic and treatment services;
- Later diagnosis
- Inability to afford health services (e.g., private specialist appointments) and treatments (e.g., non-subsidised radiotherapy).

Most tertiary cancer services are available in major metropolitan areas. However, approximately one-third of people diagnosed with cancer live outside these areas. This highlights the need for further efforts towards increasing the availability and timeliness of oncology services in rural, regional and remote NSW.

1.J) Access to palliative care services

The primary goal of palliative care is the quality of life for people living with and dying from a terminal condition. When last reviewed in 2015, Australia was ranked second in the world in the quality of end of life care[74]. Despite this, psychological assistance for the dying as part of their bereavement care was recognised as a shortcoming in remote areas of Australia.

An important part of rural and remote palliative care is ensuring culturally safe care, particularly given the variety of cultural backgrounds outside the major cities, including Indigenous people.

Looking at Australia-wide data, rural, regional and remote communities generally face poorer access to the services of palliative care professionals[75]. However, there is a greater rate of palliative care physicians in remote areas due to their smaller (albeit more spread out) population. The following table shows this trend:

Health professional	Remoteness[a]	Number of FTE per 100,000 population
Palliative care physicians	Major city	1.2
	Inner regional	0.6
	Outer regional	0.6
	Remote	1.3
Palliative care nurses	Major city	12.3
	Inner regional	13.5
	Outer regional	10.6
	Remote	7.7

a. Very remote areas are not included due to this data not being published.

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Additional comments to support an analysis of these figures are provided under 'Workforce shortages' in section 1.G) above.

Within NSW, most palliative care is carried out by nurses and very few specialist palliative care physicians practise outside of Sydney[76]. To support people with terminal illness, NSW implements advance care planning, which is considered the gold standard for palliative care[77].

An innovative model of palliative care, known as the Far West NSW Palliative and End-of-Life Model of Care, is also being used in the most remote part of the State[78]. The Alliance considers this to be an excellent model of palliative care that should be expanded across other remote settings to support them in care for the dying.

In 2017, NSW Health undertook a series of 10 roundtables across the State's metropolitan and regional communities to discuss and inform palliative care planning[79]. As a result of these consultations, it was recognised that in rural, regional and remote parts of the State, palliative care staff need strong communication skills and cultural awareness, including for both young and Indigenous patients. It was also noted that palliative care services need to be integrated into primary health care by having more community-based staff trained and experienced in palliative care, including nurses, medical specialists and social workers. The consultations also highlighted the importance of having incentives to encourage recruitment into the palliative care workforce (such as scholarships) and adequate resources incorporated into LHD service planning. Lastly, it was recognised that having a diversity of options for receiving palliative care are needed, such as hospital beds, hospices and in-home care support.

Through these consultations, and the investment that the NSW Government is putting towards palliative care services[80], efforts are underway to improve palliative care in rural, regional and remote communities. The Alliance hopes that this investment will in turn support access to good quality palliative care services in these areas.

1.K) Indigenous and CALD communities in NSW

Indigenous people: Health outcomes

NSW Indigenous people comprise 3.4% of the total population of NSW, approximately one-third of Australia's Indigenous population[81]. Of the NSW Indigenous population, nearly 20% lives in rural and remote areas; their distribution is as follows:

- Major cities – 123,099 (46.3%)
- Inner regional – 91,618 (34.5%)
- Outer regional – 41,229 (15.5%)
- Remote – 7,311 (2.8%)
- Very remote – 2,428 (0.9%)[82]

It is widely recognised that Indigenous Australians face poorer health outcomes than non-Indigenous people. Within NSW, there are significant inequities in the health outcomes of Indigenous communities[83].
For example, between 2009-2013 and 2014-2018, the rate of deaths due to infectious and parasitic diseases increased for Indigenous NSW residents from 13.0 to 16.4 per 100,000[84]. By contrast, the rate of deaths due to this cause over the same period for non-Indigenous NSW residents decreased from 10.4 down to 10.1 per 100,000. Although this is only one cause of death, total deaths from all causes have consistently been higher

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for Indigenous than non-Indigenous people. The most recent NSW data (2014-2018) shows that Indigenous people had a death rate of 736.6 per 100,000, compared to 526.7 for the non-Indigenous population[85].

The higher mortality rate for Indigenous people contributes to their lower median age than non-Indigenous people. In 2016, Indigenous NSW residents had a median age of 21.8 years for males and 23.4 years for females, whereas non-Indigenous NSW residents had a median age of 37.3 years and 37.0 years, respectively[82]. The life expectancy at birth is also 8-10 years lower for Indigenous NSW residents (70.9 years for males; 75.9 years for females) than for non-Indigenous NSW residents (80.2 years for males; 83.5 years for females)[82].

Looking at self-reported wellbeing, in 2014-15, 38.8% of Indigenous NSW residents assessed their own health as very good or excellent, compared to 56.3% of the total NSW population. Self-reported high or very high psychological distress was also much higher among Indigenous NSW residents (31.3%) than NSW as a whole (12.8%) during the same period[81].

Indigenous people: Primary health care services and hospitalisations

Primary health care services for Indigenous people in rural, regional and remote parts of Australia are delivered primarily by Aboriginal Community Controlled Health Services (ACCHSs). ACCHSs seek to keep Indigenous patients well and prevent avoidable acute care. They employ an integrated, patient-centred model of care, utilising a multidisciplinary care team to support and monitor the patient's long-term health outcomes. The Commonwealth Government's investment in ACCHSs benefits Indigenous communities by improving access to high-quality care. It also supports the community health professionals employed by the ACCHSs. Furthermore, it reduces the expenditure on public hospitals and the reliance on acute care.

Despite the presence of ACCHSs, Australia-wide data shows that Indigenous Australians make up 6.7% of public hospital emergency department presentations[84], whereas they only account for 3.3% of the Australian population[81]. There is a need for more targeted approaches to bring down the rate of avoidable hospitalisations in Indigenous communities. The most frequent cause of Indigenous hospitalisations is 'Injury, poisoning and certain other consequences of external causes'[84].

The Alliance considers that health and hospital service planning should incorporate more information about the major causes of Indigenous hospitalisations, with a view to prevent them from occurring. For example, health and hospital service planning for Indigenous people should target the use of alcohol and other drugs, and mental health services.

Lastly, cultural safety is an important element of ensuring the right care for Indigenous people, whether this care be in the community or in the hospital. The Alliance believes a greater emphasis on training in cultural safety is needed for the hospital and community-based health workforces. This includes paramedics, nurses, specialists, and even administrative hospital staff.

Culturally and linguistically diverse (CALD) communities

Based on results from the 2016 Census, NSW is home to the largest number of overseas-born people residing in Australia (2 million, or approximately 34%)[85]. Similar to Indigenous communities, CALD communities possess a poorer health profile overall in rural, regional and remote parts of Australia than in major cities. CALD patients face challenges in accessing health services already, especially because of the

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need for interpreting services. This has been exacerbated by the COVID-19 pandemic due to fear and lack of trust.[86]

The needs of CALD communities need to be factored into the planning and delivery of health and hospital services. The Alliance considers that a good example of this type of work was in 2015, when the Independent Hospital Pricing Authority undertook a national costing study of hospital services for CALD patients[87]. This study showed that CALD patients incur a slightly higher cost for receiving health and hospital services, primarily due to the cost of interpreter services. They also necessitate additional costs for hospitals in terms of social services for patients, and religious and cultural awareness training for staff. These findings should be considered when developing models for the funding and delivery of health services for CALD communities in rural, regional and remote areas of NSW.

In 2019, NSW established the NSW Plan for Healthy Culturally and Linguistically Diverse Communities 2019-2023, which aims to support the health needs of culturally and linguistically diverse patients[88]. The Alliance hopes that the implementation of this plan will result in better hospital and health services for CALD communities in rural, regional and remote areas, to ultimately improve their health outcomes.

1.L) Any other matters: Improving population health

The Productivity Commission's 'Shifting the Dial' 2017 report, which highlights a range of national issues including health system integration, states that 'the mix of funding and policy responsibilities among the various tiers of government has undermined the capacity for genuinely integrated care'[89]. Building on this, the Alliance considers that the separation of responsibilities and funding between the States and the Commonwealth for public hospital services are clearly articulated under the new National Health Reform Agreement 2020-21 to 2024-25 (the Agreement). However, the Agreement provides for joint responsibility and funding for population health activities. The Alliance believes this area requires further clarification and action.

Lack of clarity regarding each jurisdiction's population health activities can lead to gaps and (on the flipside) wasteful overlaps, in the delivery of services and activities that emphasise prevention and health promotion. This is a particular risk for rural and remote communities, who have poorer access to community health services and population health activities.

Effective population health programs include public campaigns on the risks of alcohol consumption during pregnancy, and government messaging on the importance of regular physical activity. These examples, and other population health initiatives, have the potential to empower communities by enhancing individual health literacy. This can reduce the need for acute care and other symptomatic treatments. However, the Alliance would like to emphasise that these types of campaigns, and other population health activities, need to avoid a "one size fits all" approach, particularly across geographic areas, cultural and demographic composition, and degree of remoteness.

Recommendations

The Alliance recommends that NSW Health make extensive improvements in health service planning, hospital and community health staffing, as well as access and availability to oncology and palliative care services, for rural, regional and remote communities.

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Hospital planning and funding

The Alliance recommends that information on public hospital spending in rural, regional and remote NSW be explored further, including:

- better understanding the factors that may be contributing to expenditure on hospital services;
- whether the types of services being funded are the most efficient and effective for patients, particularly addressing the need for emergency and ambulance services;
- evaluating trials of innovative models of care, particularly digital health solutions;
- planning systems and projections for public hospitals serving rural, regional and remote communities; and
- the adequacy of staffing allocations and capital expenditure in rural, regional and remote NSW.

The Alliance also recommends that more investment in ambulance and emergency services is urgently needed in rural, regional and remote NSW.

Health services and health outcomes

The Alliance recommends that the NSW Government prioritise the removal of barriers to accessing health care services in rural, regional and remote communities, particularly for Indigenous and CALD residents. The NSW Government should also commit to reversing the decline in the provision of rural health services in order to:

- improve access to acute care;
- improve access to oncology care and palliative care, as well as maternity and pre- and post-natal care;
- improve access to preventive health activities;
- ensure an adequate, mobile health workforce (including paramedics) with a focus on keeping people well in their community;
- trial and expand innovative models of care, including pooled funding models; and
- collaborate effectively with PHNs to maximise the health of the community, including through co-commissioning and joint prevention campaigns.

Population health activities

The Alliance recommends that:

- the NSW Government design and implement programs to support their rural health workforce in a way that complements Commonwealth Government programs such as the RHMT and other rural health workforce development programs;
- the NSW Government factor in the special needs of people from Indigenous and CALD backgrounds to support their utilisation of health services and improve their health outcomes;
- State and local levels of government in NSW undertake more work to support better engagement in prevention activities and health literacy, thereby empowering rural, regional and remote communities;
- the social determinants of health be considered an essential priority in health service planning and population health programs to address the high burden of disease, illness and poor mental health in regional and remote areas;

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- the NSW Government work cooperatively with the Commonwealth Government, including State LHDs and Commonwealth PHNs, to identify gaps and overlaps in population health activities in rural, regional and remote areas; and
- once the gaps in population health activities are identified, initiatives should be targeted accordingly. Initiatives should be co-designed and use innovative funding models (for example, pooled Commonwealth and State funding) to support improvements in the health and wellbeing of rural, regional and remote communities.

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References

1. Australian Institute of Health and Welfare. Looking back on health in 2020. Canberra: AIHW, 2020 [cited 2020 Dec. 17]. Available from: https://www.aihw.gov.au/reports-data/australias-health-performance/looking-back-on-health-in-2020
2. NSW Rural Health Plan: Towards 2021. NSW Government, 2020 [cited 2021 Jan. 4]. Available from: https://www.health.nsw.gov.au/rural/Pages/rural-health-plan.aspx
3. Four Corners. The death of Alex Braes still haunts doctors who didn't even know him. Australian Broadcasting Corporation, 2019 [cited 2021 Jan. 6]. Available from: https://www.abc.net.au/news/2019-09-09/alex-braes-death-still-haunts-doctors/11470424
4. The Sydney Morning Herald. Parliament to launch inquiry into 'appalling' state of NSW country hospitals. SMH, 2020 [cited 2021 Jan. 6]. Available from: https://www.smh.com.au/national/nsw/parliament-to-launch-inquiry-into-appalling-state-of-nsw-country-hospitals-20200827-p55q09.html
5. The Sydney Morning Herald. From a walk at Manly to amputation: hospitals putting 'lives at risk'. SMH, 2020 [cited 2021 Jan. 6]. Available from: https://www.smh.com.au/national/nsw/from-a-walk-at-manly-to-amputation-hospitals-putting-lives-at-risk-20200511-p54ruz.html
6. The Sydney Morning Herald. Baby's death leads to 'extraordinary' discovery of 2000 unchecked results at hospital. SMH, 2020 [cited 2021 Jan. 6]. Available from: https://www.smh.com.au/national/nsw/baby-s-death-leads-to-extraordinary-discovery-of-2000-unchecked-results-at-hospital-20200911-p55uom.html
7. Australian Bureau of Statistics. 1270.0.55.005 - Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016. Canberra: ABS, 2016 [cited 2021 Jan. 5]. Available from: https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1270.0.55.005Main%20Features20July%202016?opendocument&tabname=Summary&prodno=1270.0.55.005&issue=July%202016&num=&view=
8. Hugo Centre for Population and Housing. Accessibility/Remoteness Index of Australia Plus (ARIA+ 2016). University of Adelaide, 2018 [cited 2021 Jan. 5]. Available from: https://www.adelaide.edu.au/hugo-centre/news/list/2018/11/21/accessibilityremoteness-index-of-australia-plus-aria-2016
9. Australian Commission on Safety and Quality in Health Care. Third Atlas 2018. ACSQHC, 2019 [cited 2021 Jan. 5]. Available from: https://www.safetyandquality.gov.au/our-work/healthcare-variation/third-atlas-2018
10. Australian Commission on Safety and Quality in Health Care. The Third Atlas of Healthcare Variation 2018 - Technical supplement. ACSQHC, 2019 [cited 2021 Jan. 5]. Available from: https://www.safetyandquality.gov.au/publications-and-resources/resource-library/third-atlas-healthcare-variation-2018-technical-supplement
11. Australian Bureau of Statistics. Bourke - Cobar - Coonable (SA3) (10501). Canberra: ABS, 2017 [cited 2021 Jan. 4]. Available from: https://itt.abs.gov.au/itt/r.jsp?RegionSummary&region=10501&dataset=ABS_REGIONAL_ASGS&geoconcept=REGION&measure=MEASURE&datasetASGS=ABS_REGIONAL_ASGS&datasetLGA=ABS_REGIONAL_LGA&regionLGA=REGION&regionASGS=REGION
12. Australian Institute of Health and Welfare. Alcohol and other drug use in regional and remote Australia: consumption, harms and access to treatment 2016–17. Canberra: AIHW; 2019.

10 Campion Street Deakin ACT 2600
PO Box 280 Deakin West ACT 2600
02 6285 4660
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www.ruralhealth.org.au

13. Australian Institute of Health and Welfare. Rural & remote health [Internet]. Canberra: Australian Institute of Health and Welfare, 2019 [cited 2020 Dec. 17]. Available from: https://www.aihw.gov.au/reports/rural-remote-australians/rural-remote-health
14. Australian Institute of Health and Welfare. Family, domestic and sexual violence in Australia: continuing the national story 2019. Canberra: AIHW; 2019.
15. Australian Bureau of Statistics. Life tables 2017-2019. Canberra: ABS, 2020 [cited 2021 Jan. 5]. Available from: https://www.abs.gov.au/statistics/people/population/life-tables/latest-release#data-download
16. Preedy VR, Watson RR. Handbook of Disease Burdens and Quality of Life Measures. (2010) Health-Adjusted Life Expectancy. New York: Springer, 2010 [cited 2021 Jan. 5]. Available from: https://doi.org/10.1007/978-0-387-78665-0_5774
17. Australian Institute of Health and Welfare. Health-adjusted life expectancy in Australia: expected years lived in full health 2011. Canberra: AIHW; 2017.
18. Australian Institute of Health and Welfare. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015 [Internet]. Canberra: AIHW; 2019 [cited 2021 Jan. 6]. Available from: https://www.aihw.gov.au/reports/burden-of-disease/burden-disease-study-illness-death-2015/data
19. HealthStats NSW. Deaths by category of cause. NSW Government, 2020 [cited 2021 Jan. 6]. Available from: http://www.healthstats.nsw.gov.au/Indicator/bod_dth_cat/bod_dth_cat_aria_snap
20. Australian Institute of Health and Welfare. Mortality Over Regions and Time (MORT) books [Internet]. Canberra: Australian Institute of Health and Welfare, 2020 [cited 2021 Jan. 6]. Available from: https://www.aihw.gov.au/reports/life-expectancy-death/mort-books
21. National Rural Health Alliance. Fact Sheet – January 2020 [Internet]. Canberra: National Rural Health Alliance, 2020 [cited 2020 Dec. 17]. Available from: https://www.ruralhealth.org.au/sites/default/files/publications/Alliance-factsheet-about-us-jan-2020.pdf
22. Australian Institute of Health and Welfare. Australian bushfires 2019–20: exploring the short-term health impacts. Canberra: AIHW; 2020.
23. Cousins S. Bushfires expose weaknesses in Australia's health system. Lancet [Internet]. 2020 Jan [cited 2020 Dec 17];395(10219):175-176. Available from: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30096-9/fulltext DOI: 10.1016/s0140-6736(20)30096-9
24. Vardoulakis S, Marks G, Abramson MJ. Lessons Learned from the Australian Bushfires: Climate Change, Air Pollution, and Public Health. JAMA Intern Med [Internet]. 2020 Feb [cited 2020 Dec. 17];180(5):635–636. Available from: https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2762323
25. Yu P, Xu R, Abramson MJ, Li S and Guo Y. Bushfires in Australia: a serious health emergency under climate change. The Lancet Planetary Health, 2020 [cited 2021 Jan. 7]. Available from: http://doi.org/10.1016/S2542-5196(19)30267-0
26. With costs approaching $100 billion, the fires are Australia's costliest natural disaster. The Conversation, 2020 [cited 2021 Jan. 7]. Available from: http://www.businessnewsaus.com.au/articles/with-costs-approaching--100-billion--the-fires-are-australia-s-costliest-natural-disaster.html

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www.ruralhealth.org.au

27. Australian Commission on Safety and Quality in Health Care. A guide to the potentially preventable hospitalisations indicator in Australia. ACSQHC, 2017 [cited 2021 Jan. 5]. Available from: https://www.safetyandquality.gov.au/publications-and-resources/resource-library/guide-potentially-preventable-hospitalisations-indicator-australia
28. Australian Institute of Health and Welfare. Potentially preventable hospitalisations in Australia by age groups and small geographic areas, 2017–18 [Internet]. Canberra: Australian Institute of Health and Welfare, 2019 [cited 2021 Jan. 5]. Available from: https://www.aihw.gov.au/reports/primary-health-care/potentially-preventable-hospitalisations
29. Australian Institute of Health and Welfare. Disparities in potentially preventable hospitalisations across Australia: Exploring the data [Internet]. Canberra: Australian Institute of Health and Welfare, 2020 [cited 2021 Jan. 4]. Available from: https://www.aihw.gov.au/reports/primary-health-care/disparities-in-potentially-preventable-hospitalisations-exploring-the-data
30. Australian Commission on Safety and Quality in Health Care. Atlas 2017 - 1. Chronic disease and infection: potentially preventable hospitalisations. ACSQHC, 2019 [cited 2021 Jan. 5]. Available from: https://www.safetyandquality.gov.au/our-work/healthcare-variation/atlas-2017/atlas-2017-1-chronic-disease-and-infection-potentially-preventable-hospitalisations
31. Bureau of Health Information. Healthcare Quarterly – July to September 2020. NSW Government, 2020 [cited 2021 Jan. 4]. Available from: https://www.bhi.nsw.gov.au/BHI_reports/healthcare_quarterly/Jul-Sep2020#nsw_results
32. Performance: Surgery. NSW Government, 2020 [cited 2021 Jan. 4]. Available from: https://www.health.nsw.gov.au/Performance/Pages/surgery.aspx
33. Australian Institute of Health and Welfare. Elective Surgery. Canberra: AIHW, 2020 [cited 2020 Dec. 17]. Available from: https://www.aihw.gov.au/reports-data/myhospitals/sectors/elective-surgery
34. https://www.health.nsw.gov.au/healthone/Pages/default.aspx
35. Health: Local health districts and specialty networks [Internet]. NSW Government, 2020 [cited 2020 Dec. 17]. Available from: https://www.health.nsw.gov.au/lhd/Pages/default.aspx
36. HealthStats NSW. Population by Local Health District [Internet]. NSW Government, 2020 [cited 2020 Dec. 17]. Available from: http://www.healthstats.nsw.gov.au/Indicator/dem_pop_lhnmap
37. Australian Government. Fact Sheet: Primary Health Networks. Department of Health, 2018 [cited 2021 Jan. 15]. Available from: https://www1.health.gov.au/internet/main/publishing.nsf/Content/Fact-Sheet-Primary-Health-Networks+
38. Australian Government. COORDINARE and Southern NSW Local Health District appoint General Practitioner Liaison Officers. South Eastern NSW PHN, 2018 [cited 2021 Jan. 15]. Available from: https://www.coordinare.org.au/news-and-events/news/latest-news/coordinare-and-southern-nsw-local-health-district-appoint-general-practitioner-liaison-officers/
39. Australian Government. Is your urgency an emergency? South Eastern NSW PHN, 2018 [cited 2021 Jan. 15]. Available from: https://www.coordinare.org.au/news-and-events/news/latest-news/is-your-urgency-an-emergency/
40. Australian Government. Southern NSW LHD Intellectual Disability Mental Health Service. South Eastern NSW PHN, 2020 [cited 2021 Jan. 15]. Available from: https://www.coordinare.org.au/news-and-events/news/latest-news/southern-nsw-local-health-district-intellectual-disability-mental-health-service/

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www.ruralhealth.org.au

41. Funding reports: New South Wales Report - June 2020. NHR contributions for each Local Hospital Network YTD. National Health Funding Body, 2020 [cited 2020 Dec. 17]. Available from: https://www.publichospitalfunding.gov.au/public-hospital-funding-reports/83458/85462/nhr-contributions-each-local-hospital-network-ytd
42. Classifications: Subacute and non-acute care. Independent Hospital Pricing Authority, 2020 [cited 2020 Dec. 17]. Available from: https://www.ihpa.gov.au/what-we-do/subacute-and-non-acute-care
43. Australian Government. Summary Statistics: Health Workforce Summaries. Department of Health, 2020 [cited 2021 Jan. 15]. Available from: https://hwd.health.gov.au/summary.html
44. National Rural Health Alliance. The little book of numbers: Health Workforce. NRHA, 2020 [cited 2021 Jan. 15]. Available from: https://www.ruralhealth.org.au/book/health-workforce-0
45. Australian Government. Rural Health Multidisciplinary Training (RHMT) Program. Department of Health [cited 2021 Jan. 15]. Available from: https://www1.health.gov.au/internet/main/publishing.nsf/Content/rural-health-multidisciplinary-training
46. Australian Government. Evaluation of the Rural Health Multidisciplinary Training (RHMT) Program 2019-2020. Department of Health [cited 2021 Jan. 15]. Available from: https://www1.health.gov.au/internet/main/publishing.nsf/Content/rural-health-rhmt-evaluation
47. Pharmaceutical Society of Australia. Medicine safety: Take care. PSA, 2020 [cited 2021 Jan. 15]. Available from: https://www.psa.org.au/advocacy/working-for-our-profession/medicine-safety/take-care/
48. Litton E et al. Surge capacity of intensive care units in case of acute increase in demand caused by COVID-19 in Australia. Medical Journal of Australia [Internet], 2020 May [cited 2021 Jan. 15]; 2012 (10): 463-467. Available from: https://www.mja.com.au/journal/2020/212/10/surge-capacity-intensive-care-units-case-acute-increase-demand-caused-covid-19
49. Gardiner FW et al. Royal Flying Doctor Service Coronavirus Disease 2019 Activity and Surge Modeling in Australia. Air Medical Journal [Internet], 2020 Sep [cited 2021 Jan. 15]; 39(5): 404-409. Available from: https://doi.org/10.1016/j.amj.2020.05.011
50. O'Sullivan E et al. Rural Pandemic Preparedness: The Risk, Resilience and Response Required of Primary Healthcare. Risk Management and Healthcare Policy. [Internet], 2020 Aug [cited 2021 Jan. 15]; 2020:13; 1187-1194. Available from: https://apo.org.au/sites/default/files/resource-files/2020-08/apo-nid307586.pdf
51. Announcing the RAIR Program. Rural Ambulance Infrastructure Reconfiguration, 2015 [cited 2021 Jan. 8]. Available from: http://www.mylocalambulance.health.nsw.gov.au/news-and-publications/newsletter/2014-september/17-new-and-or-updated-nsw-ambulance-stations-annou
52. Welcome. Rural Ambulance Infrastructure Reconfiguration, 2015 [cited 2021 Jan. 8]. Available from: http://www.mylocalambulance.health.nsw.gov.au/
53. $100 million for rural ambulance infrastructure. Liberal New South Wales, 2020 [cited 2021 Jan. 8]. Available from: https://nsw.liberal.org.au/Shared-Content/News/2020/$100-MILLION-FOR-RURAL-AMBULANCE-INFRASTRUCTURE
54. Healthcare Observer. Bureau of Health Information, 2020 [cited 2021 Jan. 8]. Available from: https://www.bhi.nsw.gov.au/Healthcare_Observer/_nocache
55. Al-Shaqsi SZK. Response time as a sole performance indicator in EMS: Pitfalls and solutions. Open access emergency medicine: 2010 Jan [cited 2021 Jan. 15]; 2: 1-6. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4806820/

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www.ruralhealth.org.au

56. NSW Government. Corporate Publications. NSW Ambulance, 2020 [cited 2021 Jan. 15]. Available from: https://www.ambulance.nsw.gov.au/about-us/corporate-publications
57. St John Ambulance Australia. What is the chain of survival. St John Ambulance (VIC), 2020 [cited 2021 Jan. 15]. Available from: https://www.stjohnvic.com.au/news/what-is-the-chain-of-survival/
58. Upstart. Paramedic graduates struggle to find work. Upstart Magazine, 2019 [cited 2021 Jan. 15]. Available from: https://www.upstart.net.au/paramedic-students-struggling-to-find-work-post-study/
59. Boyle MJ & Jaime W. Editorial: The glut of graduate paramedics – What do we do with them? Australasian Journal of Paramedicine, 2015 [cited 2021 Jan. 15]. Available from: https://doi.org/10.33151/ajp.12.5.498
60. Estimates provided by Adj Assoc Prof Ray Bange, HFANZCP, HFPA from Paramedicine Board of Australia data and Report on Government Services (2019) [cited 2021 Jan. 15]. Available from: https://www.ruralhealth.org.au/sites/default/files/publications/paramedic-fact-sheet.pdf
61. BJGP Life. Paramedics in General Practice: What can we expect? Royal College of General Practitioners, 2018 [cited 2021 Jan. 15]. Available from: https://bjgplife.com/2018/02/23/paramedics-general-practice-can-expect/
62. Mahtani KR et al. Setting the scene for paramedics in general practice: what can we expect? Journal of the Royal Society of Medicine: 2018 Apr [cited 2021 Jan. 15]; 111(6); 195-198. Available from: https://doi.org/10.1177/0141076818769416
63. Booker M & Voss S. Models of paramedic involvement in general practice. British Journal of General Practice, 2019 Oct [cited 2021 Jan. 15]; 69(687); 477-478. Available from: https://doi.org/10.3399/bjgp19X705605
64. O'Meara P. Community paramedics: a scoping review of their emergence and potential impact. International Paramedic Practice, 2014 May [cited 2021 Jan. 15]; 4:1. Available from: https://doi.org/10.12968/ippr.2014.4.1.5
65. Eaton G et al. Contribution of paramedics in primary and urgent care: a systematic review. British Journal of General Practice, 2020 Jun [cited 2021 Jan. 15]; 70:695. Available from: https://doi.org/10.3399/bjgp20X709877
66. Patterson DP et al. Association between poor sleep, fatigue, and safety outcomes in Emergency Medical Services providers. Prehospital emergency care: official journal of the National Association of EMS Physicians and the National Association of State EMS Directors, 2012 Jan [cited 2021 Jan. 15]; 16:1; 86-97. Available from: https://doi.org/10.3109/10903127.2011.616261
67. Reardon M et al. Review article: Prevalence of burnout in paramedics: A systematic review of prevalence studies. Emergency Medicine Australasia, 2020 Apr [cited 2021 Jan. 15]; 32:2; 182-189. Available from: https://doi.org/10.1111/1742-6723.13478
68. Tervonen et al. Cancer survival disparities worsening by socio-economic disadvantage over the last 3 decades in New South Wales, Australia [Internet]. BMC Public Health, 2017 Sep [cited 2020 Dec. 18]; 17:691. Available from: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4692-y DOI: 10.1186/s12889-017-4692-y
69. Paramita et al. Geographical Variations in Prostate Cancer Outcomes: A Systematic Review of International Evidence [Internet]. Frontiers in Oncology, 2019 Apr [cited 2020 Dec. 18]; 9:238. Available from: https://www.frontiersin.org/articles/10.3389/fonc.2019.00238/full DOI: 10.3389/fonc.2019.00238
70. Afshar N, English DR and Milne RL. Rural–urban residence and cancer survival in high-income countries: A systematic review [Internet]. Cancer, 2019 Apr [cited 2020 Dec. 18]; 125:2172-2184.

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Available from: https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/cncr.32073 DOI: 10.1002/cncr.32073

71. Ireland MJ et al. A systematic review of geographical differences in management and outcomes for colorectal cancer in Australia. BMC Cancer [Internet] 2017 Dec [cited 2020 Dec. 18]; 17:95. Available from https://bmccancer.biomedcentral.com/articles/10.1186/s12885-017-3067-1 DOI: 10.1186/s12885-017-3067-1
72. Australian Institute of Health and Welfare. Cancer statistics for small geographic areas [Internet]. Canberra: Australian Institute of Health and Welfare, 2019 [cited 2021 Jan. 6]. Available from: https://www.aihw.gov.au/reports/cancer/cancer-statistics-for-small-geographic-areas
73. Australian Institute of Health and Welfare. Cancer in Australia 2019. Canberra: AIHW; 2019.
74. The Economist Intelligence Unit. 2015 Quality of Death Index. The Economist, 2015 [cited 2021 Jan. 6]. Available from: https://perspectives.eiu.com/healthcare/2015-quality-death-index
75. Australian Institute of Health and Welfare. Palliative care services in Australia [Internet]. Canberra: Australian Institute of Health and Welfare, 2020 [cited 2021 Jan. 6]. Available from: https://www.aihw.gov.au/reports/palliative-care-services/palliative-care-services-in-australia
76. Palliative care in NSW. NSW Government, 2020 [cited 2021 Jan. 6]. Available from: https://www.health.nsw.gov.au/palliativecare/Pages/palliative-care-in-NSW.aspx
77. The Economist Intelligence Unit. The new palliative care gold standard. The Economist, 2015 [cited 2021 Jan. 6]. Available from https://perspectives.eiu.com/healthcare/2015-quality-death-index/blog/new-palliative-care-gold-standard
78. Wenham S, Cumming M and Saurman E. Improving palliative and end-of-life care for rural and remote Australians. Public Health Research & Practice, 2020 [cited 2020 Jan. 7]. Available from: https://www.phrp.com.au/issues/march-2020-volume-30-issue-1/improving-palliative-and-end-of-life-care-for-rural-and-remote-australians/
79. Palliative care roundtables. NSW Government, 2020 [cited 2021 Jan. 7]. Available from: https://www.health.nsw.gov.au/palliativecare/Pages/palliative-care-roundtables-2017.aspx
80. 2020-21 NSW Budget. $56 Million For More Palliative Care Supports. Liberal Party of Australia, 2020. https://nsw.liberal.org.au/Shared-Content/News/2020/$56-MILLION-FOR-MORE-PALLIATIVE-CARE-SUPPORTS
81. Aboriginal Affairs. Key data – NSW Aboriginal people. NSW Government, 2019 [cited 2021 Jan. 6]. Available from: https://www.aboriginalaffairs.nsw.gov.au/media/website_pages/new-knowledge/facts-and-figures/key-data-about-aboriginal-people-in-nsw/KEY-DATA-ABORIGINAL-PEOPLE-OCTOBER-2019.pdf
82. Australian Bureau of Statistics (2018). Estimates of Aboriginal and Torres Strait Islander Australians, June 2016. Catalogue number 3238.0.55.001. Table 1 Estimated resident Aboriginal and Torres Strait Islander population, states and territories - 30 June 2016. ABS, 2018 [cited 2021 Jan. 6]. Available from https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/latest-release
83. Productivity Commission. Report on Government Services 2020: Health. Australian Government, 2020 [cited 2021 Jan. 6]. Available from: https://www.pc.gov.au/research/ongoing/report-on-government-services/2020/health
84. Australian Institute of Health and Welfare. Indigenous Australians' use of health services [Internet]. Canberra: Australian Institute of Health and Welfare, 2020 [cited 2020 Dec. 19]. Available from: https://www.aihw.gov.au/reports/australias-health/indigenous-australians-use-of-health-services

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85. Australian Bureau of Statistics. 2071.0 - Census of Population and Housing: Reflecting Australia - Stories from the Census, 2016 – Cultural Diversity in Australia. ABS, 2017 [cited 2020 Dec. 19. Available from: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0~2016~Main%20Features~Cultural%20Diversity%20Data%20Summary~30
86. newsGP: Fears CALD patients avoiding healthcare during pandemic [Internet]. Royal Australian College of General Practitioners, 2020 [cited 2020 Dec. 19]. Available from: https://www1.racgp.org.au/newsgp/clinical/fears-cald-patients-avoiding-healthcare-during-pan
87. Culturally and Linguistically Diverse (CALD) Patient Costing Study Report. Independent Hospital Pricing Authority, 2015 [cited 2021 Jan. 6]. Available from: https://www.ihpa.gov.au/publications/culturally-and-linguistically-diverse-cald-patient-costing-study-report
88. Multicultural Health Policy. NSW Government, 2019 [cited 2020 Dec. 19. Available from: https://www.health.nsw.gov.au/multicultural/Pages/policies-and-plans.aspx
89. Shifting the Dial: 5 year productivity review: Supporting Paper No. 14: Commonwealth-State Relations. Australian Government, 2017 [cited 2021 Jan. 6]. Available from: https://www.pc.gov.au/inquiries/completed/productivity-review/report/productivity-review-supporting14.pdf

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National Rural Health Alliance 2021 **44 organisations with an interest in rural and remote health and representing service providers and consumers:**
Allied Health Professions Australia Rural and Remote
Australasian College for Emergency Medicine (Rural, Regional and Remote Committee)
Australasian College of Health Service Management (rural members)
Australasian College of Paramedicine
Australian College of Midwives (Rural and Remote Advisory Committee)
Australian College of Nursing - Rural Nursing and Midwifery Community of Interest
Australian Chiropractors Association Aboriginal and Torres Strait Islander Rural Remote Practitioner Network.
Australian College of Rural and Remote Medicine
Australian General Practice Accreditation Limited
Australian Healthcare and Hospitals Association
Australian Indigenous Doctors' Association
Australian Nursing and Midwifery Federation (rural nursing and midwifery members)
Australian Physiotherapy Association (Rural Advisory Council)
Australian Paediatric Society
Australian Psychological Society (Rural and Remote Psychology Interest Group)
Australian Rural Health Education Network
Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine
Congress of Aboriginal and Torres Strait Islander Nurses and Midwives
Council of Ambulance Authorities (Rural and Remote Group)
CRANAplus
Country Women's Association of Australia
Exercise and Sports Science Australia (Rural and Remote Interest Group)
Federation of Rural Australian Medical Educators
Isolated Children's Parents' Association
National Aboriginal Community Controlled Health Organisation
National Aboriginal and Torres Strait Islander Health Worker Association
National Rural Health Student Network
Pharmaceutical Society of Australia Rural Special Interest Group
RACGP Rural: The Royal Australian College of General Practitioners
Regional Medical Specialists Association
Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Royal Australian and New Zealand College of Psychiatrists
Royal Australasian College of Medical Administrators
Royal Australasian College of Surgeons Rural Surgery Section
Royal Far West

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Royal Flying Doctor Service
Rural Doctors Association of Australia
Rural Dentists' Network of the Australian Dental Association
Rural Health Workforce Australia
Rural Optometry Group of Optometry Australia
Rural Pharmacists Australia
Services for Australian Rural and Remote Allied Health
Society of Hospital Pharmacists
Speech Pathology Australia (Rural and Remote Member Community)