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An Australian Government Initiative

RURAL Workforce AGENCY NT

Northern Territory PHN
Primary Health Care Workforce Needs Assessment

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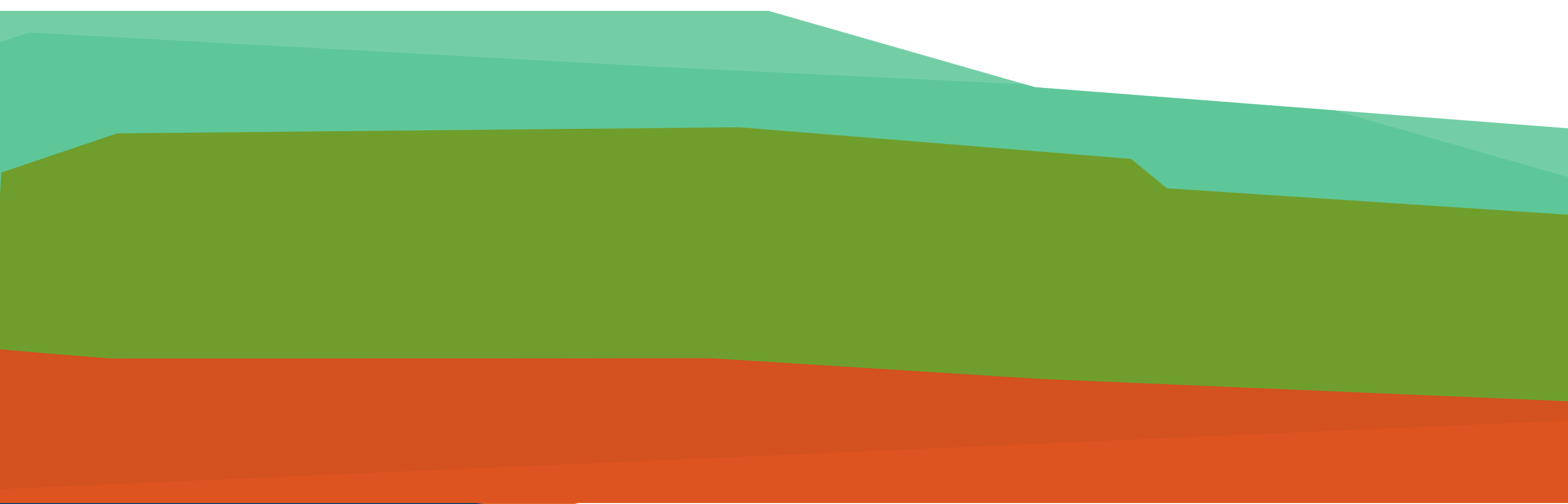
YEAR 2: ALLIED PRIMARY HEALTH WORKFORCE



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1. EXECUTIVE SUMMARY

The *Northern Territory PHN Health Workforce Needs Assessment* is a living document that will continually improve and develop with input from stakeholders. It informs activities undertaken by Northern Territory Primary Health Network incorporating Rural Workforce Agency Northern Territory (Northern Territory PHN) under the Australian Government funded Rural Health Workforce Support Activity for the Northern Territory (NT).

The Health Workforce Needs Assessment (HWNA) commenced in 2017–18 with a focus on general practitioners, remote area nurses and Aboriginal and Torres Strait Islander health practitioners. It formed the basis for broad consultation with the primary health care sector and was expanded in 2018–19 to include allied health professionals. The HWNA 2018–19 was developed from a review of available literature, data and interviews with key stakeholders. Allied health is rapidly evolving and includes many disciplines that can work in multidisciplinary teams or operate as individual providers. It includes those disciplines registered with national registration and accreditation schemes as well as those that are self-regulated. There are potentially some 22 professions which can be considered as allied health.[1] Given such breadth of subject matter, this HWNA will be further developed in 2019–20 to continue building a comprehensive understanding of the of the primary care sector in the NT by June 2020.

While the NT currently has less allied health professionals per capita than other states and territories, over time there has still been an increase in the figures across professions, except for psychologists. Historically, trends in the number of allied health professionals are sensitive to government policy and funding. Allied health professionals are concentrated in Darwin and Alice Springs with limited numbers in other regional centres where allied health care is predominantly delivered through outreach services. Allied health professionals in the NT tend to be younger and less experienced and very few are unemployed.

Specific challenges associated with rural and remote practice are evident across the entire NT, with contributors including small discipline-specific professional workforces, personal and professional isolation and poor service viability resulting from diverse and fragmented funding and small economies of scale. Recruitment difficulties relate particularly to the ability to attract experienced allied health professionals, and without these experienced professionals, the inability to support early years careers allied health professionals. Addressing recruitment and retention challenges involves addressing capacity across the entire pipeline and requires creativity, collaboration, integration of resources, careful selection of candidates, in addition to understanding and promoting the value proposition of remote work and focusing on 'growing our own.'

Increasingly stakeholders are looking to focus less on recruitment and more on retention. This includes the need to address the quality of leadership and management, job security, professional experience, career development opportunities, access to professional networks, professional resilience, community engagement and public recognition, incentives and support, mentoring and supervision capacity. While several workforce initiatives currently exist, it is important that these are integrated and utilised to maximise outcomes. There remain significant gaps in the rural pipeline and recruitment and retention capacity of the sector.

Innovative workforce models are critical to workforce sustainability, including approaches that utilise the right mix of cross sectoral collaboration, telehealth, outreach, skills sharing and rural generalism, as well as the recruitment and support of overseas trained allied health professionals. The current number of Aboriginal and Torres Strait Islander allied health practitioners does not reflect the NT population. Increasing these roles will be critical to health and workforce outcomes. New and emerging roles will enable allied health professionals to work at the top of their scope of practice and assist in addressing workforce maldistribution, shortages and poor economies of scale in remote communities. These roles include allied health rural generalists and allied health assistants.

Tertiary pathways to allied health careers in the NT are limited, thus affecting the rural pipeline. Challenges exist to increase our ability to grow our own, to maintain connection with NT students studying interstate to maximise NT employment outcomes and to provide positive Territory experiences for interstate students and allied health professionals.

Demand for allied health professionals is set to increase due to the burden of disease, increasing access to Medicare rebates for allied health professionals, more government initiatives driven by allied health roles, expanded role of allied health in primary care, expanded scopes of practice, the implementation of the National Disability Insurance Scheme (NDIS) and recent changes to aged care.

2. INTRODUCTION

Background

The HWNA is an activity under the Rural Health Workforce Support Activity funded by the Australian Government Department of Health and managed by Northern Territory PHN.

The Rural Health Workforce Strategy Activity spans 1 July 2017 to 30 June 2020. NT funding is $13,222,019 for the three years, with approximately $3.8 million allocated for each financial year to be spent across three broad activity areas:

- health workforce access;
- improving workforce quality; and
- building a sustainable workforce.

The overarching objective of the Activity is to contribute to addressing health workforce maldistribution, quality and shortages in regional, rural and remote Australia.

In order to develop the evidence base for the distribution of funding, a needs assessment is undertaken to identify the priority populations, geography, professions and systems to be supported by this funding. This ongoing activity takes place in consultation with the Health Workforce Stakeholder Group. The group is made up of industry representatives and experts that guide the development of the HWNA and subsequent planning and implementation of activities to address identified needs.

In 2017, it was agreed at a national level that the first year of the program would focus on general practitioners and the remote primary health care workforce including Aboriginal and Torres Strait Islander health practitioners and remote area nurses. The HWNA 2017–18 was completed in line with that scope in February 2018, with subsequent prioritisation and Activity Work Plan development. The HWNA 2017–18 contains significant background material on the demographic, health and policy environment within the NT, which remains valid throughout the three-year cycle of the Activity. This material is not reproduced here but includes the identification of national and local health priorities, sociodemographic challenges, a summary of service provision models within the NT and a description of the policy environment within which the health workforce is recruited, employed and trained.

The agreed scope for 2018–19 is allied health professionals. Focus is placed on identification of the challenges and opportunities for sustaining an appropriate primary health workforce; including demand, attraction and recruitment, retention, professional development, workforce models, emerging roles, tertiary pathways and current workforce solutions and programs addressing these challenges.

A first draft of the HWNA 2018–19 was presented to the Health Workforce Stakeholder Group in December 2018 for discussion and consideration of potential priorities and strategies. Based on this document, a needs assessment report was submitted to the Australian Government Department of Health in February 2019. This document was then circulated broadly for comment and contribution from the primary health care sector and this final report reflects the feedback received.

Scope

The scope of this needs assessment was defined by the Health Workforce Stakeholder Group in July 2018. The scope aimed to broadly cover allied health professionals. While data covers allied health professionals working across the sector, the focus of qualitative information is on those working in Aboriginal community controlled health services (ACCHSs), private practice, community health care services and government primary health care services. While much of the information provided applies broadly to all disciplines, the following disciplines have been specifically addressed:

- dental practitioners[a]
- occupational therapists
- optometrists
- pharmacists
- physiotherapists
- podiatrists
- psychologists
- dietitians
- audiologists
- speech pathologists.

While data has been provided on medical radiation practitioners,[b] this discipline was not included in further investigations. Nutritionists, social workers and paramedics are also not covered due to a lack of data available during the needs assessment process.

Needs Assessment Process

Northern Territory PHN is committed to an evidence-based approach to help ensure that people in the NT enjoy their best health and wellbeing. Needs assessments are a systematic way of identifying the health and wellbeing outcomes of a population in order to plan systems and services to meet these needs. It is a collaborative approach underpinned by principles that guide governance, engagement and data. This process informs the strategic planning phase of the commissioning process, as outlined in Figure 1.

[a] Includes dentists, dental hygienists, oral health therapists, dental therapists, dental prosthetists

[b] There are three divisions of practice for medical radiation practitioners: nuclear medicine technology, radiation therapy and diagnostic radiography.

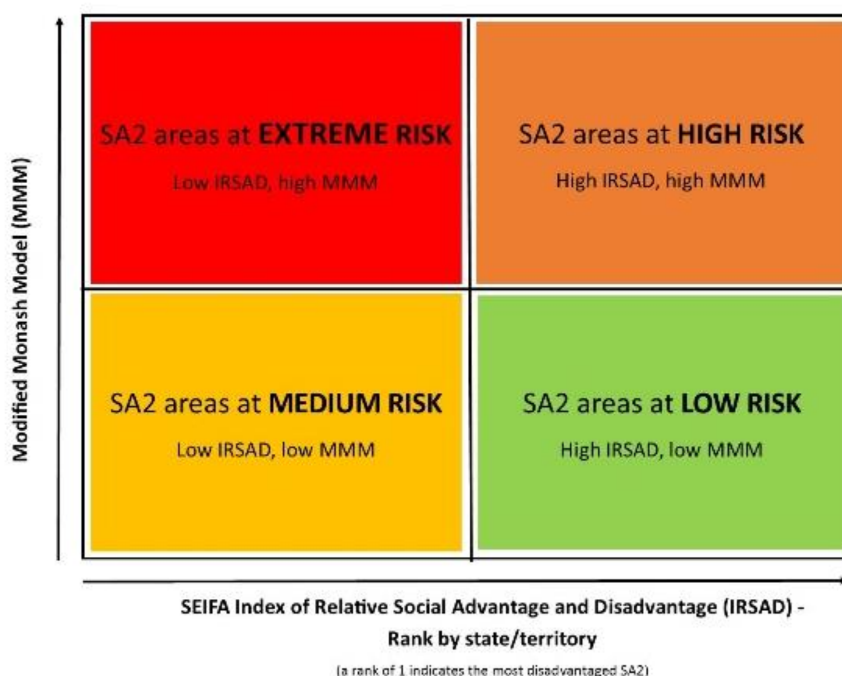
Figure 1: PHN Commissioning Framework

The recommendations developed from the needs assessment process for 2017–2018 and 2018–2019 have informed the Workforce Activity Work Plans for 2019–20.

2.1 Geographic Priorities

As reported in the HWNA 2017–18, apart from Darwin and surrounds, most localities within the NT fall within the 'Extreme Risk' and 'High Risk' quadrants illustrated in Figure 2. These communities also tend to have high proportions of Aboriginal and Torres Strait Islander residents and a high proportion of both young children and people with complex chronic conditions.

Figure 2: Community risk matrix



The communities with the most extreme risk (largely due to very low Index of Relative Social Advantage and Disadvantage (IRSAD) scores), are in the vicinity of Katherine and in the north western region of East Arnhem Land.

It is difficult to further identify 'hot spots' of need without examining data at a community level. Rather, it is better to acknowledge all locations outside of the Darwin and Darwin rural areas as having equally high priority for allied health, with specific communities' subject to higher priority at times of particular workforce shortages or other local considerations.

2.2 Engagement and Consultation

A series of semi-structured interviews were conducted with a cross section of health organisations, service providers and university representatives with expertise in the area of allied health. The resulting review of data gathered has contributed valuable information to building understanding of the challenges and opportunities for workforce development in the NT's allied health context, although not all industries (e.g. aged care) nor all allied health professions were able to be represented at this time. Broad consultation then occurred with open circulation of the draft document to stakeholders across the NT. Stakeholders were provided with a range of vehicles through which feedback could be provided. This feedback was collated and considered in the compilation of this report.

2.3 Data

Data on the number, distribution and characteristics of many allied health professionals is available through the Australian Government Department of Health's National Health Workforce Dataset (NHWDS), which is built from registration and survey data captured by the Australian Health Practitioner Regulation Agency (AHPRA) each year. For those disciplines registered through AHPRA, this was the key data source. For other disciplines, data was obtained directly through professional

bodies and Australian labour market reports. Additionally, data from Northern Territory PHN has been accessed to explore patterns of recruitment and vacancies.

Limitations

Comprehensive data on the availability and employment of allied health professionals on a regional basis is not readily available. The statistics presented here are taken primarily from the NHWDS. The data presented is drawn from reporting of each practitioner's main place of practice in the previous week. This is therefore a snapshot which is not able to account for more variable working arrangements such as intermittent outreach practice or locum arrangements. For example, where practitioner numbers are already low, the presence or absence of a visiting health professional in the week prior to their annual registration could potentially have a large impact on the statistical picture for a local area. As such, this data should be viewed as an indicator only of the availability of the selected professions within a given region.

It should also be noted that these estimations do not consider the high rates of staff turnover and temporary workforce models that are known to impact the stability of service in many locations throughout the NT. While the workforce figures provide a useful baseline to discuss workforce distribution, the actual situation in many communities is far more complex than can be represented by standard data collections, especially as many allied health services are provided on an outreach basis.

Particularly for professions with low numbers of practitioners such as podiatrists and optometrists, percentage estimates can be quite volatile from year to year despite only small changes in actual numbers.

Current data on outreach services, while improving, is not adequate for us to understand the true distribution of the allied health workforce across the NT. Improvements in our ability to understand the full extent of outreach services will provide a better picture of the distribution of this workforce in the NT.

Demand Estimates

The complex nature of allied health service delivery in the NT provides a challenging environment for estimating the number of health professionals required. A large portion of allied health services in metropolitan areas are delivered through private health insurance in which case demand is driven by insurance coverage. Meanwhile, in the remote context, a large amount of allied health services are delivered through Australian Government funded programs, which means that demand is driven by program funding and supply. Lastly, the unique nature of health needs in the NT, characterised by remoteness and high Aboriginal and Torres Strait Islander populations, makes national comparisons or benchmarks inappropriate. Stakeholders were concerned that the focus this needs assessment takes on vacant positions and comparisons with national per capita supply rates masks true demand. It was suggested that work needs to be undertaken to develop needs-based benchmarks like the core 'basket of primary health care services' that consumers in rural and remote communities should expect to access. [2] However, while place-based need should drive demand, this is currently not well understood. The process will have to be quantified and funding models adapted before it reflects workforce supply and demand that is truly responsive to population need. While the

assessment of population need and the design of funding models is beyond the scope of this needs assessment, it is acknowledged that the sector will need to be flexible to respond to emerging evidence and potential resource redistribution.

Discipline Data

Available data from the NHWDS has been collated for:

- dental practitioners[c]
- occupational therapists
- optometrists
- pharmacists
- physiotherapists
- podiatrists
- psychologists.

Data for the following disciplines was obtained directly from professional associations:

- dietitians
- audiologists
- speech pathologists.

Key statistics are presented in Tables 1 (pg 24) and 2 (pg 25) and Figure 2 (pg 27) and are discussed in subsequent sections.

[c] Includes dentists, dental hygienists, oral health therapists, dental therapists, dental prosthetists

3. WORKFORCE SUPPLY AND DEMAND BY ALLIED HEALTH DISCIPLINE

Summary

As shown in Table 1, the NT experienced a growth in all allied health disciplines between 2013 and 2017, with the exception of a decline in medical radiation professionals (-3%) and, notably, psychologists (-12%). Increases were less than 10% for most disciplines with the exception of occupational therapists (+35%) and podiatrists (+39%).

As outlined in Table 2, the NT has proportionately less health professionals per capita than the national average in all disciplines, particularly podiatry (rate ratio 0.53), psychology (rate ratio 0.65), physiotherapy (rate ratio 0.66) and medical radiation practitioners (rate ratio 0.67). The rate ratio for podiatrists has increased since 2013 (from 0.43 to 0.53), however most others have decreased – most notably psychology dropping from a ratio of 0.81 to only 0.65.

Internet vacancy data for the NT is available in Figure 1 for some disciplines for the period 2007 to 2018. This shows the demand for dietitians, occupational therapists and speech pathologists peaking around 2009–10, dipping around 2013 and increasing again after that to 2018. [d] This trend is likely a reflection of the *Northern Territory National Emergency Response Act* which commenced in 2007 and was repealed in 2012. This highlights how government initiatives can significantly impact workforce demand.

Figure 3 illustrates the number of vacancies in each profession and the average number of days taken to fill positions for recruitments managed by Northern Territory PHN. The professions represented in this data set are different to those available through the NHWDS. This data represents all activity from 2013 through to the present. It should be noted that Northern Territory PHN does not handle all vacancies throughout the NT, however, this snapshot still provides an indication of the recruitment environment in the NT. All average vacancy times were more than 130 days. While the highest number of vacancies advertised were for physiotherapists, the average vacancy time for these roles was one of the lowest. Psychologists were both recruited often and had one of the highest average vacancy times.

Overall, there is an obvious concentration of practitioners in the Darwin region (including Palmerston and the rural area). Shown in Figure 2, this is particularly high for occupational therapists and psychologists and somewhat lower for podiatrists. However, these differences tend to be balanced by the proportion of practitioners in Alice Springs, indicating a consistently low distribution outside of these two areas.

There is a relatively young workforce in many professions, with over 50% of practitioners aged under 35 in many disciplines. Pharmacy and physiotherapy have the highest proportion of this younger age cohort (62% and 60% respectively), while psychology is notable for having only 22% of the workforce under 35 years of age, a figure which has declined from a high of 27% in 2016. Generally, the NT

[d] The IVI is based on a count of online job advertisements newly lodged on SEEK, CareerOne and Australian JobSearch during the month. As such, the IVI does not reflect the total number of job advertisements in the labour market.

workforce is younger than the workforce nationally, with the exception of optometrists and podiatrists.

Approximately one-third of the workforce in most disciplines have five years or less of experience. This is higher for physiotherapists (39%) and occupational therapists (37%), while the optometrist and psychologist cohorts are more experienced. Some disciplines, notably oral health, have a comparatively high proportion of practitioners whose original qualifications were obtained overseas (15%). Around 90% of allied health professionals registered in the NT work in their registered profession and very few are unemployed (0-2%).

Allied health practitioners work within a range of settings across the NT. There are a high proportion in private practice, particularly optometrists (73%). Medical radiation practitioners tend to practice predominantly in the tertiary environment (hospital and outpatients, 70%).

Oral Health Practitioners

The NHWDS shown in Table 1 records 141 oral health practitioners[e] as registered in the NT in 2017, 18 more than there was in 2013. In 2017 there were 57 oral health practitioners in the NT per 100,000 population compared with 78.4 per 100,000 nationally, outlined in Table 2. The NT has fewer oral health practitioners per 100,000 than any other state or territory in Australia. 85% are based in Darwin or Alice Springs. While more than half of all oral health practitioners in the NT work in private practice, the NT has the highest proportion of oral health practitioners working in public health. 38% are 35 years of age or under, compared with 34% nationally. 35% have been working in oral health for fewer than five years. Fewer than 4% identify as Aboriginal or Torres Strait Islander and 15% were trained overseas (Table 1).

The Australian Dental Association reports that nationally, the current dental workforce is in oversupply.[3] A rapid increase in the number of dental practitioners over the past 20 years is resulting in increasing underemployment and unemployment rates. There has been a sharp increase in the number of dental practitioner students and seven new dental practitioner training institutions. For the foreseeable future, Australia will be training more dental practitioners than it needs.[3] While nationally there is excess capacity in the dental workforce, maldistribution continues to affect accessibility in rural and remote areas.[4] This additional capacity refers to current supply in relation to current demand, rather than unmet need. Significant unmet need stemming from limited public dental services remains.

The Australian Dental Association policy recommends that governments place a moratorium on dental training places, restrict migration of dentists to Australia, implement targeted incentives to encourage dentists to practise in regional and remote areas, and develop models to provide treatment in those areas unable to support a permanent workforce.[3]

Occupational Therapists

The NHWDS in Table 1 records 145 occupational therapists as being registered and working as a clinician in the NT in 2017, a figure which has grown by 41 since 2013. In 2017, there were 58.6

[e] Includes dentists, dental hygienists, dental prosthetists, dental therapists, oral health therapists

occupational therapists in the NT per 100,000 population, compared with 61.3 per 100,000 nationally, shown in Table 2. 93% are based in Darwin or Alice Springs, and 17% work in private practice. 55% are 35 years of age or under, compared with 53% nationally, and 37% have been working as an occupational therapist for fewer than five years. Fewer than 4% identify as Aboriginal or Torres Strait Islander and 5% were trained overseas (Table 1).

The Australian Government Department of Employment, Skills, Small and Family Business' 2019 labour market rating identifies a shortage of occupational therapists in the NT, citing location of employment as the key factor affecting recruitment and retention. The skills shortage report states that 71 employers had unfilled vacancies. 56% of vacancies were filled during the report period and each vacancy received two applicants on average.[5]

Pharmacists

The NHWDS records 157 pharmacists as registered and working as a clinician in the NT in 2017, a growth of 15 from 2013. In 2017, there were 63.4 pharmacists in the NT per 100,000 population compared with 88 per 100,000 nationally. 82% are based in Darwin or Alice Springs, and more than half (57%) work in community settings. 62% are 35 years of age or under compared with 47% nationally, and 34% have been working as a pharmacist for fewer than five years. Only Fewer than 4% identify as Aboriginal or Torres Strait Islander and 9% were trained overseas, an increase from 5% in 2016.

The Department of Employment, Skills, Small and Family Business' 2019 labour market rating identifies a shortage of pharmacists in the NT, with location of employment the key factor affecting recruitment and retention. The skills shortage report shows 57% of vacancies were filled during the report period, a decrease from 73% in 2017. Vacancies received, on average, three applicants and less than one suitable applicant in metropolitan areas of the NT, while regional areas attracted less than one applicant and less than one suitable applicant per vacancy. Employers conduct multiple recruitment rounds and take up to three months to fill vacancies with locality and remuneration being the largest influences on outcomes.[6]

According to the NT branch of the Pharmacy Guild, NT community pharmacy services experience high turnover rates (an annual average of 50% turnover has been reported by the industry) as a result of the general transience of the NT workforce and the relative youth of the profession in the NT. In addition, wage and benefits disparities between the private and public sector see an ongoing movement of pharmacists out of private practices and into the public sector.

This combined with the number of overseas born and/or trained pharmacists in the NT highlights the burden on employers to recruit, retain, and provide orientation and induction programs. The need for professional support and local, easily accessible continuing education opportunities is particularly important in this environment.

Community pharmacies are located in Darwin, Palmerston, Alice Springs, Nhulunbuy, Katherine and Tennant Creek. In addition, these community pharmacies provide access to medicines under Section 100 of the Remote Area Aboriginal Health Services (RAAHS) Program for residents of remote communities. In the NT, the work of a community pharmacist is reflective of the broad range of skills

required in rural practice. Community pharmacists provide pharmacy services in a broad range of settings including the local community, aged care facilities, hospital outpatients, ACCHSs, NT Government remote health sites, renal services, dialysis units, community health centres, opiate replacement programs, chemotherapy programs, community clozapine dispensing services, and tobacco, alcohol and other drugs services. They are also liaising with GP surgeries and hospital doctors regarding prescriptions and patient medication safety issues and providing National Diabetes Services Scheme (NDSS) access point services. Pharmacists routinely work as part of an interdisciplinary care team that includes GPs, community health nurses, hospital prescribers, and ACCHSs or health clinic staff, and utilise telehealth and digital solutions to overcome the geographic dispersion of care providers. They work extended hours throughout the week, remaining open after hours. Many community pharmacies are also available over the weekend to address community health needs when access to other health providers is limited.

Pharmacy associations identified that while there was adequate supply of pharmacists, maldistribution contributed to ongoing shortages in rural and remote areas. The NT branch of the Pharmacy Guild of Australia acknowledged the importance of providing pathways for local people into pharmacy careers and noted the significant impact that the cessation of Charles Darwin University's pharmacy course will have on future recruitment and retention.

The impact of government funding and initiatives on demand for pharmacists was noted along with its unpredictability. Demand for pharmacists is expected to increase as a result of changing models of care and work settings, increasing numbers of pharmacists working as part of primary health care teams, an expanding scope of practice, ageing population and an increasing prevalence of chronic disease.[7]

Recent examples of the expanded scope of practice include:

- Pharmacist vaccination: in 2013, the pharmacy board included vaccination in the scope of practice for pharmacists. In 2017, the NT government released guidelines for immunisations at pharmacy premises in the NT;
- Registered nurses, accredited practising dietitians, registered medical practitioners, registered pharmacists, podiatrists, accredited exercise physiologists and registered physiotherapists are currently eligible to become credentialed diabetes educators. In 2019, with support from Northern Territory PHN, pharmacists in the NT are undertaking the required training to become diabetes educators;
- Under the *Fair Work Act 2009*, pharmacists have authority to issue Absence from Work Certificates as proof of legitimate absence from work.

The NT branch of the Pharmacy Guild of Australia have identified other areas of potential expanded scope of practice such as provision of asthma education, cardiac education, smoking cessation and support, wound care and transition care coordination including assisting patients to understand their medication regimen post-discharge.

The increasing integration of pharmacists into the primary health care team is exemplified in the NT through the recent implementation of the Integrating Models of Pharmacists Across Care Teams

(IMPACT) Framework developed by Northern Territory PHN to guide the integration of pharmacists into primary health care services and the inclusion of a pharmacist role in the Maningrida Remote Primary Health Care Service Team. While the critical and vital role of community pharmacy in medication education and management through remote primary health services is well recognised, sustainable funding models for these services remain elusive. Pharmacists and remote health services are advocating for recognition and formalisation of funding for sustainable remote medication education and management services. If successful, this will have an impact on both demand for workforce and desirable skills.

The NT branch of the Pharmacy Guild of Australia suggest that the provision of information on locally specific topics such as rheumatic heart disease, skin disorders such as scabies, cultural awareness, working remotely, tropical conditions, common skin conditions and wound healing in the tropics and social determinants of health is important in ensuring the quality of pharmacy services and retention outcomes for pharmacists who are new to the NT.

Physiotherapists

The NHWDS in Table 1 records 154 physiotherapists as registered and working as a clinician in the NT in 2017, which is 13 more than in 2013. In 2017, there were 62.2 physiotherapists in the NT per 100,000 population compared with 94.8 per 100,000 nationally, as outlined in Table 2. 81% are based in Darwin or Alice Springs, and 40% work in private practice. 60% are 35 years of age or under compared with 50% nationally, and 39% have been working as a physiotherapist for fewer than five years. Fewer than 4% identify as Aboriginal or Torres Strait Islander and 9% were trained overseas (Table 1).

The Department of Employment, Skills, Small and Family Business' 2019 labour market rating identifies a shortage of physiotherapists in the NT. Employers reported difficulties in attracting experienced applicants and were unlikely to employ graduates as they lack the capacity to provide adequate supervision and support. With most applicants being from interstate, location was a key factor impacting on recruitment outcomes. The skills shortage report shows 61% of vacancies were filled during the report period. Vacancies received, on average, 0.7 suitable applicants and around 40% of employers reported no applicants or inadequately qualified applicants for their vacancies. Increasing demand is expected to result from an ageing Australian population and NDIS implementation in the NT, while the lack of local training programs will impact on supply.

Stakeholders also reported an adequate supply of graduate and early career physiotherapists, however greater difficulty recruiting to senior and specialist roles and extreme difficulties recruiting to rural and remote areas due to maldistribution. Clinical placement and supervision for graduates was identified as a critical issue in ensuring a sustainable future workforce. Again, an ageing population, increased prevalence of chronic disease and movement towards an extending scope of practice were also identified as likely to increase demand for this discipline.[9]

Podiatrists

The NHWDS in Table 1 records 23 podiatrists as registered and working as a clinician in the NT in 2017, which is 7 more than in 2013. In 2017, there were 9.3 podiatrists in the NT per 100,000 population compared with 17.4 per 100,000 nationally, shown in Table 2. 83% are based in Darwin

or Alice Springs, a decrease of 4% since 2016, and 57% work in private practice. 57% are 35 years of age or under, an increase from 42% in 2016, compared with 47% nationally. 26% have been working as a podiatrist for fewer than five years. Fewer than 4% identify as Aboriginal or Torres Strait Islander and 0% (15% in 2016) were trained overseas (Table 1).

Maldistribution of workforce continues as a theme in relation to the podiatrist workforce. Obtaining clinical placements recurred as a challenge, along with increasing demand due to an ageing population and increasing chronic disease, and the need to provide access to services for Aboriginal and Torres Strait Islander communities.[10]

Psychologists

The NHWDS in Table 1 records 152 psychologists as registered and working as a clinician in the NT in 2017, which is 21 less roles than was recorded in 2013. Table 2 shows that in 2017, there were 61.4 psychologists in the NT per 100,000 population, a decrease from 66.4 in 2016, compared with 94.8 per 100,000 nationally. 91% are based in Darwin or Alice Springs, and 38% work in private practice, which is a decrease of 9% since 2016. 22% are 35 years of age or under, a 5% decrease since 2016, compared with 21% nationally. 18% have been working as a podiatrist for fewer than five years, which has increased by 8% since 2016. Fewer than 4% identify as Aboriginal or Torres Strait Islander and 11% were trained overseas (Table 1).

The psychologist workforce, unlike other disciplines, stands out as older, decreasing, Darwin-centric and more likely to work in non-clinical roles. No data is available in the NHWDS to indicate whether psychologists hold a general registration or are clinical psychologists. Registrant data from the Psychology Board of Australia for 1 July 2018 – 30 September 2018 indicates that of the 207 practicing registrants who indicated their principal place of practice as the NT,[f] 38 (18%) were endorsed for clinical psychology with a further two endorsed for neuropsychology. This compares to 30% nationally.

The increased scope of practice of clinical psychologists, along with their research and supervisory capabilities, make them a valuable resource in the provision of mental health services. It is clear that the NT has an under-supply compared to other jurisdictions.

Demand for psychologists has increased as a result of access to Medicare benefits and psychologists taking on generalist mental health roles including case management. A substantial investment by the Australian Government into mental health and wellbeing programs in the NT has also considerably influenced demand. Lower salaries, increased supervision requirements and fewer career progression opportunities are moving psychologists towards private sector careers. Limited places for master's degree students and internship pathways to registration are affecting the career path for psychologists. Increasing demand and 'bottlenecks' in the pathway are likely to affect workforce sustainability. Maldistribution of workforce continues as a theme in this discipline.[11]

[f] These figures differ from those in Table 1 due to both the different time period, and the reporting of principal place of practice vs main location of practice in the previous week

Dietitians

Dietitians Association of Australia (DAA) members in the NT include 58 Accredited Practicing Dietitians (APD) and one student while there are 6142 nationally.[12] This equates to 25 dietitians in the NT per 100,000 population compared with 26 per 100,000 nationally. 21 APDs across Australia identify as being Aboriginal or Torres Strait Islander, with one of these APDs practicing in the NT.

The supply of qualified dietitians was identified as being adequate, if not oversupplied. However, there is concern around a shortage of experienced dietitians to fill management and specialist roles. Maldistribution was again identified, with difficulties reported in recruiting to regional and remote locations. Demand is again likely to be impacted by an increasing prevalence of chronic disease.[13]

The DAA report that greater recognition of the contribution of nutrition to mental and physical health, and the increasing incidence of chronic diseases including obesity, cardiovascular, diabetes and renal disease, is contributing to greater investment in, and demand for, nutrition care across acute, community and public health settings. This is particularly the case for Aboriginal and Torres Strait Islander people. The ageing population, implementation of the NDIS and the role of dietitians in the nutrition needs of these cohorts was also identified as a key potential contributor to increasing demand. However, it was noted that both need and recognition of this in allocation of program funding is required before impact on demand for health professionals is realised.

As in many other allied health professions, the breadth of professional practice of dietitians is expanding. APDs may expand their scope of practice through additional training. Opportunities for expansion of scope of practice include diabetes education, insertion of nasogastric tubes, care of percutaneous endoscopic gastrostomy tubes and swallowing assessments.[14] Further changes to scope of practice currently being considered may provide dietitians with scope to adjust insulin (currently nurse-led) and carry out swallowing assessments (currently speech therapist-led).[13] Legislative change may be required to enable these amendments, while there will be a need for upskilling to enable clinicians to undertake this expanded scope of practice.[15]

In their submission to this needs assessment, key messages from the Dietitians Association of Australia included:

- APDs in the NT work across different settings and practice areas;
- the number of dietitians identifying as Aboriginal or Torres Strait Islander is low;
- trends in increasing incidence of chronic disease are reason for greater investment in nutrition care across acute, community and public health settings;
- recruitment and retention of dietitians to the NT requires greater investment; and
- current models of care restrict access to APDs.[14]

Stakeholders raised concerns about the lack of dietitians and diabetes educators given that diabetes causes a significant burden of disease among Aboriginal and Torres Strait Islander people in the NT.

Optometry

The NHWDS in Table 1 records 33 optometrists as registered and working as a clinician in the NT in 2016, an increase of 3 since 2013. In 2017, there were 13.3 optometrists in the NT per 100,000

population compared with 18.7 per 100,000 nationally, outlined in Table 2. 88% are based in Darwin or Alice Springs, a 4% decrease since 2016. 73% work in private practice, a decrease of 11%, This is accounted for by the growing proportion of optometrists working in Aboriginal health settings, which has risen to 18%. 39% are 35 years of age or under compared with 36% nationally and 21% have been working as an optometrist for fewer than five years, an increase from 10% in 2016. Fewer than 4% identify as Aboriginal or Torres Strait Islander and 9% were trained overseas (Table 1).

Optometry Australia has argued that since 2016, based on studies undertaken on their behalf, graduation numbers have increased the local workforce resulting in adequate supply of optometrists within Australia[16]. A 2015 study undertaken by Monash University on behalf of Optometry Australia indicated that supply would outweigh demand by 2016[17]. These projections take into account key factors impacting supply such as the opening of two new optometry schools, expecting to more than double the number of graduates, and on demand including:

- an increasing trend in the use of optometry services per capita;
- the potential that new treatments will minimise the need for spectacles; and
- new treatments that decrease the need to monitor conditions.

These factors were cumulatively expected to increase demand per capita by as much as 20% by 2036.

NT-specific modelling of the optometry workforce identified that that demand would continue to outweigh supply in some scenarios where larger growth and less patient contact hours per fulltime equivalent (FTE) were assumed. However, as New South Wales, Victoria, Western Australia, the Australian Capital Territory and Queensland would all be oversupplied at this time, any undersupply in the NT would be considered to be an issue of maldistribution rather than undersupply.[17]

The modelling acknowledged the assumption that the proportion of graduates in optometry to reside and work in rural and remote locations was a ‘potential source of error’ based on difficulties experienced by other health professions in encouraging graduates to practise in remote locations. The modelling raised concerns that an oversupply of optometrists may come with its own concerns regarding the availability of experienced professionals to place students and supervise graduates. While it identified the seemingly obvious benefit of addressing undersupply in rural and remote communities, it also noted that oversupply in other health professions historically did not automatically address supply issues in rural and remote locations.[17]

Consultation with Optometry Australia identified that there may be slightly more optometrists in the NT (35) than the data in Table 1 suggests. In addition, Optometry Australia noted that many outreach optometry services are conducted in the NT and it is not uncommon for these services to be provided by optometrists from outside of the NT, suggesting that the actual workforce is larger than data indicates. Optometry Australia confirm that demand is ‘close to balanced nationally’ however note that ‘there is likely still an undersupply of optometrists in the NT.’ Optometry Australia noted that poor access to continuing professional development (CPD) was a significant challenge for NT optometrists.

Audiologists

Audiology Australia lists 21 accredited audiologists in the NT,[18] representing 9.2 per 100,000 population. Audiology Australia estimates another 10 audiologists provide visiting services, and in addition to this, it is likely that not all audiologists are accredited with this organisation. Many of these providers are involved with outreach services to remote communities. 2011 Census data identified 1489 audiologists in Australia, representing 6.9 per 100,000 population.

Australian Hearing provides government funded services and lists practices in Casuarina, Palmerston, Coolalinga, Katherine, Tennant Creek and Alice Springs. Arafura/Alice Audiology list practices in Darwin and Alice Springs, while additional audiology services are provided by the Audiology Department at the Royal Darwin Hospital.

Outreach audiology services are provided to Aboriginal children and young people (<21 years) by the NT Government through the Hearing Health program. This program employs audiologists to provide services including health education and prevention, promotion, direct clinical assessments and care, and also teleotology. The most recent reporting reveals a drop in the number of services provided between 2015 and 2017, which is largely attributable to a shortage of audiologists.[19]

The Australian Government Department of Jobs and Small Business (formerly the Department of Employment) report a national shortage of audiologists and expect job openings for audiologists to increase by 32.6% over the five years to May 2022.[20] The Hearing Care Industry Association reports ‘shortages of regional, rural and remotely-based clinicians, Aboriginal and Torres Strait Islander hearing health professionals…’[21] and ‘substantial difficulty in employing enough practitioners to help service the Australian population’[22], noting that audiology was on the skilled shortage list in every state and territory in Australia and members were routinely recruiting from overseas. Audiology services are already difficult to access in rural and remote areas of Australia where there is already greater need and this will only increase over time, driven by an increasing need for audiology services as a result of the ageing Australian population.

Consultation with the sector dispels the concept of workforce shortage and suggests the issue is more likely one of maldistribution. While NT-specific data is not available, a Victorian study reported unmet needs were primarily in regional and remote areas where ‘experienced staff were needed because there was not sufficient supervision for new graduates.’[23] The Victorian study showed that the main reason for unfilled positions was not a lack of applicants but inadequate skills and experience, ‘Up to nine months after graduation audiologists will be working in cafes. It’s astounding given the need. But they don’t want to go to remote areas and there is no supervision there. In regional areas they need people who are senior.’[23]

Consultation with Audiology Australia again identified that there are adequate and good quality health professionals to meet needs nationally, however ‘attraction and retention is different full-stop in regional remote NT.’ Retention was identified as the greater issue with Audiology Australia noting that many health professionals do not stay more than one or two years. Opportunities to improve recruitment outcomes exist in providing placement support for students, support for graduates and opportunities for post-graduate specialisation. Note was made of the challenges for provision of supervision to new graduates as a one-year supervision program is required after

graduation before an audiologist is considered competent to practice independently. The complexity of clinical presentations in regional and remote areas was also identified, with the need for more training and webinars to assist in the development of associated competencies. Audiology Australia recognises that Aboriginal and Torres Strait Islander health is a significant component of audiology services in Australia and is working to improve student awareness of both Aboriginal and Torres Strait Islander health and cultural awareness, respect and responsiveness. They are also working with Indigenous Allied Health Australia (IAHA) to promote the profession to Aboriginal and Torres Strait Islander people.

Speech Pathologists

The Australian Bureau of Statistics (ABS) grouping of speech pathologists with audiologists and the lack of AHPRA regulation makes reporting on the speech pathology workforce difficult. In 2014, Speech Pathology Australia reported a membership of just over 6000, estimating that this represented 70% of the workforce. This workforce has been steadily increasing with growth between 2006 and 2011 reported as 37%.[24] In 2011, only 29 of 5295 speech pathologists in Australia were located in the NT, representing just 18.4 per 100,000 residents compared to 23.7 per 100,000 residents nationally.

The NT Branch of Speech Pathology Australia listed 9 employers of speech pathologists in the Darwin region in 2016. Approximately 0.7% of members are Aboriginal or Torres Strait Islander. Around 25 FTE are in government and non-government services, while around six FTE are estimated in private practice. There are two employers identified in the top end remote region representing between three and four FTE. The Katherine region has three employers with a total of around 3.5 FTE, while seven employers in the Alice Springs and Central Australia region make up around 10.5 FTE. Private practices are located in Darwin, Katherine and Alice Springs.[25]

These estimates suggest that in 2016 there were around 45 speech pathologists in the NT, representing 18.4 per 100,000 population.[25] While the 2016 number of speech pathologists nationally is unknown, this is well below the 2011 national average of 23.7.

The Department of Jobs and Small Business expect job openings for speech pathologists to increase by 32.6% over the five years to May 2022.[20] A 2014 Senate report suggested the demand for speech pathology services in Australia outweighs supply of these services.[24]

Table 1: Allied Health Professionals working as clinicians – demographics

		Oral Health	Medical Radiation	Occupational Therapists	Optometrists	Pharmacists	Physiotherapists	Podiatrists	Psychologists	Speech therapists*	Dieticians**	Audiologists***
# PRACTITIONERS	2017	141	87	145	33	157	154	23	152	45	58	21
	2013	123	90	104	30	142	141	16	173			
LOCATION	Darwin & Palmerston	71%	72%	73%	76%	68%	65%	61%	73%	60%		
	Alice Springs	14%	21%	17%	12%	14%	16%	22%	18%	23%		
AGED <35 yrs	NT	38%	49%	55%	39%	62%	60%	57%	22%			
	National	34%	46%	53%	36%	47%	50%	47%	21%			
OVERSEAS	Qualified OS[a]	15%	11%	5%	9%	9%	9%	0	11%			
SELECTED PRACTICE SETTINGS [b]	Private Practice	55%	22%	17%	73%	0	40%	57%	38%	19%	14%	
	Community Health	24%	0	19%	0	57%	8%	0	14%		17%	
	Aboriginal Health	6%	0	3%	18%	8%	5%	22%	12%		12%	
	Residential/Disability	0	0	15%	0	0	5%	0	2%		10%	
	Defence/Corrections	10%	0	0	0	3%	10%	0	11%			
	Hospital/Outpatients	4%	70%	28%	0	30%	23%	13%	2%		34%	
TIME IN WORKFORCE	≤ 5 Years	35%	36%	37%	21%	34%	39%	26%	18%			
	≥ 11 Years	49%	39%	35%	55%	38%	31%	39%	50%			

[a]Excluding New Zealand

[b]Practice Settings
Private practice includes: Solo private practice, group private practice, locum private practice, general practitioner (GP) practice, other private practice.
Community health includes: Community mental health service, community health care service, other community health care service, public clinic, community pharmacy.
Residential/disability includes: Disability service, residential aged care facility

Source: National Health Workforce Data Set, derived from APHRA registration data, 2017
**Source: https://www.speechpathologyaustralia.org.au/SPAweb/Document_Management/Branches/Northern_Territory.aspx?WebsiteKey=fc2020cb-520d-405b-af30-fc7f70f848db*
***https://audiology.asn.au/ccms.r?Pageid=10042&tenid=AUDA&NAVCMD=nextPage|1&VARLIST=DISPMODE|State|Keyword|Country|Post|Region|Chapter|Grp|Statcur|Suburb|TOI|Char01|Char02&DISPMODE=AudiologySearch&State=NT&Keyword=&Country=&Post=&Region=&Chapter=&Grp=&Statcur=&Suburb=&TOI=&Char01=&Char02=*

Table 2: Allied Health Professionals working as clinicians by population

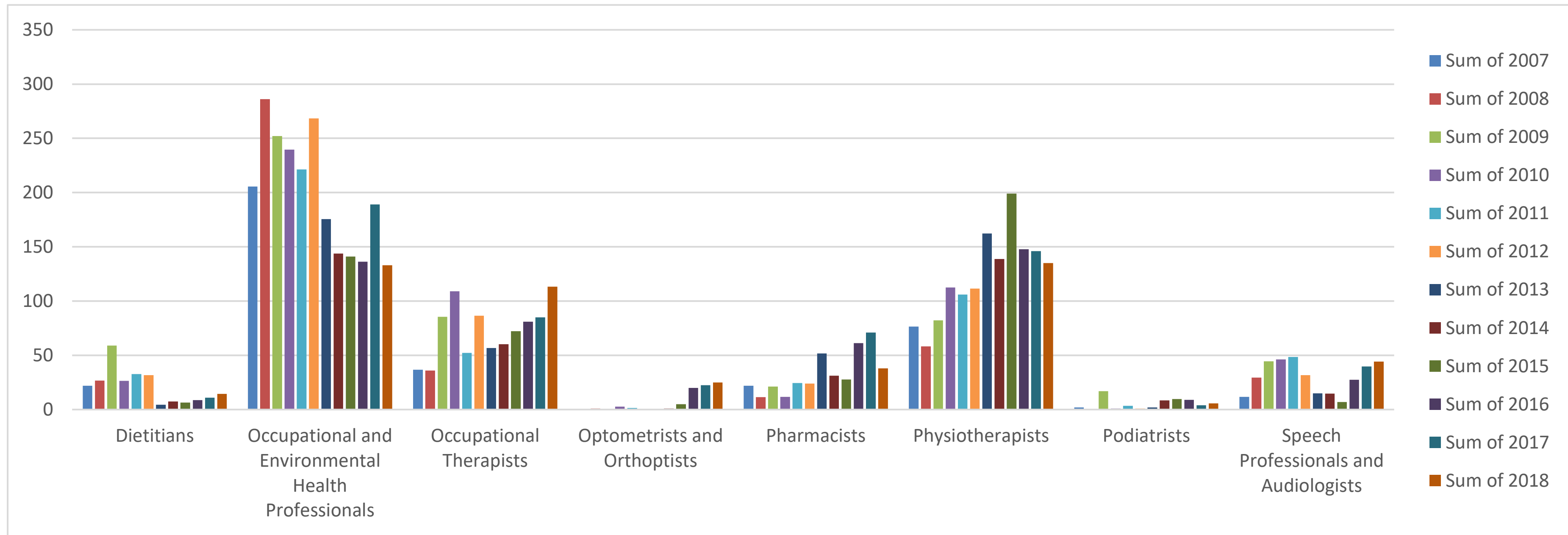
	2013			2017		
Discipline	NT	Australia	Rate ratio NT/Australia	NT	Australia	Rate ratio NT/Australia
	Rate per 100,000			Rate per 100,000		
Oral Health Practitioners	50.9	74.4	0.68	57	78.4	0.73
Medical Radiation Practitioners	37.2	48	0.78	35.1	52.2	0.67
Occupational Therapists	43	51.2	0.84	58.6	61.3	0.96
Optometrists	12.4	17.4	0.71	13.3	18.7	0.71
Pharmacists	58.7	82.8	0.71	63.4	88	0.72
Physiotherapists	58.3	82.5	0.71	62.2	94.8	0.66
Podiatrists	6.6	15.3	0.43	9.3	17.4	0.53
Psychologists	71.6	88	0.81	61.4	94.7	0.65
Total	38.6	53.0	0.73	41.1	58.2	0.71
Other Discipline	NT	Australia		NT	Australia	
Speech Pathologists*				18.4	23.7	0.78
Audiologists**				8.5	6.9	1.42

Source: National Health Workforce Data Set (NHWDS), derived from APHRA registration data, 2016

**Source:* https://www.speechpathologyaustralia.org.au/SPAweb/Document_Management/Branches/Northern_Territory.aspx?WebsiteKey=fc2020cb-520d-405b-af30-fc7f70f848db

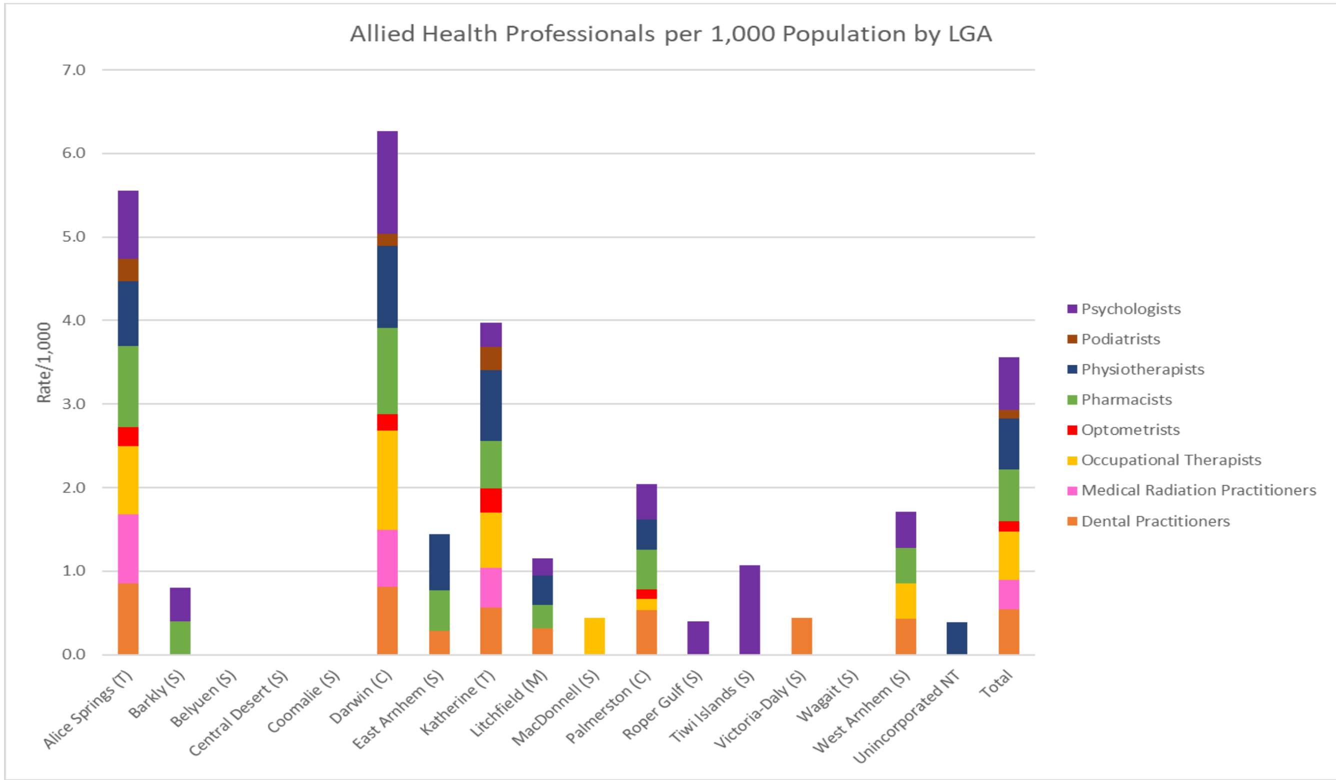
***https://audiology.asn.au/ccms.r?Pageid=10042&tenid=AUDA&NAVCMD=nextPage|1&VARLIST=DISPMODE|State|Keyword|Country|Post|Region|Chapter|Grp|Statcur|Suburb|TOI|Char01|Char02&DISPMODE=AudiologySearch&State=NT&Keyword=&Country=&Post=&Region=&Chapter=&Grp=&Statcur=&Suburb=&TOI=&Char01=&Char02=*

Figure 1: Labour Market Information Portal - Internet vacancy index – detailed occupation data (Northern Territory)



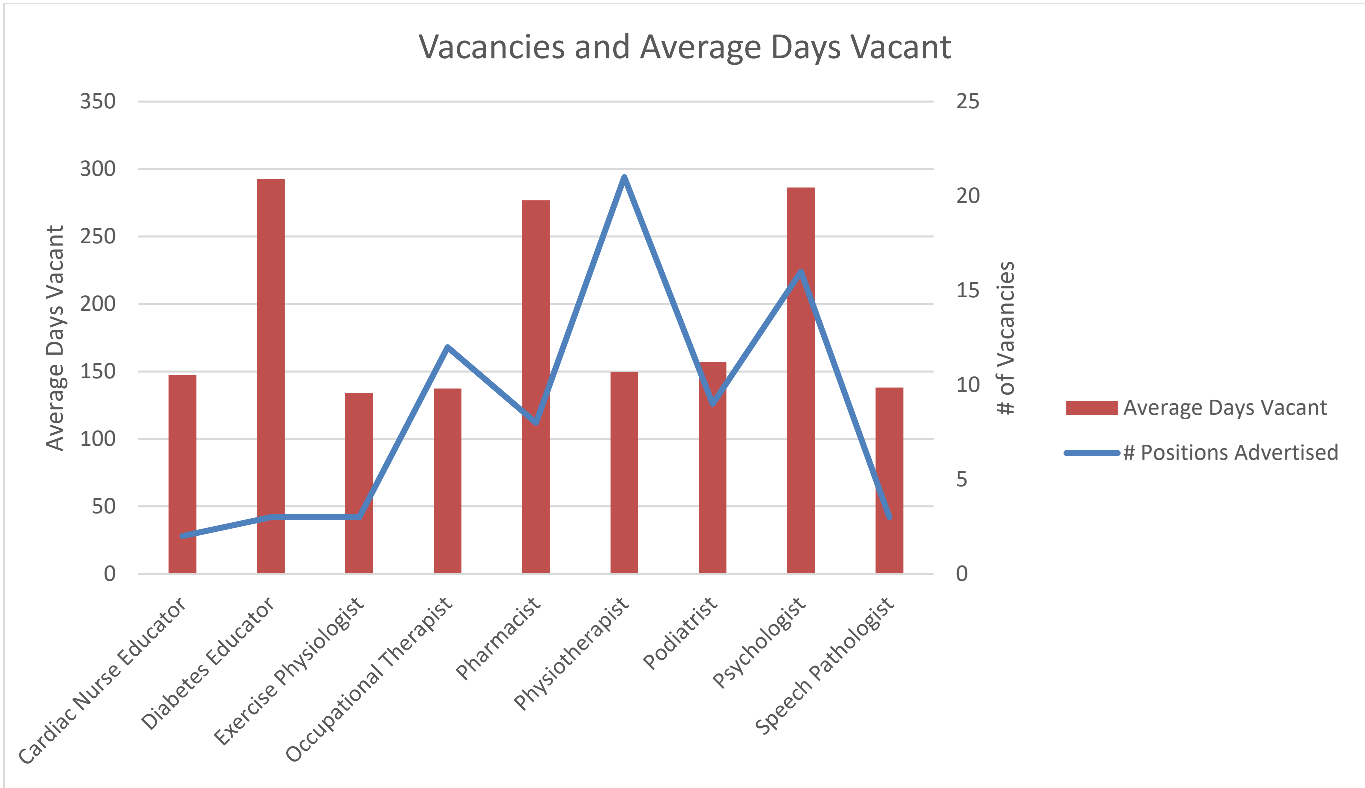
Source: http://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport

Figure 2: Distribution of selected allied health professionals



Source: National Health Workforce Data Set (NHWDS), derived from APHRA registration data, 2016

Figure 3: Allied health vacancies managed by Northern Territory PHN



Source: RWA NT recruitment database (Northern Territory PHN)

4. RURAL AND REMOTE CHALLENGES

The challenges and opportunities of delivering primary health care services to diverse and dispersed populations are well documented and are often shared across the range of primary health professions. However, allied health professionals may also experience challenges unique to their individual professions and scope of practice.

Literature reviewed regarding remote and rural health practice describes:

- a high burden of disease;
- poor access to health care;
- Aboriginal and Torres Strait Islander populations with complex health care needs;
- geographical, professional and social isolation of practitioners;
- a broad mix of interprofessional approaches;
- sensitivities of working and living in a cross-cultural context;
- challenges of servicing small, dispersed and highly mobile populations with relatively high health needs;
- a physical environment of climatic extremes; and
- a communications context of rapid technological change.[26]

Studies confirm a similar range of challenges for allied health professionals working in regional or remote practice environments. Rural and remote allied health services are characterised by small discipline-specific professional workforces, oftentimes sole clinicians. This can impact on availability of profession-specific support, while limiting peer learning and supervision opportunities and reducing the ability to cover for training or recreation leave. It can also affect depth of clinical governance and access to discipline specific leadership.[27] There can also be limited access to specialist referral pathways and practitioners may be placed in senior positions while relatively inexperienced and with few opportunities for career progression, professional development and support.

Diverse, fragmented primary care funding models limit the viability of allied health providers in smaller centres.[27] These aspects are further compounded by the long distances the workforce must travel in remote locations, requiring additional resourcing of time and funding. Also revealed was the existence of increased workloads, a requirement for more public health support, a need for emergency and extended clinical skills, combined with an overall recognition that the work is more complex in these locations.[26, 28] Allied health professionals can be poorly prepared, have unrealistic expectations, be expected to work to an extended scope of practice, carry very diverse caseloads with increased responsibilities, have greater involvement in multidisciplinary teams, be expected to use flexible models of service delivery such as telehealth and outreach, experience a need for a deeper level of cultural awareness, and work in a range of different settings of service outside of a formal health service location.[29, 30] Organisational challenges include lack of management support, inadequate resourcing, inappropriate infrastructure and a lack of consistency in the organisational structure.[26]

Self-care is also a recurrent theme in the regional remote health workforce, including the challenge of managing work-life balance, supporting families, negotiating accommodation matters, acclimatisation, lack of socio-cultural facilities, social isolation including separation from social networks, adjusting to a new and often small community, together with the difficulties of managing personal and professional boundaries and importance of confidentiality in small communities.[26, 30]

Attractive aspects of rural practice included independence as primary health providers, practice variety and community recognition.[26, 30]

5. ATTRACTION AND RECRUITMENT

Attraction

Some stakeholders stated they were now finding fewer health professionals attracted to roles in the NT and the opportunity to obtain experience in Aboriginal and Torres Strait Islander health. In their view, poor organisational processes, poor understanding of the roles of allied health professionals in the multidisciplinary team and inadequate positions to address need result in limited job satisfaction. Given this trend and the resulting difficulties of recruiting at this time, stakeholders agreed on a need for a broader market strategy that would help to revisit and redefine the value proposition to attract health professionals to work in the NT. Clarifying and describing the broad scope of practice, offering entry level qualifications and rural generalism, including remote-specific aspects to specialist qualifications and clearly articulating the pathways to remote allied health practice are all important aspects in attracting an allied health workforce.

Rural areas have been called 'professional nurseries,' reflecting the tendency for new graduates to take up roles in rural and remote communities,[31] while providers have significant difficulty in attracting experienced health professionals.[9, 13] Stakeholders supported the observation that experienced allied health professionals are most difficult to attract, particularly in more rural or remote locations. Without experienced health professionals to mentor and supervise early years practitioners, gaps appear in the pathway. Employers are keen to support pathways including student placement as part of their service model but are unable to recruit experienced employees to supervise them. University roles specific to the supervision of students are also difficult to recruit to. New graduates are easier to recruit and will stay one to two years after which they often return interstate. Vacant roles for experienced allied health professionals are sometimes filled with inexperienced health professionals in the absence of more appropriately qualified applicants. This then has a flow on impact, placing greater pressure on managers and impacting on retention of the management workforce. The filling of these roles with less experienced health professionals may compromise patient care and masks the true workforce need.

Stakeholders suggested that a key way to stimulate workforce supply is to encourage providers, places and commissioning partners to create well supported entry level positions and training, to help get people on a pathway to a profession. Feedback also indicated that local employers needed to be encouraged or incentivised to employ local people who are more likely to stay near their family and 'grow' or learn more effectively from their home base. Stakeholders also suggested a need to create active linkages with professional bodies and networks to promote the NT as a viable career destination.

Recruitment

Stakeholders reflected on the need to be more creative in recruitment, especially for those services that are experiencing workforce difficulties to 'think outside the box.' Inability to do so may be due to a lack of capacity, 'permissions,' experience or expertise in seeking or identifying different options. Stakeholders described difficulties in 'knowing where to invest' in recruitment, which job boards to advertise on and how they will get the best return. The way roles are advertised impacts on the outcome and managers felt the need to develop more skill in their approach to recruitment including the ability to clearly define the position description, understand and promote a value proposition and identify and negotiate appropriate expectations.

There is some evidence that positions advertised with a focus on adventure or gaining regional and remote and Aboriginal and Torres Strait Islander health experience may be a position attractor or may eventually add value to a resume, but may not help to create an expectation of a long-term commitment. On the other hand, a focus on contribution, relationships and participation in community may engender more appropriate expectations and longer term 'buy in' from applicants who are then more likely to stay. Taking the time to attract and recruit for suitable personality attributes such as resilience and adaptability, will also better support retention of health professionals in remote locations and this knowledge may be used to develop valuable selection criteria.

Feedback also indicated that a regional and place-based focus on employment solutions through cross-sectoral collaboration will increase viability and create more varied and attractive roles.

Many programs have inadequate funding to cover full-time roles, however part-time positions are hard to fill. People are unlikely to relocate for part-time work and the type of people who seek part-time work are few in the NT. Further, it is difficult to offer flexible working hours, as the part-time hours created by this are very difficult to fill. This is likely to then impact the ability to retain experienced health professionals who are more likely to be those seeking flexible hours. While recruitment difficulties can vary over time and location, stakeholders felt that some professions stand out and a better strategy for directing people into areas of skills shortage in the NT is needed. Of particular note were audiology, dietetics and mental health and wellbeing professions (psychologists, mental health nurses, social workers, occupational therapists). Some figures provided included 66% of audiology positions vacant and 40% of social work positions vacant.

Rural Background and Experience

'Growing our own' health professionals is a tactic well accepted by stakeholders as a key strategy to increase recruitment and retention capability. While there is limited quality evidence showing the relative value of various recruitment interventions, available research shows rural background, quality rural placements and rural health course content have greatest impact on recruitment outcomes in rural and remote communities.[32] While Stagnitti et al. found rural exposure did not influence a decision to stay, 80% of respondents to their survey who had previous rural experience, indicated they were more likely to seek rural positions.[31] Additionally, literature has consistently shown that medical graduates and other health professionals are more likely to work in a rural location if they have a rural background or had undertaken a rural placement during training.[33] However, lack of permanency and disappointment with graduate programs can affect the retention of these, and all, graduates.[34] Recruitment to rural areas can also be influenced by bonding programs.[35]

The term 'rural pipeline' is increasingly used to refer to an emerging body of evidence that supports recruitment of students from rural backgrounds, training delivered in rural locations, rural and remote placements and rural content in curriculum followed by opportunities for rural and remote post-graduate employment and development.[32] While not all health professions will have the capacity to deliver training in rural locations, stakeholders advocated for universities to implement quotas for rural and remote students.

The potential barriers to students undertaking rural placements are an additional consideration. Schofield et al. undertook a survey of 121 students from a range of health professions to understand their employment commitments directly prior to rural placement.[36] They found that 41% of respondents were working immediately before their clinical placements and would therefore suffer potential loss of income if they were unable to work due to their placement. Scholarship support was unevenly distributed, with nursing and allied health students being relatively under-supported in relation to lost earnings. The study concluded that there are a number of financial disincentives for students to undertake rural clinical placements. Additional support for some disciplines is needed to offset this financial burden. Establishing an employment scheme for students on rural clinical placements and a scholarship for income replacement where employment is not available, would also alleviate income loss.

Stakeholders acknowledged the existence of some funded programs which support student placements such as those offered by the University Departments of Rural Health. However, access to these programs was seen as inequitable and support inadequate. The quality of student placement has a significant impact on outcomes and financial support to allow small providers to facilitate quality placements was seen as vital.

Stakeholders saw the potential value of maintaining relationships with individuals involved in workforce development programs including student health professionals who undertook placements in the NT. Stakeholders also saw the potential value in maintaining contact with NT residents studying interstate, providing support for these students and maintaining a connection by undertaking placements and holiday internships in the NT. A further observation was the need to support and connect the many young professionals in a range of roles (health, education, police) in rural communities to support and encourage them to link up and provide peer support to each other.

In July 2019 the National Rural Health Commissioner released a discussion paper for consultation, *Rural Allied Health Quality, Access and Distribution: Options for Commonwealth Government Policy Reform and Investment*, which outlined options across five policy areas.[37] One of these policy areas involves building a sustainable rural allied health workforce by creating opportunities for rural origin students, while another involves enhancing structured rural training and career pathways.

The *National Regional, Rural and Remote Tertiary Education Strategy* released in 2019 further outlines a range of strategies to improve access to tertiary study options for students in rural and remote areas by addressing financial impediments, providing student support, building aspiration and improving participation from equity groups (including Indigenous students).[38] This supports the imperative that the NT continues to focus on growing our own health professionals.

6. RETENTION

Rural and remote allied health services are characterised by higher annual turnover rates, compared to their urban or regional counterparts.[39] The cost of staff turnover is significant with the median total costs to replace an allied health professional estimated at $45,781.[39] One report noted that 30% of the Victorian allied health workforce left their profession within a period of seven to eight years.[40] This turnover reduces the overall experience profile of the profession and the capacity to mentor and support early years professionals.[40]

Factors influencing retention of health professionals include: community amenity, safe and supportive work environments including quality of leadership and management, job security, professional experience, career development, nature of the work and outreach support, professional networks, professional resilience, job setting, community engagement and public recognition of the role and appropriate financial incentives[32]. Stakeholders further identified poor orientation, lack of mentoring, support, supervision, career structure, professional development opportunities and burnout as contributors to the high turnover of allied health professionals. Given the breadth and complexities of practice in remote areas, access to professional development funding at a higher rate than in metropolitan areas was also seen as very important and is one way to recognise the value of the workforce. Additionally, the need for family support, particularly for health professionals with young families, is consistently identified as a key reason for losing experienced health professionals. There are well understood issues around access to infrastructure and, particularly topical at the time of interviews, the increasing cost of 'access to home,' with increasing cost and decreasing range of available flight options.

Stakeholders acknowledge that the ongoing nature of workforce transience in the NT is challenging and retention is vital in ensuring a sustainable allied health workforce, however some stakeholders also acknowledge that this transience needs to be accepted. A change of mindset, and innovation around approaches to ensuring the sectors resilience in the face of this transient workforce must be considered.

6.1 Local and Aboriginal and Torres Strait Islander Support Staff

Stakeholders confirmed that there is a need to apply future focus on attracting, developing and retaining a local Aboriginal and Torres Strait Islander workforce, especially mental health workers, as this contributes to cultural appropriateness, service acceptability, client engagement, effectively improving health outcomes. A supportive local Aboriginal and Torres Strait Islander workforce can improve job satisfaction and reduce turnover in associated professional roles such as psychologists.

Difficulties were noted for people working in mental health and wellbeing roles working across differing culture and value systems. This reveals a fundamental need for intercultural understandings and enhanced communication between clinicians, consumers and carers that can cross disciplines. It impacts the quality of assessment, diagnosis and treatment, the development of a therapeutic relationship and ultimately the take-up of allied health services. Lack of support in these areas can lead to allied health staff being underutilised on community, poor job satisfaction and poor retention.

6.2 Professional Resilience

Allied health professionals consulted through this needs assessment process identified that their role is not always well understood, particularly when working in medical and nursing dominated remote primary health care services. This can have a significant impact on professional productivity, job satisfaction and retention, particularly for early years professionals.

A significant increase in funds for social and emotional wellbeing services across the NT has seen a significant increase in mental health, social work and psychology positions in rural centres and remote communities. This workforce is new to the community and is therefore less well understood. Roles need to be clearly defined and the resident workforce need to understand how these new roles fit with and work with the existing strengths of each community as well as the local primary health care workforce. Stakeholders noted the success of some embedded services such as alcohol and other drugs services and identified a need to learn from these services, particularly their ability to sit comfortably between health and community services philosophies.

Ashby et al. examine the professional resilience of mental health occupational therapists, suggesting it is a key aspect of retention, particularly in workplaces affected by cumulative stresses or challenges.[41] The challenges that impact professional identity may include:

- professionals being expected to work outside their professional domains;
- professional isolation experienced as the minority discipline in an interdisciplinary group;
- supervision by a health professional from another discipline (who may not share a professional perspective); and
- a lack of understanding or respect for the discipline from the interdisciplinary group.

Professional resilience was also linked to a strong professional identity when Ashby identified the importance of the following sub themes:

- the use of discipline-based theories and concepts;
- becoming professionally bilingual;
- coping with pressure to adopt other forms of theoretical knowledge;
- professional socialisation;
- professional supervision; and
- knowing when it’s time to go.

Finally, Ashby also suggests that professional resilience, particularly of minority professions, can be supported by the creation of interdisciplinary teams where each profession feels validated and supported by professional supervision and professional networking.[41]

6.3 Job Setting

A study conducted by O’Toole et al. surveyed health professionals in rural Victoria and found that allied health professionals in private practice are more likely to be retained in rural areas than those in the public sector.[42] O’Toole suggests that this results from a broader social relations context affecting retention, than what is usually addressed by retention strategies. O’Toole is not suggesting a ‘universal shift’ to private

delivery, but that the answer to rural and remote retention of allied health professionals is part of a flexible approach where:

> 'local circumstances, individual needs (and skills) and institutional arrangements can coalesce to produce a range of local delivery outcomes (and)…..look beyond the personal and organisational issues associated with bureaucratic relations to aspects of market and associative relations that can act to embed people into local communities.'[42]

Stakeholders acknowledged that private providers in rural centres have a greater longevity, live within the region, have invested in the community and are known and trusted by the community. However, while historically owners of private practices may have been retained for longer in rural communities, this may change as a result of the NDIS. The NDIS provides a specific 'captive' target group with perhaps less of a need to develop a connection and reputation in the community and may therefore be more likely to be transient.

6.4 Community Engagement

Personal relationship with community is an important factor in retention. In the NT, allied health professionals are often employed in remote communities through outreach programs in fly-in-fly-out (FIFO) roles. These roles have more difficulty integrating into primary health care teams, poor clarity of their role in the community, poor access to adequate infrastructure to deliver quality services and may have a less strong relationship with the community due to the FIFO nature of their roles. This is an expensive workforce solution that often doesn't achieve outcomes that reflect investment. As a result, FIFO workers can have reduced job satisfaction, feeling they have less impact on the wellbeing of community as a result of limited access to deliver needed services. Working as a direct employee of the local health service, even in a FIFO role, increases retention and integration due to shared systems and governance and the workforce are more easily integrated with and supported by resident primary health care services.

Studies support the relationship between the health worker's community engagement and retention, noting that careful matching of health professionals with rural and remote communities is important, indicating that the quality (appropriateness for position) of each staff member is more important than the quantity (overall number) of staff.[43]

6.5 Leadership and Management

There is evidence that good governance, leadership and management are crucial to recruitment, retention and the performance of the workforce over time, with implications for professional development particularly of clinicians moving into management roles[43]. In a survey of allied health professionals conducted in rural Victoria, reasons given for respondents wanting to leave their position were: management structure (10%), lack of career structure (9%) and lack of professional support (12%). Clear job descriptions, good orientation, professional support (including locums and multi-professional teams), lifestyle, family support and a career path were identified as key factors in health professionals' intention to stay. While little can be done to change the personal or community factors that impact on retention of health professionals, management factors can be addressed through appropriate training and policy.[31]

6.6 Job Security

A significant portion of rural and remote services are funded through Australian Government programs which historically experience short funding cycles and limited notice of funding extension. This lack of security has a significant impact on the turnover of allied health professionals involved in the delivery of these programs.[44]

6.7 Experience

Allied health professionals commencing their rural or remote placement as more experienced professionals will stay longer than other health professionals.[39]

6.8 Retention Framework

Humphreys et al. in a review of retention strategies for health professionals in rural and remote areas, notes the need for a coordinated national approach to go beyond the realm of medical practitioners:

> 'Given the overwhelming importance for the primary health care approach to address the health needs of rural and remote populations across Australia, it is important to recognise and address the workforce needs of all health professionals and not just those of medical practitioners. Research indicates the need to ensure that all health professionals (regardless of discipline) working in rural and remote areas, are provided with essential requirements for them to deliver sustainable high-quality care in a way that is professionally satisfying. A coordinated national approach is required to enable services to design and flexibly implement retention packages for all of their staff.'[43]

Humphreys et al. propose a comprehensive rural and remote health workforce retention framework with six components:

(i) maintaining an adequate and stable staffing; appropriate recruitment – selecting the right person and providing adequate relief - avoiding burnout;
(ii) providing appropriate and adequate infrastructure, Information Communications Technology, vehicle and housing;
(iii) maintaining realistic and competitive remuneration;
(iv) fostering an effective and sustainable workplace organisation with good communication, career development, employee induction and orientation, leadership, management and supervision;
(v) shaping the professional environment that recognises and rewards individuals making a significant contribution to patient care such as a preceptor/mentor ship program, collegial support and supervision, Continuing Professional Development and conference opportunities, engaging in research and scholarships for academic pursuits, degree of autonomy, opportunity for promotion and career pathway within organisation/service; and
(vi) ensuring social, family and community support.[43]

A literature review by Gwynne et al. identified three categories of factors affecting retention of the non-Indigenous health workforce in rural and remote locations. These were:

- clinical experience, qualifications and skills;
- access to professional development, supervision and peer support; and

- interpersonal communication, cultural competence and perceived connectedness with the rural or remote community.[45]

6.9 Incentives and Supports

Intention to stay has been linked to financial incentives, CPD and personal support.[35] In a review of evidence, Buykx et al. found that non-financial incentives related to working and housing conditions, can be an even greater influence on health professional retention.[46] Therefore, while financial incentives are one of the most common pathways for retention strategies, data shows that other considerations may be more effective in influencing a health professionals' decision to stay. Further, there was little evidence that incentives that oblige health professionals to stay, including return of service obligations attached to financial incentives or visa restrictions, influence retention past the period of the obligation.[46]

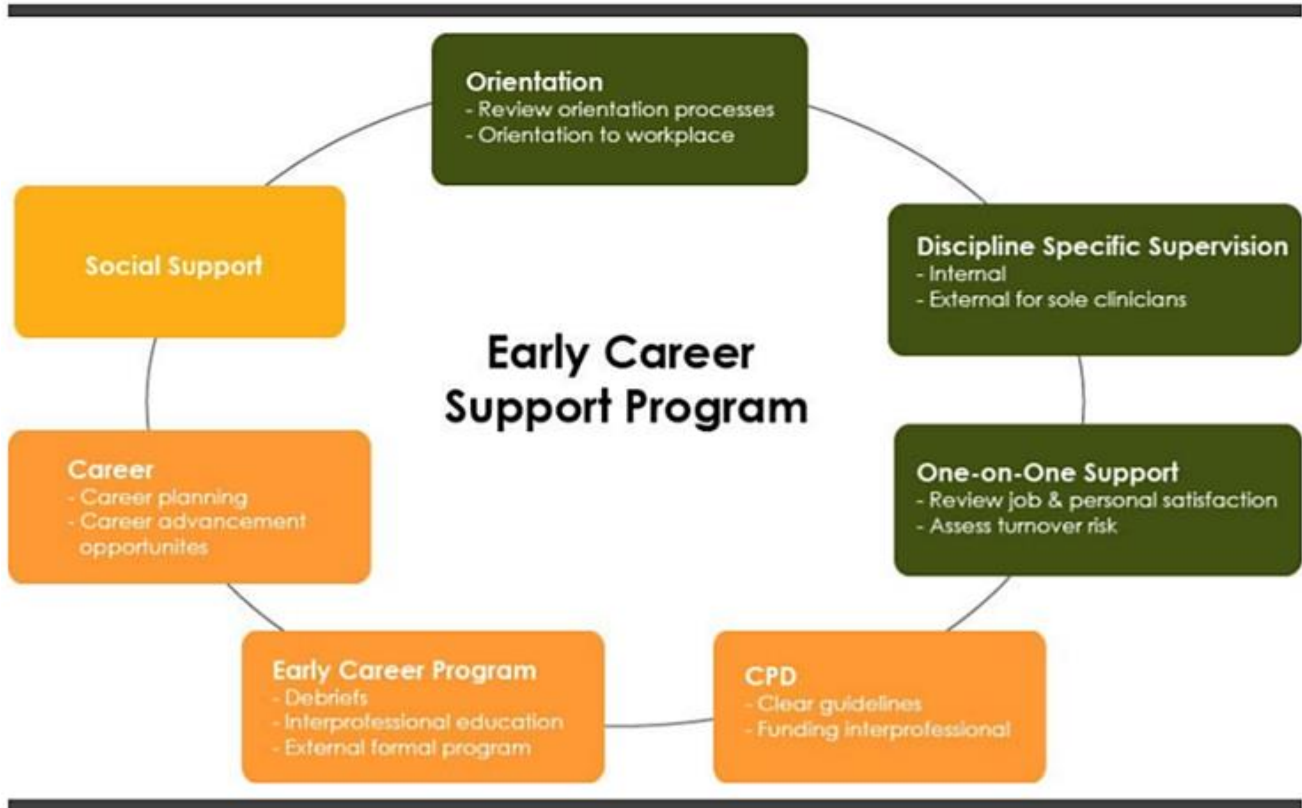
Literature indicates a range of potential ways in which the challenges of rural practice can be addressed. Professional supports include comprehensive orientation to the role and community, supervision, CPD and networking opportunities and clear career pathways. Financial considerations including travel expenses for professional development and social supports including support for families, social and recreational opportunities are important along with availability of locum support.[26]

The recent discussion paper released by the National Rural Health Commissioner, *Rural Allied Health Quality, Access and Distribution*, recommends funding HECS-HELP loan repayments for health professionals working in rural and remote communities. This suggestion is corroborated by stakeholders including the NT branch of the Pharmacy Guild of Australia in their submission to this needs assessment.

6.10 Early Years Mentoring Supervision and Support

Stakeholders consistently identified challenges with supporting early years health professionals. Difficulties often stemmed from a lack of depth of experience within employer organisations to provide appropriate peer support, clinical governance and supervision. Cooper and Cosgrave summarise the key components of support required for early years allied health professionals in rural and remote locations (Figure 4).[47] An opportunity exists for health services to collaborate across health services and jurisdictions to collectively achieve what is difficult to achieve individually.

Figure 4: key components of support required for early years allied health professionals in rural and remote locations



Source: Cooper R, & Cosgrave, C (2018)

Supervision has emerged as a constant theme in all aspects of this needs assessment for allied health professionals and is critical throughout the allied health pathways.

Historically allied health professionals work in discipline specific teams managed by a senior of their discipline, whether in private practice or hospital settings. This is gradually changing, driven by:

- an increasing focus on a more multidisciplinary team approach;
- the small scale of discipline specific work in small communities;
- the formation of collaborative relationships and referral pathways to and from medical practitioners as well as other allied health disciplines; and
- a move toward co-located health disciplines.

Service models where health professionals (including doctors, nurses and allied health) are managed at a service level rather than by discipline are becoming more prevalent. The challenge is to achieve this while maintaining a professional supervision matrix structure for supervision and support through a discipline senior. The Dietitians Association of Australia, in their submission to this needs assessment, note that supervision can include both onsite interdisciplinary supervision and offsite clinical supervision from a fellow dietitian.[14]

Top End Health Services (TEHS) has recently created allied health leadership positions to provide better input into policy decision making as well as direction, coordination and clinical governance of the allied health

workforce. How this outcome might be achieved at a jurisdictional level warrants consideration as the employment of allied health professionals increases in rural and remote multi-disciplinary health services where the depth of discipline specific expertise is limited.

The review of Australian Government health workforce programs in 2013 recommended that the Australian Government fund the establishment of allied health networks and professional hubs in rural areas to provide peer support, ensure adequate supervision of students and new practitioners, and access to CPD.[28] This concept was reiterated by members of the Rural and Remote Health Stakeholder Roundtable in 2018 when they discussed initiatives such as telehealth models of supervision and the appointment of regional clinical senior positions.[48] Most recently, the National Rural Health Commissioner has recommended compensating supervisors of allied health students in private practice.[37]

6.11 System Capability

Systems that support allied health professionals to manage the wide-ranging demands on them will assist in retention. Use of allied health assistants will enable allied health professionals to delegate tasks and manage workload while increasing interventions and client outcomes. Use of telehealth to network with allied health professionals with specialist expertise will assist generalists to meet wide ranging needs in their communities.[32]

7. PROFESSIONAL DEVELOPMENT

Access to ongoing training and support is particularly difficult for allied health professionals in the NT. With a large variety of allied health professions and relatively few in each profession, the NT does not have the critical mass to make local training opportunities viable in many cases. For example, the NT Government allocates a set amount for each professional for CPD. While the amount increases with the longevity of the employee, stakeholders noted that the amount did not even cover the cost of travelling interstate to access CPD, let alone accommodation or course fees. There is also a need to consider more generalist courses as well as understanding that a small number of allied health professionals will require specialist training.

There is also concern that there may be a lack of experienced mentors at the local level in some of the more specialist allied health areas such as women's physiotherapy. This then may indicate a need to develop a more blended, flexible and place-based learning model consisting of a mix of visiting, online or workplace-based practice support modalities that could include clinical mentoring, tutoring or even coaching.

Managers note that there are few other people in their profession, at their level and in their region, therefore access to mentoring within the profession is very difficult. There is both an opportunity and interest from universities to be more involved in graduate mentoring and support and potentially in the delivery of CPD.

TEHS recently introduced a program for new graduates. While other organisations do not have the capacity to employ educators, regional cross jurisdictional collaboration could improve capacity for this activity.

It was also suggested that further improvement to CPD opportunities could be achieved by working together across both private and public sectors to identify common needs for CPD in the NT. Making opportunities open to all sectors could attract experts to the NT to offer courses. A more collaborative approach would be

beneficial to the NT workforce with many people moving across sectors. There is also scope to improve networking, linkages and awareness of what is happening in the allied health field across the NT.

Cultural responsiveness is also seen as critical to both staff retention and the effectiveness of health services in meeting local need. AHPRA are in the process of increasing emphasis on cultural responsiveness and safety as a clinical requirement. It is envisaged that professional board level standards, guidelines and tools will then be developed to ensure basic cultural responsiveness skills. Cultural orientation needs to be local, contextual and ongoing. Cultural mentoring, done well, can be transformational, however mutual expectations need to be well understood and recognised.

7.1 Maximising service responsiveness

Stakeholders noted the importance of CPD in maximising the ability of the NT workforce to meet the needs of the community. The NT Branch of the Pharmacy Guild of Australia provided an example whereby coordinated delivery of pharmacist vaccination training to 40 local NT pharmacists resulted in a dramatic increase in community pharmacies implementing a vaccination service in their pharmacies, with all regions (apart from Nhulunbuy) now offering the service for their communities.

7.2 Rural and Remote Skills and Specialisation

Allied health professionals in remote and rural practice require additional competencies, including:

- clinical competencies such as advanced practice and multi-skilling, including health promotion, public health and primary health care skills;
- organisational competencies including communication, supervision, advisory, prioritisation and business skills;
- other professional competencies such as service planning and evaluation, implementation of alternative service models, self-care, advocacy for role of own profession within the multidisciplinary team or community, networking, quality and safety management skills;
- cultural competencies;
- team practice competencies including leadership and the ability to work collaboratively and in multidisciplinary teams; and
- attitudinal competencies such as the ability to be cooperative and collaborative, autonomous, resourceful, creative, reflective and critical of own practice.[26]

Skills related to personal safety including four-wheel driving, first aid, observing local protocols and knowledge of local area were also important. Orientation and support to transition new allied health staff to rural and remote practice was seen as critical.[29]

Rural and remote specialisation would require a clinician to demonstrate skills in population health, community-based assessment and intervention. Sheppard and Nielsen identify the specialised skills of a physiotherapist working in rural and remote communities as being able to:

- determine population-based needs and facilitate community involvement;
- focus on appropriate communication strategies to clients and communities;

- devise responsive strategies to individual and community needs with new ideas about service models;
- learn new and changing professional identities;
- build a practical understanding across the range of health practice areas in order to identify appropriate referrals and networks; and
- act as researchers and evaluators of what they are doing and let everyone know their success stories.[49]

7.3 Recognition

There is some evidence that rural and remote practice is becoming a recognised discipline within physiotherapy. The Australian Physiotherapy Association convenes a National Rural Issues Committee, advised by a Rural Members Council, which reports directly to the board of directors on rural and remote issues. A rural network recognises the needs of members practicing in rural and remote locations, there is a rural representative or portfolio holder on each state branch council and specific rural and remote representation on the National Advisory Council. Allied Health Professions Australia (AHPA) established the AHPA Rural and Remote committee to better understand and support the needs of their rural and remote members and provide a voice around rural and remote issues at a national level. However, there is currently no recognition for rural and remote practice as a specialty within most allied health professions and a process of identification of key competencies is required to define this specialisation.[48] Specialisation in rural and remote practice will emphasise the positive opportunities rural and remote practice presents, increase the profile of rural allied health careers and provide a useful strategy for recruitment and retention.[48]

8. WORKFORCE MODELS

8.1 Cross Sectoral Collaboration

The provision of core allied health services to more remote locations is unlikely to be affordable without exploration of alternate service delivery models for allied health disciplines.[28] Remuneration being siloed across sectors decreases viability and efficiencies in all sectors and results in an increased dependence on visiting service models where joined up models would otherwise make local service models viable. Stakeholders identified a need to be more open and creative about different approaches to shared workforce solutions, particularly looking at cross-sector and place-based workforce development opportunities. Potential exists to increase the viability of allied health roles in remote communities by exploring models that strengthen collaboration between all services, combining funding sources and resources across areas such as public and private services, NDIS, aged care and primary care to achieve workforce solutions and sustainable service outcomes.[28]

Outside of Darwin and Alice Springs there are few private allied health services in the NT. This means that communities have limited ability to access Medicare Benefits Schedule (MBS) items or realise the value in private health insurance for allied health services. Models need to be explored which strengthen collaboration between all sectors including private, public, health, aged care and disability sectors. Primary health networks (PHNs) have long been identified as potentially playing a role in increasing access to allied health services in rural locations by facilitating an integrated approach to employment of allied health practitioners.[28] In 2011 a toolkit was developed to support the development of cross-agency allied health workforce options, this

toolkit was developed as a precursor to a significant role that Medicare Locals[g] were expected to have in brokering such arrangements.[50]

One of the policy areas outlined in the National Rural Health Commissioner's 2019 discussion paper involves creating sustainable jobs, acknowledging that the viability and sustainability of rural allied health services can be maximised by enabling delivery of services across sectors.[37] The National Rural Health Commissioner proposes the concept of Integrated Allied Health Hubs (IAHHs), multidisciplinary allied health 'one stop shops' providing face to face, outreach or telehealth services. IAHHs would operate through partnership between rural workforce agencies (RWAs), PHNs, local health networks and local hospital districts, existing non-government organisations (NGOs), general practices, ACCHSs, universities, multipurpose services, allied health practices, local government, schools, disability services and aged care services, drawing from multiple funding sources and operating across all sectors.

A variety of cross-agency service level solutions have been demonstrated across the NT, some are reported in Section 13.

8.2 Outreach

The National Rural Health Commissioner reports that, for smaller communities, outreach consultations are critical for enabling early intervention and continuity of care.[37] Allied health services are often provided to more remote communities in the NT by health professionals from Darwin, Alice Springs and in some cases from interstate or overseas. Exemplifying the role of outreach services in the NT is the *Outreach Health Program Report: July 2012 to December 2017* on hearing health outreach services provided to Aboriginal and Torres Strait Islander children and young people in the NT.[19] This report details the provision of outputs of 1870 audiology, 876 ear, nose and throat teleotology and 876 clinical nurse specialist services. Of those treated, 55% had reduced hearing loss and 65% had reduced hearing impairment over subsequent visits.

Another of the larger programs providing allied health outreach, is the Medical Outreach Indigenous Chronic Disease (MOICD) program. This is an Australian Government funded initiative to support a range of multidisciplinary health outreach services to Aboriginal and Torres Strait Islander people in the area of chronic disease prevention, detection and management. In the NT, the MOICD program is administered by Northern Territory PHN. Services covered include dietetics, podiatry, cardiac educators, exercise physiologists and diabetes educators.[51] Northern Territory PHN delivered outreach services totalling 2657 visit days, 1456 visits, and 16,812 clients during the 2017–18 financial year.[52] While MOICD is just one of a number of outreach programs in the NT, this outreach approach is the workforce solution for the delivery of most allied health services for the more than 80 remote communities in the NT. This service alone reflects delivery of more than 12 FTE of allied health services in these remote communities including over 2 FTE each of podiatry, physiotherapy, diabetes nurse education and exercise physiotherapy. It is important to note there is a wider diversity and number of outreach services than those reflected here, and that work will continue across the NT to identify and collect this data to help better inform health workforce planning into the future.

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[g] Medicare Locals, established in 2011 to coordinate regional primary health care services, transitioned to Primary Health Networks in 2015

Outreach service provision is unique to rural and remote practice and can present particular challenges and rewards and require particular skills.[53] There are a limited number of recent publications specifically related to outreach models of allied health delivery. However, work from remote north-west Queensland in 2003 identified large caseloads including excessive travel as a barrier to retention of allied health professionals in rural and remote areas. This study also identified sustainability of the outreach service model as a challenge in terms of both recruitment and retention and also effectiveness of the service.[54]

Effectiveness of outreach services can be influenced by factors, such as lack of comprehensive induction and local orientation programs including cultural orientation, worker safety concerns and the high turnover of both resident staff of the primary health care service and the visiting health professionals.[44]

While the outreach approach is a viable workforce solution, stakeholders were concerned that it does not contribute to building local workforce capacity and viability in the long-term. Building local capabilities and capacity must remain a priority. In 2018, Northern Territory PHN commenced a commissioning process for its Outreach Health Services Program. This involves the co-design of an outreach health services model with remote primary health care services. Stakeholders noted that outreach commissioning can, and is, being used to enhance and leverage workforce sustainability including:

- approaches that contract private place-based services providers where they exist and thereby increase the viability of those services;
- options to develop viable place-based employment solutions through combining resources across programs; and
- approaches that achieve greater investment by visiting health professionals in developing local capacity.

8.3 Telehealth

Stakeholders were firm in their belief that telehealth must continue to be examined for its potential as a workforce solution. Services are reporting that they now have evidence demonstrating the value of telehealth including better health outcomes and reduced need for patients to travel to access services and are committed to maintaining and improving access to video conferencing. [55] Such a commitment is reflected by the NT Government through Objective 3.5 of the NT Health Strategic Plan which is to "expand appropriately supported teleconferencing including telehealth to improve connectivity of all the healthcare team, as well as patients and carers". [56] The National Rural Health Commissioner notes that telehealth solutions are imperative in providing timely access and continuity of care for smaller communities.[37] Further, one of the policy areas outlined by the Commissioner involves utilising service models such as telehealth in supported and structured ways to broaden the sustainability and impact of the rural allied health workforce.[37]

Audiology Australia described a need to develop and promote different ways to deliver audiology assessment and support in remote locations noting that the growth of tele-audiology provides opportunities to increase overall delivery of services. These approaches however require more infrastructure and systems support, particularly appropriate reimbursement.

The DAA support delivery of services by telehealth when access to an in-person service is not possible or requires significant travel.[14] DAA report use of telehealth by their members, sometimes impeded by

unreliable technology and the need for support provided at the patient end of the service. DAA notes that while Medicare reimburses certain medical practitioners for telehealth services, this support is not available to allied health professionals claiming Medicare allied health chronic disease management items. DAA identifies the opportunity for improved workforce solutions by addressing these inconsistencies.

Continuing to reflect the broad acceptance of telehealth by allied health peak bodies, the NT branch of the Pharmacy Guild of Australia suggest that community pharmacies have the infrastructure and capacity to facilitate a pharmacy-based technology hub concept, supporting delivery of telehealth services by a variety of professionals if appropriate funding structures and supports were available.

8.4 Skill Sharing

Skill sharing occurs where knowledge, skills and responsibilities for approved clinical services are shared across professional disciplines. The aim of skill sharing is to provide timely or opportunistic services, particularly where there is limited access to the range of allied health professions. Skill sharing is a key premise of the allied health rural generalist model.[32]

8.5 Rural Generalism

Stakeholders also identified workforce solutions that extend the skills and resources of the resident workforce and support these resident health professionals with specialist access and advice. (see 11.1, Allied Health Rural Generalists)

8.6 Recruitment of overseas trained professionals

Workforce challenges are now generally accepted to be a matter of maldistribution rather than shortage. Government policy is reflecting this, and stakeholders are identifying increasing challenges with recruiting overseas trained allied health professionals. The NT Skilled Occupation Priority List recognises pharmacists, medical diagnostic radiographers, occupational therapists, physiotherapists, speech therapists, audiologists and psychologists as high priority occupations. Stakeholder sentiment still reflects some need for employment of overseas trained allied health professionals if the domestic market cannot meet the recruitment need but identified the significant burden of application fees for employers to sponsor allied health professionals on temporary skill shortage visas.

9. DEMAND

Demand for allied health services is influenced by the significant burden of disease in the NT, prevalence of health insurance, increasing allied health access to Medicare items, expanded role of allied health in primary care, extended scope of practice, NDIS and aged care reforms.

9.1 Disease Burden

The NT experiences a much higher burden of disease than other jurisdictions.[57] This will continue to drive demand for a different mix, size and skill base in the allied health workforce.

9.2 Service Delivery Model

Allied health services are funded in a variety of ways, each showing different trends and having an impact on the demand for health professionals.

2.1.1 *Private Health Insurance*

44% of Territorians have general health insurance compared with 54% nationally.[58] In 2017–18 there were just 147.5 allied health related general treatments provided under private health insurance per 100 people in the NT compared with 212.9 nationally.[58] Nationally the per capita use of general (non-hospital) private health services increased 29.3%. This was most notable in natural therapies (132%), optical (54%) and physiotherapy (34%).[59] Only 20% of Aboriginal adults in non-remote areas of Australia have private health insurance compared with 57% of non-Aboriginal adults. While data was not available for remote areas it is expected this would be significantly lower again.

2.1.2 *Medicare*

Traditionally Medicare has covered only medical services. However, increasingly allied health services can be funded through this public health insurance scheme including:

- since 1975, optometrists have been able to bill for some vision assessments;
- prescribed oral surgical procedures carried out by a dentist;
- the Medicare allied health initiative (2005) allows chronically ill people who are being managed by their GP under a chronic disease management plan to access Medicare rebates for allied health services; and
- in 2006, MBS items for psychological therapy treatments were introduced as part of the Better Access to Psychiatrists, Psychologists and GPs program.

Nationally the per capita utilisation of Medicare funded allied health services increased by 91% between 2007–8 and 2016–17. This increase was greatest for podiatry (430%), physiotherapy (311%) and mental health services (132%).[60]

Submissions made by the DAA to this needs assessment recognised the increasing importance of allied health consultations currently allowed under the Medicare chronic disease management items, advocating for an increase from five per annum to ten per annum to enable better overall access to allied health practitioners, including APDs, to support patient self-management. DAA also advocate for further additions of MBS items for dietetic services for mental health, disability, and prediabetes. Such inclusions would provide valuable access to dietetic services, thereby increasing workforce demand. The NT branch of the Pharmacy Guild of Australia note that pharmacists are not eligible to claim MBS chronic disease management service items for the provision of health services to people with a chronic disease. Access to the MBS for chronic disease management, case conference and telehealth items by pharmacists practising from any setting would increase access to pharmacy services, particularly in remote settings.

It must be noted here however that Medicare is a less viable model for funding rural and remote allied health services for several reasons. There is no indexation of the MBS schedule to accommodate the additional expenses involved in delivering services in rural and remote communities, further, they do not accommodate the additional time required to provide culturally sensitive services or the impact of attendance for appointments when delivering services in remote Aboriginal communities. This has been acknowledged by the National Rural Health Commissioner with policy suggestions including provision of incentives compensating for the complexity that increases with rurality of practice.[37]

2.1.3 *Government Initiatives*

A range of government initiatives have been funded to address poor access to allied health services in at risk communities. These programs include, but are not limited to the:

- Rural Primary Health Services Program (RPHS): an Australian Government funded program which aims to improve access to a range of primary and allied health care services and activities for rural and remote communities which may involve allied health services. In the NT, the program supports activities in Tennant Creek, Borroloola, Galiwin'ku, Jabiru, Katherine West, Elcho Island, Katherine and Utopia Homelands;
- Access to Allied Psychological Services (ATAPS) program: an Australian Government funded short-term mental health service initiative for priority population groups that have difficulty in accessing mental health treatment such as people who are in remote areas, unable to pay service fees, or at risk of homelessness;
- MOICD Program: funded by the Australian Government to increase access to a range of health services, including expanded primary health care for Aboriginal and Torres Strait Islander peoples, in the prevention, detection, treatment and management of chronic conditions. Allied health services are provided to more than 80 communities across the NT through this program; and
- Visiting Optometrists Scheme: supports optometrists to deliver outreach optometric services to remote and very remote locations, and rural communities with an identified need for optometric services.

9.3 Scope of Practice

Scope of practice for many allied health disciplines in Australia continues to expand with professional bodies seeking to support and encourage appropriate innovation.[61] This expansion is likely to drive increased demand for allied health services, training and development needs and governance considerations. There is good evidence to support potential savings from increasing the role of allied health in primary care. There is scope to increase allied health involvement in preventing hospitalisation, in conducting screening assessments to reduce the waiting lists of specialists and in chronic disease management. Realising this potential will also potentially increase demand for allied health professionals.[40]

Expanded scope of practice in allied health aims to improve patient access to health care in rural and remote communities. In 2014, Queensland Health identified several actions required to support implementation of expanded scope. These were:

- organisational commitment;
- redesigning models of care to improve patient access and outcomes and improve cost-effectiveness through expanding scope of practice;
- showcasing opportunities to enhance patient experiences and provide cost-effective services through allied health professionals expanding their scope of practice;
- addressing barriers to allied health professionals expanding their scope of practice including funding models and amending regulation, legislation and policy;
- evaluating outcomes of full scope of practice and provide evidence of its benefits; and

- accessing education, training and tools to support allied health professionals to expand their scope of practice.[62]

Queensland Health have led the way in undertaking these actions implementing allied health led models of care, achieving legislative change to enable endorsed podiatrists to prescribe for the treatment of podiatric conditions and physiotherapists and podiatrists to request plain-film x-rays. Prescribing trials involving physiotherapists and pharmacists have also been undertaken including initiatives to increase the use of allied health assistants to support expanded scope.[63]

Pharmacy is one example of opportunities to both use and expand the health profession's full scope of practice, by increasing responsibility, and accountability for medicines management, embedding pharmacists wherever medicines are used and equipping them to enhance community access to health services.[64] Emerging service models involve pharmacists as an integrated part of health care teams, moving from a transaction-based, commoditised dispensing model of practice to a relationship-based, patient-centric and collaborative model. Pharmacists have played a key role in managing patients' health concerns by using their clinical training to 'assess then treat or refer' based on patient needs and are becoming integrated into general practice, aged care facilities, Aboriginal and Torres Strait Islander health services and disability services.

Improving patient outcomes can be achieved by equipping pharmacists to enhance community access to health services with pharmacies evolving from retail to health care settings and holding greater ability to initiate treatments, alter medications and change doses where appropriate. Australia has recently introduced pharmacist-provided vaccination in all states and territories for several vaccines (e.g. influenza, MMR, dTpa/DTPa). There is broad support for a pharmacist delivered vaccination scheme and minor ailment scheme in Australia, which allows specific groups of people to access treatment of self-limiting illness such as fungal infections, allergies, diarrhoea, ear aches, sore throats, and headaches through their pharmacist. Pharmacists are also able to offer health promotion, education and screening services including smoking cessation, weight management, cholesterol, blood glucose and blood pressure screening. While the conversation around pharmacist prescribing continues, changes to the scheduling of some medications in recent years has increased pharmacists capacity to supply a limited range of medications under specific conditions, and other changes have increased capacity to provide continued dispensing of statins and oral contraceptives.[64]

While maximising or expanding scope of practice is seen as a critical factor in improving access to services, limitations are often a commercial question of how it will be funded, or who will pay.

9.4 National Disability Insurance Scheme (NDIS)

The rollout of the NDIS throughout the NT has significant implications for the employment of allied health professionals. The shift to individual funding is a structural change which may be challenging for practitioners, who often must undertake costly operational adjustments to become registered NDIS providers. It is also anticipated that the NDIS will create additional demand for a skilled allied health workforce, which will be difficult to meet in areas where there are already an inadequate number of practitioners. The NDIS is also a substantial change for the individual consumers and carers who are faced with decisions about whether to have their funding managed by a not-for-profit disability provider, or to share their funding management with a disability provider in a blended management arrangement, or to self-manage, which means they need to

become an employer or service contractor of allied health professionals. Such a system change could result in a demand for more flexible service provision, with resulting impact on service viability.

The NDIS trial in the Barkly region showed poorer outcomes than trials in less remote locations, with a high level of unmet demand, particularly for allied health services. It was observed that there was a historically inadequate supply of disability services in the region, and this did not improve despite the additional NDIS funding. There were few new providers entering the region contrary to what was observed in other locations and recruitment and retention continue to be challenging. The particular considerations of remote service delivery, including adequate funding for transport and travel time, remain an issue for all providers.[65]

Stakeholders have some concerns about the potential workforce implications of the NDIS including that:

- government initiatives including NDIS and aged care packages are creating a demand for allied health services that is not necessarily being met;
- a refocusing of government funded services resulting in uncertainty with positions on short-term contracts, which is increasing turnover and reducing capacity to recruit;
- there has not been a corresponding increase in market development matching the reduction in government services;
- the NDIS funding model appears insufficient to encourage private allied health providers to establish very remote services, as the cost of delivery, particularly travel, can be too high to service a small number of clients in each location;
- providers will go where their business is most lucrative – the areas of high population density where they can get the most work for the least cost overheads; and
- without the necessary allied health capacity there will be impacts on support roles such as allied health assistants.

10. ABORIGINAL AND TORRES STRAIT ISLANDER ALLIED HEALTH PROFESSIONALS

Aboriginal and Torres Strait Islander people make up approximately 30% of the NT population, however no more than 4% of any allied health discipline are Aboriginal or Torres Strait Islander. Only 1.6% of Australian domestic university students are Aboriginal and Torres Strait Islander and only 47% of Aboriginal and Torres Strait Islander students who started a university level bachelor degree in 2006 had graduated by 2014 (compared with 74% for non-Indigenous students).[1]

Including compulsory cultural content in the curriculum and having culturally safe university and placement experiences are critical to increasing the participation and progression of Aboriginal and Torres Strait Islander students in allied health courses[1]. Stakeholders also recommended that Aboriginal and Torres Strait Islander quotas should be implemented for allied health university courses along with accountability for universities to provide appropriate supports and entry pathways. The clinical sciences program offered as part of the NT Medical Program and, historically, the occupational therapy pathway positions offered jointly by Charles Darwin University (CDU) and Flinders University prioritise access for Indigenous applicants and Northern Territorians. Other CDU health course programs do not currently have the same prioritisation, or offer specific

course level Indigenous entry programs, although these are under development. Currently CDU health courses achieve 7% Aboriginal and Torres Strait Islander enrolment, with a target of 15%.

The *IAHA Workforce Development Strategy* has five domains that cover the journey into and through allied health:

1. **Pathways into allied health:** increasing Aboriginal and Torres Strait Islander peoples' knowledge and understanding of the role and value of allied health professionals and making it easier for people to enter allied health professions:
- importance of early (high school) exposure;
- importance that pathways are identified and made available to more people than they have been previously; and
- traditional and non-traditional, direct and indirect pathways are acknowledged and supported.
2. **Student support and engagement:** ensuring Aboriginal and Torres Strait Islander allied health students receive the appropriate and ongoing support they need while at university, understand the value of, and to develop as, allied health professionals and making it easier for people to enter allied health professions:
- importance of university commitments to increasing Aboriginal enrolments, retention and completion.
3. **Transition to early careers for our graduates:** providing support as we recognise the time when Aboriginal and Torres Strait Islander allied health students move from university to paid work in their chosen allied health career can be stressful and challenging:
- the cultural safety and responsiveness of health employers and service environments;
- organisations identifying need, demand and targets for growing the number of Aboriginal and Torres Strait Islander allied health professionals employed in clinical and non-clinical roles; and
- appropriate and sustainable workforce models that support new Aboriginal and Torres Strait Islander allied health graduates to work in rural and remote Australia.
4. **Allied health career development and support:** supporting Aboriginal and Torres Strait Islander allied health professionals to grow and develop in their chosen allied health career including clinical, non-clinical and management careers to support them to become successful, valued and respected:
- CPD opportunities;
- leadership development and training opportunities.
5. **Enable future workforce development:** ensuring future planning and workforce projection models consider and incorporate the vital work and need for a major increase in the number of Aboriginal and Torres Strait Islander allied health professionals.[1]

Once Aboriginal and Torres Strait Islander practitioners have entered the workforce, stakeholders have observed that they may have difficulty practicing effectively in their home communities due to family and cultural obligations. There is a need to further support the Aboriginal and Torres Strait Islander workforce to navigate these challenges.

11. EMERGING ROLES

11.1 Allied Health Rural Generalists

Engagement with the allied health generalist pathway is in its infancy. At a national level Services for Australian Rural and Remote Health (SARRAH) have taken the lead in defining and supporting the development of these roles. In the NT, TEHS is the primary agency working in this area. Top End Health Services have four Allied Health Rural Generalist Training Positions which are 18month -2-year positions. The professions eligible are speech pathology, physiotherapy, social work, psychology, podiatry, radiography, occupational therapy, nutrition/dietetics, the first cohort of trainees were from the professions of Podiatry, Pharmacy, Speech Pathology and Physiotherapy. The second cohort which commenced in July 2019 are from professions of pharmacy and nutrition/dietetics.

Stakeholders view the rural generalist pathway as a means to recruit locally, meet the needs of community, keep family connections strong, provide career development opportunities and create sustainable services. Opportunities or supports for this pathway are being examined by other stakeholders in several ways. For example, Flinders University through the Centre for Remote Health is exploring useful synergies with the remote health practice program. Stakeholders also identified a need to provide support to health professionals on the generalist pathway, identifying a potential need for academic support, mentoring and culturally responsive practice.

The Rural Generalist Role

There appears to be significant support and momentum for the concept of a rural generalist in allied health[28, 66], which aims to build the capacity, value and sustainability of allied health services and multi-disciplinary teams in rural and remote areas.[67] Allied health rural generalist positions were first implemented in Queensland in 2014 under the direction of the Allied Health Professions Office of Queensland.

The initial program aimed to:

- increase rural and remote employment opportunities for early career allied health professionals;
- establish a model for training, development, and ongoing support;
- increase rural exposure and incentivise rural and remote practice;
- support the sustainability of the rural and remote allied health workforce; and
- trial rural and remote allied health generalist models of care.

Early evaluation showed improvements in staff satisfaction, personal stress, collaboration, service integration, communication within and between multidisciplinary teams, referral and service pathways and the creation of networks with regional and metropolitan services. The evaluation also demonstrated increased service development opportunities, improved continuity of care and increased service capacity through telehealth, new models of care including group services and the use of allied health assistants.[68]

> 'The term allied health rural generalist refers to a service, or to a position or practitioner delivering the service, that responds to the broad range of health care needs of a rural or remote community.
>
> This includes delivering services for people:

- with a wide range of clinical presentations;
- across the age spectrum; and
- in a variety of clinical settings (inpatient, ambulatory care, community).

The primary aim of generalist service models is to deliver high quality, safe, effective and efficient services as close to the client's community as possible. To meet this aim, teams and individual health professionals need to implement strategies that maximise local service access and quality.

The primary strategies are:

- telehealth;
- delegation to support workers (e.g. allied health assistants);
- extended scope of practice including skill-sharing (trans-professional practice); and
- partnerships supporting the implementation of a 'generalist scope' for complex or low frequency clinical presentations, including rural-urban, cross-agency and cross-sectoral partnerships that use shared care or collaborative practice models.

Role breadth is relatively unrelated to the depth or complexity of practice. Consequently, allied health rural generalist roles can reflect the continuum from early career through to more experienced and skilled levels of practice, including extended scope.'[69]

Rural Generalist Pathway

The allied health rural generalist pathway has been defined by SARRAH and includes three elements, a formal education program, workforce policy and employment structures, and rural generalist service models[69].

James Cook University's *Allied Health Rural Generalist (AHRG) Program* offers the formal education component of the rural generalist pathway. There are two levels to this program. Level one is for early career health professionals and level two is designed for health professionals with more clinical experience, greater independence in complex decision making and clinical leadership.[70]

As defined by SARRAH, 'an AHRG Training Position is a role designed to support the development of an early career professional from graduate-level competency through to a proficient rural generalist practitioner in an allied health profession.'[66] These positions require dedicated supervision and development time, access to the AHRG Program through James Cook University, profession-specific local supervision, and a development plan. The position also requires contribution to rural generalist service development strategies which can include extended scope of practice, delegation to support workers, telehealth supported service delivery and new service models such as shared care with metropolitan services.[66]

There are several prerequisites for a successful AHRG Training Position, including the availability of early career positions in addition to accessible, experienced supervisors and the ability to quarantine development and supervision time. The service must be able to support the implementation of service development strategies.[66]

Implementation of allied health generalist roles in health services require structures that support the employment and progression of generalist roles, policy and processes to support the governance of extended scope roles and service models. This framework will in turn support and engage allied health professionals to implement innovative and effective solutions to the challenges of delivering care across geographically dispersed and culturally diverse populations.

11.2 Allied Health Assistants

The allied health assistant role is one possible solution to increase access to services in rural and remote communities. The *Review of Australian Health Workforce Programs* identified support for allied health assistant roles from rural allied health professionals and local managers, although advocacy and peak groups were less supportive. The review noted that while clinical effectiveness and safety need to be explored, there are potential efficiencies and productivity gains as well as increased access to services.[28] Since this time, there has been increasing acknowledgment of the role of allied health assistants and progress in the implementation of roles and the development of processes and frameworks to support them. The National Rural Health Commissioner suggests that adoption of allied health assistants through clear governance frameworks could assist to buffer rural allied health workload, referencing a Victorian study which found that allied health assistants could substitute around 17% of allied health work in rural and metropolitan areas with greatest potential in podiatry, speech and exercise physiology.[37]

Allied health assistants work 'under the delegation and supervision of an allied health professional, take on less-complex treatment or care tasks, and perform administrative or other tasks that would otherwise reduce the time available for more complex direct care by more highly trained practitioners.'[71] Effective use of allied health assistants may allow therapists to focus more on the overall treatment direction and integrated team care planning as well as complex service delivery tasks in their scope of practice. The role of allied health assistants, particularly in primary health care and in rural settings, is continually developing in order to maximise access and efficiency. This provides significant opportunity but also warrants close consideration to ensure appropriate role delineation in line with training, skills and competencies.[71]

> 'Occupational Therapy Australia endorses the utilisation of a comprehensive allied health assistant governance and delegation framework that:
>
> 1. Promotes the use of allied health assistants to complement occupational therapy practice
> 2. Recognises that allied health assistants are not a substitute for registered occupational therapists
> 3. Recognises occupational therapists are to maintain responsibility for assessments and clinical decision making
> 4. Delegates specific tasks to allied health assistants by occupational therapists
> 5. Recognises engagement of allied health assistants by an employer should require formal training to ensure basic understanding and competencies in the role, e.g. completion of Certificate IV in Allied Health Assistance, with electives in occupational therapy
> 6. Acknowledges that allied health assistants engaged in providing assistance to occupational therapists must receive clinical supervision from an occupational therapist in one of the following forms:
>
> - direct clinical supervision where the occupational therapist works alongside the allied health assistant and can observe and direct;

- indirect clinical supervision where the supervising occupational therapist is on-site and easily accessible, but not in direct view of the allied health assistant, and the allied health assistant utilises clear communication points to access support if needed; and
- remote clinical supervision, where the supervising occupational therapist is located some distance from the allied health assistant, but processes are in place to ensure the supervising occupational therapist is contactable and accessible to provide direction, support and guidance as required.

7. Allied health assistants working under the direction of occupational therapists must commit to an appropriate continuing professional development process. Supervising occupational therapists must support allied health assistants in planning and implementing their continuing professional development plan.
8. Allied health professionals have responsibility for all professional assessments and clinical decisions regarding patient care, including developing care plans. It is never appropriate to delegate these responsibilities to allied health assistants.'[71]

Consultation with Audiology Australia identified a keen interest in developing a larger Aboriginal and Torres Strait Islander workforce, upskilled, supported and enabled to undertake roles in screening, detection, early intervention, prevention and health promotion. Representatives of the NT branch of the Pharmacy Guild of Australia identified pharmacy assistants as critical to the day to day operation of community pharmacies, often progressing from part-time positions while still at school to trained pharmacy technicians and potentially pharmacists. Trained pharmacy assistants can provide critical stability and support to pharmacists particularly where pharmacy workforce is unstable. Often a long-term member of the local community, the pharmacy assistant provides a powerful linkage between customer and pharmacist, particularly in rural communities.

Recent increases in NDIS eligible payments for services delivered by qualified allied health assistants have resulted in increased viability of, and therefore interest from providers, in delivering services through allied health assistants.

11.3 Audiometrists

For routine device fitting, the work of audiologists and audiometrists is interchangeable. Audiometrists conduct hearing assessments to identify hearing impairment and take appropriate action based on the test results. They may refer clients for further audiological or medical assessment and be involved in care management and education programs. Audiometrists also prescribe and dispense hearing aids and/or other listening devices to assist in hearing rehabilitation. Audiometrists focus on hearing and auditory function assessment and rehabilitation.[22]

Audiometry is a two-year TAFE diploma. In 2015, 80 students Australia-wide were enrolled in Audiometry. In 2016 the number was 113. Audiometry is taught by two TAFE colleges in Australia. TAFE Randwick (face to face classroom option) and OTEN Strathfield NSW (distance learning program with some residential schools).[22]

12. TERTIARY PATHWAYS

Within the NT, CDU offers 12 positions in a clinical sciences undergraduate pathway as part of the NT Medical Pathway, along with pharmacy, psychology, post-graduate clinical psychology, medical laboratory science, social work, health sciences and sport and exercise science. Given that the NT has a small population, ongoing viability of these courses will be important to 'growing our own' allied health workforce. Some of these locally available courses are not receiving enough applications locally, and high school students' awareness of the health career pathways that are available to them will be vital. This has been evidenced in recent months where a decision has been made by CDU to 'teach out' the pharmacy course currently being offered locally. With no further intakes, the course will cease to provide graduates to the local workforce over the next few years.

There are several key allied health courses not offered, in their entirety, in the NT. This has a significant impact on recruitment and retention of health professionals. 'Growing our own' improves workforce retention, as people who have grown up in a region are more likely to return and/or stay. However, while 'growing our own' is seen as a key strategy for long-term workforce solutions, the viability issues of offering these courses in a region with relatively small total population, and in a national context of significant competition between universities, are acknowledged.

Opportunities to introduce new qualifications are limited by the cost of setting up these courses and the potential future student throughput. Set up costs can be high – often in excess of two million dollars and the number of students required to achieve viability for these programs would be considerable. Because of both set up and ongoing operational costs along with smaller cohorts, courses such as optometry, medical imaging and audiology are therefore unlikely to be viable without innovative solutions in the short term.

CDU is increasing opportunities for students in a range of allied health professional courses. These include:

Bachelor Programs	**Post-graduate programs**
Occupational Therapy	Occupational Therapy
Speech Therapy	Speech Therapy
Nutrition Health Science	Nutrition Creative Therapies
Health Service Management	Social Work
Public Health	Medical Laboratory Science
Social Work	Safer Communities (Child Protection)
Medical Laboratory Science	

Historically, CDU has offered some allied health pathways in partnership with Flinders South Australia (Flinders SA). In these arrangements the:

1. CDU health science serves as a pathway to occupational therapy with students completing the first year at CDU and the remaining two years at Flinders SA. Six positions were offered each year where students complete the Bachelor of Health Sciences with occupational therapy specialty at CDU and gain direct entry to Flinders SA Master of Occupational Therapy if their grade point average (GPA) is

five or above. These programs had not experienced full enrolment and progress in the program is sometimes slow as students are mature and studying part-time. Students of this course are not offered financial supports and there are no job guarantees, as are offered in the medical program;
2. CDU sport science course is a pathway to postgraduate physiotherapy entry at Flinders SA; and
3. CDU science course serves as pathway to optometry at Flinders SA.

There is a need to ensure that the prerequisites for progression to Flinders courses are clearly defined to ensure students have appropriate expectations of their pathway in these programs. The number of guaranteed progression positions are presently small, and these pathways are not strongly promoted or fully utilised. While ultimately students are still lost to interstate, there are opportunities to maintain greater connection with these students.

Opportunities exist to partner with other interstate universities in order to support the delivery or partial delivery of courses to NT students locally and assist in growing our own health professionals. These opportunities are greatest where there is significant evidence of demand in addition to strong support from the profession locally.

With policy directions such as NDIS and aged care packages resulting in an increasing private sector allied health workforce, stakeholders reflected on the need for the undergraduate curriculum to include topics around service development or entrepreneurship. While universities are focusing on masters degrees, some stakeholders stated this doesn't necessarily make for better graduates. Generalist skills are highly valued and important given that the population size does not make for viable specialist roles in most cases.

1.1 Tertiary Course Content

Training focused on the specific skills required for rural health practice is becoming an integral part of some courses.

Sheppard and Nielsen identified specific capabilities required of rural and remote practitioners including:

- responding to expectations of a new way of working, across organisational and professional boundaries in different teams;
- participating in workforce planning based on the needs of patients, such as a focus on an integrated chronic diseases model rather than providing services within a defined role or scope of practice;
- welcoming new service providers who will emerge to achieve integrated community care such as therapy assistants or triage experts;
- developing important skills in community development, primary health care and assessing and responding to the social determinants of health;
- expertise in technology to access and provide information; and
- evaluating the evidence of health care interventions in forming health care approaches.[49]

There is some movement towards requiring some baseline skills and experience for remote Indigenous work. Rural and remote physiotherapy practice has been recognised as requiring skills in population health and primary health care and these subjects are starting to be adopted as core curriculum.[49] CDU are planning to build in Aboriginal and Torres Strait Islander and rural and remote course content and see this as a potential

point of difference for their courses. They are also keen to increase, or potentially mandate, rural placements, although investment in vital infrastructure and supports will be required. This will be welcomed by stakeholders who have identified these basic skills and experience as important in preparing a workforce for the needs of Northern Territorians.

12.1 Student Placement

Student clinical placements are becoming more difficult for students to find and graduates of many allied health courses such as dietetics, physiotherapy, podiatry and speech therapy are finding it increasingly difficult to gain suitably supervised or supported professional experience.[9, 10, 40] Stakeholders reported no difficulty attracting students to placement in the NT, although supervision and support can be difficult to maintain. With distinct difficulties in recruiting and retaining experienced health professionals there is a gap in the workforce that has the potential to affect other pathways into allied health due to an inability to support students and early years professionals.

Stakeholders identified a need to ensure supervision is made available by looking at different models of supervision that offer creativity while maintaining clinical governance. The speech therapy student led clinic based in Katherine is an example of an alternative model for student placement. These clinics are designed to encourage the recruitment and retention of health professionals by providing effective rural training experiences for health students and exposing health students to working in a remote town with large Aboriginal populations. These clinics involve four speech therapy students placed in primary schools in Katherine for seven weeks with supervision from a speech therapist with time dedicated to this supervisory role. Northern Territory PHN is supporting an extension of this activity to increase physiotherapy and occupational therapy student placements in Alice Springs and Katherine respectively.

Opportunities for student placement can also be maximised through collaboration with broader industry. An example is a partnership between Griffith University and the Arnhem Land Progress Aboriginal Corporation to deliver nutrition and dietetics student placements across 27 Northern Territory and Queensland communities.[72] Stakeholders have questioned whether similar relationships with the Australian Defence Force or mining sectors could provide improved support for student placement or professional supervision for new graduates.

Local Aboriginal and Torres Strait Islander students are prioritised for student placements in NT Government services and the Flinders University Remote and Rural Interprofessional Placement Learning (RIPPL) program, which provides support for allied health and nursing student placements. However, while longer placements increase the likelihood of future rural and remote practice, support is generally only for two to four weeks.

Stakeholders reported that investment in student placements has resulted in all students returning to take up permanent employment opportunities, however employers note there are opportunities to improve this return on investment through better ongoing case management. Flinders University are currently planning a tracking study for all people who have undertaken placements. The aim is to follow students for ten years after rural placement to track their career path. Flinders is also interested in looking at the potential to link university exit data and AHPRA registrations for the same purpose.

13. WORKFORCE SOLUTIONS AND PROGRAMS

Universities, industry groups, organisations and individual practices in the NT have shown significant innovation in addressing workforce challenges. Government funding for workforce programs is often inconsistently applied and poorly coordinated across allied health disciplines and more broadly across all health professions, with some disciplines receiving more significant government attention and resourcing than others. In addition, several workforce initiatives that have previously provided positive results have ceased. In some cases, this has been because historical collaborative approaches are no longer possible due to the workforce stress on the services involved.

13.1 Peer support and development

There is some recognition of the need to support allied health professionals as they move into new multidisciplinary service models and locations. Aboriginal Medical Services Alliance Northern Territory (AMSANT) has received funds from Northern Territory PHN to employ allied health professionals to provide peer support to allied health professionals working in social and emotional wellbeing roles. This role connects with, and mentors, the social and emotional wellbeing workforce, identifies and addresses issues, and provides orientation and case management support.

Funded by the Australian Government through RWA NT, the NT Health Careers Development program run by Health Professionals Alliance NT assists early years health professionals and those who are new to the Northern Territory through support, advice and career development provided by qualified NT health business owners and practitioners.

13.2 Recruitment and relocation support

Funded by the Australian Government and is managed by Rural Workforce Agency NT (RWA NT), the Health Professional Relocation Grant (HPRG) provides financial assistance to support the relocation of eligible health professionals to the Northern Territory (NT) or health professionals who are moving within the NT to a more remote area classification.

13.3 Innovative workforce models & cross sectoral collaboration

An NT health service has a collaborative relationship with an interstate hospital involving consecutive three-month rotations of allied health professionals from the interstate hospital to Alice Springs. Across the six-year relationship nine physiotherapists who undertook placements in Alice Springs have returned to permanent roles. This program has recently been replicated for pharmacy.

The Mala'la model for delivery of pharmacy services in Maningrida demonstrates the value in partnership collaborations. The NT branch of the Pharmacy Guild of Australia note the success of this arrangement is linked to the service being provided by a larger private practice. This approach ensures that the service continuity is maintained despite leave and staff turnover and that the visiting pharmacist has access to peer and professional support and clinical governance systems.

13.4 School-based Initiatives

Attracting young people to a rural allied health career requires a multifaceted approach. Broad strategies to encourage young people to consider a rural health profession should start in secondary school. In order to

market and promote a rural allied heath career, it is important to clearly describe the role and service environments in which a rural allied health practitioner can work. Furthermore, it should clearly describe and highlight the features of a training and career pathway, and positive aspects of rural practice. Given that pathways to allied health careers for NT residents often involve interstate study or less conventional pathways, stakeholders identified the importance of clearly articulating, describing and addressing gaps in the pathways for individual disciplines.

The NT Aboriginal Health Academy is an important initiative launched in February 2018 to support Aboriginal high school students gain health qualifications. The first cohort involved 24 Aboriginal high school students who enrolled in a school-based traineeship with key health organisations across the Darwin region in order to complete a Certificate III in Allied Health Assistance. Aboriginal and Torres Strait Islander health professionals are used as teachers and provide role models. Further feedback confirmed the importance of initiatives such as these that could be generalised into other learning contexts with the capability to assist younger people onto the health qualification pathway at an earlier age, so that the pathways can be created and sustained from the early high school years onwards and into tertiary institutions and jobs. Barriers of language, literacy and exposure to formal learning may also mean that some candidates may prefer to start at a Certificate II health services level if the Certificate III or IV is too difficult at first, in order to help ease their introduction to and completion of formal learning.

The Northern Territory PHN High School to Health Careers Program involves interstate students who are undertaking studies in a health discipline at a university or Certificate IV in Aboriginal and Torres Strait Islander Primary Health Care promoting health careers to high school students in rural and remote schools. As part of the experience, students also have the opportunity to visit with various health clinics and meet some health professionals in the NT. With funding support from Northern Territory PHN, IAHA run High School to Health Careers Programs focused on the promotion of health careers to Aboriginal and Torres Strait Islander school students by Aboriginal and Torres Strait Islander health professionals and tertiary students. The RIPPL NT team engage with school students to promote allied health pathways including a successful escape room competition this year.

13.5 Rural Pharmacy Workforce Programs

Rural pharmacy workforce programs, funded by the Australian Government and administered by Pharmacy Guild of Australia are designed to strengthen and support the rural pharmacy workforce, in turn to provide increased access to quality pharmacy services for consumers residing in rural and remote regions of Australia.

These programs include the:

- Aboriginal and Torres Strait Islander Pharmacy Assistant Traineeship Scheme aims to increase the number of Aboriginal and Torres Strait Islander pharmacy assistants and establish alternative pathways for Aboriginal and Torres Strait Islander students to enter pharmacy through allowances of $10,000 for community pharmacies to employ and train an Aboriginal and Torres Strait Islander Pharmacy Assistant Trainee;

- Aboriginal and Torres Strait Islander Pharmacy Scholarship Scheme aims to encourage Aboriginal and Torres Strait Islander students to undertake undergraduate or graduate studies in pharmacy at university;[73]
- Rural Pharmacy Scholarship Scheme provides financial support to encourage and enable students from rural and remote communities to undertake undergraduate or graduate studies in pharmacy at university. Up to 30 scholarships are offered annually, with a value of $10,000 per annum per student;
- Rural Pharmacy Mentor support involves at least quarterly contact, such as via email, telephone or face-to-face sessions as instigated by the scholar;
- Intern Incentive Allowance for Rural Pharmacists aims to increase and support the rural and remote pharmacy workforce by encouraging pharmacists to practice in rural and remote areas (Pharmacy ARIA category 2 – 6). A maximum payment of $10,000 is available for employers who have engaged a pharmacy intern employee for a continuous six to 12-month period;
- Intern Incentive Allowance for Rural Pharmacies – Extension Program provides funding up to $20,000 to enable community pharmacies in rural areas (PhARIA category 4-6) to retain a newly registered pharmacist, for whom they acted as a preceptor during their intern year, for a minimum of 12 continuous months beyond the initial intern period;[73]
- Rural Intern Training Allowance provides financial support to assist intern pharmacists from rural and remote areas to access compulsory intern training program activities;
- Continuing Professional Education (CPE) Allowance provides financial support to assist pharmacists from rural and remote areas to access CPE and other professional development activities;
- Emergency Locum Service provides support to pharmacists in rural and remote areas through direct access to locums in emergency situations such as illness, bereavement, or family emergencies;
- Rural Pharmacy Liaison Officer (RPLO) Program has been established to implement local level projects that provide support to practising rural community pharmacies and pharmacy students undertaking placements in rural areas including professional development and networking opportunities for pharmacies, pharmacists and pharmacy students;
- Rural Pharmacy Maintenance Allowance (RPMA) is an allowance (up to $45,930 per annum) paid to eligible pharmacies which recognises the additional financial burden of maintaining a pharmacy in rural and remote areas of Australia; and
- Rural Pharmacy Student Placement Allowance provides financial support to encourage and enable pharmacy programs at Australian universities to deliver student placements in rural and remote communities. The allowance assists with the administration of the program and travel and accommodation costs associated with undertaking a placement in a rural or remote area.[73]

13.6 Indigenous Allied Health Career Promotion and Support Programs

IAHA offer a range of services to support Aboriginal and Torres Strait Islander people to move into and through allied health careers, including:

- a mentoring program which includes leadership development;
- the Rural and Remote Indigenous Allied Health Workforce Development Project which aims to contribute to addressing workforce needs arising from NDIS in Tennant Creek by offering more flexible and culturally appropriate workforce development and service models;

- the IAHA National Indigenous Allied Health Awards
- NT Aboriginal Health Academy; and
- Aboriginal and Torres Strait Islander High School to Health Careers Program.

13.7 Workforce Incentive Program

The Workforce Incentive Program, an announcement in the 2018–19 Federal Budget, will provide incentives to encourage general practices to employ nurses, Aboriginal and Torres Strait Islander health workers and practitioners and allied health professionals including non-dispensing pharmacists. These roles will be part of the modern general practice health care team, delivering multidisciplinary service models to ensure greater responsiveness to people with chronic and complex conditions.[74] This program, along with other programs such as Health Care Homes, are likely to drive an increasing demand for allied health providers in general practice.

13.8 NDIS and Aged Care Initiatives

The Boosting the Local Care Workforce Program aims to build workforce capacity for the NDIS and aged care sectors. The program involves employment of care workforce regional coordinators to develop localised knowledge on service provider and workforce markets, identify areas of risk, assist service providers to attract, retain and optimise their workforce, connect stakeholders, maximise opportunities to collaborate within the sector and support local approaches to workforce development. Sector transition and employer support funds assist providers to access business advice, professional services and/or purchase of software tailored to business needs.

In 2018 Aged and Community Services Australia implemented a Workforce and Industry Development Unit. A key role of this unit is to support and enable both organisations within the sector, and the sector as a whole, to address workforce issues head on. With a national focus the unit aims to identify (and share) State and Territory based attraction, recruitment, retention, and skill development initiatives and solutions that are working in other regional areas of Australia and identify, develop and implement new and innovative initiatives to support services in the NT.

13.9 Regional University Centres

Regional University Centres have been funded in Nhulunbuy and Wuyagiba (in East Arnhem Land) with planned expansion into Ramingining, Milingimbi and Galiwin'ku. Wuyugiba Regional Study Hub is managed by Wuyugiba Bush Hub Aboriginal Corporation set up by the traditional owners and delivered in partnership with Macquarie University. Regional University Centres are facilities that regional students can use to study tertiary courses locally delivered by distance from any Australian Universities. Centres provide study spaces; video conferencing, computing facilities, administrative and academic support services (such as developing writing and researching skills), pastoral support, study advice and assisting with accessing student services. The Wuyagiba hub was part of a trial in 2018 with an initial focus is on two-way pre-Uni preparation courses and longer-term plans to offer accredited Uni courses on Country. The Nhulunbuy service funding was announced in early 2019 and will be delivered by Arnhem Land Progress Aboriginal Corporation.

13.10 Undergraduate placement programs

The RIPPL NT program offered by Flinders NT provides student placement support services for allied health and nursing students. The RIPPL team support allied health and nursing students with linkages to placement opportunities, Aboriginal and Torres Strait Islander cultural awareness training, orientation, subsidised accommodation, access to facilities, networking and education sessions, financial assistance and provide support for placement supervisors.

In a partnership between Griffith University and the Arnhem Land Progress Aboriginal Corporation, nutrition and dietetics student placements are offered across 27 Northern Territory and Queensland communities.[72]

13.11 Scholarships and Bursaries

Hearing Australia offer Master of Audiology scholarships valued at $15,000 over a two-year study period. Six scholarships are currently offered across a number of universities. Scholarship winners also participate in a Hearing Health outreach visit to a remote community.

The NT Department of Health offer scholarships to NT students studying interstate and cadetships to Aboriginal and Torres Strait Islander students including opportunities for paid work during university breaks.

The Health Workforce Scholarship Program (HWSP) is an Australian Government funded program delivered in the NT by RWA NT. With the aim to further develop the skills of the Northern Territory's rural and remote primary health workforce this program, Allied Health Professionals who work in MMM 3-7 areas can receive up to $20,000 towards upskilling. Scholarships are available for post-graduate study while bursaries are available for other types of training and upskilling (e.g. conferences, continuing professional development events or other short courses).

13.12 NT PHN student clinics

The speech therapy, physiotherapy and occupational therapy student led clinics supported by Northern Territory PHN and run by Flinders NT based in Katherine and Alice Springs provide an alternative model for student placement. These clinics are designed to encourage the recruitment and retention of health professionals by providing effective rural training experiences for health students and exposing health students to working in remote towns with large Aboriginal populations. These clinics involve students placed in schools with supervision from qualified allied health professionals with time dedicated to this supervisory role.

14. CONSULTATION

A variety of opportunities to contribute to this HWNA were offered to stakeholders at different points throughout the needs assessment process. The following provides a summary of participating organisations:

14.1 Individual interviews and Submissions

- Charles Darwin University (CDU)
- Aboriginal Medical Services Alliance Northern Territory (AMSANT)
- Flinders University Northern Territory
- Services for Australian Rural and Remote Allied Health (SARRAH)
- Central Australia Health Services (CAHS)

- Indigenous Allied Health Australia (IAHA)
- Northern Territory PHN
- Audiology Australia
- Dietitians Association of Australia
- Optometry Australia
- Pharmacy Guild of Australia (NT Branch)
- Speech Pathology Australia (NT Branch)
- Top End Health Services (TEHS)

14.2 Stakeholder Group Members

- Charles Darwin University (CDU)
- Aboriginal Medical Services Alliance Northern Territory (AMSANT)
- Services for Australian Rural and Remote Allied Health (SARRAH)
- Central Australia Health Services (CAHS)
- Top End Health Services (TEHS)
- Batchelor Institute of Indigenous Tertiary Education
- Health Providers Alliance Northern Territory
- Northern Territory Government Department of Health
- CRANAplus

14.3 Broad Consultation

The broad consultation elicited informal feedback from a range of sources. Formal responses were received from the following:

- Northern Territory PHN Board Workforce Committee
- Mala'la Health Service, Aboriginal Corporation
- Healthy Living NT
- Physio Forward
- Primary Health Care – TEHS (Pharmacy)
- AMSANT
- TEHS
- Flinders NT x 2
- CDU

14.4 Solutions Workshops

Representatives from the following organisations participated in workshops in Alice Springs, Tennant Creek, Katherine, Darwin and Nhulunbuy:

- Anyinginyi Health Aboriginal Corporation
- Sunrise Health Service x 2

- Katherine West Health Board
- Wurli-Wurlinjang Aboriginal Health Service
- Anglicare Headspace
- Anglicare NT
- Sunrise Health Service
- NT Friendships and Support
- Gorge Health Services x 2
- Northern Territory PHN
- Call My Doctor Pty Ltd
- NT Government
- Alice Springs Hospital
- Flinders NT
- Office of Disability
- Central Australian Aboriginal Congress x 2
- Alice Springs Physiotherapy and Sports Injury Clinic
- NT Department of Health x 2
- Territory Pharmacy x 2
- Relationships Australia NT
- Healthy Living NT
- AMSANT
- Industry Skills Advisory Council NT (ISAC NT)
- TEHS
- CDU
- Bodyfit NT
- Top End Speech Pathology
- Arnhem Allied Health

15. PRIORITIES AND OPTIONS

The HWNA 2017–18 process ultimately led to the identification of both geographic and strategic priorities. A review of the first draft of this document by the stakeholder group in December 2018 noted that the nature of the NT environment provides inherently similar workforce challenges to general practitioners, remote area nurses and Aboriginal and Torres Strait Islander health practitioners, which were the focus of the HWNA 2017–18. The group agreed that the priorities approved in 2017–18 remain relevant:

GEOGRAPHIC PRIORITIES

All remote Aboriginal community-controlled health services
All Aboriginal community-controlled health services serving the Aboriginal populations in Darwin and Alice Springs
General practices in remote locations MMM 6 and 7 – Katherine, Nhulunbuy, growing outer regional areas (Dundee, Wagait Beach, Adelaide River and Bachelor) and Darwin urban fringe communities (Howard Springs, Humpty Doo, Weddell, Alligator)

STRATEGIC PRIORITIES

There are four priority areas identified that are underpinned by high level strategies. It is important to note that the Aboriginal and Torres Strait Islander health workforce have a standalone strategy, however needs of the Aboriginal and Torres Strait Islander health workforce are considered through all strategic priority areas.

Priority Area 1: Develop the Aboriginal and Torres Strait Islander workforce – clinical and non-clinical	
1.1	Develop dedicated and achievable/flexible pathways to health careers
1.2	Build and support the Aboriginal and Torres Strait Islander health practitioner workforce
1.3	Develop and support all Aboriginal and Torres Strait Islander people working in and supporting health

Priority Area 2: Develop pathways from selection and employment to retention	
2.1	Develop mechanism for coordination of pathways across and with key stakeholders
2.2	Identify enablers to retention and apply across all professions
2.3	Target local student from high school/VET/undergraduate cohorts
2.4	Support and develop existing pathways and extend to all disciplines and professions

Priority Area 3: Attract, maintain and retain existing workforce within the Northern Territory with consideration of gaps and emerging needs	
3.1	Develop appropriate marketing and recruitment activities
3.2	Develop career opportunities through continuing professional development and skill building
3.3	Support structured career progression and emerging needs of the workforce
3.4	Develop strategies to reduce workforce turnover including flexible attraction and retention packages and incentives

Priority Area 4: Develop locally responsive, sustainable models of care	
4.1	Supporting activities that develop the quality of leadership and management
4.2	Support activities that build capacity in organisations to become 'employers of choice'
4.3	Facilitate organisations to explore successful and sustainable service models

These priorities, as applied to the development and support of the NT allied health workforce, will continue to guide the work of Northern Territory PHN and the Health Workforce Stakeholder Group in planning and implementing activities under the Rural Health Workforce Support Activity.

The HWNA is a living document that will continually improve and develop with input from stakeholders.

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