

Services for Australian Rural
and Remote Allied Health
(SARRAH)



Allied Health Professional
Workforce



Effectiveness of the Allied Health component of the Nursing and Allied Health Scholarship and Support Scheme (NAHSSS) 2011-2017: Final Evaluation

31 December 2021

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Evaluation team

[AHP Workforce](#) provides information, resources and advice to help allied health workforce, managers, employers and policy makers respond to the changing dynamics of the 21st Century health, aged care and disability environment.

Consultants, Dr Anna Moran, Adjunct Professor Susan Nancarrow and Dr Kristy Robson are Allied Health professionals and researchers with a strong background and understanding in optimising health service organisation and delivery, particularly through workforce change.

They bring more than 20 years' experience in allied health research and evaluation with particular relevance to workforce development and research capacity building. We draw on our collective international experience as allied health clinicians, managers, researchers, lecturers, business owners, board directors and consultants to provide the best, evidence informed approaches to driving practice changes in allied health.



Executive Summary

Context

This evaluation explores the effectiveness of a Commonwealth-funded allied health scholarship scheme, active for a seven year period from 2010 until 2017, in regard to increasing the supply and retention of the rural and remote allied health workforce.

The Nursing and Allied Health Scholarship and Support Scheme (NAHSSS) commenced in July 2010. The purpose of the NAHSSS was to consolidate a range of pre-existing programs to increase the supply and retention of Allied Health professionals in rural areas by promoting access to tertiary education, professional development and clinical placements for nurses and allied health students and professionals.

The objectives of the NAHSSS were to:

- I. Increase the rural health workforce by facilitating the entry of jobseekers and youths interested in pursuing a career in nursing or the allied health professions;
- II. Facilitate the continuing professional development of nurses, midwives and Allied Health professionals; and
- III. Encourage the pursuit of a health career in geographic areas and professions where there were identified shortages.

The allied health component of the NAHSSS was administered by Services for Australian Rural and Remote Allied Health (SARRAH) since 2010. NAHSSS scholarships were awarded to eligible allied health students and professionals between 2011 and 2017. Scholarships were awarded on the basis of geographic and profession-based health workforce shortages. Twenty-three different allied health professions were eligible to access the NAHSSS over the 7 year funding period.

Since the inception of the NAHSSS, 4617 allied health students and professionals received scholarship support under the following categories:

- **The Undergraduate (Entry - Level) Scholarship Stream** supporting rural-origin students to study a course that would lead to qualification as an Allied Health professional.
- **Postgraduate Scholarship Stream** supporting qualified rural Allied Health professionals (Allied Health professionals) to study an accredited postgraduate qualification at a recognised university located in Australia.
- **Clinical Psychology Scholarship Stream** supporting rural psychology graduates seeking registration with the Psychology Board of Australia to become endorsed clinical psychologists.
- **Continuing Professional Development Scholarship Stream** supporting rural Allied Health professionals to maintain and improve their skills and knowledge in their clinical areas of practice.



- **Clinical Placement Scholarship Stream** supporting rural-origin allied health students to undertake rural and remote clinical placements.

At the time of this report, two recipients of NAHSSS scholarships are yet to complete their studies. All recipients will have completed their studies by December 2022.

Aims and Objectives

The overarching aim of this evaluation is to understand the impact of the five Commonwealth funded allied health scholarship support streams on the supply and retention of Allied Health professionals in rural areas.

The objectives of the evaluation are therefore to:

- I. Understand the extent and reach of the NAHSSS Scheme (number and profile of NAHSSS scholars);
- II. Understand the impact of the NAHSSS on supply and retention of the rural AH workforce; and
- III. Understand the role of the NAHSSS in supporting and enabling rural allied health careers.

Methods

A mixed methods approach was used with three components:

- Analysis of descriptive data from NAHSSS scholars obtained at the point of scholarship commencement;
- A follow up survey in the form of an online questionnaire administered to all NAHSSS scholars; and
- In-depth interviews with a sample of NAHSSS scholars from each of the scholarship programs.

The results were synthesised using program logic to determine the success of the NAHSSS in addressing the problems identified with the supply and retention of the rural allied health workforce and therefore the objectives of the scheme

Results

Of the original 4617 original scholarship recipients, follow up data were obtained from 1157 completed scholar questionnaires representing a 27.3% response rate after accounting for failed email addresses (n=684).

Respondents were broadly representative of scholars funded under the NAHSSS for gender and geographic location at scholarship commencement. Data were analysed descriptively. Interviews were conducted with 19 participants from across all scholarship streams and key themes identified.



The extent and reach of the NAHSSS Scheme

Over the 10 year period from the commencement of the NAHSSS (2011) to present day (2021), scholarships were awarded to 4617 Allied Health professionals and students representing 23 different allied health professions.

Scholarships enabled:

- 2827 students to *obtain* allied health qualifications (n=1395 clinical placement scholarships, 880 undergraduate scholarships and 552 clinical psychologist scholarships);
- 925 Allied Health professionals to *retain* their qualifications (continuing professional development scholarships); and
- 865 Allied Health professionals to *extend* their qualifications (postgraduate scholarships).

Scholarships were awarded to students and professionals who lived and/or worked in diverse geographic locations (MM1-7) across every state and territory in Australia.

In keeping with the strong female profile of the Allied Health workforce (Nancarrow & Borthwick, 2021), the majority of scholars were female (n=3870, 83.8%) however there was a greater proportion of men in the post graduate scholarship stream compared to other streams (n=194, 22.4%).

Reflecting the scholarship eligibility criteria, almost three quarters of scholars (71.2% n=3283) were from Modified Monash (MM) category areas 2 to 7. The scholarships supported a significant number of First Nations students and professionals (n=168) to access allied health study and/or work integrated learning (clinical placement) support as well as 66 students from a state/territory where no allied health undergraduate training was offered to access undergraduate allied health courses (Northern Territory n=21, Tasmania n=45).

Funded studies and work integrated learning/clinical placements had a high completion rate (95-98%). Most scholarship recipients continue to practise as allied health clinicians or work in other health/disability related roles (87.7%).

In the follow up questionnaire scholars described themselves as established in their career (37.6%, reflecting the high response rate from post graduate scholars). With the exception of clinical psychology scholars who predominantly work in the private sector in rural locations (48.0%), the majority of scholars from the remaining scholarship streams working in MM2+ locations report that they work for government organisations (55.1%, n=349).

Scholars from more remote workplaces (MM6-7) tend to work for either government or not for profit organisations rather than the private sector.

The impact of the NAHSSS on *supply and retention* of the AH workforce in rural areas

Despite the lack of comparative data, this evaluation identifies that the NAHSSS was highly effective in increasing both the supply and retention of Allied Health professionals in rural areas.



Supply of the allied health workforce to rural areas:

- The proportion of Allied Health professionals who were funded under the scheme who are currently practising in a MM2+ rural area is 66.5% increasing to 71.9% when the scholar was from a MM2+ rural background.
- The odds ratio (OR=4.95, 95% CI) indicates that undergraduate and clinical psychology NAHSSS scholars who were from a rural background on receipt of their scholarship are 4.95 times more likely to be currently working in a rural location than clinical psychology and undergraduate NAHSSS scholars with a metropolitan background.
- Over the last 10 years the scholarship scheme supported an estimated 297 clinical psychologists into the MM2+ rural MM2+ mental health workforce and an estimated 496 other Allied Health professionals into the MM2+ rural workforce.
- A quarter of MM1 origin Allied Health professionals moved to and are currently working in rural areas (n=29, 25.5%).
- Many metropolitan-origin scholars who subsequently moved to a rural area were funded by the clinical placement and/or undergraduate schemes (n=21/29).
- A large percentage of those working in an MM1 and MM2 setting also provide outreach to rural communities (n=305, 51.35%), predominantly to MM5+ settings (n=180, 60.0%).
- A quarter (n=62/242, 25.6%) of undergraduate scholars have not remained in a rural location.

Retention of the rural allied health workforce:

- There was a high level of retention of the CPD and Postgraduate scholar workforce with 82.6% (n=311) of scholars who were already living or working in a rural area on commencement of their scholarship continuing to work in a MM2+ rural location on follow up;
- Scholars from the most remote settings (MM7) were more likely to have moved to a less remote location on follow-up, with 30.4% of MM7-origin scholars now working in a metropolitan setting;
- Across all scholarship categories, just under one third of rural-origin scholars moved from rural to metropolitan workplaces 28.1% (range 21.9-38.6%) with MM7 origin scholars representing those more likely to move (38.6%) to metropolitan settings.

The role of the NAHSSS in supporting and enabling rural allied health careers

The NAHSSS scholarships made a significant contribution to supporting, enabling and extending rural allied health careers and in doing so, significantly improving the level of care available to rural communities.

- The NAHSSS scholarships provided undergraduate students with financial security to relocate to undertake an allied health degree and to have the financial support to concentrate on completing the academic workload required of them to successfully complete their degree.



- For postgraduate, clinical psychology and CPD scholars, the expertise and skillset of the rural allied health workforce was greatly expanded (and retained) as a result of the scheme. The scheme contributed to the retention of mid to established career Allied Health professionals by funding study that allowed scholars to maintain and progress their careers in rural locations and improved professional satisfaction. Rural clinical psychology scholars had difficulty completing the supervised practice requirement of their studies which was not specifically funded under the scholarship scheme.
- Clinical placement scholars benefited from the scheme by having the financial capacity to immerse themselves in a rural practice location. For some, this encouraged a pursuit of a rural career and for others, provided valuable insight into the complexity of rural settings that has allowed for better care to be delivered from a metropolitan setting.
- The level of gratitude from scholars was significant. One example is provided below, from a clinical psychology scholarship recipient.

I'm actually feeling emotional just talking about this. Because when I got those funds released throughout the two years, it was just phenomenal how much relief that gave me to know that I could go through the next phase and just took so much pressure off so I just have so much appreciation for the [NAHSSS] Scholarship. And I can't express just how much that meant to me. My life has changed because I was able to complete that pathway that I was passionate about. And I've got the jobs that I'm interested in. I've got doors that are open that I wanted, and felt supported by so it's meant a heck of a lot. So just thank you to that program. [Clinical Psychology Scholar interview]

Discussion

The NAHSSS made a positive contribution to the supply, retention and upskilling of the rural allied health workforce and Aboriginal and Torres Strait Islander allied health workforce.

The scheme was highly successful in achieving progress towards these outcomes:

- More rural-origin Allied Health professionals completed higher education degrees in allied health
- More rural-origin Allied Health professionals entered the workforce
- More rural-origin Allied Health professionals who enter the workforce are working in rural areas
- More Allied Health professionals stayed working in rural areas
- More rural Allied Health professionals pursued their professional or career aspirations
- More rural psychologists have clinical psychology registration
- More rural psychologists with clinical psychology registration remain in the rural workforce
- More First Nations people qualified and working as allied health professionals across Australia

This evaluation demonstrates that the NAHSSS made a positive impact on the supply and retention of Allied Health professionals in rural areas, contributing to offsetting a general trend for Allied Health professionals to be metropolitan based (Department of Health, 2019).



The success of the NAHSSS could be further enhanced by targeting of the supply of particular allied health professions to specific, identified areas of need. This can only happen if both the supply and geographic distribution of the allied health workforce is known and compared to identified areas of community need.

Furthermore, the postgraduate and CPD schemes enabled Allied Health professionals to become more highly skilled in areas of particular allied health practice such as primary health care, aged care, mental health and indigenous health. As described by scholars, this resulted in the needs of their rural communities being better met and more junior work colleagues benefiting from upskilling and mentoring from those scholarship recipients.

The research evidence clearly demonstrates that rural-origin students are more likely to return to rural practice. By targeting rural-origin and rural workplace Allied Health professionals and students, the NAHSSS scheme successfully enabled a significant increase in the supply and retention of the allied health workforce in rural areas.

Allied health careers have blossomed under the NAHSSS with many of the narratives from the interviews celebrating and reinforcing the benefits of rural workplaces to allied health careers (Malatsky & Bourke, 2016). The program logic suggests that these impacts could be further enhanced through investment in other evidenced enabling activities such as Cosgrave's Attract Connect Stay program (Cosgrave, 2021), the National Aboriginal and Torres Strait Islander Health Workforce Plan and the Allied Health Rural Generalist Pathway, some of which are already funded by the Department of Health e.g. The Allied Health Rural Generalist Education and Training Scheme (TARGHETS) and/or are being supported by SARRAH.

Conclusion

The NAHSSS was a highly effective scheme that has achieved its objectives and in doing so has contributed significantly to supporting rural and remote allied health practitioners at various stages of their career.

Objective 1

Increase the health workforce by facilitating the entry of jobseekers and youths interested in pursuing a career in nursing or the allied health professions;

Objective met –

- ✓ Facilitated the entry of 880 jobseekers and youths to pursue a career in the allied health professions and an estimated 496 into the rural health workforce;
- ✓ Facilitated a further 1395 allied health students to experience a rural placement during their undergraduate degree therefore increasing the pool of allied health graduates into the workforce who had knowledge and understanding of the rural context;



	✓ Facilitated the entry of 552 clinical psychologists into the workforce and an estimated 297 into the rural workforce.
Objective II	Objective met –
Facilitate the continuing professional development of nurses, midwives and Allied Health professionals;	✓ Facilitated the continuing professional development of 925 Allied Health professionals and retention of 82.6% in rural areas.
Objective III	Objective partially met –
Encourage the pursuit of a health career in geographic areas and professions where there were identified shortages.	<ul style="list-style-type: none">✓ Encouraged the ongoing health careers in rural areas for 865 postgraduate scholars and 925 CPD scholars and in doing so, retention of 82.6% in rural areas.• Unable to identify whether the scholarships were able to specifically influence geographic areas and professions where there were identified shortages/needs.

Recommendations

The NAHSSS provided a comprehensive program of scholarships and supports that was successful in contributing to the supply, retention and upskilling of the rural allied health workforce and Aboriginal and Torres Strait Islander allied health workforce. To facilitate future planning as part of a comprehensive rural health workforce strategy, the following recommendations are made:

1. Further work is undertaken to develop a comprehensive multidisciplinary rural workforce data set, incorporating the allied health workforce. This could be cross-referenced with rural primary health networks' health needs assessments to assist in targeting areas for prioritisation for rural allied health workforce development.
2. Since the cessation of the NAHSSS in 2016 there has been no equivalent undergraduate allied health scholarship program, and there appears to be no plan in development that will increase the supply of rural-origin allied health professionals in the near future. Given the significant workforce shortages currently impacting on access to services in rural and remote Australia, the undergraduate stream targeting students from a rural background should be reinstated as a priority. This scholarship program should be integrated with existing workforce development programs, such as Indigenous Allied Health Australia's Academy Program.
3. If a decision is made not to reinstate an allied health undergraduate scholarship stream, consideration should be given to broadening the HELP-waiver scheme currently only available to medical and nurse practitioner students to include allied health professionals committing



to work in MMM3-7 areas. Funding for allied health scholarships should be quarantined and reported on by discipline, particularly for multidisciplinary programs.

4. All current and future health workforce scholarship programs, including the Health Workforce Scholarship Program, Aged Care and Mental Health scholarship programs, should include targets for allied health participation and that data should be made available as part of a broader comprehensive allied health workforce data set.
5. Given the effectiveness of the post-graduate scholarship support program in retaining allied health professionals in MMM3-7 where the need is greatest, the current Health Workforce Scholarship Program should be broadened to include allied health professionals working across all sectors, and not just those working in primary healthcare settings. It will also be important to disaggregate allied health workforce from nursing workforce data in order to effectively evaluate the utility of these programs for allied health professionals accessing professional development support.
6. A scholarship program to support and grow the mental health workforce should be made available as a matter of urgency to address the significant need for more mental health services in rural and remote Australia. This scholarship program should include undergraduate and post-graduate support, as well as CPD support to assist provisionally-registered psychologists to gain full registration.
7. The clinical placement scholarship stream was effective in exposing undergraduate allied health professionals to rural practice. However the supply of rural clinical placements is very poor, and there are a number of systemic barriers that constrain the capacity for allied health professionals to offer undergraduate clinical placements. Further exploration of these system barriers and strategies to address them should be undertaken as a priority to grow the number of available rural clinical placements.



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Introduction and context

This evaluation explores the effectiveness of a 7 year commonwealth funded allied health scholarship scheme at increasing the supply and retention of allied health scholarship recipients.

The Nursing and Allied Health Scholarship and Support Scheme (NAHSSS) commenced in July 2010. The purpose of the NAHSSS was to consolidate a range of pre-existing programs to increase the supply and retention of Allied Health professionals in rural area by promoting access to tertiary education, professional development and clinical placements for nurses and allied health students and professionals.

The objectives of the NAHSSS were to:

- I. Increase the health workforce by facilitating the entry of jobseekers and youths interested in pursuing a career in nursing or the allied health professions;
- II. Facilitate the continuing professional development of nurses, midwives and Allied Health professionals; and
- III. Encourage the pursuit of a health career in geographic areas and professions where there were identified shortages.

Services for Australian Rural and Remote Allied Health (SARRAH) has administered the allied health component of the NAHSSS since 2010. NAHSSS scholarships were awarded to eligible allied health students and professionals between 2011 and 2017 inclusive. Scholarships were awarded based on geographic and profession-based areas of health workforce shortage and prioritised scholarships which aligned with broader Government health policy. Twenty-three allied health professions were able to access the NAHSSS over the 8 year funding period.

Over the life of the NAHSSS funding, three amendments were made:

- The Government announced additional scholarships as part of the 2014-2015 Budget targeting identified areas of practice: primary health care, aged care, mental health and indigenous health.
- In the 2012-13 Budget, the Government provided additional scholarships for practicing Allied Health professionals and students from Tasmania. These additional scholarships were only applicable to three scholarship streams Postgraduate, Clinical Placements and Continuing Professional Development. The purpose of the Tasmanian scholarships was to overcome the severe pressure and the distinctive challenges for Tasmanian's.
- In the 2016-7 budget, the Government provided one further year of NAHSSS funding.

Since the inception of the NAHSSS, 4617 allied health students and professionals received scholarship support under the categories of:

- **The Undergraduate (Entry - Level) Scholarship Stream** supporting rural-origin students to study a course that will lead to qualification as an Allied Health professional. Maximum scholarship entitlement \$10,000 per annum for maximum of 3 years for Full Time Equivalent



- (FTE) studies (some were awarded for longer depending on degree length);
- **Postgraduate Scholarship Stream** supporting qualified rural Allied Health professionals (Allied Health professionals) to study an accredited postgraduate qualification at a recognised university located in Australia. Maximum scholarship entitlement \$15,000 per annum for maximum of 2 years for Full Time Equivalent (FTE) studies.
 - **Clinical Psychology Scholarship Stream** supporting rural psychology graduates seeking registration with the Psychology Board of Australia to become endorsed clinical psychologists. Maximum scholarship entitlement \$15,000 per annum for maximum of 2 years for Full Time Equivalent (FTE) studies.
 - **Continuing Professional Development Scholarship Stream** supporting rural Allied Health professionals to maintain and improve their skills and knowledge in their clinical areas of practice. Maximum scholarship entitlement \$1,500 per activity.
 - **Clinical Placement Scholarship Stream** supporting rural-origin allied health students to undertake rural and remote clinical placements. Maximum of \$11,000 per placement.

At the time of this report, two recipients of NAHSSS scholarships are yet to complete their studies. All recipients will have completed their studies by December 2022.

The allocation of scholarships was managed using rurality, allied health profession and scholarship specific criteria. All scholarship streams required all three criteria to be met with the exception of clinical psychology and clinical placement scholars who did not require the rural criteria. For clinical psychology scholars, rurality was used as a ranking tool where scholarships were oversubscribed.

Scholarship criteria

- The Undergraduate (Entry - Level) Scholarship Stream supported students studying an undergraduate degree one of the eligible professions.
- Postgraduate Scholarship Stream supported qualified Allied Health professionals who deliver services in rural and remote areas of Australia who were studying or seeking to study an accredited postgraduate qualification at a recognised university located in Australia.
- Clinical Psychology Scholarship Stream supported psychology graduates seeking registration with the Psychology Board of Australia to become endorsed clinical psychologists. Only students studying Australian Psychology Accreditation Council (APAC) accredited clinical psychology courses were eligible to receive the scholarship.
- Continuing Professional Development Scholarship Stream supported Allied Health professionals to maintain and improve their skills and knowledge in their clinical areas of practice by providing financial assistance to complete paid professional development activities.
- Clinical Placement Scholarship Stream supported allied health students undertaking rural and remote clinical placements.

Rural criteria

Applicants were required to provide evidence of living, studying and/or working in RA 2 -5 areas



(MM 2-7 areas). From 2014 to 2017 all applicants from Tasmania and the Northern Territory were deemed eligible for NAHSSS scholarships due to the lack of availability of some accredited allied health courses in these locations. Applicants from Aboriginal and Torres Strait Islander background who lived outside ASGC RA 2 – 5 locations were also eligible for NAHSSS funding.

To ensure supply and retention analyses could be matched to the follow up cohort, data from NAHSSS scholars at *commencement* of their scholarship that used historical rural classifications (Australian Standard Geographical Classification – Remoteness Areas (ASGC –RA) were brought into line with the contemporary classification system, The Modified Monash Model (MMM). This involved transforming all NAHSSS scholar *commencement* postcode, town and state variables into MMM classifications. All rural classifications reported in this evaluation therefore use the MMM classification system.

Table 1 Australian Standard Geographical Classification – Remoteness Areas (ASGC –RA) and rurality criteria for NAHSSS applicants. Grey RA / MM classifications were not eligible for funding unless applicants were from Tasmania, the Northern Territory or from Aboriginal or Torres Strait Islander origin. Green RA/MM classifications were eligible.

RA1 (MM1)	RA2 (MM2)	RA3 (MM3-5)	RA4 (MM6)	RA5 (MM7)	RA6
Major cities	Inner Regional	Outer Regional	Remote	Very Remote	Migratory

Rurality criteria for scholarship applicants:
 Post graduate scholarship applicants are required to provide evidence of living and providing a clinical service in an ASGC-RA 2 -5 location, or living in a metropolitan area and providing a clinical service in an ASGC-RA 2 or above location.
 Undergraduate scholarship applicants must provide evidence that their home address meets the ASGC-RA 2- 5 requirement for a minimum of 5 consecutive or 8 cumulative years from the age of five.
 Clinical placement scholarship applicants are required to undertake placements in ASGC- RA 2 – 5.
 CPD scholarship applicants were required to provide evidence of living or providing clinical services in ASGC RA 2 - 5
 Clinical Psychology applicants were required to provide evidence of being a permanent resident of Australia. Rurality was used as ranking tool where scholarships were oversubscribed.

Allied health criteria

Table two identifies the 23 professions that were eligible for funding.

Table 2 Allied health professions eligible for scholarships included (n=23)

Aboriginal Health Worker (Cert IV in AHW and above qualifications);	Audiology;
Chinese Medicine;	Chiropractic;
Dental and Oral Health (Dentist, Dental Hygiene, Dental Therapist, Dental Prosthetics);	Dietetics and Nutrition;
Diabetes Educator**;	Exercise Physiology (AAESS approved only);
Genetic Counselling;	Health Promotion**;



Medical Radiation Science Medical Imaging, Nuclear Medicine Technology and Radiation Therapy);	Occupational Therapy;
Optometry;	Orthoptics
Osteopathy	Paramedicine
Pharmacy*;	Physiotherapy;
Podiatry;	Prosthetics and Orthotics
Psychology;	Social Work (Australian Association of Social Workers approved courses only);
Speech Pathology;	Sonography.

* Only eligible for postgraduate scholarships

** Only eligible for postgraduate and CPD scholarships



Evidence review

A review of published research evidence and grey literature was used to underpin the evaluation and explore the three core assumptions underpinning each of the NAHSS scholarship streams, namely:

1. Allied health students who are supported to undertake rural work integrated learning (rural clinical placements) are more likely to choose a rural work destination [*Clinical Placement scholarship stream*];
2. Improving access to allied health undergraduate study for disadvantaged rural students increases the likelihood of rural students completing their allied health degree and choosing a rural work destination [*Undergraduate scholarship stream; Clinical Psychology scholarship stream*];
3. Providing professional development and support for rural Allied Health professionals positively influences rural Allied Health professional rural career aspirations and the likelihood of staying in a rural area [*Post graduate scholarship scheme; Continuing Professional Development scholarship scheme*].

Context

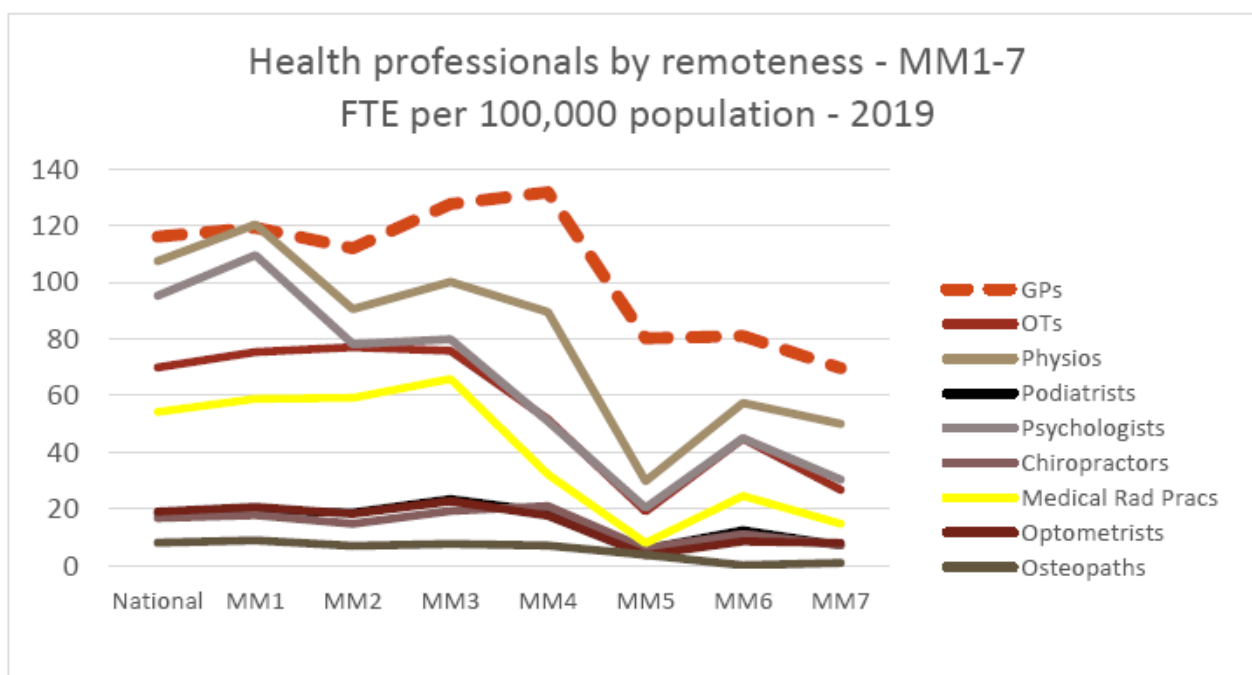
Most health workers live and work in cities, yet almost half of the world's population currently live in rural and remote areas (Sheil-Adlung, 2015). Challenges attracting and retaining a full complement of health workers in rural and remote communities is widely recognised as being a significant contributor to rural residents experiencing poorer health outcomes than their metropolitan counterparts (World Health Organisation, 2010).

In Australia, chronic rural health workforce shortages have been identified as significantly contributing to the substantial unaddressed health care needs found in rural and remote communities (Australian Institute of Health and Welfare (AIHW), 2019). Contributing to this is the shortage of Allied Health professionals, particularly given the lead role that Allied Health professionals play in providing rehabilitation and chronic disease management services (Ducat et al, 2014, O'Callagan et al., 2005).

The rural allied health workforce issue is primarily one of maldistribution, with an oversupply of Allied Health professionals in metropolitan areas and an undersupply in rural areas, with Allied Health workforce shortages intensifying with remoteness (AIHW, 2019). Maldistribution and workforce shortages in rural and remote Australia are about twice as severe as for medical practitioners with numbers dropping sharply with remoteness. The following graph shows the distribution by remoteness (where MMM1 is inner metropolitan and MMM7 is very remote) for a selection of AHPS, compared with GPs.



Figure 1: Health Professionals by Remoteness (source: Department of Health)



The World Health Organisation (WHO) recommends a number of ways to address the issue of under-supply of health professionals in rural areas, including national policy, regulatory interventions, financial incentives, personal and professional support and the education of health students (WHO, 2010). The Australian government has implemented numerous schemes to address the undersupply of health professionals in rural areas, including the Nursing and Allied Health Scholarship and Support Scheme (NAHSSS). This evidence review focuses specifically on schemes the NAHSSS implemented to address Australia's rural allied health (AH) workforce pipeline issues, while acknowledging there are also similar and different issues and incentives for medical and nursing workforces.

The relationship between rural work integrated learning (rural clinical placements) and rural work destination for Allied Health professionals

There is now strong evidence that rural origin allied health students are more likely to work in a rural area (Playford et al. 2020). This relationship is further augmented when rural origin students are exposed to good quality rural work integrated learning (WIL) opportunities as part of their undergraduate training (Nancarrow, Moran et al. 2013, Moran et al. 2020).

Wolfgang et al. (2019) for example demonstrate rural origin allied health students who attend longer, immersive rural work integrated learning placements are twice as likely to work in a rural or remote area on graduation than their metropolitan peers. Smith et al. (2021) demonstrate that rural



origin students are 4.5 times more likely to participate in rural work integrated learning experiences than their metropolitan peers.

For these benefits to be realised, rural work integrated learning experiences need to be of sufficient quality and provide an excellent student experience. For a rural work integrated learning experience to be high quality and to have the greatest chance of successfully influencing graduate work destinations to rural areas, the following mechanisms must be adhered to:

- support for students;
- engagement, consultation and partnership with key stakeholders and organisations; and
- regional coordination, infrastructure and support.

One mechanism that can positively influence the uptake, quality and impact of a rural WIL experience is the provision of resourcing to the student to offset the cost of the experience for the student, in particular for travel and/or accommodation (Moran, Nancarrow et al. 2020). Financial support for supervisors and organisations to accept undergraduate students is also an important mechanism to influence the uptake and quality of rural WIL experiences (Nancarrow, Moran et al. 2013). While some universities and University Departments of Rural Health offer to pay Allied Health professionals in private settings to take undergraduate students, many do not. Further, clinical educators in these settings are limited in what they can delegate to students due to funding bodies such as Medicare and private health insurers restricting access to rebates for treatment carried out by students, making it difficult for some allied health service providers to offer clinical placements in rural areas.

The NAHSSS undergraduate rural clinical placement scholarship scheme was based on the premise that undergraduates (of any origin) who attend rural WIL experiences are more likely to choose to work in rural areas, and that funding provided to students to undertake rural WIL experiences will influence the number of graduates choosing to work in rural areas. There is a significant paucity of research, however, specifically examining the impact of funding interventions that assist students to successfully access and complete their rural WIL experiences.

Whilst positive rural work integrated learning experiences can and do play a key role in influencing the rate of rural employment of newly graduated Allied Health professionals (Playford et al. 2006), other research indicates the decision of health professionals to work in a rural location is not determined simply by background or participation in 'excellent' rural placements, but varies between individuals as a result of the complex interaction of many factors (Nancarrow et al. 2013, Schofield et al. 2009). For example one longitudinal Australian study shows that intention to work rurally increases over time, since graduation (Rowbotham J, 2019).



Rural disadvantage, access to allied health undergraduate study for rural students and factors affecting access to and the success of rural students completing their allied health degree.

It is important that individuals have opportunities to participate in quality higher education, regardless of location or background. While overall higher education participation in Australia is high, there are substantial and long-standing differences in the rate of participation across different geographic areas and social groups. These differences arise from a complex mix of interrelated geographical, socioeconomic and cultural factors.

Given the strength of evidence demonstrating the impact rural origin has on the likelihood of rural practice in the allied health professions, it is logical therefore that more rural students should be encouraged to undertake tertiary level study to become Allied Health professionals.

The uncapping of university placements in 2012 has led to a significant increase in the proportion of young people who enrolled in and attended university (Productivity Commission 2019). The expansion in the number of Australian Government-supported university places meant that additional students had the opportunity to attend university that they would not have had in earlier periods.

Despite an increase in participation rates, Australia continues to have one of the largest urban/rural achievement gaps in the Organisation for Economic Co-operation and Development (OECD, 2013). Students in rural communities in Australia are less likely than their urban peers to complete secondary education (Alston & Kent, 2006) or attend university (James, 2001). This trend increases as distance increases; with the likelihood of students reporting an intent to study at university decreasing as distance increases (Cooper et al. 2017).

Key factors that contribute to these rural participation differences, particularly in relation to initial access to higher education include (Productivity Commission 2019, James 2001, Cardack et al. 2009):

- school achievement and completion;
- aspirations towards higher education;
- university selection and admission processes;
- provision of and access to higher education; and
- financial considerations.

For people in rural and isolated areas in Australia socioeconomic effects are generally more pronounced and pervasive than any effects of location when it comes to higher education participation rates (James 2001). Attainment and achievement at school and the aspiration to attend university are key to closing the gap between rural and metropolitan higher education participation rates. These factors are however deeply influenced by underlying differences in individuals'



backgrounds, such as socioeconomic status, gender and cultural background (James 2001, Cardack et al. 2009).

There is evidence for example that socioeconomic status (SES) does not influence higher education participation rates for rural students if their eligibility to attend university (their ATAR) is adequate. That is, participation among those with similar eligibility to attend university (ATARs) does not vary by SES. What does vary however is the link between SES and sufficient school achievement to achieve the ATAR to attend university (Cardak et al. 2009).

Given this complexity, strategies designed to lift participation rates in under-represented rural areas are unlikely to be effective if they focus only on issues of distance and accessibility (Cardak et al 2017, 2009; Productivity commission 2019).

The Australian Government Productivity Commission research paper examining the demand driven university system (2019) identifies that strategies that aim to improve higher education access should also enable success. The paper (2019) describes how equity groups (such as those in rural areas) face three hurdles to success when it comes to higher education: gaining access to university; degree completion; and labour market transitions.

One paper has examined barriers and enablers to rural and remote student transition to allied health undergraduate education (Speirs & Harris, 2015). The study identifies that recruitment pathways to allied health tertiary studies in rural and remote communities are vague and often interrupted, and the return of graduates to these communities is haphazard. Akin to the findings of the Productivity Commission findings (2019) students from rural and remote communities often experience secondary education disadvantage with inadequate subject choices, pathways and opportunities and programs designed to facilitate transition to tertiary study are often limited in their capacity to address cumulative concerns. With respect to rural WIL opportunities, students from rural and remote backgrounds face financial imposts and are confounded by daunting social isolation, and separation from families and support systems. In regard to clinical placement, the disincentives and social isolation weigh heavily.

Another study (Kumar et al. 2020) identifies that transition to rural practice is influenced by exposure to rural settings, social/lifestyle, and mentor and support. The multifactorial nature of the barriers and enablers highlight the complexity underpinning how Allied Health professionals transition to rural-based practice. These barriers/ enablers are often inter-linked and continually evolving which pose significant challenges for health care stakeholders to successfully addressing these.

The NAHSSS undergraduate scholarship and, to an extent, the clinical psychology scholarship schemes are based on the premise that graduates of rural origin are more likely to choose to work in rural areas, and that funding the studies of such students is a viable way to increase the supply of allied health workforce to rural areas.



Professional development and support for rural Allied Health professionals.

Evidence shows that an Allied Health Professional's decision to locate to, stay or leave a rural community is influenced by a complex array of personal, community and professional contexts (Cosgrave et al. 2018, 2019, 2020).

Cosgrave et al. argue that the duration of stay for rurally-based health professionals is dependent on the extent to which the personal and professional needs of the health professional, and any significant others, are able to be met by the rural town and community in which they live.

The Whole-of-Person Retention Improvement Framework (WoP-RIF) (Cosgrave et al. 2018, 2019, 2020) identifies three essential domains that enable understanding of and targeted interventions that influence workforce retention in rural areas. The three domains include: Workplace/Organisational, Role/Career and Community/Place.

Cosgrave argues that innovative strategies are urgently needed in the community-place domain as it is this domain that contributes most strongly to new to area employee's decisions to stay or leave within the first instance 12 months of starting work in a new rural area.

Cosgrave's turnover intention theory stipulates that an individual's decision to stay or leave is determined by the gap between their personal and professional expectations; their satisfaction with their job (professional) and rural living (personal) experience; and their life stage. Thus retention of allied health employees is influenced by:

- Rural adaptation and life stage of the Allied Health professional
- factors that impact their personal experience
- factors that impact their social connections
- professional or work-related experiences and
- expectations such as the workplace culture, the scope of the role and career advancement opportunities.

A major finding from Cosgrave's work is that, in the adjustment stages (initial and continuing), turnover intention was most strongly affected by professional experiences, in particular those relating to the job role, workplace relationships and level of access to professional development. Having reached the 'having adapted' stage, the major influence on turnover intention shifted to personal satisfaction, and this was strongly impacted by individuals' life stage.

Therefore, with respect to professional or work related experiences, an Allied Health professional's decision to locate to, stay or leave a rural community is significantly influenced by the availability of and access to practice supports, opportunities for professional growth, organisational commitment to supporting the practitioner and understanding the context of rural practice.



Lack of access to CPD is known to be problematic for rural Allied Health professionals. In particular, rural Allied Health professionals cite additional costs of travel to attend CPD, expensive registrations, lack of backfill to leave clinical work to undertake CPD and not being provided with a car or time to travel. Two evidence reviews (Berndt et al. 2017, Moran et al. 2013) identify that there are few studies that examine the impact of practice change following the educational intervention and, despite a suggestion there is a link between the constructs, few measure the relationship between access to continuing professional development and workforce retention for Allied Health professionals.

The World Health Organisation's (WHO) policy of improving retention of rural health-care workers recommends that governments design continuing education and professional development programmes that meet the needs of rural health workers and that are accessible from where they live and work, so as to support their retention (WHO, 2010).

Research has identified that outcomes of support interventions for practitioners in rural and remote contexts may be enhanced if the professional support strategy includes (Moran et al., 2020):

- consultation with staff prior to professional development or education programmes to assess individual, collective and context specific needs;
- external support;
- accessible and adequate resources assisting staff to undertake or access the programme; and
- interactive and networking opportunities.

With regard to clinical psychologists in rural areas, there is evidence that obtaining full registration as a general psychologist is challenging in part due to the significant requirements set by the Psychology Registration Board. This is exacerbated by a shortage of experienced clinical psychologists working rurally who can provide the supervision required for accreditation and the cost of obtaining supervision (SARRAH, 2016).

The Commonwealth Government currently funds a number of targeted scholarship programs accessible to allied health professionals including Allied Health Rural Generalist Education and Training Scheme (TAHRGETS) administered by SARRAH, which supports early career allied health professionals to undertake post-graduate training and education in Rural Generalist Practice. In addition, the Health Workforce Scholarship Program (HWSP) has been administered by state-based rural workforce agencies since 2016. Unlike the former NAHSSS CPD stream, the HWSP is only available to Allied Health professionals working in non-government organisations in primary healthcare settings. Data regarding the proportion of total HWSP funding allocated to Allied Health Professionals is not available to the general public. Other specific scholarship programs in Aged Care and Mental Health (not rural-specific) will become available in 2022 and, through a closed grant process, will be administered by the Australian College of Nursing

The NAHSSS continuing professional development (CPD) scholarship scheme and the NAHSSS post graduate scholarship scheme are based on the premise that Allied Health professionals in rural areas



are more likely to remain practising as Allied Health professionals in rural areas if there is accessible and adequate resources for CPD and opportunities for post graduate activities.

Summary of research evidence

The overarching problem for the Commonwealth Government and rural communities alike is high levels of morbidity and mortality with inadequate access to Allied Health services that can contribute to health and social care solutions that will address the level and type of need (that is, need exceeds supply of the allied health workforce in rural and remote areas).

A form of program logic, PEASI, was used to summarise the evidence (Table 3) and identify key impact indicators to ascertain the success of the NAHSSS against objectives of the scheme. PEASI program logic approach [Problem – Enablers – Activities – Successes – Impacts] lets Allied Health professionals clearly identify their workforce challenge, examine different enabling contexts and solutions and understand what activities can be used to contribute to solving the specific challenges. PEASI program logic is adapted from the Inductive Logic Reasoning (ILF) methodology that was created to examine the mechanisms that enabled successful large scale allied health workforce change interventions in Queensland Australia (Nancarrow et al. 2013).

As identified in the evidence review, there are many activities (interventions), such as Cosgrave's WOP-RIF (Cosgrave 2020), transition to rural practice activities such as the Allied Health Rural Generalist (AHRG) Pathway and mechanisms to maximise the impact rural work integrated learning opportunities have on intention to work in a rural location (Moran et al., 2020) that are known to be effective in leveraging the enabling contexts described to address the problems identified above.

The following activities (interventions) are those that were implemented as part of the NAHSSS which are yet to be evaluated for their impact and as such are the focus of this evaluation.

- Scholarship support for rural origin students to attend and complete higher education studies in allied health;
- Scholarship support for allied health students (of any origin) to undertake rural WIL placements;
- Scholarship support for rural Allied Health professionals access CPD;
- Scholarship support for rural Allied Health professionals to access post graduate studies;
- Scholarship support for rural and metropolitan psychologists to access masters' level accreditation to practice as clinical psychologists in rural and metropolitan areas.

Congruent with the problems identified in the PEASI logic model, the overarching desired impact or best possible outcome from the NAHSSS activities is that there are sufficient Allied Health professionals in the workforce to meet rural needs and as such rural mortality and morbidity improves.



The following are considered the most appropriate indicators that would demonstrate whether or not the NAHSSS activities have been successful in addressing known problems and as such contribute to achieving the desired impact.

Macro-level Problem: There are not enough Allied Health professionals to meet demand in rural areas.

Best possible (desired) outcome: There are sufficient Allied Health professionals in rural areas to meet demand

Problem statement 1: Rural students are less likely to access and succeed at higher education than metropolitan students; There are not enough Allied Health professionals who choose to work in rural areas.

Best possible outcome 1: Students from rural areas are supported to pursue a career in Allied Health and choose to work in a rural area

- Evidence Based Enablers: Students from a rural-origin are more likely to work in rural areas when they graduate; Rural-origin students who are supported to access and complete higher education studies are more likely to graduate from their higher education studies;
- NAHSSS Activities to address problem: The Undergraduate (Entry - Level) Scholarship Stream supported rural-origin students to study a course that led to qualification as an Allied Health professional.
- Impact indicators: Number of rural-origin Allied Health professionals who were supported to attend and obtain undergraduate qualifications as an Allied Health professional (supply); Number of rural-origin Allied Health professionals who received NAHSSS undergraduate support who chose to work in in a rural area (supply);

Problem statement 2: There are not enough undergraduate Allied Health students undertaking rural work integrated learning placements; Rural work integrated learning placements are often not financially viable for undergraduate allied health students to undertake (or allied health organisations to support); There are not enough Allied Health professionals who choose to work in rural areas.

Best possible outcome 2: Undergraduate allied health students are supported to undertake rural WIL placements and choose to work in a rural area

- Evidence Based Enablers: Rural WIL placements are positively associated with an increased intention to work in rural areas on graduation; Rural-origin students are more likely to work in rural areas if they undertake immersive, high quality rural WIL placements; the most impactful enablers to undertaking rural WIL placements are access to financial support, accommodation and transport.
- NAHSSS activities to address problem: The Clinical Placement Scholarship Stream supported allied health students to undertake rural and remote clinical placements.



- Impact indicators: The number of undergraduate Allied Health professional students who are enabled to undertake a rural WIL placement; The number of undergraduate Allied Health professionals who enter the workforce are working in rural areas (supply);

Problem statement 3: Rural psychologists struggle to access training pathways and experienced supervisors to obtain accreditation to practice as registered clinical psychologists; There are not enough psychologists with clinical psychology registration in rural Australia.

Best possible outcome 3: Psychologists are supported to undertake training pathways that enable them to gain accreditation as an endorsed clinical psychologist and choose to work in a rural area.

- Evidence Based Enablers: Access to funding to cover travel, backfill, accommodation and postgraduate study costs as well as support from workplace to undertake postgraduate activities; Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations (through professional development);
- NAHSSS activities to address problem: The Clinical Psychology Scholarship Stream supported psychology graduates seeking registration with the Psychology Board of Australia to become endorsed clinical psychologists.
- Impact indicators: Number of psychologists supported to access and undertake postgraduate clinical psychology qualifications; Number of accredited clinical psychologists who practice as clinical psychologists in rural areas (supply).

Problem statement 4: Allied Health professionals struggle to access sufficient professional development in rural areas; Allied Health professionals who work in rural areas don't stay in rural areas.

Best possible outcome 4: Allied Health professionals from rural areas are supported to access sufficient professional development opportunities; Allied Health professionals from rural areas remain working in rural areas

- Evidence Based Enablers: Access to funding to cover travel, backfill, accommodation and training costs as well as support from workplace to undertake development activities; Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations (through professional development);
- NAHSSS activities to address problem: Continuing Professional Development Scholarship Stream supported rural Allied Health professionals to maintain and improve their skills and knowledge in their clinical areas of practice.
- Impact indicators: Number of rural Allied Health professionals who continue to work in rural areas (retention); Number of rural Allied Health professionals supported to undertake professional development opportunities.



Problem statement 5: Allied Health professionals in rural areas struggle to access career-enhancing postgraduate opportunities; Allied Health professionals who work in rural areas don't stay in rural areas.

Best possible outcome 5: Allied Health professionals from rural areas are supported to access postgraduate, career enhancing opportunities; Allied Health professionals from rural areas remain working in rural areas

- Evidence Based Enablers: Access to funding to cover travel, backfill, accommodation and postgraduate study costs as well as support from workplace to undertake postgraduate activities; Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations (through professional development);
- NAHSSS activities to address problem: The Postgraduate Scholarship Stream supported qualified rural Allied Health professionals (Allied Health professionals) to study an accredited postgraduate qualification at a recognised university located in Australia
- Impact indicators: Number of rural Allied Health professionals supported to access and undertake postgraduate opportunities; Number of rural Allied Health professionals supported to pursue professional or career aspirations; Number of rural Allied Health professionals who continue to work in rural areas (retention);

The information from this evidence synthesis was used to shape the evaluation questions and structure of this report.

Table 3 PEASI summary logic model

Overarching Problem / Drivers: High levels of morbidity in rural communities that can be partially addressed through access to Allied Health professional services however there are not enough Allied Health professionals to meet demand in rural areas.

Overarching desired outcome: Sufficient Allied Health professionals in the workforce to meet rural needs.

Area	Problem	Enablers	Activities	Success indicators	Impact (best possible outcome)
Undergraduate support	<p>Rural students are less likely to access and succeed at higher education than metropolitan students;</p> <p>There are not enough Allied Health professionals who choose to work in rural areas.</p>	<ul style="list-style-type: none"> - Rural-origin students who are supported to obtain the ATAR required to study at university are more likely to access higher education studies; - Rural-origin students who are supported to access and complete higher education studies are more likely to graduate from their higher education studies; - Rural-origin students are more likely to work in rural areas when they graduate if they are supported to transition into rural workplaces; - Allied health students from a rural origin are more likely to work in rural areas when they graduate. 	Scholarship support for rural origin students to attend and complete higher education studies in allied health;	<p>More rural-origin Allied Health professionals completing higher education degrees in Allied Health; more rural-origin Allied Health professionals enter the workforce; more rural-origin Allied Health professionals who enter the workforce are working in rural areas;</p>	<p>Students from rural areas are supported to pursue a career in Allied Health and choose to work in a rural area;</p> <p>There are sufficient Allied Health professionals in the workforce to meet rural needs.</p>



Area	Problem	Enablers	Activities	Success indicators	Impact (best possible outcome)
Clinical placement support	<p>There are not enough undergraduate Allied Health students undertaking rural work integrated learning placements;</p> <p>Rural work integrated learning placements are often not financially viable for undergraduate allied health students to undertake (or allied health organisations to support);</p> <p>There are not enough Allied Health professionals who choose to work in rural areas.</p>	<ul style="list-style-type: none"> - Rural WIL placements are positively associated with an increased intention to work in rural areas on graduation; - Rural-origin students are more likely to work in rural areas if they undertake immersive, high quality rural WIL placements; - the most impactful enablers to undertaking rural WIL placements are access to financial support, accommodation and transport. - For these benefits to be realised, rural work integrated learning experiences need to be of sufficient quality and provide an excellent student experience - Allied health organisations in rural areas need to be supported to provide sufficient, high quality rural WIL experiences. 	Scholarship support for rural origin students to undertake rural WIL placements.	More Allied Health professionals enabled to undertake a rural WIL placement; More Allied Health professionals who enter the workforce are working in rural areas;	<p>Undergraduate allied health students are supported to undertake rural WIL placements and choose to work in a rural area;</p> <p>There are sufficient Allied Health professionals in the workforce to meet rural needs.</p>



Area	Problem	Enablers	Activities	Success indicators	Impact (best possible outcome)
Clinical Psychology support	<p>There are not enough rural psychologists with clinical psychology registration;</p> <p>Rural psychologists struggle to access training pathways and experienced supervisors to obtain accreditation to practice as registered clinical psychologists.</p>	<ul style="list-style-type: none"> - Access to funding to cover travel, backfill, accommodation and postgraduate study costs as well as support from workplace to undertake postgraduate activities; - Allied Health professionals (clinical psychologists) who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations through post graduate study; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to social support, support to connect with the community and support to fulfil their life aspirations. 	Scholarship support for rural psychologists to undertake masters' level accreditation to practice as clinical psychologists in rural areas.	More psychologists are supported to access and undertake postgraduate clinical psychology qualifications; More accredited clinical psychologists are practising as clinical psychologists in rural areas.	<p>Psychologists are supported to undertake training pathways that enable them to gain accreditation as an endorsed clinical psychologist and choose to work in a rural area;</p> <p>There are sufficient Allied Health professionals in the workforce to meet rural needs.</p>
CPD support	Allied Health professionals don't stay in rural areas;	<ul style="list-style-type: none"> - Access to funding to cover travel, backfill, accommodation and training costs as well as support from 	Scholarship support for rural Allied Health professionals access CPD;	More Allied Health professionals stay working in rural areas; More rural Allied Health professionals	Allied Health professionals from rural areas are supported to access sufficient



Area	Problem	Enablers	Activities	Success indicators	Impact (best possible outcome)
	Allied Health professionals struggle to access sufficient professional development in rural areas;	<ul style="list-style-type: none"> - workplace to undertake development activities; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations through professional development; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to social support, support to connect with the community and support to fulfil their life aspirations. 		supported to obtain professional development opportunities; More rural Allied Health professionals pursue professional or career aspirations.	<p>professional development opportunities and remain working in rural areas;</p> <p>There are sufficient Allied Health professionals in the workforce to meet rural needs.</p>
Post graduate support	<p>Allied Health professionals don't stay in rural areas;</p> <p>Allied Health professionals in rural areas struggle to access sufficient career-enhancing postgraduate opportunities;</p>	<ul style="list-style-type: none"> - Access to funding to cover travel, backfill, accommodation and postgraduate study costs as well as support from workplace to undertake postgraduate activities; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are 	Scholarship support for rural Allied Health professionals to access post graduate studies;	More Allied Health professionals stay working in rural areas; More rural Allied Health professionals are supported to access postgraduate courses; More rural Allied Health professionals pursue	Allied Health professionals from rural areas are supported to access postgraduate, career enhancing opportunities and remain



Area	Problem	Enablers	Activities	Success indicators	Impact (best possible outcome)
		<p>supported to pursue professional or career aspirations through post graduate study;</p> <ul style="list-style-type: none">- Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to social support, support to connect with the community and support to fulfil their life aspirations.		<p>professional or career aspirations.</p>	<p>working in rural areas;</p> <p>There are sufficient Allied Health professionals in the workforce to meet rural needs.</p>

Methodology

This mixed methods evaluation seeks to investigate the effectiveness of the allied health component of the Nursing and Allied Health Scholarship and Support Scheme (NAHSSS) in achieving the objectives of the scheme; namely to provide evidence relating to the supply and retention of Allied Health professionals in rural areas over time (2011-2021).

As a requirement of receiving a NAHSSS scholarship, scholars consented to be contacted to participate in the evaluation of the scheme. Ethics approval to undertake the evaluation was received from Southern Cross University Human Research Ethics Committee, approval number is 2021/141.

Aims and objectives

The overarching aim of this evaluation is to understand the impact of the five Commonwealth funded allied health scholarship support streams on the supply and retention of Allied Health professionals in rural areas over time.

The objectives of the evaluation reflected the objectives of the scheme and were therefore to:

- I. Understand the extent and reach of the NAHSSS Scheme (number and profile of NAHSSS scholars);
- II. Understand the impact of the NAHSSS on supply and retention of the rural AH workforce; and
- III. Understand the role of the NAHSSS in supporting and enabling rural allied health careers.

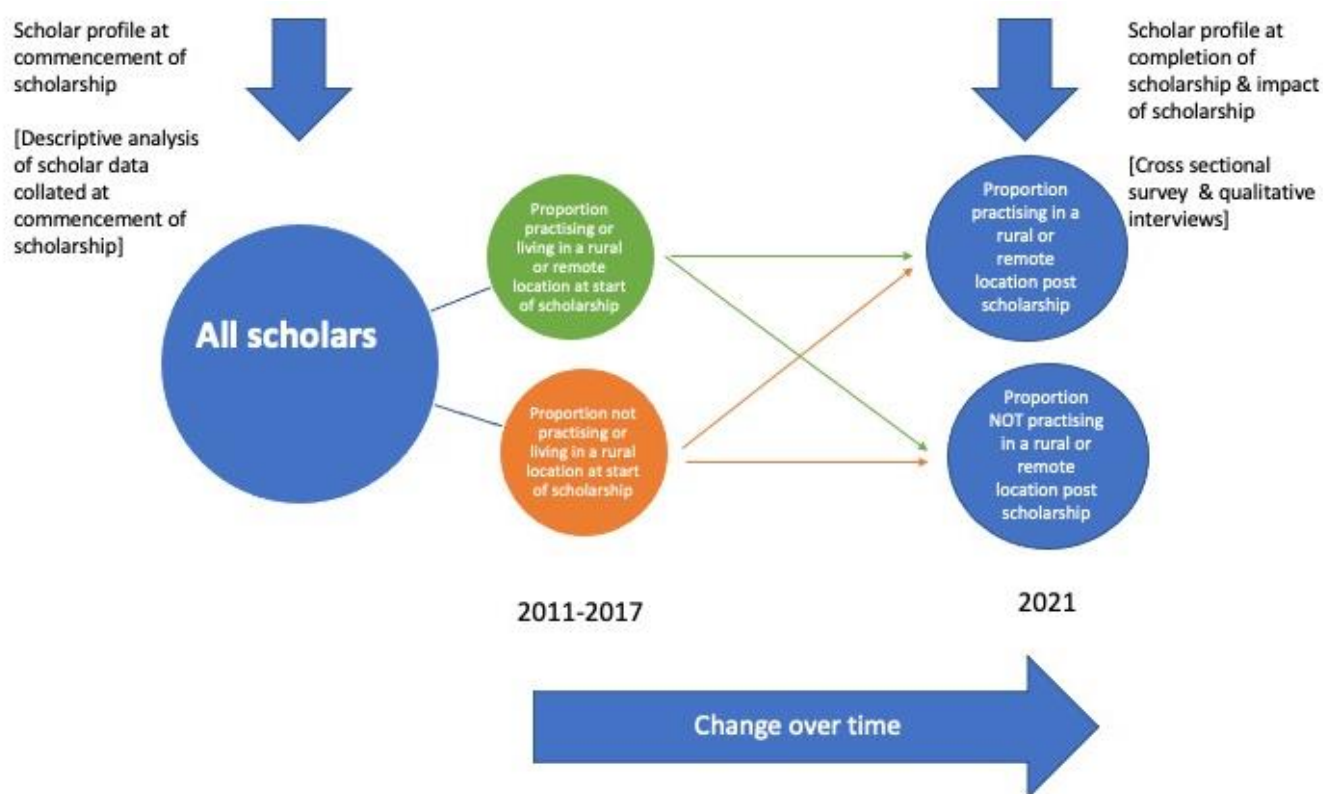
Methodology

A mixed methods approach was used with three components:

- Analysis of descriptive data from NAHSSS scholars obtained at the point of scholarship commencement;
- A follow up survey in the form of an online questionnaire administered to all NAHSSS scholars; and
- In-depth interviews with a sample of NAHSSS scholars from each of the scholarship programs.



Figure 2 Methodology schema



Scholar profile at commencement of scholarship

Original NAHSSS scholar data obtained at the point of scholarship commencement was used to understand:

1. the profile of the NAHSSS scholars at the time of receiving scholarship support
2. geographic workplace location at commencement of their scholarship; and
3. to compare the change in geographic workplace/residential location over time.

Data collected by SARRAH at commencement of all scholarships included:

- Name and contact details
- Gender
- Ethnicity (CALD, Aboriginal and Torres Strait Islander , Other)
- Residential postcode (for Undergraduate and Clinical Placement scholars)
- University of study
- Location of work (postcode) (for CPD and Post Graduate scholars)
- Allied health profession
- Post graduate or CPD course information
- Clinical Placement location (postcode) and duration (weeks)



Follow up questionnaire

Data collection was undertaken using Qualtrics software distributed to NAHSSS scholars via email over a 5 week period (from 1 November to 1 December 2021). Three reminders were sent to participants at 1.5 week intervals. The questionnaire can be found in appendix 2.

The questionnaire was used to understand the current profile of scholars for each scholarship stream (including practise status and geographic workplace location), change over time in these variables and to understand the role the NAHSSS played in influencing outcomes of each scholarship stream.

Qualitative study

A qualitative study consisting of in-depth, semi-structured phone / online interviews with a sample of NAHSSS scholars was undertaken to explore the key factors, enablers and activities that lead to improved supply and retention of the AH workforce in rural and remote areas over time. Of particular interest was the role of the NAHSSS in supporting and enabling:

- completion of undergraduate studies;
- completion of clinical psychology accreditation and registration;
- completion of post graduate studies; and
- capacity and willingness to remain a practising Allied Health professional in a regional, rural or remote area over time, focussing on rural careers.

Data were collected using semi-structured telephone or online interviews that were voice-recorded and transcribed verbatim. The semi-structured interviews consisted of several key questions that helped to define the areas to be explored, but also allowed the interviewer or interviewee to diverge in order to pursue an idea or response in more detail (Miles, 1994, Britten, 1999). Questions included in the interview schedule explored the impact the NAHSSS scholarship on the ability of scholars to complete their studies or attend rural placements as well as the influence the scholarship has had on their career and capacity and willingness to remain in the rural workforce. The interview schedule can be found in Appendix 3.

Sampling and Recruitment

In terms of eligibility criteria for participation in the evaluation, all NAHSSS scholars who received scholarship support from SARRAH during the 2011-2017 period (n=4617) were included in baseline data analysis and were invited to participate in a follow up questionnaire (Table 4).

Table 4 Study eligibility criteria

Study arm	Eligibility criteria
Scholar profile at commencement of scholarship	All NAHSSS scholars who received scholarship support from SARRAH during the 2011-2017 period (n=4617).
Follow up survey	All NAHSSS scholars who received scholarship support from SARRAH during the 2011-2017 period (n=4617).



Qualitative study	All NAHSSS scholars who opted in to be contacted by researchers AND who received scholarship support from SARRAH during the 2011-2017 period were eligible for interview. From those who opted in to being interviewed, approximately 8-10 NAHSSS scholars from each scholarship category were invited to be interviewed. Purposive selection of participants according to scholarship type, rural origin, current workplace location and profession ensured a range of scholars were interviewed.
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Data Analysis

Scholar profile at commencement of scholarship

Data were provided to the consultants in a Microsoft Excel spreadsheet.

Descriptive statistics were used to respond to the research questions. Of interest were the following statistics:

- demographic, geographic, scholarship and allied health/course profile of NAHSSS scholars on commencement of their scholarship.

As described earlier, to ensure supply and retention analyses were as accurate as possible and could be matched to the follow up cohort, data from NAHSSS scholars at *commencement* of their scholarship that used historical rural classifications (Australian Standard Geographical Classification – Remoteness Areas (ASGC –RA) were brought into line with contemporary classification systems (The Modified Monash Model, MMM). This involved transforming all postcode, town and state variables from NAHSSS scholars at *commencement* of their scholarship into MMM classifications. As such, all data reported in this evaluation, both commencement and follow-up, use MMM classifications.

Transforming commencement location data however means that there were a small proportion of scholars who were eligible for funding through the NAHSSS under ASGC-RA classification 2 who, under the new classification system, are now MM 1 (n=75).

Postcode, town and state data were imported into Google Earth Pro to visually map geographic distribution of all scholars at scholarship commencement and follow up (2021). An 82% accuracy on geographic location for postcodes/towns was reported by Google Earth Pro.

Follow up survey

Data were analysed using Qualtrics, Excel and where required, SPSS. Descriptive statistics were used to answer the research questions. Of interest to this arm of the study were the following statistics:

- Scholarship and (or residential) workplace geographic profile of NAHSSS scholars on commencement of their scholarship;
- Current geographic workplace of NAHSSS scholars;
- The impact of the scholarship on current workplace location and career;



- The number and proportion scholars who completed their higher education degree in Allied Health (supply);
- The number and proportion of scholars who obtained professional registration (supply);
- The number and proportion of psychologists who obtained their masters and registration in clinical psychology (supply);
- The number and proportion of rural Allied Health professionals who obtained post graduate qualifications (retention);
- The change in the proportion and geographic workplace distribution of all scholars (and for each scholarship stream) (from scholarship receipt to present day) who are currently registered or working as Allied Health professionals (supply & retention).

Qualitative study

Thematic analysis was used for the qualitative data. The a priori issues for this research were reflected in the interview questions and included:

- Influence of the scholarship on intended outcomes
- Enablers / barriers to achieving intended scholarship outcomes
- Influence of the scholarship on allied health career / capacity to live and work as an Allied Health professional in a rural area
- Other enablers / barriers to living and working as an Allied Health professional in rural area

Themes identified from three data sources were synthesised to extract key learnings.

Supply and retention

Scholarships were intended to be awarded to bolster under-represented allied health professions in areas of need across Australia. There continues to be no national allied health workforce minimum dataset in Australia nor any way to routinely capture geographic areas of need for allied health services. Consequently there are no baseline data with which to compare change over time in the supply of specific allied health professions to specific geographic areas of need. Equally this evaluation has not compared the supply and retention of Allied Health professionals who received a scholarship with those who did not.

As such it is not possible to accurately examine the true impact of the scholarship scheme on the supply and retention of the allied health workforce or on addressing unmet needs in rural communities. In lieu of baseline comparative data, the supply and retention of scholars over time was estimated using the follow-up questionnaire responses, which ascertained the proportion of scholars in metropolitan or rural locations when they commenced their scholarship and the proportion scholars in metropolitan or rural locations in 2021.

- Retention was calculated using data from continuing professional development and postgraduate scholars. These scholars were predominantly working in a rural location on receipt of their scholarship (%) and were funded to encourage scholars to remain in a rural location.



- *Supply* was calculated using undergraduate, clinical psychology and where appropriate, clinical placement scholar data. These scholars were funded to increase the supply of Allied Health professionals into the rural workforce.

Synthesis

Program logic was used to synthesise the data from this evaluation against known, evidenced enablers, to identify how successful the NAHSSS was in addressing the problems identified with the supply and retention of the rural allied health workforce and therefore the objectives of the scheme. Results of this evaluation are presented according to each best possible outcome statement identified from the evidence review.

Results

Participants and Data collected

Baseline NAHSSS Scholar data

Original NAHSSS scholar data obtained at the point of scholarship commencement (n=4617) was cleaned and descriptively analysed. There were minimal missing data in the baseline dataset however postcode data for clinical placement scholars was not collected nor was allied health profession for the entire 2014 continuing professional development scholar cohort (n= 210).

Follow up NAHSSS Scholar data

The follow up questionnaire was distributed to all NAHSSS Scholars (n=4617) using email addresses held. Follow up data were obtained from 1037 completed scholar questionnaires representing a 27.3% response rate after accounting for failed email addresses (n=684) (Table 5). Clinical placement (21.0%) and undergraduate scholars (22.1%) were marginally under-represented in the follow questionnaire responses while postgraduates were over-represented (37.1%). First nation scholars were also under represented in the follow up questionnaire (Table 6). There was an under representation of MM1 commencement scholars for the clinical placement scholarship stream (23.7% of questionnaire respondents as compared to 76.1% of baseline scholars were from commencement MM1 settings) (Table 6).

Due to low numbers of responses for MM6 -7 respondents, caution must be used when interpreting the data where MM6 and MM7 information is described. This is particularly the case when follow up data are disaggregated and reported as individual scholarship streams.

Table 5 Follow up questionnaire response rate

Scholarship stream	Emails sent	Surveys Completed	Failed email address	Response rate (%)
--------------------	-------------	-------------------	----------------------	-------------------



Continuing Professional Development	895	190	227	28.4
Post graduates	778	250	105	37.1
Clinical Placement	1375	253	172	21.0
Undergraduates	879	173	96	22.1
Clinical Psychology	552	171	84	36.5
TOTAL	4479	1037	684	27.3

Table 6 Baseline and follow up respondents

Scholarship stream	Number of scholars		Geographic location		Aboriginal and Torres Strait Islander representation	
	Baseline	Follow up *	Baseline (commencement location)	Follow up (commencement location) *	Baseline	Follow Up*
Continuing Professional Development	965	190 (19.6%)	MM1 28 (3.0%) MM2+ 897 (97.0%)	MM1 4 (14.2%) MM2+ 157 (82.6%)	22 (2.2%)	2 (1.1%)
Post graduates	865	250 (28.9%)	MM1 38 (4.4%) MM2+ 827 (95.6%)	MM1 7 (2.8%) MM2+ 243 (97.2%)	30 (3.5%)	2 (0.8%)
Clinical Placement	1395	253 (18.1%)	MM1 1057 (76.1%) MM2+ 332 (23.9%)	MM1 60 (23.7%) MM2+ 139 (54.9%)	37 (2.6%)	3 (1.2%)
Undergraduates	880	173 (19.6%)	MM1 59 (6.7%) MM2+ 821 (93.3%)	MM1 23 (13.3%) MM2+ 150 (86.7%)	62 (7.1%)	6 (3.5%)
Clinical Psychology	552	171 (30.9%)	MM1 146 (26.4%) MM2+ 406 (73.6%)	MM1 27 (15.8%) MM2+ 141 (84.2%)	17 (3.1%)	2 (2.8%)

*there are some missing data for follow up variables

Interviews were conducted with 19 scholars from across all scholarship categories across multiple geographic backgrounds and workplaces (Table 7).

Table 7 Scholarship interview participants

Scholarship type	AH profession	Year of scholarship	Career stage	MM at scholarship commencement	Current MM
CPD	Physiotherapy	2013	Established Career	MM 3	MM 5



CPD	Occupational Therapy	-	Established Career	MM 5	MM 5
CPD	Social Work	2015	Established Career	MM 5	MM 3
Undergraduate	Optometry	2015	Early Career	MM 1	MM 3
Undergraduate	Social work	2014	Established Career	MM 3	MM 3
Undergraduate	Physiotherapy	2015	Early career	MM 4	MM 6
Postgraduate	Podiatry	2011	Established Career	MM 2	MM 2
Postgraduate	Dietetics & Nutrition	-	Established Career	MM 2	MM 2
Postgraduate	Podiatry	2012	Established Career	MM 2	MM 2
Postgraduate	Pharmacy	2014	Established Career	MM 4	MM 4
Postgraduate	Physiotherapy	2011	Established Career	MM 6	MM 3
Postgraduate	Paramedic	2015	Established Career	MM 7	MM 1
Clinical Psychology	Psychology	2012	Established Career	MM 4	MM 1
Clinical Psychology	Psychology	2014	Mid Career	MM 2	MM 2
Clinical Placement	Exercise Physiologist	2016	Early Career	MM 1	MM 1
Clinical Placement	Occupational Therapist	2014	Mid Career	MM 6	MM 1

Overview of NAHSSS scholars

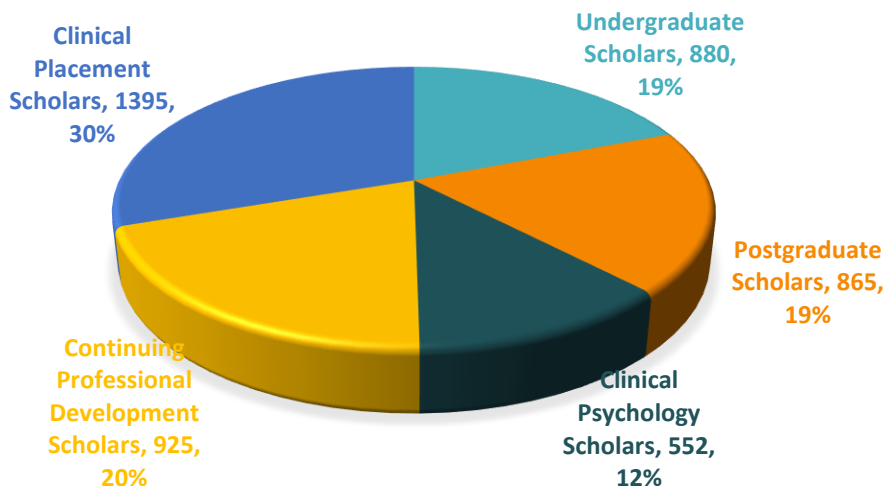
Scholar profile

Scholarships were awarded to 4617 Allied Health professionals and students over the duration of the NAHSSS funding across the following streams (Figure 3):

- 880 undergraduate scholarships
- 865 post graduate scholarships
- 552 clinical psychology scholarships
- 925 continuing professional development scholarships
- 1395 clinical placement scholarships

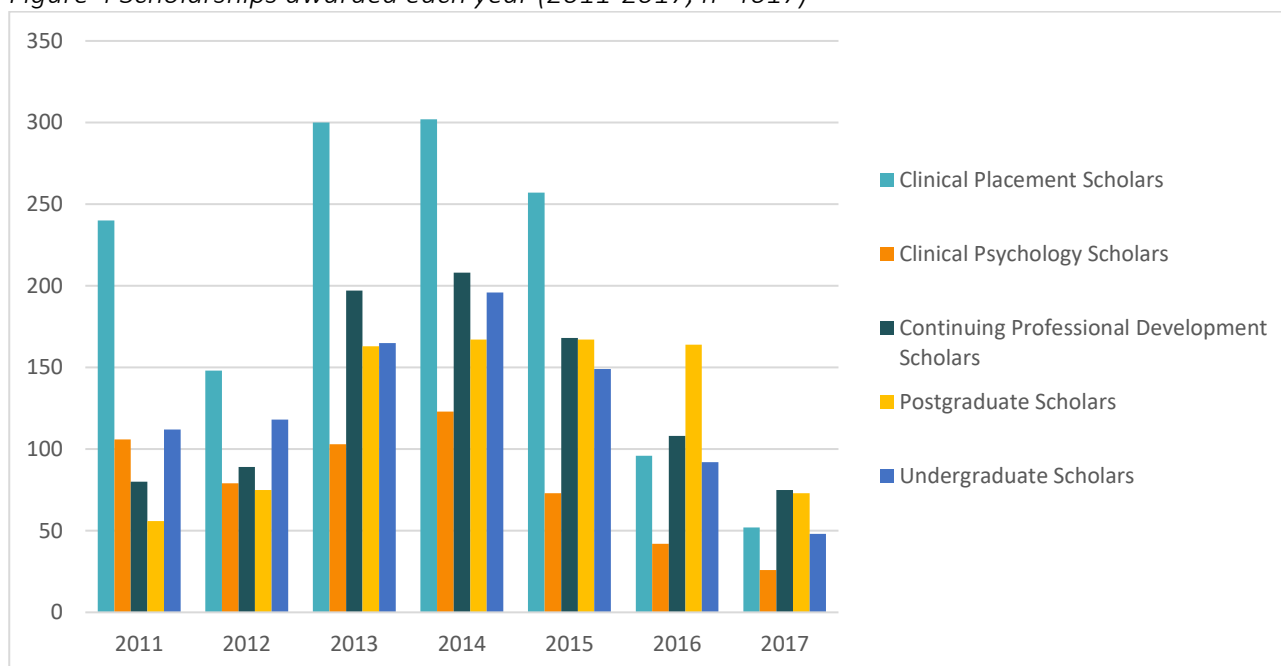


Figure 3 Scholarship streams (n=4617)



Scholarships were awarded between 2011 and 2017 with the majority of scholarships being awarded in 2014 (Figure 4).

Figure 4 Scholarships awarded each year (2011-2017, n=4617)



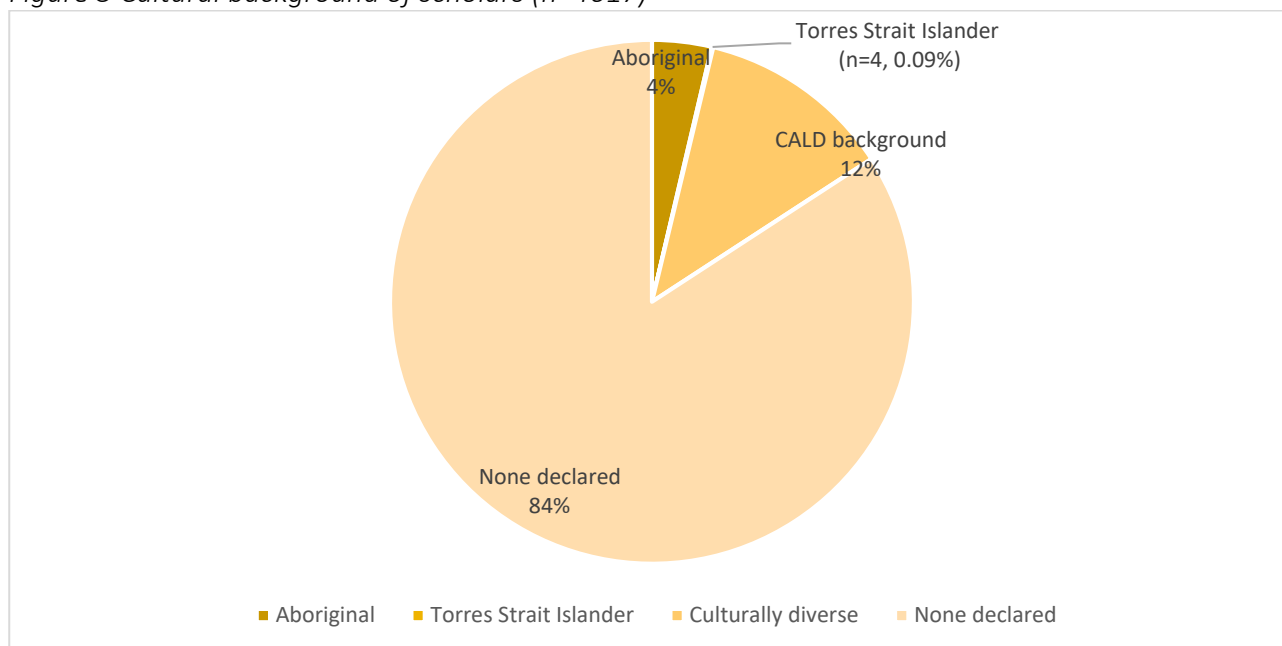


Diversity

The majority of scholars were female (n=3870, 83.8%) and did not identify as from a culturally or linguistically diverse (CALD) background. This was consistent across all scholarship streams apart from the undergraduate stream where there were more First Nations scholars (n=59).

The scholarships enabled 168 First Nations and 538 culturally and linguistically diverse (CALD) background students and professionals to access allied health study and/or work integrated learning (clinical placement) support (Figure 5). The NAHSSS also enabled 66 students from a state/territory where no allied health *undergraduate* training was offered to access undergraduate allied health courses (Northern Territory n=21, Tasmania n=45).

Figure 5 Cultural background of scholars (n=4617)

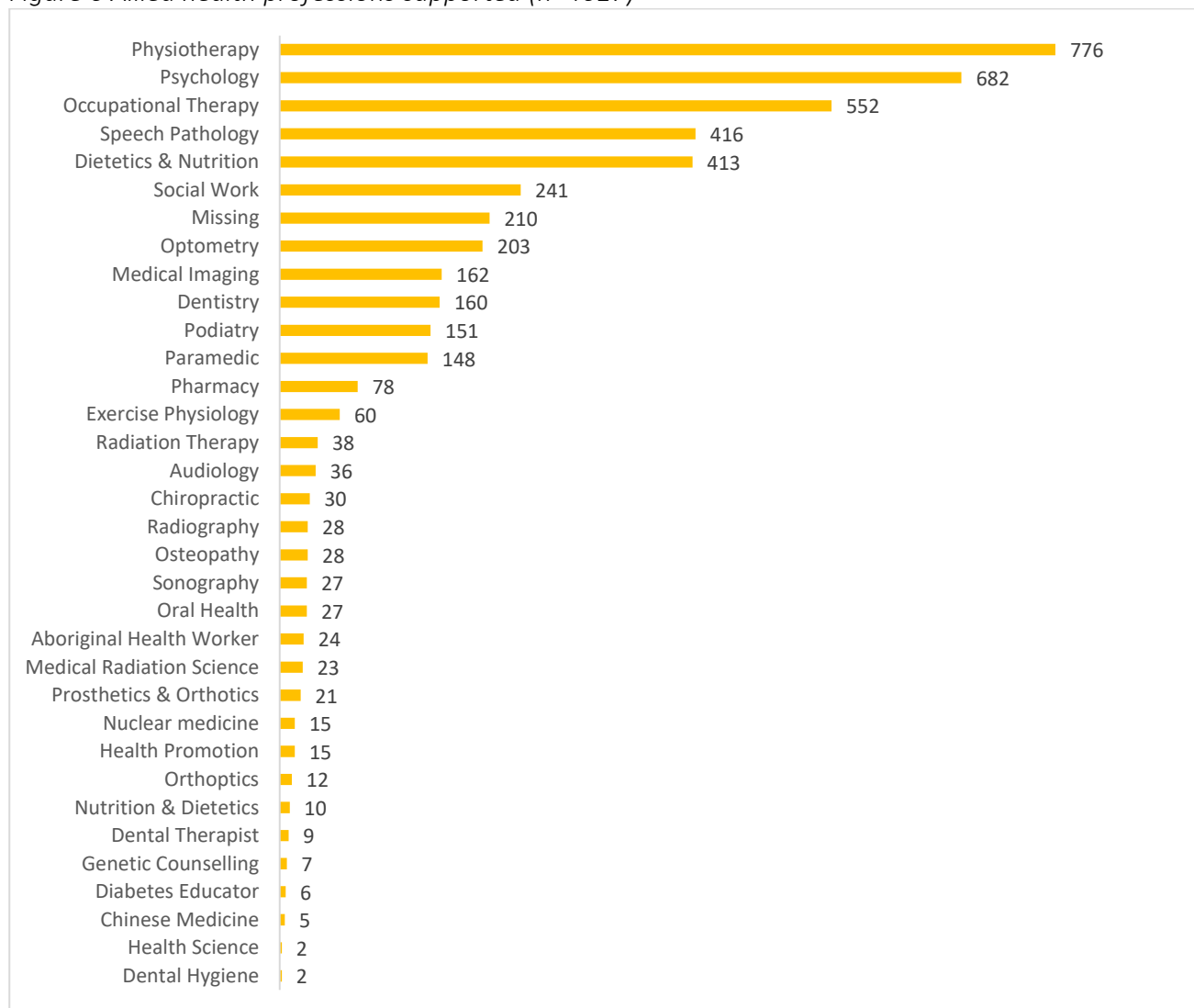




Allied health profile

Scholarships were awarded across 33 different allied health professions with physiotherapy (n=776, 16.8%), psychology (n=682, 14.8%), occupational therapy (n=552, 12.0%), speech pathology (n=416, 9.0%) and dietetics and nutrition (n=413, 8.9%) were the most frequently funded professions and Chinese medicine (n=5, 0.1%) and dental hygiene (n=2, 0.04%) the least (Figure 6).

Figure 6 Allied health professions supported (n=4617)

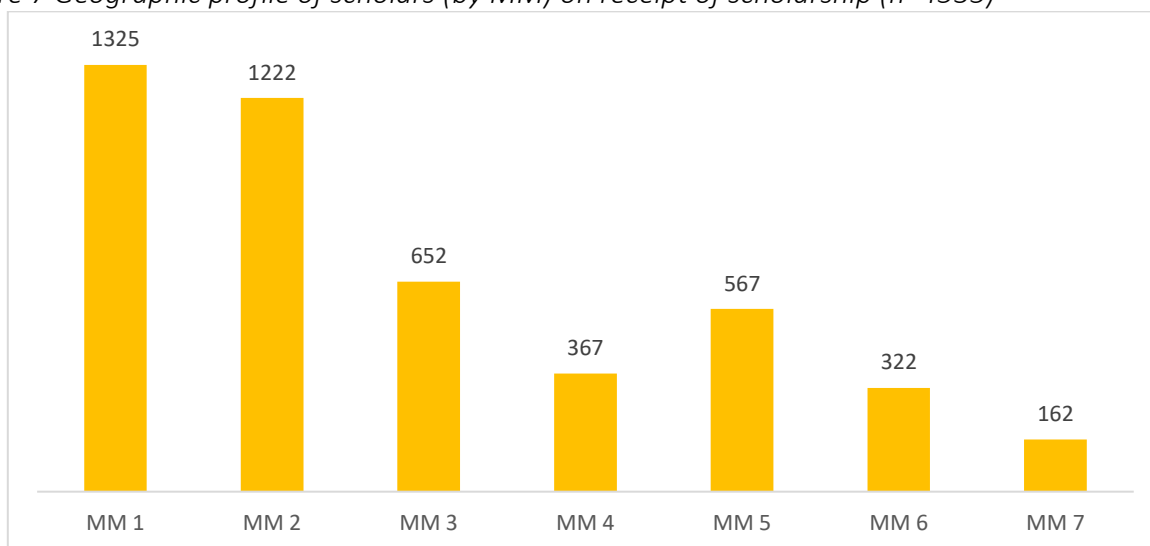




Geographic profile of scholars at time of scholarship

Scholars were predominantly from rural backgrounds or rural workplace locations (Modified Monash Category MM 2-7) (n=3283, 71.2%) (Figure 7, Image 1). This was true for all scholarship streams apart from those who received assistance to undertake work integrated learning (clinical placement scholars) who were predominantly from a metropolitan (MM1) background (n=1053, 22.8%).

Figure 7 Geographic profile of scholars (by MM) on receipt of scholarship (n=4535)



Scholars were predominantly from New South Wales (NSW 25.4%) followed by Queensland (QLD 24.6%), Victoria (Vic 17.7%), Western Australia (WA 11.1%), Tasmania (Tas 7.54%), Northern Territory (NT 6.97%), South Australia (SA 6.41%) and the Australian Capital Territory (ACT 0.26%) (see Image 1 and Figure 8).

Figure 8 Geographic profile of scholars (by state) on scholarship commencement (n=4617)

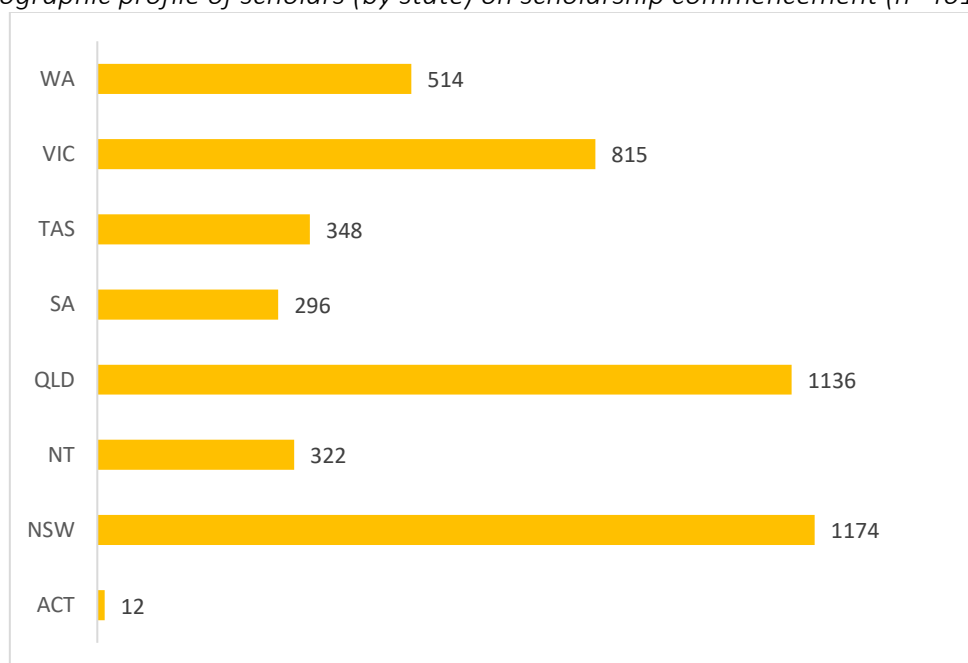
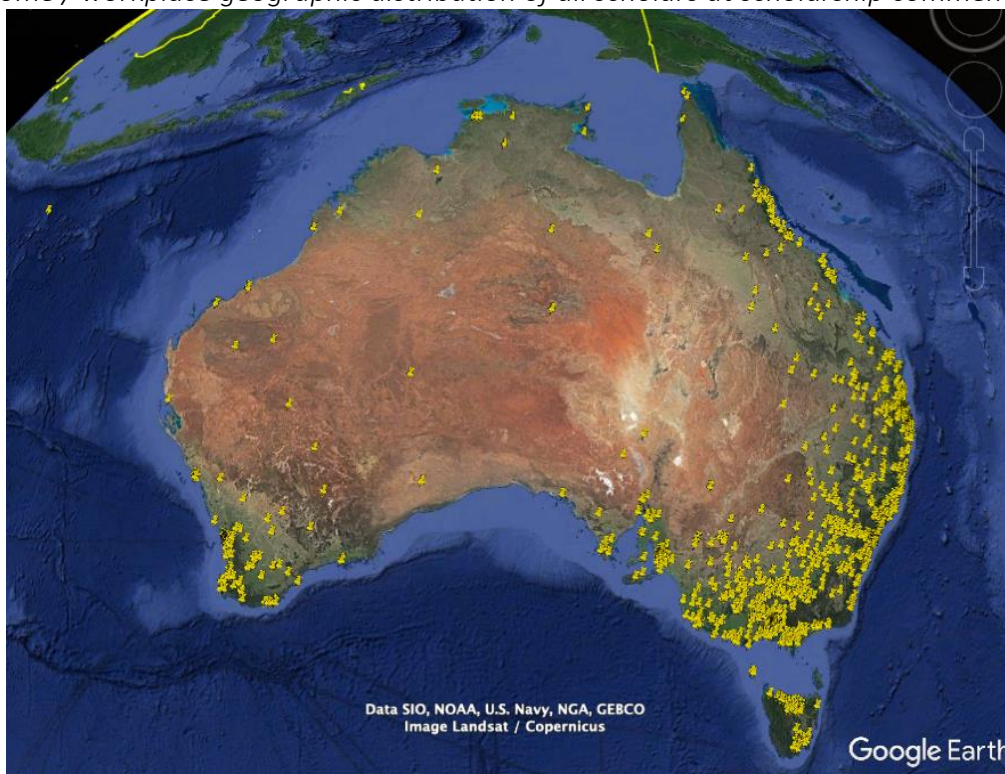




Image 1 Home / workplace geographic distribution of all scholars at scholarship commencement



Current practise status

The majority of respondents to the follow up questionnaire were working as Allied Health professionals in clinical roles (n= 917, 85.62%) (Table 8).

Table 8 Current practise status (2021)

Response	n	%
Yes, I am currently working / am on leave from working clinically as an Allied Health professional	917	85.62%
Yes, I continue to identify as an Allied Health professional but I am not currently working in a clinical role	94	8.78%
No, I am not currently working or registered to work as an Allied Health professional (I have left the profession)	37	3.45%
Other*	23	2.15%
Total	1071	100%

*other included studying for another degree (medicine, orthoptics, PhD), working in research, changed profession, retired

Career status and role at follow up (2021)

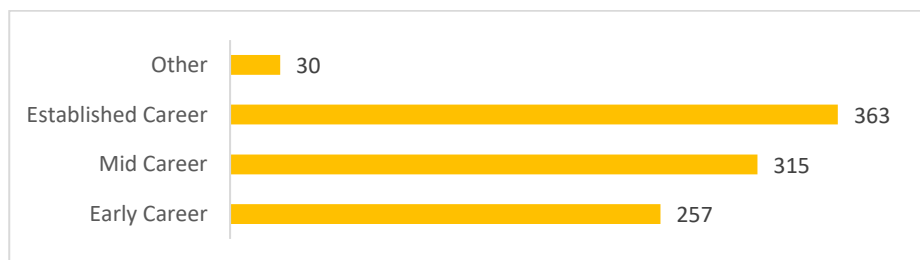
There was an even spread of early, mid and established career Allied Health professionals amongst the cohort. The large percentage of established career Allied Health professionals (37.62%) reflects the over representation of post graduate scholars in the questionnaire responses (Figure 9).

Respondents reported a range of roles including Aboriginal Health Practitioner (Hearing and Ear Health specialist), Senior research fellow, Chief Wellbeing Officer, Elder Abuse Manager, Manager



of Allied Health Education , Advanced Scope Physiotherapist in emergency and orthopaedic telehealth, paediatric ketogenic dietitian and PhD candidate, senior pelvic health physiotherapist, Allied Health Workforce Development Officer, Advanced Care Paramedic, senior advisor occupational therapist with department of education and Operational Advanced Life Support Paramedic.

Figure 9 Career status at follow up (2021)



Workplace profile at follow up (2021)

At follow up, scholars were asked to identify who their primary employer was (for more than 50% of their working time). Most scholars report they currently work for government organisations (n=492, 51.1%) or within the private sector (n=343, 35.6%). (Figure 10). Those working in more remote locations (MM6+7) tend to be predominantly employed by government or not for profit organisations (Table 9).

Figure 10 Employer profile at follow up (2021, n=962)

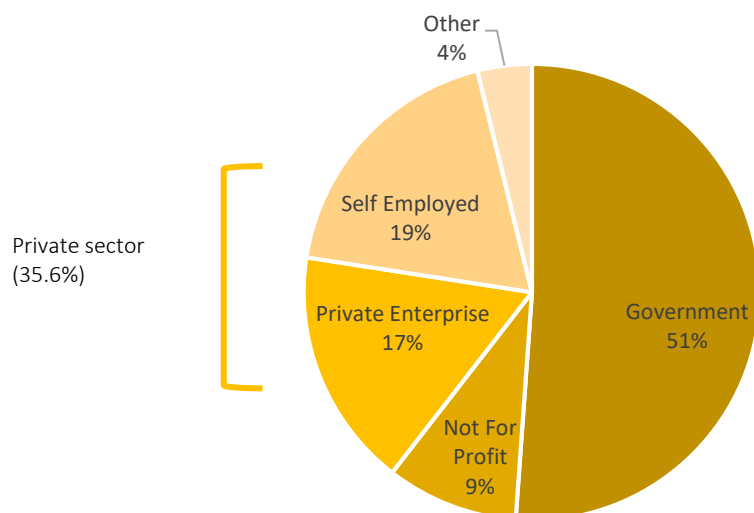




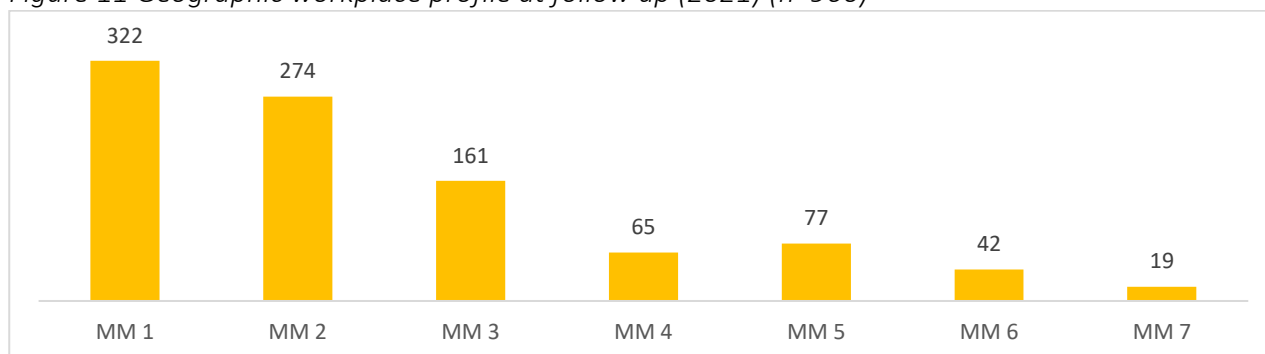
Table 9 Employer profile by MM classification

		Employer					Other
		Total	Government	Not For Profit	For Profit	Self Employed	
Current workplace rural classification	Missing Count	10.0	3.0	1.0	0.0	3.0	3.0
	Total Count (All)	962.0	492.0	90.0	163.0	180.0	37.0
	MM 1	319.0	140.0	34.0	66.0	63.0	16.0
		33.2%	28.5%	37.8%	40.5%	35.0%	43.2%
	MM 2	273.0	162.0	23.0	39.0	41.0	8.0
		28.4%	32.9%	25.6%	23.9%	22.8%	21.6%
	MM 3	160.0	74.0	17.0	32.0	31.0	6.0
		16.6%	15.0%	18.9%	19.6%	17.2%	16.2%
	MM 4	63.0	29.0	3.0	12.0	18.0	1.0
		6.5%	5.9%	3.3%	7.4%	10.0%	2.7%
MM 5	77.0	45.0	5.0	5.0	20.0	2.0	
	8.0%	9.1%	5.6%	3.1%	11.1%	5.4%	
MM 6	42.0	28.0	5.0	7.0	1.0	1.0	
	4.4%	5.7%	5.6%	4.3%	0.6%	2.7%	
MM 7	18.0	11.0	2.0	2.0	3.0	0.0	
	1.9%	2.2%	2.2%	1.2%	1.7%	0.0%	

Geographic profile of scholars at follow up (2021)

Most respondents reported their current workplace as regional or rural MM2+ (n=631, 65.7%). A third of respondents at follow up reported they work in a metropolitan setting (MM1, n=322, 33.54%) followed by 28.54% (n=274) working in a regional setting (MM2). 6.4% reported they are working in remote areas MM6-7 (Figure 11).

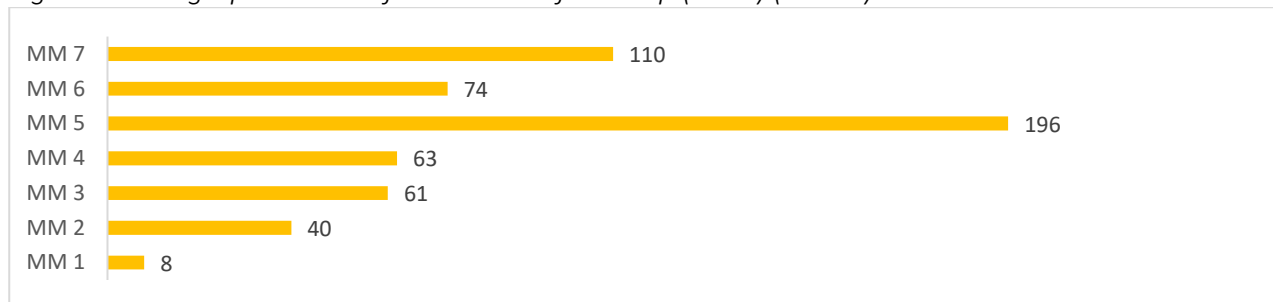
Figure 11 Geographic workplace profile at follow up (2021) (n=960)



While many respondents reported they currently work in metropolitan and regional areas, a large percentage of those working in an MM1 and MM2 setting also provide outreach to rural communities (n=305, 51.35%), predominantly to MM5+ settings (n=180, 60.0%) (Figure 12).



Figure 12 Geographic areas of outreach at follow up (2021) (n=552)



Change in geographic profile

The map below (Image 2) demonstrates the locations (by postcode) of all NAHSSS scholars (n=4617) at scholarship commencement (in yellow) with current workplace locations (postcode) of a sample of NAHSSS scholars (in red) (from the follow up questionnaire n=1157). The map and data (table 10 & 11) reveal that the regional and rural workforce has remained relatively stable with 66.35% (n=631) of all respondents to the questionnaire moving to or remaining in a rural area. While scholars from MM1 backgrounds predominantly remained in MM1 locations (n=85/114, 66.4%) around a fifth moved to and are currently working in rural areas (n=29, 22.6%). There was also movement of NAHSSS scholars to MM1 locations who commenced their scholarship in a rural location (MM2+) (n=235, 24.7%).

Of those NAHSSS scholars who currently work in a regional or rural area (n=631), most were from regional/rural backgrounds or locations (n=602). The odds ratio (OR=7.51, 95% CI) indicates that, at follow up, NAHSSS scholars from a rural background are 7.51 times more likely than their metropolitan counterparts to be still working in a rural workplace location (Table 10 & 11).

Investing in rural-origin students is therefore more likely to lead to these students working in a rural location compared to investing in metropolitan students (noting the over representation of postgraduate scholars in the follow up questionnaire response rate which has led to a higher than expected odds ratio).

Table 10 All scholars odds ratio of working in rural workplace location given rural background

Scholar background at time of application (all)	Current Workplace location (2021)		
	Metropolitan (MM1)	Regional/Rural (MM2+)	Total
Metropolitan (MM1)	85	29	114
Regional/Rural (MM2+)	235	602	837
Total	320	631	951



Image 2 Change in location of all NAHSSS scholars (commencement and 2021)

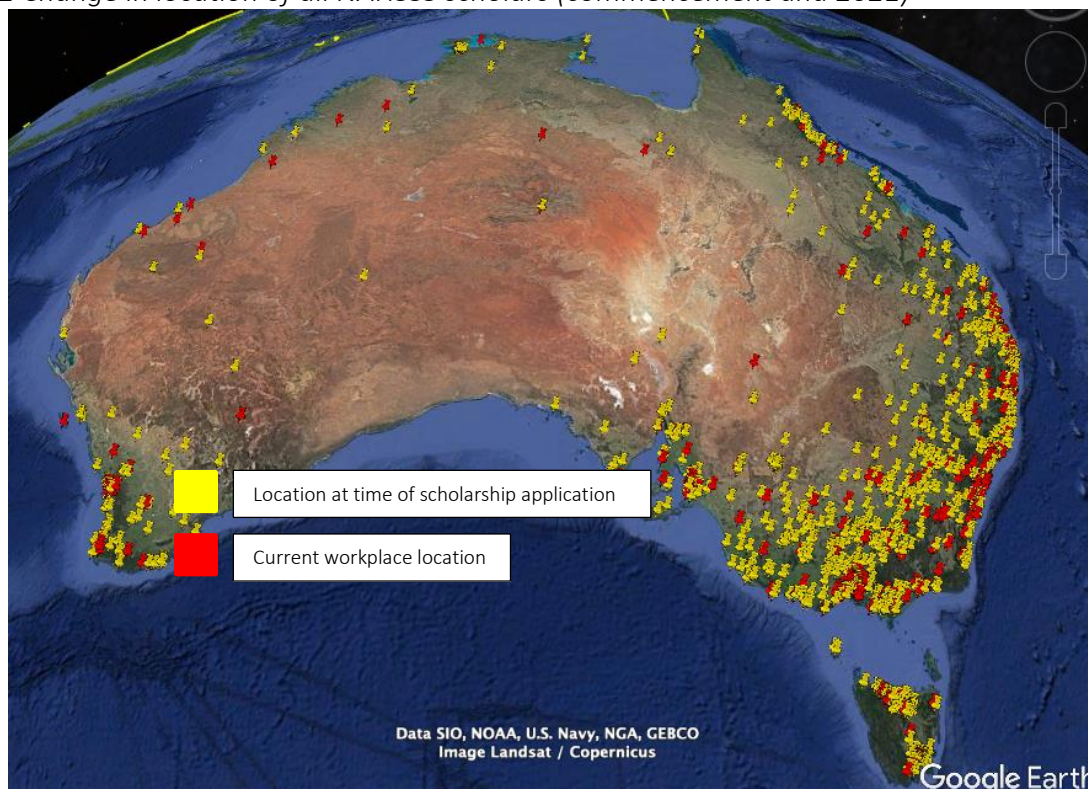


Table 11 Change in scholar workplace location over time (all)

		Commencement Rural classification							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification	Missing Count	129.0	14.0	37.0	20.0	16.0	18.0	17.0	7.0
	Total Count (All)	1,080.0	128.0	318.0	202.0	111.0	187.0	90.0	44.0
	MM 1	320.0 29.6%	85.0 66.4%	79.0 24.8%	48.0 23.8%	30.0 27.0%	41.0 21.9%	20.0 22.2%	17.0 38.6%
	MM 2	271.0 25.1%	3.0 2.3%	182.0 57.2%	22.0 10.9%	8.0 7.2%	38.0 20.3%	11.0 12.2%	7.0 15.9%
	MM 3	160.0 14.8%	5.0 3.9%	11.0 3.5%	100.0 49.5%	13.0 11.7%	23.0 12.3%	7.0 7.8%	1.0 2.3%
	MM 4	64.0 5.9%	7.0 5.5%	6.0 1.9%	2.0 1.0%	37.0 33.3%	8.0 4.3%	3.0 3.3%	1.0 2.3%
	MM 5	76.0 7.0%	3.0 2.3%	1.0 0.3%	7.0 3.5%	5.0 4.5%	57.0 30.5%	2.0 2.2%	1.0 2.3%
	MM 6	42.0 3.9%	7.0 5.5%	1.0 0.3%	2.0 1.0%	2.0 1.8%	1.0 0.5%	29.0 32.2%	0.0 0.0%
	MM 7	18.0 1.7%	4.0 3.1%	1.0 0.3%	1.0 0.5%	0.0 0.0%	1.0 0.5%	1.0 1.1%	10.0 22.7%

Evidence to support desired outcome 1: Students from rural areas are supported to pursue a career in allied health and choose to work in a rural area

The Undergraduate (Entry - Level) Scholarship Stream

Impact Indicator 1: Number of rural-origin Allied Health professionals who were supported to attend and obtain undergraduate qualifications as an Allied Health professional (supply);

Undergraduate Scholar profile

Of 880 undergraduate scholarships funded, 98.1% of follow up respondents (n=205) graduated from their scholarship funded undergraduate degree and obtained registration (where required). One respondent who did not complete their undergraduate study said the academic workload was too high/unmanageable.

Diversity

Most undergraduate scholars were female (n=18, 81.59%) and did not identify as being from a Cultural And Linguistically Diverse (CALD) background (n=791, 90%). The scholarships enabled 62 First Nations (n=3 Torres Strait Islander and 59 Aboriginal) students and 26 students from a Cultural And Linguistically Diverse (CALD) background to access undergraduate allied health courses. The NAHSSS also enabled 66 students from a state/territory where no allied health *undergraduate* training was offered to access undergraduate allied health courses (Northern Territory n=21, Tasmania n=45).

Allied Health Profile

Of the 27 professions funded in the undergraduate stream, physiotherapists (n=172, 19.5%) and occupational therapists (n=169, 19.2%) were the most frequently funded followed by speech pathology (n=94, 10.7%), social work (n=73, 8.4%) and paramedics (n=73, 8.4%).

Geographic profile of scholars at time of scholarship

Scholars were predominantly from rural backgrounds (Modified Monash Category MM 2-7) (n=819, 93.1%). Most were from MM5 locations (28.4%) (Figure 12,13). There was a dominance of scholars studying physiotherapy and occupational therapy who were from MM5 locations and a small but strong representation of scholars studying medical imaging and paramedicine from more remote (MM6+7) locations. Undergraduate scholars were predominantly from New South Wales (NSW n=275) followed by Victoria (n=222).

University where undergraduate study was undertaken



Most scholars undertook their undergraduate studies at a regional university (n=569, 64.7%) (Table 12).

Table 12 Undergraduate university

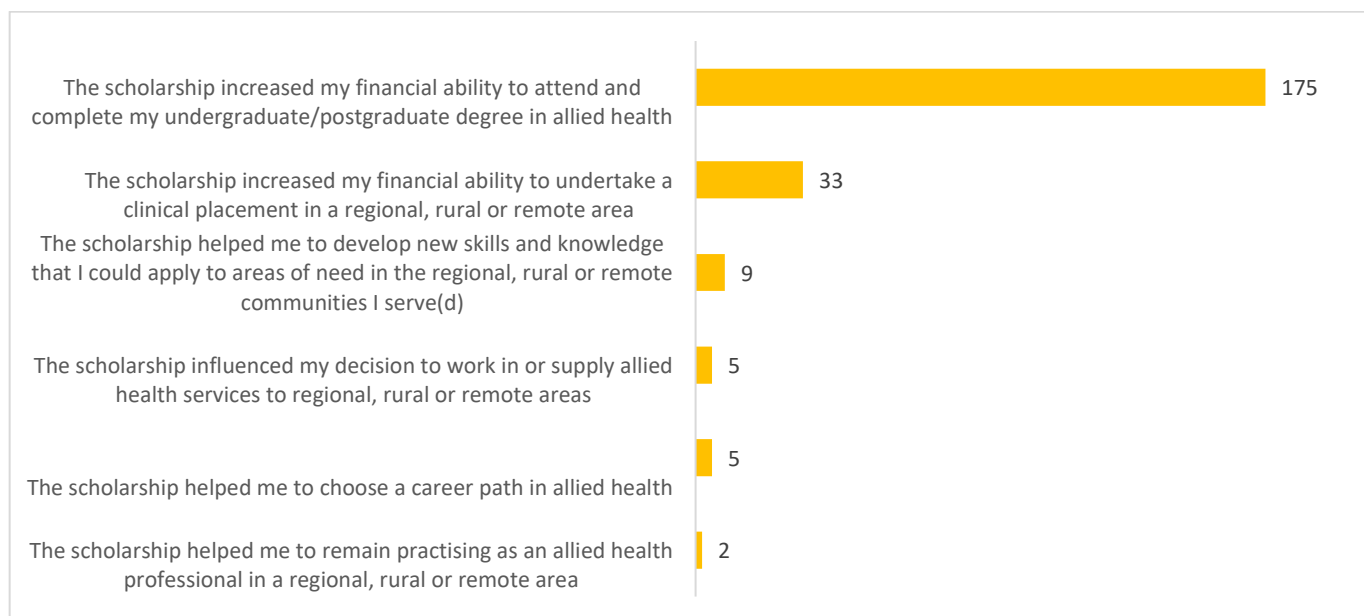
University	n
Central Queensland University	23
Charles Sturt University	178
Flinders University	25
Griffith University	12
James Cook University	70
La Trobe University	119
Southern Cross University	11
University of New England	8
University of Newcastle	78
University of Notre Dame	8
University of Sunshine Coast	30
University of Tasmania	5
University of Wollongong	2
TOTAL REGIONAL	569
Adelaide University	3
Australian Catholic University	21
Canberra University	1
Curtin University	43
Deakin University	21
Edith Cowan University	9
Macquarie University	7
Monash University	30
Murdoch University	2
Queensland University of Technology	33
RMIT	17
The Australasian Society for Ultrasound in Medicine	1
University of Melbourne	6
University of New South Wales	6
University of Queensland	37
University of South Australia	43
University of Sydney	14
University of Technology Sydney-Ultimo	1
University of Western Australia	5
University of Western Sydney	4
Victoria University	6
TOTAL METROPOLITAN	310
TOTAL	879



Impact on financial ability to attend university and complete studies

Undergraduate scholars who responded to the follow up questionnaire said the NAHSSS funding had a significant impact on their financial ability to attend university and complete their undergraduate degree (n=175, 75.4%) (Figure 13).

Figure 13 Impact of the NAHSSS on undergraduate scholars



Findings from the semi-structured interviews with undergraduate recipients found that the ability for rural students to access the NAHSSS scholarships to contribute towards their undergraduate degrees contributed to their overall success for a range of reasons. It enabled these rural students to access educational opportunities that they might not have been able to, particularly given there were often limited options to study allied health courses in the rural and regional townships they lived in.

But I do remember my parents in around year 12 kinda sat me down and said we don't think we can afford Brisbane at this stage, my parents, we were in a middle of a drought, they had some small businesses and just don't know whether we can afford it to be honest (Undergraduate scholar A)

The financial support allowed students to focus on their studies, rather than having to juggle work and study which assisted in them being successful in their chosen profession.

And it meant that I was able to concentrate on my course and to be able to really give my all to my course where previously I've been working, you know, like really long hours during night shift. See, and I just found that my grades were slipping a little bit because of the stress that I was under while trying to work and maintain uni and complete all of the assignments on the dates (Undergraduate scholar C)

For some students this financial assistance also meant they were able to live on campus which created further opportunities to access additional supports that helped their transition to university life and study.



It was really the reason that I ended up moving on campus colleges which was really expensive and I would not have been able to stay there if it wasn't for the scholarship but the access to the different support networks you get tutoring, you got to really network with different people (Undergraduate scholar A)

The financial assistance also meant that students had the funds to cover added expenses associated with their allied health university courses such as rural placements.

Also to allow me to travel for those placements that weren't always or they weren't often funded by the university at all (Undergraduate scholar B).

The scholarships provided the students with the opportunity to focus on their studies without having to work to support themselves. Scholars reported that they were more likely to achieve academic success which resulted in them accomplishing their chosen pathway of being a rural allied health practitioner.

I think if you were doing that plus on top working full time, and then I think I probably wouldn't have done as well academically which then really kind of set that trajectory because it was the fact that I did academically well.....that's why I am rural here today. (Undergraduate scholar A)

Impact Indicator 2: Number of rural-origin Allied Health professionals who received NAHSSS undergraduate support who chose to work in in a rural area (supply)

Current practise status

While the majority of undergraduate respondents continued to work in clinical or non-clinical allied health roles (n=203, 94.9%), 5% had left the profession.

Career status and role at follow up (2021)

Most undergraduate scholars (59.6%) considered themselves early career Allied Health professionals however just under a third reported they were mid-career (30.7%). At follow up, undergraduate scholars were predominantly undertaking clinical roles. Some described their role in more detail as: Raise the Age WA Community Campaigner, the first community podiatrist employed full time within an Aboriginal Community Controlled Health Service, business/private practice owners (n=7), researchers (n=32), clinical mentors, advanced practice therapists (n=2).

Workplace profile at follow up (2021)

The majority of undergraduate scholar respondents are currently working for government organisations (46.1%). Despite many undergraduate respondents identifying as early career Allied Health professionals, a significant proportion are self-employed (14.3%).



Geographic profile of scholars at follow up (2021)

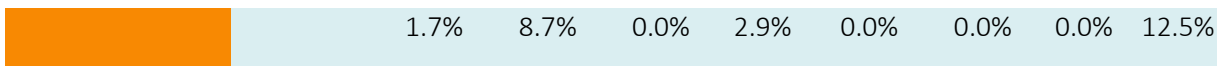
While most undergraduate scholars are currently working in MM2+ rural areas (n=145, 66.8%) a third currently work in MM1 locations (n=72, 33.1%).

Change in geographic profile

A large proportion of undergraduate scholars who responded to the questionnaire had moved from their rural place of origin to an MM 1 workplace location (n=62/242, 25.6%). This movement was highest for undergraduate scholars from MM2 and MM7 locations (Table 13) but lowest for those from MM5 locations, of whom 52.9% remained in an MM3 location. Conversely, half (n=11/21, 52.4%) of MM1 origin undergraduate scholars had moved to rural workplace locations.

Table 13 Change in location from scholarship commencement to follow up (2021) for undergraduate scholars

		Commencement Rural classification (undergraduate scholars)							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification (undergraduate scholars)	Missing Count	27.0	2.0	7.0	4.0	2.0	7.0	3.0	2.0
	Total Count (All)	242.0	23.0	53.0	34.0	29.0	76.0	19.0	8.0
	MM 1	72.0	10.0	20.0	5.0	9.0	22.0	2.0	4.0
		29.8%	43.5%	37.7%	14.7%	31.0%	28.9%	10.5%	50.0%
	MM 2	53.0	1.0	17.0	4.0	3.0	22.0	5.0	1.0
		21.9%	4.3%	32.1%	11.8%	10.3%	28.9%	26.3%	12.5%
	MM 3	41.0	2.0	6.0	18.0	3.0	10.0	2.0	0.0
		16.9%	8.7%	11.3%	52.9%	10.3%	13.2%	10.5%	0.0%
	MM 4	17.0	2.0	3.0	0.0	7.0	3.0	2.0	0.0
		7.0%	8.7%	5.7%	0.0%	24.1%	3.9%	10.5%	0.0%
	MM 5	18.0	1.0	0.0	2.0	4.0	11.0	0.0	0.0
		7.4%	4.3%	0.0%	5.9%	13.8%	14.5%	0.0%	0.0%
MM 6	10.0	3.0	0.0	0.0	1.0	1.0	5.0	0.0	
	4.1%	13.0%	0.0%	0.0%	3.4%	1.3%	26.3%	0.0%	
MM 7	4.0	2.0	0.0	1.0	0.0	0.0	0.0	1.0	



Summary of undergraduate NAHSSS scholars

Vignette of a “typical” undergraduate NAHSSS Scholar

Meet Jenny. She is an early career occupational therapist from Parkes (MM5) in rural NSW. Jenny was awarded an **undergraduate NAHSSS scholarship** in 2014 which helped her to financially to attend Charles Sturt University in Albury to study a 4 year undergraduate occupational therapy degree. The scholarship helped to cover her accommodation and living costs so she didn’t have to work while studying. This was important as Jenny found the academic workload challenging. Jenny graduated from university and registered as an occupational therapist and is now living and working in Wagga Wagga (MM 3), NSW, as an early career occupational therapist for the local public health service.

Vignette of a “typical” First Nations undergraduate NAHSSS Scholar

Meet Kylie. She is an early career social worker from Geraldton (MM5) Western Australia. Kylie was awarded an undergraduate NAHSSS Scholarship in 2014 which, alongside Abstudy support, helped her to financially attend and complete her undergraduate degree in social work from Curtin University. The support enabled Kylie to complete her degree and pursue her “dream of being a social worker. The scholarship helped Kylie ensure she had a career that allowed her to support the children and families that she now works with in her home township.





Evidence to support desired outcome 2: Undergraduate allied health students are supported to undertake rural work integrated learning placements and choose to work in a rural area

Clinical Placement (Work Integrated Learning) scholars

Impact indicator 1: Number of undergraduate Allied Health professional students who were enabled to attend a rural clinical placement

A total of 1395 clinical placement scholars were funded with 100% of scholars completing their scholarship funded rural clinical placement.

Diversity

The majority of clinical placement scholars were female (n=1122, 80.43%). Most were not from a CALD background (n=1146, 82.2%). The scholarships enabled 37 First Nations and 212 CALD background professionals to access post graduate study.

Allied Health Profile

Of the 25 professions funded under the clinical placement scholarship stream physiotherapists (n=250, 17.9%) and dietitians and nutritionists (n=226, 16.2%) were funded most frequently, followed by speech pathology (n=168, 12%) and occupational therapy (n=159, 11.4%). The proportion of those studying dietetics and nutrition who were funded under the clinical placement scholarship stream was almost four times the proportion funded in the undergraduate stream.

Geographic profile at scholarship commencement

Scholars were predominantly from metropolitan backgrounds on receipt of their clinical placement (Modified Monash Category MM 1) (n=1053, 75.4%). Just under one third of scholars were from NSW (n=439, 31.5%) followed by QLD and Vic. Reflective of a lack of undergraduate courses offered in Tasmania and the Northern Territory, clinical placement scholars from these two states/territories were underrepresented in the clinical placement stream.

Geographic distribution of clinical placements funded by NAHSSS

Most placements were undertaken in MM2 (52.7%, n=736) locations followed by MM3 (37.2%, n=519) and MM6 (7.6%, n=120). Placements were undertaken predominantly in NSW and QLD.

Length of placement

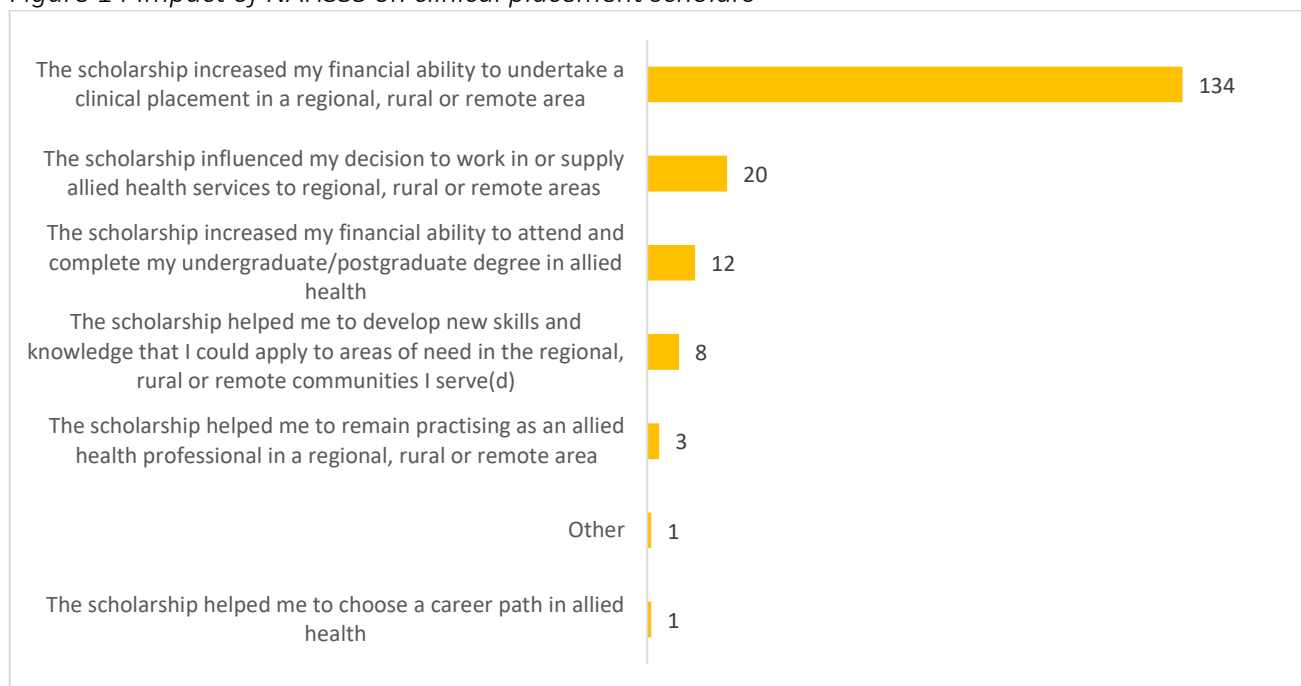
Most placements ran for 5 weeks or more (78.4%, 1092).

Impact on financial ability to undertake rural clinical placements



The majority of clinical placement scholars identified the NAHSSS financially enabled them to undertake their rural placement (n=134, 74.9%) (Figure 14)

Figure 14 Impact of NAHSSS on clinical placement scholars



Impact indicator 2: The number of undergraduate Allied Health professionals who enter the workforce are working in rural areas

Current practise status

While the majority of clinical placement scholars continue to work or identify as Allied Health professionals (n=151, 82.1%), a small proportion are no longer working as Allied Health professionals (n=13, 7.1%).

Career status and role at follow up (2021)

Most clinical placement scholars identify as either mid (n=92, 56.4%) or early career (n=57, 35.0%) Allied Health professionals. Scholars worked predominantly in clinical roles with some performing at director, manager, or team leader level. One scholar had since moved into medicine and another was studying for their PhD.

Workplace profile at follow up (2021)

Most clinical placement scholars work in the private sector either as self-employed professionals or for a for-profit organisation/business (n=70, 42.9%).

Geographic profile of scholars at follow up (2021)



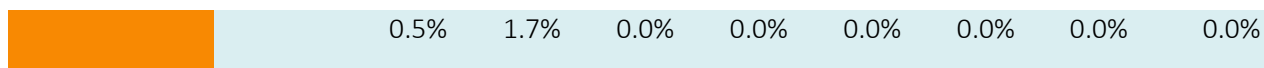
While a significant number of clinical placement scholars work in metropolitan settings (n=106, 64.2%), an encouragingly larger number than baseline figures currently work in rural workplaces MM2+ (n=59, 35.7%)

Change in geographic profile

44.1% of MM1 origin clinical placement scholars who responded to the questionnaire had moved to a rural location in 2021 (n=59). Just under two thirds of clinical placement scholars who commenced their scholarship in a rural location, remained in a rural location in 2021 with the remaining third who commenced their scholarship in a rural area (MM2+) reported they had moved to a metropolitan workplace in 2021 (n=66, 37.2%) (Table 14).

Table 14 Change in location from scholarship commencement to follow up (2021) for clinical placement scholars

		Commencement Rural classification (Clinical placement scholars)							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification (Clinical placement scholars)	Missing Count	24.0	9.0	6.0	4.0	2.0	1.0	2.0	0.0
	Total Count (All)	188.0	60.0	47.0	35.0	14.0	14.0	13.0	5.0
	MM 1	105.0	39.0	24.0	21.0	5.0	5.0	6.0	5.0
		55.9%	65.0%	51.1%	60.0%	35.7%	35.7%	46.2%	100.0%
	MM 2	25.0	2.0	14.0	3.0	2.0	3.0	1.0	0.0
		13.3%	3.3%	29.8%	8.6%	14.3%	21.4%	7.7%	0.0%
	MM 3	15.0	3.0	1.0	4.0	4.0	3.0	0.0	0.0
		8.0%	5.0%	2.1%	11.4%	28.6%	21.4%	0.0%	0.0%
	MM 4	6.0	4.0	1.0	0.0	0.0	1.0	0.0	0.0
		3.2%	6.7%	2.1%	0.0%	0.0%	7.1%	0.0%	0.0%
	MM 5	4.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
		2.1%	1.7%	0.0%	2.9%	0.0%	7.1%	7.7%	0.0%
MM 6	8.0	1.0	1.0	2.0	1.0	0.0	3.0	0.0	
	4.3%	1.7%	2.1%	5.7%	7.1%	0.0%	23.1%	0.0%	
MM 7	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	



While the majority of clinical placement scholars identified the NAHSSS financially enabled them to undertake their rural placement 11.3% identified that the placement influenced their decision to work in a rural area (n=12), Figure 13.

Findings the semi structured interviews, recipients talked about the benefits of having the scholarships to undertake clinical placements as an undergraduate student meant that they could broaden their options on where they could go rather than just limited these to where they had family they could stay with.

But the options were probably greater in that I didn't have to go to my hometown where I would have you know, accommodation with my family or, you know, those factors weren't really at play. I could just take whatever location was offered. (Clinical placement scholar A)

It was also noted that due to the diversity of experiences that students often saw on these rural placements, they were able to develop a broad range of skills and knowledge then if they had just down metropolitan placements.

Yeah, it would have been more of a stretch but I think I would have made it work only because I think and looking back on it now. It was definitely the placement where I learned the most by long stretch, so I think it then set me up pretty well. I think I definitely learned a lot out of it. I think it was because we got out there and we were just thrown into it. The resources were stretched a lot further. (Clinical placement scholar B)

This often resulted in students gaining more confidence and that enabled them to be more well-rounded practitioners and better prepared to enter the workforce, particularly within a rural regional setting after graduation.

And I think that experience just being thrown in. Go for it. Do what you want and see what works see what doesn't work. I think just built a lot of confidence. That in coming back, I guess coming back into the metro area where there was a lot more supervision. I you know, I have enough confidence to do you know, stand up, do things jump into things a lot more. (Clinical placement scholar B)

It also opened their eyes to looking at more creative and innovative options to deliver healthcare when lack of resources existed, while encouraging the importance of ongoing professional development to enhance the healthcare they were providing.

You couldn't do everything we learned at uni. This way more sets of adaptations were needed. For example, we didn't have a hydrotherapy pool, hydrotherapy [on my placement] was in a dam. Actually, having the opportunity to go to regional as a student helped me desire to want to keep growing my skills to take remotely in my early professional years. (Clinical placement scholar C)



Some recipients talked about the ability to undertake clinical placement with a large organisation within a rural area meant they were more familiar with how that organisation worked and they build networks through that placement, so when it came time to apply for a job already have that organisational knowledge was seen as an advantage and directly resulted in rural recruitment opportunities

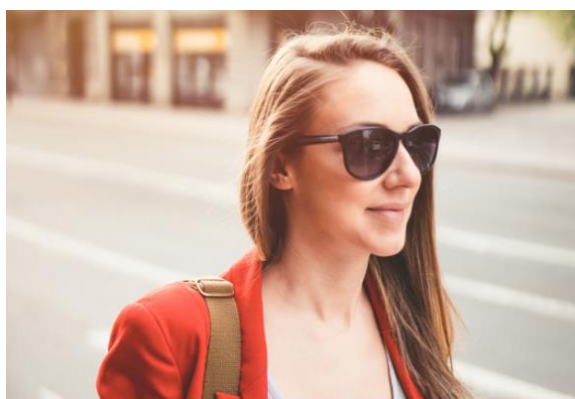
Like people that I met during that placement and sort of networks that I started, or even just processes and things that I became aware of, were very helpful in applying for a job and sort of knowing what you know how to address selection criteria in a way that was really specific to the organization but also once I started working for them, I had some of those networks so being supported just to have a placement with them opened up job opportunities across the state, really, across that whole regional network (Clinical placement scholar A)

While some recipients ended up working in a metropolitan setting after graduation despite undertaking a rural placement, there were still benefits noted particularly around understanding the context and challenges for people living in rural areas which had a lasting influence and contributed to better person-centred care when these patients were accessing metropolitan health services.

I think having had that that experience in a professional sense, working with people from those areas, I think has helped me particularly with my ability to communicate with those people who come and you know, I work with now and understanding you know, like we, we have patients, they have knee surgery, they go home that afternoon, they need to be seeing a physio the next day and understanding more for some people if physios three hours away, you know, like just understanding those things having been in the field myself and actually seen it. I think it just makes you empathize a little bit more with them (Clinical placement scholar B)

Summary of clinical placement NAHSSS scholars

Vignette of a “typical” clinical placement NAHSSS Scholar



Meet Ruth. She is a mid career dietitian from Sydney (MM 1), NSW. Ruth was awarded a rural **clinical placement scholarship** in 2014 to undertake a dietetics placement as part of her undergraduate degree in dietetics from the University of Sydney. The scholarship funding enabled Ruth to travel to and find accommodation in Dubbo (MM 2) in rural NSW to undertake her 5 week placement. The financial assistance was essential as Ruth had to give up her casual work in order to travel away from Sydney for 5 weeks to undertake the placement. The placement itself taught Ruth about resource poor settings in rural Australia and provided new skills around being more creative and innovative in delivering care. She learned about the complexities of



the rural environment which has helped her to deliver more appropriate care to rural clients via telehealth from her Sydney private practice during the COVID-19 pandemic.

Evidence to support desired outcome 3: Psychologists are supported to undertake training pathways that enable them to gain accreditation as an endorsed clinical psychologist and choose to work in a rural area

Clinical Psychology Scholarship Stream

Impact Indicator 1: Number of psychologists supported to access and undertake postgraduate clinical psychology qualifications

A total of 552 clinical placement scholars were funded in the clinical psychology stream. Of these, 148 responded to the survey and all but 4 (94.3%) had graduated from their scholarship funded study and 142 had obtained endorsement (n=2 were part way through supervision requirements). Non-completion was due to personal reasons in each case.

Context

To be eligible for endorsement as a clinical psychologist, a psychologist must have:

- An accredited Doctorate in one of the approved areas of practice and at least one year of approved supervised, full time equivalent practice with a Board approved supervisor or,
- An accredited Masters degree in one of the approved areas of practice and a minimum of two years of approved supervised, full time equivalent practice with a Board approved supervisor or,
- Another qualification that in the Board's opinion is substantially equivalent to the above.

For an example, if scholar 'x' completed a Master of Clinical Psychology (fifth and sixth year course work), the scholar fulfilled the requirement to obtain registration as a general psychologist. To obtain an endorsement as a clinical psychologist, the scholar needs to register for the Allied Health professional RA Registrar program and complete 3080 hours psychological practice including 80 hours compulsory supervised practice and 80 hours CPD requirements. The NAHSSS Scholarship scheme assisted clinical psychology students to undertake the final two years of their Masters study.

Diversity

The majority of clinical psychology scholars were female (n=471, 85.33%). Most were not from a CALD background (n=543, 82.1%). The scholarships enabled 17 First Nations and 82 CALD professionals to access post graduate study.



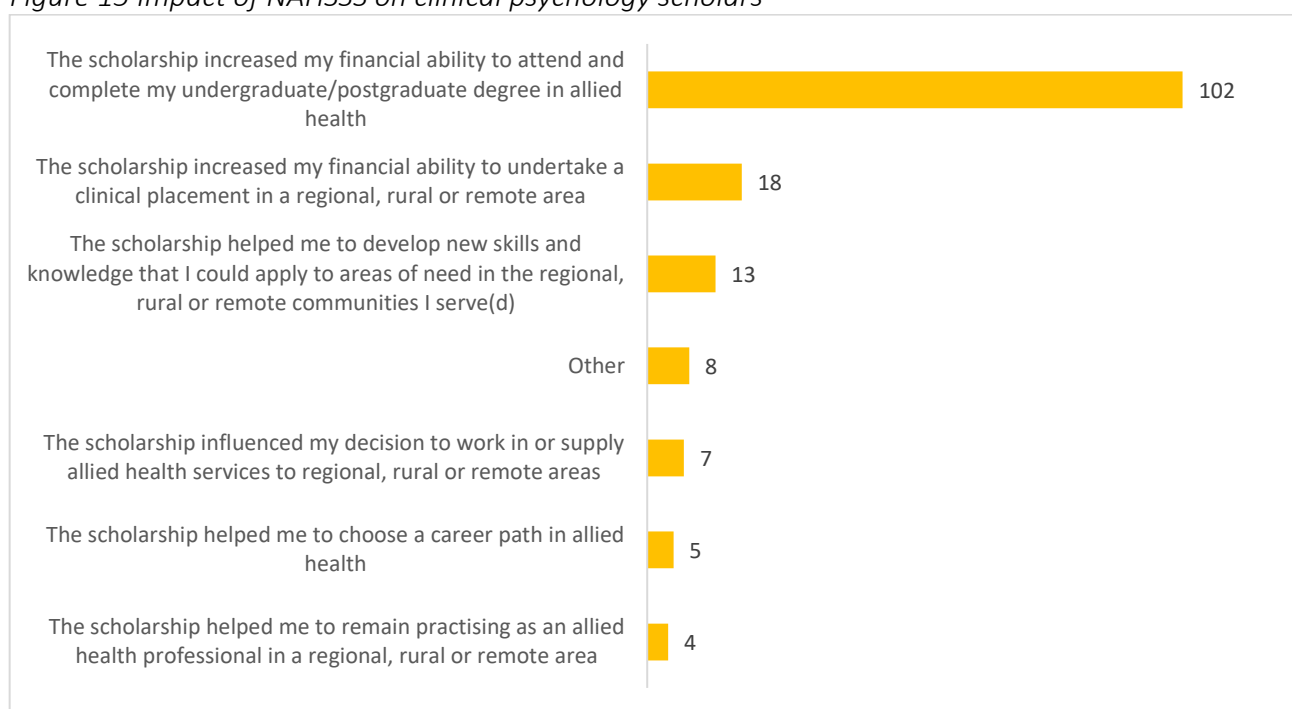
Geographic profile of scholars at time of scholarship

While there was no requirement to be from a rural background or workplace to apply for the clinical psychology scholarships, rurality was used to prioritise applicants when scholarships were oversubscribed. The geographic profile of clinical psychologists reflects this with the majority being from MM2 (n=226, 40.9%) and MM1 (n=143, 25.9%) locations. There are an encouraging number however that were living or working in MM3+ locations at the time of their scholarship being awarded (n=183, 33.2%).

Impact on ability to access and undertake the clinical psychology accreditation pathway

Clinical psychology respondents to the follow up questionnaire overwhelmingly identified the financial support offered by the NAHSSS as of significant impact to them (n=102, 65.0%), Figure 15.

Figure 15 Impact of NAHSSS on clinical psychology scholars



From the semi-structured interviews, clinical psychology recipients reported that the financial support to complete the clinical pathway was a strong influence in creating an essential supply of clinical psychologists, which as noted by participants, are particularly needed within rural and regional locations. Without this financial assistance most recipients indicated that they wouldn't have started the program of study, which would have resulted in a different career trajectory.

Without the NAHSSS scholarship, I don't think I would be a clinical psychologist today. You need to financially be able to do it, I had been offered another job that was 30k more a year and a car. And I was going to take that, except I got accepted. And then I said, well, I was my final thought was, well, if I get this scholarship, I'm going to go if I don't get this scholarship, I'm going to probably take that on the job, and I would have been a project manager and then go on a completely different career path and wouldn't be working now to help people back in the country (Clinical psychology scholar A)



Particularly because the clinical psychology pathway requires postgraduate study, often these students were at different life stages to other Allied Health professionals, and this meant that they had additional financial pressures that they had to contend with which in turn influenced whether they were able to begin and complete this degree in order to become registered.

Oh, money absolutely. I think by the time I obviously can only speak for myself, but by the time you're so I was 31, then and you've got a car loan, you I was still just renting at that point. But from going from a full-time wage that I had to just living on Austudy. I don't actually know if I could have done it, literally could have done it. Because you can't work when you're doing the master's program. And they're really upfront about that, when you apply. It's a question in the interviews, if they sort of get the impression that you can't sort of support yourself through the program you're not going to get in. (Clinical psychology scholar B)

Additionally, because of the structure of these postgraduate programs, recipients often talked about the challenges associated with the extended clinical placements involved in the postgraduate degree. These long periods of time away from family and away from an ability to potentially work and financially contribute often resulted in colleagues leaving the program of study. The financial support from the scholarship directly contributed to course completion and increasing the number of registered practitioners.

Master students are often away from home for a longer time than anyone expected or was absent from the family. A lot of times I went home as much as I could. But I was absent for more than I wanted to be and so supporting the whole family requires. It does require more money and more time. And for my partner to do that on her own. I think we would have been significantly more stressful and therefore I don't think we would have survived as a family with [the scholarship]. So even if we got through financially I don't think we would be intact as a family. (Clinical psychology scholar C)

The ability to be well supported financially through the scholarship also meant that students could broaden their opportunities on where they went on placement and this enabled them to build networks across the psychology field to better support their transition into practice, particularly within rural and regional locations. Furthermore, not being locked into a position at the end meant the practitioners to go to where they felt they could make the most impact.

But I was able to build up some contacts through my supervisor through my hospital-based placements already, so I got large amount of my supervision done while I was in hospital-based health service. And then once I've got that done it kind of opened up doors to move into work for NGOs and private practice. So yeah, and I think more opportunities in private practice for me to work rurally if I'd been locked into working with health service I'd still be there now and I'd be very limited in my scope to reach out to rural families. (Clinical psychology scholar A)

Impact indicator 2: Number of accredited clinical psychologists who practice as clinical psychologists in rural areas.



Current practise status

All clinical psychology scholars who responded to the questionnaire are currently working as or identify as Allied Health professionals (n=159).

Career status and role at follow up (2021)

Most clinical psychology scholars who responded to the survey identify as either early (n=54, 35.3%) or mid-career Allied Health professionals (n=59, 38.6%). Most respondents worked in clinical roles. Some worked in senior management roles (n=6), as clinical leads (n=9), in academic settings (n=3) and in advanced roles (n=3).

Workplace profile at follow up (2021)

Unlike other scholarship streams, a large proportion of clinical psychology scholars who responded to the survey are self-employed (n=55, 36.2%).

Geographic profile of scholars at follow up (2021)

While the majority of clinical psychologists were from MM2 regions at awarding of the scholarships, questionnaire respondents are now more likely to work in MM1 settings (n=70, 46.1%), however of the whole cohort, the majority respondents continue to work in rural areas (MM2+, n=82, 53.9%)

Change in geographic profile

Just over half (54.3%, n=81) of those clinical psychology scholars who commenced their scholarship in a rural location, remained in a rural location in 2021. Most stayed in an MM 2 location. Very few of MM1 origin clinical psychology scholars who responded to the questionnaire had moved to a rural location in 2021 (n=3, 12%). A third of rural-origin clinical psychology scholars had moved to MM1 workplace locations in 2021 (Table 15).

Table 15 Change in location from scholarship commencement to follow up (2021) for clinical psychology scholars

		Commencement Rural classification (clinical psychology scholars)							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification (clinical psychology scholars)	Missing Count	7.0	2.0	2.0	1.0	1.0	0.0	0.0	1.0
	Total Count (All)	158.0	27.0	57.0	27.0	13.0	26.0	6.0	2.0
	MM 1	69.0	22.0	22.0	7.0	6.0	9.0	3.0	0.0
		43.7%	81.5%	38.6%	25.9%	46.2%	34.6%	50.0%	0.0%
	MM 2	39.0	0.0	31.0	3.0	0.0	4.0	1.0	0.0
		24.7%	0.0%	54.4%	11.1%	0.0%	15.4%	16.7%	0.0%
MM 3	21.0	0.0	1.0	14.0	2.0	3.0	1.0	0.0	
	13.3%	0.0%	1.8%	51.9%	15.4%	11.5%	16.7%	0.0%	
MM 4	8.0	1.0	0.0	2.0	4.0	1.0	0.0	0.0	

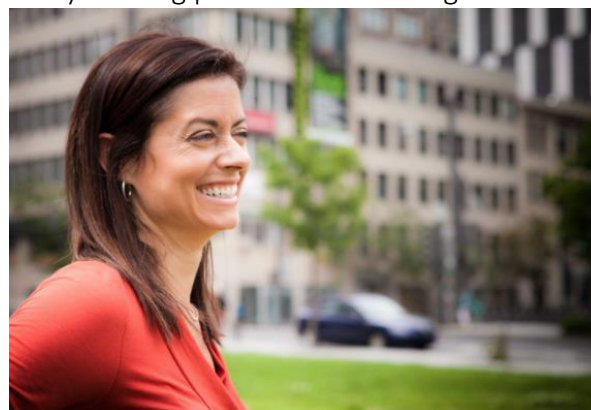


	5.1%	3.7%	0.0%	7.4%	30.8%	3.8%	0.0%	0.0%
MM 5	12.0	1.0	1.0	0.0	0.0	9.0	0.0	1.0
	7.6%	3.7%	1.8%	0.0%	0.0%	34.6%	0.0%	50.0%
MM 6	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%
MM 7	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.6%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Summary of clinical psychology NAHSSS scholars

Vignette of a “typical” clinical psychology NAHSSS Scholar

Meet Tracy. Tracy is a mid-career clinical psychologist from Toowoomba (MM 2) Queensland. She was awarded a **clinical psychology scholarship** in 2014 to study an accredited Master of Clinical Psychology at University of Southern Queensland full time. Part of the accreditation process required Tracy to undertake 2 years of approved, supervised full time equivalent practice with a Board approved supervisor. The scholarship enabled Tracy to study full time to complete the master’s requirements. While she did eventually receive full accreditation as a clinical psychologist, Tracy found it extremely challenging to fulfil the supervision requirements as she was a mother of two young children and was required to be away from her family for long periods. The funding allowed Tracy however to choose interesting placements that enabled her to build a strong network of mentors in the psychology field which helped her to transition into practice in her regional area. Tracy now works as a self-employed clinical psychologist in her own private practice and has remained in Toowoomba with her family.



Evidence to support desired outcomes 1-3: More Allied Health professionals choose to work in rural settings (supply)

The clinical psychology scheme was implemented to specifically increase the psychology workforce to support rural mental health needs. The proportion of clinical psychologists who responded to the follow up questionnaire who were currently working in rural areas (MM2+) was 53.9%. As there were no other schemes between 2011-2017 that specifically supported psychologists who were from or working in rural areas to obtain their clinical psychology qualification, it can be assumed that from 2013 onwards (once the first clinical psychology NAHSSS scholars obtained their clinical psychology qualifications), the NAHSS scholarships supported 297 clinical psychologists working in the rural (MM2+) mental health workforce.



Similarly, 66.8% (n=145) of undergraduate respondents to the follow up questionnaire indicated they are currently working as Allied Health professionals in a rural area (MM2+). As there were no other *undergraduate* allied health scholarship schemes available during the time of the funding, it can be concluded therefore that the NAHSSS enabled the supply of an extra 880 Allied Health professionals into the workforce and of which approximately 588 (66.8% of 880 scholars) into the *rural* (MM2+) allied health workforce.

A further 35.7% (n=59) of clinical placement scholar respondents to the follow up questionnaire indicated they are currently working in a rural area, representing an estimated supply of 498 (35.7% of 1395) Allied Health professionals into the rural (MM2+) workforce.

Of those undergraduate and clinical psychology scholars who currently work in a regional or rural area (n=207), most were from regional/rural backgrounds or locations (n=195). The odds ratio (OR=4.95, 95% CI) indicates that clinical psychology and undergraduate NAHSSS scholars from a rural background on receipt of their scholarship are 4.95 times more likely to be currently working in a rural location than clinical psychology and undergraduate NAHSSS scholars with a metropolitan background/workplace location (Table 16 & 17). Investing in rural-origin students is therefore 4.95 times more likely to lead to these students working in a rural location compared to investing in metropolitan students.



Table 16 Supply: Undergraduate and clinical psychology scholars likelihood of working in rural workplace location

Undergraduate & clinical psychology scholar background at scholarship commencement	Current Workplace location (2021)		
	Metropolitan (MM1)	Regional/Rural (MM2+)	Total
Metropolitan (MM1)	32	12	44
Regional/Rural (MM2+)	105	195	300
Total	137	207	344

Table 17 Change in location from scholarship commencement to follow up (2021) for undergraduate, clinical psychology scholars

		Commencement Rural classification (Undergraduate & Clinical Psychology scholars)							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification (Undergraduate & Clinical Psychology scholars)	Missing Count	28.0	4.0	8.0	3.0	2.0	6.0	2.0	3.0
	Total Count (All)	372.0	48.0	103.0	56.0	38.0	95.0	23.0	9.0
	MM 1	137.0 36.8%	32.0 66.7%	42.0 40.8%	11.0 19.6%	15.0 39.5%	30.0 31.6%	4.0 17.4%	3.0 33.3%
	MM 2	86.0 23.1%	1.0 2.1%	44.0 42.7%	7.0 12.5%	3.0 7.9%	24.0 25.3%	6.0 26.1%	1.0 11.1%
	MM 3	56.0 15.1%	2.0 4.2%	5.0 4.9%	32.0 57.1%	3.0 7.9%	11.0 11.6%	3.0 13.0%	0.0 0.0%
	MM 4	24.0 6.5%	3.0 6.3%	3.0 2.9%	2.0 3.6%	10.0 26.3%	4.0 4.2%	2.0 8.7%	0.0 0.0%
	MM 5	26.0 7.0%	1.0 2.1%	1.0 1.0%	0.0 0.0%	4.0 10.5%	19.0 20.0%	0.0 0.0%	1.0 11.1%
	MM 6	10.0 2.7%	2.0 4.2%	0.0 0.0%	0.0 0.0%	1.0 2.6%	1.0 1.1%	6.0 26.1%	0.0 0.0%
	MM 7	5.0 1.3%	3.0 6.3%	0.0 0.0%	1.0 1.8%	0.0 0.0%	0.0 0.0%	0.0 0.0%	1.0 11.1%



Evidence to support desired outcome 4: Allied Health professionals from rural areas are supported to access sufficient professional development opportunities and choose to remain working in a rural area

Continuing Professional Development scholars

Impact indicator 1: Number of rural Allied Health professionals supported to undertake professional development opportunities

925 Continuing Professional Development (CPD) scholars were funded to undertake a range of CPD activities.

Diversity

The majority of CPD scholars were female (n=791, 81.59%) and not from a CALD background (n=791, 90%). The scholarships supported 22 First Nations and 115 CALD professionals to access post graduate study.

Allied Health Profile

Of the 26 professions funded in the CPD stream, physiotherapists (n=158, 22.1%), occupational therapists (n=124, 17.3%) and speech pathologists (n=116, 16.2%) were the most frequently funded.

Geographic profile of CPD scholars at time of scholarship

Scholars were predominantly from rural backgrounds or were working in rural areas on receipt of their scholarship (Modified Monash Category MM 2-7) (n=828, 95.7%).

Most were from MM2 locations (32.6%) however a quarter of CPD scholars were from more remote areas (n=231, 25.0% MM6+7).

Proportional to the number of scholars funded within each profession, there was good representation from most professions in remote areas.

There was a slightly larger representation of speech pathology and physiotherapy CPD scholars who were working/residing in MM5 locations.

The greatest proportion of CPD scholarship recipients were from Queensland (27.4%) with a higher proportion of scholars from Tasmania (n=115, 12.4%) and Western Australia (n=140, 15.1%) compared to other scholarship streams. There was high representation from the Northern Territory (n=115, 12.4%).



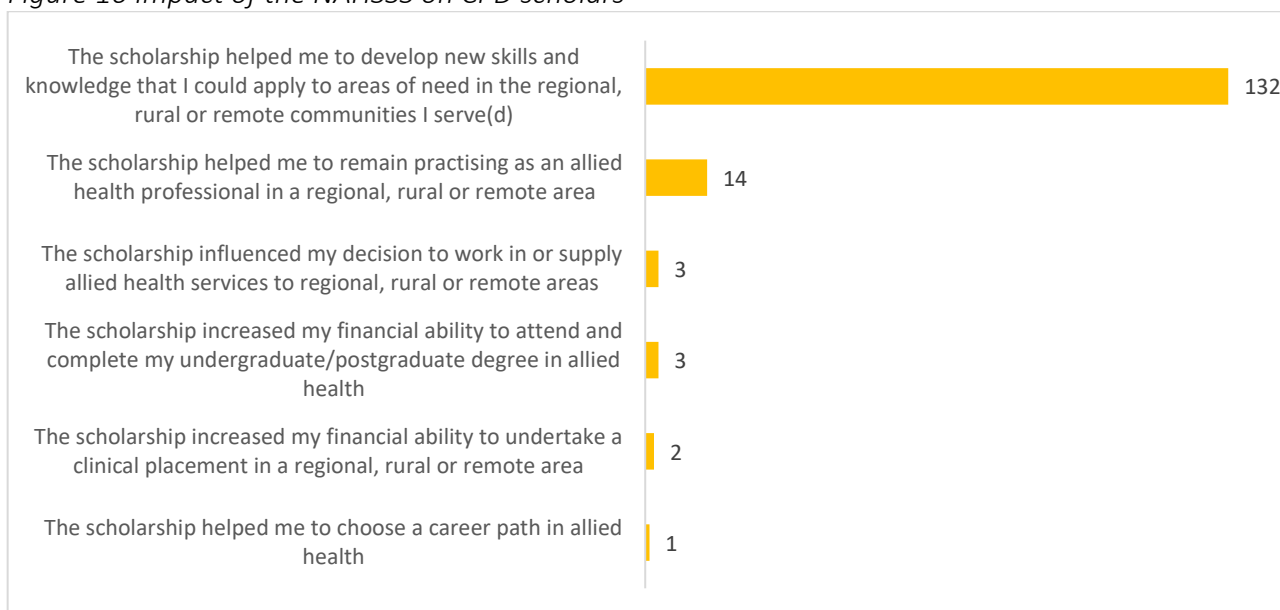
Type of study undertaken

Most CPD scholars were funded to undertake a short course (n=528) or attend a conference (n=370). Other activities that were funded included workplace learning (n=12) or to undertake postgraduate modules (n=15). The range of activities undertaken was extremely diverse with a large proportion to do with mental health activities reflecting the changes in funding to target mental health support for Allied Health professionals. Some examples of short courses included ACT mindfully - Training in Acceptance and Commitment therapy - two day introductory workshop, Monash Intensive Bioethics Course, Introduction to family therapy, Circle of Security Parent Training, SOS approach to paed feeding and New Paradigms in Paediatric Foot and Ankle Deformity management and serial cast fabrication labs. Conferences that were attended were mostly profession specific.

Impact of the scholarship on accessing professional development opportunities

CPD respondents to the follow up questionnaire overwhelmingly identified the NAHSSS had a significant impact on the development of and capacity to use new skills and knowledge to address areas of need within their rural communities (n=132, 85.2%), Figure 16.

Figure 16 Impact of the NAHSSS on CPD scholars



The findings from the semi-structured interviews from recipients who received a scholarship to undertake continuing professional development (CPD) highlighted the challenges that rural and remote practice can bring and the need to access to good quality professional development in order to effectively meet the broad demands of the community that they serve.

We'll see I guess the emphasis on remote brought up its new different challenges. It was adult community mental health in a good team, but a team with minimal resources and stretched complex workload. And so yeah, good training allows us to do that. And to have access to that



training was really important it sort of gives you the longevity of career and a sense that you've got more tools in your kit bag. (Continuing professional development scholar B)

There were also additional benefits noted by the recipients when receiving the scholarship that enabled them to be a better practitioner and potentially resulted in retention not only within the rural and regional location but also more widely within the profession.

So, it was very attractive, just being away from the workplace for a while and doing some real self-care, but also learning a new skill set as well. [The work] can be at times very challenging. Sometimes, especially when you've been working in the field for a long time and you can fall into the trap of maybe either thinking you have seen it all or you know, or just getting a bit formulaic and having the same approach all the time. So, I wanted to shift out of my comfort zone I suppose (Continuing professional development scholar B)

Due to the complexity of rural practice and the limited human resources often seen in these areas, the ability to upskill staff to deliver what could be considered fundamental healthcare services is critical. It was noted by recipients that often junior staff were having to step up into more senior roles because recruitment was difficult, and these scholarships were an opportunity to build capacity in these staff to be able to effectively step into these roles and developed the much-needed services.

And [as a Grade One] I moved into rehabilitation, there was another Grade Two she came from Melbourne for a bit so she had exposure to the neurological caseload, stroke clients. So, I could gain some clinical skills but then they moved on and so suddenly, I was stepping up into this role, but there was no support. So then, I looked for training because I suddenly had a caseload that I had to manage, and I had no one to teach me. So, I looked for courses and there was a course that particularly stood out because it took me out of my work workplace it put me in a training with for three weeks with other clinicians from all different health services. And the greatest thing I got from that course was working with other therapists and having time to talk to them, watch them work. (Continuing professional development scholar C)

The ability to upskill more junior staff through professional development and better prepare them for stepping into the senior roles also had broader benefits for the health service. It enabled these services to build capacity in their staff to effectively mentor not only new junior staff but also provide quality rural placement experiences for students, potentially leading to further effective recruitment of allied health staff down the track.

So that together allowed me to actually go build the network to run a rehab unit where I've never run before and provide a service to those clients. So, if I could bring that skill back, which meant I could teach the students that keep coming and in neuro student placements which I needed to supervise, but I needed to learn that caseload myself, and the scholarship it was it was really pivotal (Continuing professional development scholar C)



The recipients also talked about the value and importance of building networks when you are a rural practitioner. The opportunity to attend CPD was a useful and effective way to link with other health professionals to develop these critical networks.

And it was just fabulous to network and be with other therapists and at that stages NDIS in My Aged Care, we're just sort of rolling out. And so it was really exciting to hear about that from that higher level perspective, just to be able to explore different aspects of assistive technology. And to hear from policy providers and developers at the higher levels of NDIS and My Aged Care, as well was really, really good. I ran into another therapist who was a home modification specialist, when I was at that conference, I spent a couple of days talking to her. She was fabulous. And the things we talked about and about the sessions. So and quite inspiring from somebody who had better 25 years' experience than me at that point. So yeah, it's video conferencing is great and I do love it. And it really has improved the opportunities in the last 12 months but it's sometimes still falls short of actually be able to go face to face and talk to people. (Continuing professional development scholar D)

Additionally, the importance of being able to tap into the experts in your field and know where to access advice and support was seen as a key driver to be able to continue to work within a rural context.

So, I always was looking to leave the hospital to tell the truth. Every year I met with my manager. So that's how long is there, I kept say one more year a whole year? I have stayed here 10 years. Why? because I had opportunity to keep growing my skills and to gain knowledge. So, I needed access to that in my profession. And I think the scholarship helped support that by helping me, building that network. And I kept tapping into that network. (Continuing professional development scholar C)

Impact Indicator 2: Number of rural Allied Health professionals who continue to work in rural areas (retention)

Current practise status

Most CPD scholar respondents continue to practise or identify as allied health clinicians (n=150, 96.7%).

Career status and role at follow up (2021)

Most CPD scholars identify as established career Allied Health professionals (n=108, 77.1%). At follow up, CPD scholars were predominantly undertaking clinical roles. Some described their role in more detail as: Critical Care Paramedic Aeromedical Retrieval, Acting Director of Allied Health, Director of Mental Health.

One participant provided this level of detail:

I am now retired but I worked for approximately 10 years after receiving the scholarship. Firstly 50% in [rural location MM3] and 50% in [rural location MM4]. Then from late 2014 till end of June 2020 only in MM4. I worked as an accredited mental health social worker providing individual, couples and family therapy with a main focus on trauma therapy. The scholarship provided a trauma focussed



component of education which added to my abilities to empower clients who had lost connection with their bodies through trauma.

Workplace profile at follow up (2021)

While the majority of CPD scholars currently work for government organisations (n=80, 57.1%) a significant proportion are self-employed (n=37, 26.4%).

Geographic profile of scholars at follow up (2021)

Most CPD scholars are working in rural locations (MM2+) (n=122, 87.7%) with MM2 locations the most popular (n=45, 32.4%). A small proportion are currently working in a metropolitan location (MM1 n=17, 12.2%).

Change in geographic profile

A large proportion of CPD scholars who responded to the questionnaire who commenced their scholarship in a rural area remained in a similar rural location. The most stable CPD scholars were those who were in MM 3 locations on commencement of their CPD scholarship. For these scholars, 75.8% (n=25) have remained in an MM3 location (Table 18). The movement of CPD scholars to metropolitan workplaces was relatively low with on average 10.7% of MM2+ scholars now working in MM1 locations. 37.5% of MM7-origin scholars now either work in an MM7 or an MM2 setting.

Table 18 Change in location from scholarship commencement to follow up (2021) for CPD scholars

		Commencement Rural classification (CPD scholars)							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification (CPD scholars)	Missing Count	17.0	0.0	7.0	2.0	2.0	1.0	4.0	1.0
	Total Count (All)	153.0	4.0	47.0	33.0	17.0	25.0	19.0	8.0
	MM 1	17.0	3.0	4.0	2.0	3.0	1.0	3.0	1.0
		11.1%	75.0%	8.5%	6.1%	17.6%	4.0%	15.8%	12.5%
	MM 2	44.0	0.0	33.0	2.0	2.0	3.0	1.0	3.0
		28.8%	0.0%	70.2%	6.1%	11.8%	12.0%	5.3%	37.5%
	MM 3	33.0	0.0	1.0	25.0	2.0	3.0	2.0	0.0
		21.6%	0.0%	2.1%	75.8%	11.8%	12.0%	10.5%	0.0%
MM 4	12.0	0.0	1.0	0.0	8.0	2.0	1.0	0.0	
	7.8%	0.0%	2.1%	0.0%	47.1%	8.0%	5.3%	0.0%	



	MM 5	16.0	0.0	0.0	2.0	0.0	14.0	0.0	0.0
		10.5%	0.0%	0.0%	6.1%	0.0%	56.0%	0.0%	0.0%
	MM 6	9.0	1.0	0.0	0.0	0.0	0.0	8.0	0.0
		5.9%	25.0%	0.0%	0.0%	0.0%	0.0%	42.1%	0.0%
	MM 7	5.0	0.0	1.0	0.0	0.0	1.0	0.0	3.0
		3.3%	0.0%	2.1%	0.0%	0.0%	4.0%	0.0%	37.5%

The findings from the semi-structured interviews from recipients who received a scholarship to undertake continuing professional development (CPD) revealed that the ability to continue or extend their professional knowledge directly contributed to their decision to remain in a rural or regional area.

I don't want to underplay that because I really did, like, especially that one that I got that second year out, like I could have easily. My family were quite keen for me to come home. And at that point, I could have [left] because I wasn't so connected here. So, I could have easily said to my husband like, Okay, well, let's go let's move back. I think that was actually like I remember that being a big factor in me deciding to stay (Continuing professional development scholar A)

Often the impact of receiving the scholarship meant that the recipient wanted to contribute back to their community what they had learnt from the professional development course. And the longer they stayed within the community the more connected they become and the harder it was to leave. Therefore, professional development opportunities that were assisted financially supporting the retention of Allied Health professionals in these areas.

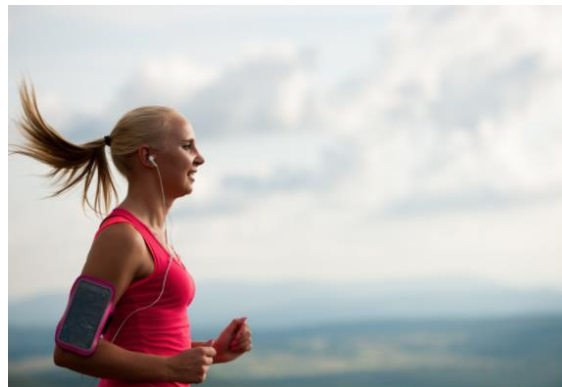
I was like okay, well, I'll definitely stay the next year. That's the future and then you get more stuck. You get stuck. Not that I'm stuck. I'm happily stuck. (Continuing professional development scholar A)



Summary of CPD NAHSSS scholars

Vignette of a “typical” CPD NAHSSS Scholar

Meet Anne. She is a mid-career speech pathologist who was working in Alice Springs (MM6) in the Northern Territory when she applied for **CPD funding** to attend the National Speech Pathology Conference in 2014 that was held in Queensland. The funding was used to fly to Queensland for the conference, for accommodation and conference registration. The CPD scholarship helped Anne to access a broad range of new skills and knowledge and to meet other speech pathologists to support her when she returned home. After attending the conference, Anne had a broader range of skills that enabled her to meet the broad demands of the community that she worked with and to support more junior staff. Anne continues to work in Alice Springs as a senior speech pathologist in a publicly funded community therapy team.



Evidence to support desired outcome 5: Allied Health professionals in rural areas are supported to access postgraduate, career-enhancing opportunities and choose to remain working in a rural area

Postgraduate scholars

Impact Indicator 1: Number of rural Allied Health professionals supported to access and undertake postgraduate opportunities

865 postgraduate scholars were funded in total with 95.9% of follow up respondents (n=255) graduating from their scholarship funded postgraduate study. For the small proportion of questionnaire respondents who did not complete their studies (n=4), the following reasons were provided:

- *A moratorium on research was imposed in the area I wished to undertake research and this affected the ability to be granted ethics approval*
- *Unexpected change of circumstances.*
- *Workplace would not permit me to complete it so I had to withdraw*
- *Sandstone university created unnecessary barriers to my education*



Diversity

The majority of postgraduate scholars were female (n=671, 77.57%) with a higher than average representation of men compared to other scholarship streams (n=194, 22.4%). Most were not from a CALD background (n=791, 90%).

The scholarships enabled 30 First Nations and 103 CALD professionals to access post graduate study.

Allied Health Profile

Of the 27 professions funded under the postgraduate scholarship stream, a significantly higher portion (n=196, 22.7%) of physiotherapists were funded compared to other professions. Social workers (11.7%) and occupational therapists (11.6%) were the next two most frequently funded.

Geographic profile of post graduate scholars at time of scholarship

Scholars were predominantly from rural backgrounds (Modified Monash Category MM 2-7) (n=828, 95.7%). Most were from MM2 locations (40.3%) with good representation in more remote areas (n=126, 14.6% MM6-7). There was a dominance of MM2 located post graduate scholars across all professions, particularly for physiotherapy. Dietetics and Nutrition, pharmacy and podiatry had a larger than average number of postgraduate scholars from more remote locations (MM5-7). There was a large representation of postgraduate scholars from Queensland (27.4%) and the Northern Territory (n=115, 13.3%).

Areas of postgraduate study

Most postgraduates were funded to undertake a masters by coursework (n=410, 47.4%). A diverse spread of courses were undertaken with the masters of public health, masters of health service management and masters of mental health being most frequently studied. Other courses included indigenous health promotion, graduate certificate in ocular therapeutics and postgraduate diploma in policy and applied social research. A significant number of PhDs were funded (n=16).



Impact of the scholarship on accessing postgraduate opportunities

38.6% (n=102) of postgraduate scholars identified their NAHSSS scholarship increased their financial ability to attend and complete their postgraduate degree (Figure 17).

Figure 17 Impact of the NAHSSS on postgraduate scholars



Impact Indicator 2: Number of rural Allied Health professionals who continue to work in rural areas (retention)

Current practise status

The majority of post graduate scholars continue to work or identify as Allied Health professionals (n=257, 95.5%) while a small proportion are no longer working as Allied Health professionals (n=6, 2.2%).

Career status and role at follow up (2021)

Most postgraduates identify as established career Allied Health professionals (n=177, 75.6%). At follow up, postgraduate scholars were predominantly undertaking senior or more specialised clinical roles. Some described their role in more detail as: Bushfire Recovery Program Case Manager, Health Promotion Manager, Case Manager of Elder Abuse Team, Manager of Allied Health Education, Manager of CT services, Clinical Educator, Clinical Researcher, Deputy Director of Pharmacy Services, Managers of Allied Health Departments, Aboriginal Health Service Pharmacist and Manager of Workforce Partnerships and Professional Development.



Workplace profile at follow up (2021)

The majority of postgraduate scholars currently work for government organisations (n=161, 68.8%) with 21.3% (n=50) working in the private sector either as employees of private enterprise or being self-employed.

Geographic profile of scholars at follow up (2021)

Most postgraduate scholars are working in rural locations (MM2+) (n=195, 84.1%) with MM2 locations the most popular (n=95, 40.9%). A small proportion are currently working in a metropolitan location (MM1 n=37, 15.9%).

Change in geographic profile

A large proportion of postgraduate scholars who responded to the questionnaire who commenced their scholarship in a rural area remained in a similar rural location. The most stable postgraduate scholars were those who were in MM 2 locations on commencement of their postgraduate scholarship. For these scholars, 75.5% have remained in an MM2 location (Table 19). The proportion of postgraduate scholars located in MM6-7 decreased between the time of receiving the scholarship and follow-up. For example, around one third of postgraduate scholars who commenced their scholarship in an MM6 or 7 location remained in those locations at follow-up (32% and 33% respectively) and 40% of MM7-origin scholars now work in a metropolitan setting (n=6) (Table 19).

Table 19 Change in location from scholarship commencement to follow up (2021) for postgraduate placement scholars

		Commencement Rural classification (Postgraduate scholars)							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification (Postgraduate scholars)	Missing Count	43.0	1.0	14.0	8.0	6.0	7.0	6.0	1.0
	Total Count (All)	273.0	7.0	102.0	52.0	32.0	40.0	25.0	15.0
	MM 1	37.0	6.0	9.0	5.0	4.0	3.0	4.0	6.0
		13.6%	85.7%	8.8%	9.6%	12.5%	7.5%	16.0%	40.0%
	MM 2	94.0	0.0	77.0	7.0	1.0	5.0	3.0	1.0
		34.4%	0.0%	75.5%	13.5%	3.1%	12.5%	12.0%	6.7%
MM 3	42.0	0.0	2.0	32.0	2.0	3.0	2.0	1.0	
	15.4%	0.0%	2.0%	61.5%	6.3%	7.5%	8.0%	6.7%	



	MM 4	19.0	0.0	0.0	0.0	18.0	0.0	0.0	1.0
		7.0%	0.0%	0.0%	0.0%	56.3%	0.0%	0.0%	6.7%
	MM 5	24.0	0.0	0.0	0.0	1.0	22.0	1.0	0.0
		8.8%	0.0%	0.0%	0.0%	3.1%	55.0%	4.0%	0.0%
	MM 6	8.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0
		2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	32.0%	0.0%
	MM 7	6.0	0.0	0.0	0.0	0.0	0.0	1.0	5.0
	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	33.3%	

Findings from the semi-structured interviews with postgraduate recipients found the ability to undertake further study and complete qualifications strengthen scholarship recipients' ability to progress in their career at their rural location, rather than having to leave to go somewhere else such as a metropolitan area to continue that career progression.

So before I did this role, there was no deputy director of pharmacy there was only a director of pharmacy and we had identified that they needed to be a second person in charge.... I've learned [from my studies] what I can do, I actually put together a proposal to say that I deserve this position. It was supported by our hospital because otherwise if I want to stay here I've only got the director of pharmacy and whoever's been here and some have been people been here for a long time. (postgraduate scholar A)

Impact indicator 3: Number of rural Allied Health professionals supported to pursue professional or career aspirations

Interviews identified that career progression opportunities arising from NAHSSS-supported postgraduate study meant that recipients could support other clinicians around them to further develop skills and expertise to develop their own self confidence and job satisfaction within a rural area.

So I guess it's just really personally on a personal level, it's made my career progression. But I do believe that it's also enabled me to support friends, colleagues, and others that have decided to go down the research journey (Postgrad scholar F)

By gaining further postgraduate qualifications through the scholarship also often had a broader impact on allied health in general. Recipients talked about being 'recognised' as an authority in an area as a result of these qualifications which elevated the role of allied health within rural practice.

Once I got my formal qualifications, I was able to do a lot more pushing back... that led to my inclusion in committees and other sorts of things organizationally, that had medical and



nursing directors of nursing, where podiatry was then included in those discussions about pressure injury prevention. And how we were actually managing chronic wounds within the service. It opened up lots and lots of doors and made a huge difference for not just me, but to our profession and the impact that we can make for people that need our regional services (Postgrad scholar D)

It also enabled health practitioners to have the opportunity to undertake study in a different, but complementary, area to further support the work they were doing within the rural and regional settings.

There was extended period of drought out our way and that went on for 10 years basically. And there was a lot of distressed in the community that in there was very poorly resourced mental health services. And as a physio I was feeling the impact of that as a clinician because there was no one else to you know, to ask for help and so yeah, the scholarship enabled me to, you know, further my education and problem solve for my, my professional needs. (postgraduate scholar B)

It was noted by the recipients that working in rural practice can be isolating and challenging, especially for allied health staff that haven't had a lot of experience. The ability to undertake further study while practicing meant they were able to directly apply new knowledge that impacted on the community, while being supported to do so. This increased job satisfaction and contributed to retention.

So trying to find a mentor or someone that I could relate to was really hard but doing that course I found I've gained so much knowledge and could push myself forward. With that behind me without having to wait for someone to say hey, do you want to do this I was more practicing. This is what we need to do. And this is how we need to restructure and things like that. And so I wouldn't have had the confidence before. Whereas now I'm seeking out those opportunities because I've got the confidence. (postgraduate scholar A)

In some cases, having the postgraduate education through the scholarship also meant that you were more authentically able to support the specific rural communities that you were working in.

So from a post grad perspective, you know, having real lived experiences in indigenous communities, and being able to apply what I'm learning to actually what I'm doing in my in my work was really important. (Postgrad scholar E)

Recipients of the postgraduate scholarships talked about the challenges of recruiting into broader roles within their organisation and often Allied Health professionals were encouraged to step up into these positions. The ability to undertake further education and qualifications to better prepared them for these positions meant they were able to be successful in these roles and were more likely to remain in these positions and stay in the regional or rural locations.

And sometimes it's easy to get drawn into doing things that are a bit too challenging. So having that basis and having like, the knowledge that was important to do things the right



way, not just to do things, was really, really helpful, really important. So the [postgrad qualification] was really valuable in terms of improving what I was able to offer. And then, really, that's where my career's taking me and my interests lie. Because of being able to have that [education], I guess, less superficial understanding of the work that I was doing I think it's a benefit to my workplace and also definitely a factor in having you stay rural. (Postgrad scholar C)

Additionally, recipients talked about the benefits of undertaking further postgraduate studies and what this meant for both their personal and professional careers, highlighting that it was often an opportunity for them to focus on something meaningful that they were passionate about. The ability to focus on themselves made them re-energised and often contributed to their decision to stay within their region.

It was actually very, very good for you know, self-care really to just to have that timeout and focusing on something that was really very positive. (postgraduate scholar B)

Summary of postgraduate NAHSSS scholars

Vignette of a “typical” postgraduate NAHSSS Scholar

Meet Dave. He is an established physiotherapist from Townsville (MM2) in regional Queensland. Dave was awarded a **postgraduate NAHSSS scholarship** in 2015 which helped him to undertake a Masters of Health Service Management (coursework) through Charles Sturt University, Bathurst. The



scholarship helped strengthen Dave’s ability to progress in his career, rather than having to move to Brisbane to continue his career progression. It also helped to provide Dave with the skills required to improve the delivery of physiotherapy services to his rural community. Dave now works as a senior physiotherapist and deputy manager of allied health in a public hospital and has stayed working and living in Townsville.



Evidence to support desired outcomes 5 & 6: More Allied Health professionals choose to remain working in rural settings (retention)

CPD and Postgraduate scholars were a relatively stable workforce over time with 82.6% (n=311) of postgraduate and CPD scholars who were already living or working in a rural area on commencement of their scholarship continuing to work in a rural location (MM2+) (Table 20). However the proportion of postgraduate and CPD scholars from rural locations who stayed in their commencement rural location decreased as commencement remoteness increased. For example only around one third of postgraduate and CPD scholars who commenced their scholarship in an MM6 or 7 location remained in those locations (36.4% and 34.8% respectively) and 30.4% of MM7-origin scholars now work in a metropolitan setting (n=7) (caution, small numbers).

There was some movement of CPD and postgraduate scholars from rural to metropolitan workplaces (range 6.2-30.4%). This proportion was consistent for most rural-origin scholars apart from MM7 origin scholars where a larger than average movement (30.4%) to metropolitan settings was observed.

Of those postgraduate and CPD scholars who currently work in a regional or rural area (n=312), most were from regional/rural backgrounds or locations (n=311) (Table 20).

Table 20 Change in location from scholarship commencement to follow up (2021) postgraduate and CPD scholars

		Commencement Rural classification							
		Total	MM 1	MM 2	MM 3	MM 4	MM 5	MM 6	MM 7
Current workplace rural classification	Missing Count	60.0	1.0	21.0	10.0	8.0	8.0	10.0	2.0
	Total Count (All)	426.0	11.0	149.0	85.0	49.0	65.0	44.0	23.0
	MM 1	54.0	9.0	13.0	7.0	7.0	4.0	7.0	7.0
		12.7%	81.8%	8.7%	8.2%	14.3%	6.2%	15.9%	30.4%
	MM 2	138.0	0.0	110.0	9.0	3.0	8.0	4.0	4.0
		32.4%	0.0%	73.8%	10.6%	6.1%	12.3%	9.1%	17.4%
	MM 3	75.0	0.0	3.0	57.0	4.0	6.0	4.0	1.0
		17.6%	0.0%	2.0%	67.1%	8.2%	9.2%	9.1%	4.3%
	MM 4	31.0	0.0	1.0	0.0	26.0	2.0	1.0	1.0
		7.3%	0.0%	0.7%	0.0%	53.1%	3.1%	2.3%	4.3%
	MM 5	40.0	0.0	0.0	2.0	1.0	36.0	1.0	0.0
		9.4%	0.0%	0.0%	2.4%	2.0%	55.4%	2.3%	0.0%
MM 6	17.0	1.0	0.0	0.0	0.0	0.0	16.0	0.0	
	4.0%	9.1%	0.0%	0.0%	0.0%	0.0%	36.4%	0.0%	
MM 7	11.0	0.0	1.0	0.0	0.0	1.0	1.0	8.0	
	2.6%	0.0%	0.7%	0.0%	0.0%	1.5%	2.3%	34.8%	

Discussion

The NAHSSS made a positive contribution to the supply, retention and upskilling of the rural allied health workforce.

The scheme was highly successful in achieving progress towards the following indicators (Table 21):

- More rural-origin Allied Health professionals completed higher education degrees in allied health
- More rural-origin Allied Health professionals entered the workforce
- More rural-origin Allied Health professionals who enter the workforce are working in rural areas
- More Allied Health professionals stayed working in rural areas
- More rural Allied Health professionals pursued their professional or career aspirations
- More rural psychologists have clinical psychology registration
- More rural psychologists with clinical psychology registration remain in the rural workforce

As a result it can be surmised that the NAHSSS contributed extensively to addressing the overarching problem of poorer outcomes for rural communities by contributing to an increased supply of highly qualified Allied Health professionals to rural areas of need.

The success of the NAHSSS could be further enhanced by targeting of the supply of particular allied health professions to specific, identified areas of need. This can only happen if both the supply and geographic distribution of the allied health workforce is known and compared to identified areas of community need.

As the clinical placement stream did not specifically target rural-origin scholars for clinical placement/work integrated learning support, large numbers of clinical placement scholars moving to rural areas for work were not observed.

There was limited evidence to support the assumption that exposing undergraduate students to rural clinical placements was effective in attracting greater numbers of AHPs to rural and remote locations. A high proportion of clinical placement scholarship recipients from a MMM1 location (75.4% of all recipients) reflected that the clinical placement stream did not target rural-origin students. Of the survey respondents, 65% of MMM1-origin scholars were still working in metropolitan locations despite having competed a rural clinical placement. This outcome is consistent with evidence suggesting the decision to move and/or stay rurally is complex and multifactorial (Malatzky et al., 2020, Kumar et al. 2020).

Furthermore, the postgraduate and CPD schemes enabled Allied Health professionals to become more highly skilled in areas of particular allied health practice such as primary health care, aged care, mental health and indigenous health. As described by scholars, this resulted in the needs of their rural communities being better met and more junior work colleagues benefiting from upskilling and mentoring from those scholarship recipients.



The research evidence clearly demonstrates that rural-origin students are more likely to return to rural practice. By targeting rural-origin and rural workplace Allied Health professionals and students, the NAHSSS scheme successfully enabled a significant increase in the supply and retention of the allied health workforce in rural areas.

Allied health careers have blossomed under the NAHSSS with many of the narratives from the interviews celebrating and reinforcing the benefits of rural workplaces to allied health careers (Malatsky & Bourke, 2016). The program logic suggests that these impacts could be further enhanced through investment in other evidenced enabling activities such as Cosgrave's Attract Connect Stay program (Cosgrave, 2021) and the allied health rural generalist pathway, some of which are already funded by the Department of Health e.g. The Allied Health Rural Generalist Education and Training Scheme (TARGHETS) and/or are being supported by SARRAH.

Conclusions

The NAHSSS was a highly effective scheme that has achieved its objectives and in doing so has contributed significantly to supporting rural and remote allied health practitioners at various stages of their carer lifecycle.

Specifically, the NAHSSS allowed progress to be made towards addressing problems achieving the following outcomes:

Problem statement 1: Rural students are less likely to access and succeed at higher education than metropolitan students; There are not enough Allied Health professionals who choose to work in rural areas.

Best possible outcome 1: Students from rural areas are supported to pursue a career in Allied Health and choose to work in a rural area

Impact: 880 students to *obtained* allied health qualifications; Estimated 496 Allied Health professionals chose to work in rural locations.

Problem statement 2: There are not enough undergraduate Allied Health students undertaking rural work integrated learning placements; Rural work integrated learning placements are often not financially viable for undergraduate allied health students to undertake (or allied health organisations to support); There are not enough Allied Health professionals who choose to work in rural areas.

Best possible outcome 2: Undergraduate allied health students are supported to undertake rural WIL placements and choose to work in a rural area

Impact: 1395 undergraduate allied health students undertook rural work integrated learning/clinical placements; A quarter of MM1 origin scholars are now working in rural areas.



Problem statement 3: Rural psychologists struggle to access training pathways and supervision requirements to obtain endorsement to practice as registered clinical psychologists; There are not enough psychologists with clinical psychology registration in rural Australia.

Best possible outcome 3: Psychologists are supported to undertake training pathways that enable them to gain accreditation as an endorsed clinical psychologist and choose to work in a rural area.

Impact: 552 clinical psychologists accessed clinical psychology training pathways of whom an estimated 98% obtained their endorsement; Estimated 297 clinical psychologists now working in rural areas.

Problem statement 4: Allied Health professionals struggle to access sufficient professional development in rural areas; Allied Health professionals who work in rural areas don't stay in rural areas.

Best possible outcome 4: Allied Health professionals from rural areas are supported to access sufficient professional development opportunities; Allied Health professionals from rural areas remain working in rural areas

Impact: 925 Allied Health professionals supported to undertake CPD activities; 87.7% remained working in rural areas.

Problem statement 5: Allied Health professionals in rural areas struggle to access career-enhancing postgraduate opportunities; Allied Health professionals who work in rural areas don't stay in rural areas.

Best possible outcome 5: Allied Health professionals from rural areas are supported to access postgraduate, career enhancing opportunities; Allied Health professionals from rural areas remain working in rural areas

Impact: 865 Allied Health professionals supported to undertake postgraduate qualifications; 84.1% remained working in rural areas.



Recommendations

The NAHSSS provided a comprehensive program of scholarships and supports that was successful in contributing to the supply, retention and upskilling of the rural allied health workforce and Aboriginal and Torres Strait Islander allied health workforce. To facilitate future planning as part of a comprehensive rural health workforce strategy, the following recommendations are made:

1. Further work is undertaken to develop a comprehensive multidisciplinary rural workforce data set, incorporating the allied health workforce. This could be cross-referenced with rural primary health networks' health needs assessments to assist in targeting areas for prioritisation for rural allied health workforce development.
2. Since the cessation of the NAHSSS in 2016 there has been no equivalent undergraduate allied health scholarship program, and there is currently no plan in development that will increase the supply of rural-origin allied health professionals in the near future. Given the significant workforce shortages currently impacting on access to services in rural and remote Australia, the undergraduate stream targeting students from a rural background should be reinstated as a priority. This scholarship program should be integrated with existing workforce development programs, such as Indigenous Allied Health Australia's Academy Program.
3. If the allied health undergraduate scholarship stream is unable to be reinstated, consideration should be given to broadening the HELP-waiver scheme currently only available to medical and nurse practitioner students to include allied health professionals committing to work in MMM3-7 areas. Funding for allied health scholarships should be quarantined and reported on, particularly for multidisciplinary programs.
4. All current and future health workforce scholarship programs, including the Health Workforce Scholarship Program, Aged Care and Mental Health scholarship programs, should include targets for allied health participation and that data should be made available as part of a broader comprehensive allied health workforce data set.
5. Given the effectiveness of the post-graduate scholarship support program in retaining allied health professionals in MMM3-7 where the need is greatest, the current Health Workforce Scholarship Program should be broadened to include allied health professionals working across all sectors, and not just those working in primary healthcare settings. It will also be important to disaggregate allied health workforce from nursing workforce data in order to effectively evaluate the utility of these programs for allied health professionals accessing professional development support.
6. A scholarship program to support and grow the mental health workforce should be made available as a matter of urgency to address the significant need for more mental health services in rural and remote Australia. This scholarship program should include undergraduate and post-graduate support, as well as CPD support to assist provisionally-registered psychologists to gain full registration.



7. The clinical placement scholarship stream was effective in exposing undergraduate allied health professionals to rural practice. However the supply of rural clinical placements is very poor, and there are a number of systemic barriers that constrain the capacity for allied health professionals to offer undergraduate clinical placements. Further exploration of these system barriers and strategies to address them should be undertaken as a priority to grow the number of available rural clinical placements.

Table 21 PEASI logic model synthesis of findings

Overarching Problem / Drivers: High levels of morbidity in rural communities that can be partially addressed through access to Allied Health professional services however there are not enough Allied Health professionals to meet demand in rural areas.

Overarching desired outcome: Sufficient Allied Health professionals in the workforce to meet rural needs.

Key – grey text are evidenced enablers that were not targeted by the NAHSSS funding; blue text are evidenced enablers that were targeted by the NAHSSS funding.

Area	Problem	Enablers	Activities	Success indicators	Impact (best possible outcome)
Undergraduate support	<p>There are not enough undergraduate Allied Health students undertaking rural work integrated learning placements;</p> <p>Rural work integrated learning placements are often not financially viable for undergraduate allied health students to undertake (or allied health</p>	<ul style="list-style-type: none"> - Rural-origin students who are supported to obtain the ATAR required to study at university are more likely to access higher education studies; - Rural-origin students who are supported to access and complete higher education studies are more likely to graduate from their higher education studies; - Rural-origin students are more likely to work in rural areas when they graduate if they are supported to transition into rural workplaces; - Allied health students from a rural origin are more likely to work in rural areas when they graduate. 	Scholarship support for rural origin students to attend and complete higher education studies in allied health;	<ul style="list-style-type: none"> - More rural-origin Allied Health professionals completing higher education degrees in Allied Health PROGRESS ACHIEVED - more rural-origin Allied Health professionals enter the workforce PROGRESS ACHIEVED - More rural-origin Allied Health professionals who enter the workforce are working in rural areas PROGRESS ACHIEVED 	There are sufficient Allied Health professionals in the workforce to meet rural needs.



	organisations to support); There are not enough Allied Health professionals who choose to work in rural areas.				
Clinical placement support	There are not enough rural psychologists with clinical psychology registration; Rural psychologists struggle to access training pathways and experienced supervisors to obtain accreditation to practice as registered clinical psychologists.	<ul style="list-style-type: none"> - Rural-origin students are more likely to work in rural areas if they undertake immersive, high quality rural WIL placements; - Rural WIL placements are positively associated with an increased intention to work in rural areas on graduation; - the most impactful enablers to undertaking rural WIL placements are access to financial support, accommodation and transport. - For these benefits to be realised, rural work integrated learning experiences need to be of sufficient quality and provide an excellent student experience. 	Scholarship support for students to undertake rural WIL placements.	<ul style="list-style-type: none"> - More Allied Health students are provided the support to undertake rural WIL placements PROGRESS ACHIEVED - More (rural-origin) Allied Health professionals who enter the workforce are working in rural areas PROGRESS PARTIALLY ACHIEVED; - Additional impact: metro-origin Allied Health professionals gained insight into 	There are sufficient Allied Health professionals in the workforce to meet rural needs.



				the complexity of rural settings that has allowed for better care to be delivered from a metropolitan setting to rural clients	
Clinical Psychology support	<p>Allied Health professionals don't stay in rural areas;</p> <p>Allied Health professionals struggle to access sufficient professional development in rural areas;</p>	<ul style="list-style-type: none"> - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to support to undertake post graduate study; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations through post graduate study; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to social support, support to connect with the community and support to fulfil their life aspirations. 	Scholarship support for rural psychologists to undertake masters' level accreditation to practice as clinical psychologists in rural areas.	<ul style="list-style-type: none"> - More rural psychologists have clinical psychology registration PROGRESS ACHIEVED - More rural psychologists with clinical psychology registration remain in the rural workforce PROGRESS ACHIEVED 	There are sufficient Allied Health professionals in the workforce to meet rural needs.
CPD support	Allied Health professionals don't stay in rural areas;	<ul style="list-style-type: none"> - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to support to undertake professional development opportunities; 	Scholarship support for rural Allied Health professionals access CPD;	<ul style="list-style-type: none"> - More Allied Health professionals stay working in rural areas PROGRESS ACHIEVED 	There are sufficient Allied Health professionals in the workforce to



	Allied Health professionals in rural areas struggle to access sufficient career-enhancing postgraduate opportunities;	<ul style="list-style-type: none"> - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations through professional development; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to social support, support to connect with the community and support to fulfil their life aspirations. 		<ul style="list-style-type: none"> - More rural Allied Health professionals pursue professional or career aspirations PROGRESS ACHIEVED 	meet rural needs.
Post graduate support	<p>There are not enough undergraduate Allied Health students undertaking rural work integrated learning placements;</p> <p>Rural work integrated learning placements are often not financially viable for undergraduate</p>	<ul style="list-style-type: none"> - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to support to undertake post graduate study; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they are supported to pursue professional or career aspirations through post graduate study; - Allied Health professionals who work in rural areas are more likely to stay in their rural workplace if they have access to social support, support to connect with the community and support to fulfil their life aspirations. 	Scholarship support for rural Allied Health professionals to access post graduate studies;	<ul style="list-style-type: none"> - More Allied Health professionals stay working in rural areas PROGRESS ACHIEVED - More rural Allied Health professionals pursue professional or career aspirations PROGRESS ACHIEVED. 	There are sufficient Allied Health professionals in the workforce to meet rural needs.



	<p>allied health students to undertake (or allied health organisations to support); There are not enough Allied Health professionals who choose to work in rural areas.</p>				
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Appendices

Appendix 1 NAHSSS Follow Up Questionnaire

NAHSSS Evaluation 2021

Survey Flow

Block: Section 1 - Information and Consent (1 Question)
Standard: Section 2 - Commencement information (6 Questions)
Standard: Section 3 - Current situation (8 Questions)
Standard: Section 4 - Impact of the NAHSSS (17 Questions)
Standard: Section 5 - Consent to follow up (3 Questions)
Standard: Section 6 - Any other feedback (1 Question)

Page Break

Start of Block: Section 1 - Information and Consent



Consent

This is an internet-based survey. Every effort will be made to ensure that responses are confidential, however the researcher cannot guarantee the confidentiality or anonymity of material transferred by internet.

By beginning the questionnaire/survey, you acknowledge that you have read the information about the study and agree to participate in this research.

- Yes, I have read the information sheet and agree to participate. (1)
- No, I do not wish to participate. (2)



Skip To: End of Survey If This is an internet-based survey. Every effort will be made to ensure that responses are confidential... = No, I do not wish to participate.

End of Block: Section 1 - Information and Consent

Start of Block: Section 2 - Commencement information



Q2 What type of NAHSSS scholarship did you receive from SARRAH?

- The Undergraduate (Entry-Level) Scholarship Stream (1)
- Postgraduate Scholarship Stream (2)
- Clinical Psychology Scholarship Stream (3)
- Continuing Professional Development Scholarship Stream (4)
- Clinical Placement Scholarship Stream (5)
- Both the Undergraduate AND Clinical Placement Scholarship Streams (6)



Q4 What year did you receive your Scholarship?



For scholars who received both undergraduate and clinical placement scholarships, please respond for your undergraduate scholarship.

- 2011 (1)
- 2012 (2)
- 2013 (3)
- 2014 (4)
- 2015 (5)
- 2016 (6)
- 2017 (7)

Display This Question:

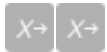
If What type of NAHSSS scholarship did you receive from SARRAH? = Both the Undergraduate AND Clinical Placement Scholarship Streams





Q60 What year did you receive your clinical placement scholarship?

- 2011 (1)
- 2012 (2)
- 2013 (3)
- 2014 (4)
- 2015 (5)
- 2016 (6)
- 2017 (7)



Q13 What is the rural classification of your primary place of residence when you received your scholarship?

For scholars who received both undergraduate and clinical placement scholarships, please respond for your undergraduate scholarship only.



Please use this website if you are unsure of your rural classification: [Modified Monash Model Interactive Tool](#)

- MM 1 (1)
- MM 2 (2)
- MM 3 (3)
- MM 4 (4)
- MM 5 (5)
- MM 6 (6)
- MM 7 (7)



Q6 Which of the following best describes your eligibility status when you received your Scholarship?

For scholars who received both undergraduate and clinical placement scholarships, please respond for your undergraduate scholarship only.



Please use this website if you are unsure of your rural classification: [Modified Monash Model Interactive Tool](#)

- I undertook primary and/or secondary schooling in an ASGC-RA 2 / MM 2 and above location only in Australia. (1)
- Prior to receiving my scholarship, I lived for eight cumulative years in an ASGC-RA 2 / MM 2 and above location (2)
- I was residing and working (full-time or part-time) in a non-clinical capacity in an ASGC-RA 2 / MM 2 and above location. (3)
- I was seeking support to obtain my masters in clinical psychology (4)
- I was residing and/or working in Tasmania (5)
- I was residing and/or working in the Northern Territory (6)
- I am of Aboriginal and/or Torres Straight Islander descent (7)
- I received a scholarship under the extenuating circumstances category (8)
- Other (9) _____



Q10 What was your allied health discipline or field of study when commencing your scholarship?

For scholars who received both undergraduate and clinical placement scholarships, please respond for your undergraduate scholarship only.



- Aboriginal Health Worker (1)
- Audiology (2)
- Chinese Medicine (3)
- Chiropractic (4)
- Dentistry (5)
- Dental Hygienist (6)
- Dental Therapist (7)
- Dental Prosthetics (8)
- Dietetics and Nutrition (9)
- Diabetes Educator (10)
- Exercise Physiologist (11)
- Genetic Counselling (12)
- Health Promotion (13)
- Medical Radiation Science (14)
- Medical Imaging (15)
- Nuclear Medicine Technology (16)
- Radiation Therapy (17)
- Occupational Therapy (18)
- Optometry (19)



- Orthoptics (20)
- Osteopathy (21)
- Paramedic (22)
- Physiotherapy (23)
- Podiatry (24)
- Prosthetics & Orthotics (25)
- Psychology (26)
- Social Work (27)
- Speech Pathology (28)
- Sonography (29)
- Other (30) _____

End of Block: Section 2 - Commencement information

Start of Block: Section 3 - Current situation



Q14 Are you currently working or registered to work as an allied health professional?

- Yes (1)
- No (2)
- Other (3) _____

Skip To: End of Block If Current AH Status = No



Q15 What is the postcode of the workplace you work in most of the time (where you spend more than 50% of your working time)?



Q16 What is the rural classification of the workplace that you work in most of the time (where you spend more than 50% of your working time)

Please use this website if you are unsure of your rural classification: [Modified Monash Model Interactive Tool](#)

- MM 1 (1)
- MM 2 (2)
- MM 3 (3)
- MM 4 (4)
- MM 5 (5)
- MM 6 (6)
- MM 7 (7)





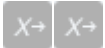
Q18 Do you provide outreach services to regional, rural or remote areas (either physically or by telehealth)?

Yes (1)

No (2)

Display This Question:

If Outreach = Yes



Q20 What is the rural classification (MM) of the furthest geographic area to which you provide outreach services?

Please use this website if you are unsure of your rural classification: [Modified Monash Model Interactive Tool](#)

MM 1 (1)

MM 2 (2)

MM 3 (3)

MM 4 (4)

MM 5 (5)

MM 6 (6)

MM 7 (7)

Q29 What is your current role & job title?



If more than one, please list all.



Q32 How would you classify your career status?

- I am an early career allied health professional (newly graduated up to 3 years qualified) (1)
- I am a mid career allied health professional (3-5 years qualified) (2)
- I am an established allied health professional (5+ years qualified) (3)
- Other (4) _____



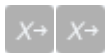


Q30 Who is your primary employer (for more than 50% of your working time)?

- I am employed by the government (e.g. hospital, community services, ACCHO, Aboriginal and Torres Straight Islander health) (1)
- I am employed by a not for profit organisation (e.g. health, disability or aged care provider) (2)
- I am employed by a for profit organisation (e.g. health, aged care or disability company/business) (3)
- I am self employed (e.g. I own my own business or I have an ABN and provide contracted services to another organisation) (4)
- Other (5) _____

End of Block: Section 3 - Current situation

Start of Block: Section 4 - Impact of the NAHSSS





Q33 Which of the following best describes the impact of the NAHSSS scholarship for you?

- The scholarship helped me to choose a career path in allied health (1)
- The scholarship increased my financial ability to attend and complete my undergraduate degree in allied health (2)
- The scholarship increased my financial ability to undertake a clinical placement in a regional, rural or remote area (3)
- The scholarship helped me to develop new skills and knowledge that I could apply to areas of need in the regional, rural or remote communities I serve(d) (4)
- The scholarship influenced my decision to work in or supply allied health services to regional, rural or remote areas (5)
- The scholarship helped me to remain practicing as an allied health professional in a regional, rural or remote area (6)
- Other (7) _____

Display This Question:

If What type of NAHSSS scholarship did you receive from SARRAH? = The Undergraduate (Entry-Level) Scholarship Stream



Q38 Did you graduate from your undergraduate course?

- Yes (1)
 - No (2)
 - I am still studying but intend to graduate (3)
 - Other (4)
-



Display This Question:

If UG graduation = No

Q61 Please explain why you couldn't complete your undergraduate studies.

Display This Question:

If UG graduation = Yes





Q40 What year did you receive your registration to practise as an allied health professional?

- 2011 (1)
- 2012 (2)
- 2013 (3)
- 2014 (4)
- 2015 (5)
- 2016 (6)
- 2017 (7)
- 2018 (8)
- 2019 (9)
- 2020 (10)
- 2021 (11)
- I plan to register when I graduate (12)
- I never registered (13)
- In my allied health profession there is no registration requirement (14)
- Other (15) _____

Display This Question:

If UG Registration = I never registered

Q52 Please explain why you never registered as an allied health professional



Skip To: End of Block If Condition: Please explain why you neve... Is Displayed. Skip To: End of Block.

Display This Question:

If What type of NAHSSS scholarship did you receive from SARRAH? = Postgraduate Scholarship Stream



Q49 Did you graduate from / complete your post graduate studies?

- Yes (1)
- No (2)
- I am still studying and intend to graduate/complete my studies (3)
- Other (4) _____

Display This Question:

If PG graduation = No

Q53 Please explain why you were unable to complete your studies

Skip To: End of Block If Condition: Please explain why you were... Is Displayed. Skip To: End of Block.



Display This Question:

If What type of NAHSSS scholarship did you receive from SARRAH? = Clinical Psychology Scholarship Stream



Q57 Did you graduate from / complete your masters/PhD of Clinical Psychology?

- Yes (1)
- No (2)
- I am still studying and intend to graduate/complete my studies (3)
- Other (4) _____

Display This Question:

If CPsy graduation status = No

Q58 Please explain why you were unable to complete your studies

Skip To: End of Block If Condition: Please explain why you were... Is Displayed. Skip To: End of Block.

Display This Question:

If CPsy graduation status = Yes





Q55 What year did you register with the Psychology Board of Australia as an endorsed clinical psychologist?

- 2011 (1)
- 2012 (2)
- 2013 (3)
- 2014 (4)
- 2015 (5)
- 2016 (6)
- 2017 (7)
- 2018 (8)
- 2019 (9)
- 2020 (10)
- 2021 (11)
- I plan to register when I graduate / complete my studies (12)
- I never registered (13)
- Other (15) _____

Display This Question:

If CPsy Registration = I never registered

Q56 Please explain why you were unable to register



Q36 Apart from the NAHSSS scholarship you received did you receive any other support or assistance to complete your studies or clinical placement?

Q42 In what ways has the NAHSSS scholarship influenced or impacted on your allied health career to date?

Q43 Apart from the NAHSSS scholarship, what other factors have influenced your allied health career to date?



End of Block: Section 4 - Impact of the NAHSSS

Start of Block: Section 5 - Consent to follow up

Q44 Are you happy to be contacted by the research team for a follow up interview about the NAHSSS scholarship and your allied health career?

- Yes (1)
- No (2)

Display This Question:

If Follow up = Yes

Q45 What is the best email address to contact you on?

Q46 Are you happy for Services for Australian Rural and Remote Allied Health to contact you in future about other research?

- Yes (1)
- No (2)

End of Block: Section 5 - Consent to follow up

Start of Block: Section 6 - Any other feedback



Q47 Please provide any other comments or feedback about the NAHSSS program here.

End of Block: Section 6 - Any other feedback

Appendix 2 NAHSSS Interview Schedule

Key area for exploration	Interview Questions
Barriers/Enablers and activities that influence capacity to complete undergraduate / post graduate / clinical psychology studies & registration / undertake rural placement?	What helped or hindered you to access and undertake your study/rural placement? Prompt – specifically in what way did the NAHSSS support you? Clinical Psychologists – what helped or hindered you to access and complete your registration/accreditation process? Prompt – specifically in what way did the NAHSSS support you?
Barriers/Enablers and activities that influence Allied Health professional capacity and willingness to remain a practising Allied Health professional in a rural area Career journey How the NAHSSS Scholarship fits into the picture Other barriers/enablers to practising in a rural area.	Tell us a little bit about your allied health career journey? In what way did the NAHSSS influence your allied health career to date? What other supports have helped you to get where you are now? What has helped/hindered you to remain practising as an Allied Health professional in a rural or remote area? Why did you choose to leave rural practice? In hindsight what would have helped you to stay?
Future pacing – allowing the scholar to identify activities or contexts that they think would enable improvement or change to remaining in the rural workforce.	Knowing what you know now, what would you do differently? What advice would you give to someone starting out or wanting to stay in a rural allied health career? Prompt = Can you think of any other supports that could assist others to remain working in rural areas?