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South Australian Allied Health Rural Generalist Pathway Evaluation: Phase 2

August 2020

Flinders University

South Australian Allied Health Rural Generalist Pathway Evaluation

Phase 2 Report, August 2020

This report was completed as a result of a partnership between SA Health and Flinders University, with funds provided by the Rural Health Workforce Strategy (Government of South Australia)

Flinders University research team
Alison Dymmott
Lecturer
Caring Futures Institute

Chris Brebner
Professor
Caring Futures Institute

Stacey George
Associate Professor
Caring Futures Institute

Narelle Campbell,
Associate Professor
Flinders Northern Territory

Rachel Milte
Matthew Flinders Senior Research Fellow
Health and Social Care Economics Group

SA Health project consultants
Julianne O'Connor
Principal Consultant Allied Health
Rural Support Service, SA Health

Jodie May
Project Manager, AHRGP
Rural Support Service, SA Health

Silvana Poklar
AHRGP Project Team
Rural Support Service, SA Health

In Collaboration with SA Health:
Rural Support Service
Barossa Hills Fleurieu Local Health Network
Eyre and Far North Local Health Network
Flinders and Upper North Local Health Network
Limestone Coast Local Health Network
Riverland Mallee Coorong Local Health Network
Yorke and Northern Local Health Network

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Contents

Abbreviations

ACL	Advanced Clinical Lead
AHA	Allied Health Assistant
AHP	Allied Health Professional
AHRGP	Allied Health Rural Generalist Pathway
FTE	Full time equivalent
JCU	James Cook University
LHN	Local Health Network
RSS	Rural Support Service
SA	South Australia
SA Health	Department for Health and Wellbeing, South Australia
SARRAH	Services for Australian Rural and Remote Allied Health
TCI	Temperament and Characteristics Inventory

The term Allied Health Profession includes but is not limited to:

Audiology, dietetics, medical radiation, occupational therapy, pharmacy, physiotherapy, podiatry, psychology, social work, speech pathology.

South Australian Allied Health Professional (AHP) Classifications

AHP1	New graduate or base grade clinician
AHP2	Experienced clinician or clinical supervisor
AHP3	Senior clinician, specialist clinician, or operational line manager
AHP4	Advanced Clinical Lead, advanced specialist clinician, or senior operational manager

Use of pronouns

To protect the anonymity of the 2 male trainees, the male pronouns in quotes have been changed to female

Executive Summary

Introduction

In 2019 the Allied Health Rural Generalist Pathway (AHRGP) was introduced in SA Health Regional Local Health Networks (LHNs) through the provision of Rural Health Workforce Strategy funding from the Government of South Australia. This was one of a range of projects funded by this strategy to improve workforce outcomes and the quality of health service provision in rural and remote areas.

The AHRGP is a post graduate training course for AHPs working in rural or remote areas designed to develop rural generalist specialist skills and knowledge. The AHRGP also includes an expectation for trainees to progress service improvement projects that utilise one or more nominated rural generalist service strategies, have dedicated profession specific supervision, and have protected study time at work.

Aims

The aims of this research are to evaluate the impact of the AHRGP in regional LHNs and to explore rural and remote allied health workforce challenges and opportunities in South Australia (SA).

Methods

Flinders University was contracted by SA Health to formally evaluate the AHRGP implementation in SA. This research is utilising a mixed methods approach over four distinct phases.

In December 2019, Flinders University completed phase 1 which explored the experiences of early career AHPs working in rural and remote areas and the early perceptions of the AHRGP from the perspective of the clinicians undertaking the training as well as their clinical supervisors, line managers, advanced clinical leads (ACLs), consumer representatives and the AHRGP project management team.

From February to July 2020, Flinders University conducted phase 2 of the research to explore the experiences and early outcomes of the AHRGP from the perspectives of the trainees, their clinical supervisors, line managers, ACLs and the project management team at the midpoint of the pathway implementation.

Results

At the midpoint of the AHRGP implementation, stakeholders are generally positive about the pathway and the impact it has had on the trainees, their LHNs and consumers. Five level 2 trainees and four level 1 trainees are continuing the program beyond July 2020. Six of the original trainees in the level 1 program have withdrawn within the first 12 months of implementation. The factors leading to these withdrawals related to location of family or partner, job opportunities, clinical and organisational support and workload pressures. Despite the high number of withdrawals from the level 1 program, the average length of stay of the AHP1 trainees appears to be longer than the average for allied health professionals in regional LHNs in SA.

Many trainees have found the pathway to be useful in building their skills, knowledge and confidence to work across a broad range of clinical areas. They have also valued the opportunity to learn about and participate in service development projects. Some trainees reported challenges with the pathway, particularly around aligning the content to their practice.

Factors that may impact on the success of the AHRGRP and a range of challenges and benefits were explored with stakeholders. Time continues to be the main factor for success with many trainees reporting difficulty finding the time to implement the service development projects and managing competing demands at work. Clinical support was found to be a significant enabler for the success of the pathway and trainees valued the support they were receiving.

Factors that may impact on trainee success have also been explored and will be tracked over time, these include; personality traits, rural background, length of time working in a rural area and time spent in the local community out of work hours. Most of the trainees who are continuing with the pathway indicated they are planning to work in rural or remote areas well into the future and were looking forward to making further quality improvements in their LHNs.

The costs and benefits of the pathway were outlined; the initial analysis indicated that the majority of costs relate to the trainees' time for study, the course fees and coordination of the pathway. Benefits relating to improved retention, were costed for further analysis in phase 3.

Recommendations

At the midway point of the pathway implementation in SA, this report outlines a range of interim recommendations including:

- Continue to invest in and promote the AHRGP in SA as a positive workforce strategy, and as a way to raise the profile of allied health rural generalist specialty skills
- Review clinical supervision and line management support for all trainees including the support they receive for quarantined study time
- Explore opportunities to implement, evaluate and disseminate the trainees' work-based projects
- Continue to collaborate with James Cook University to ensure the pathway meets the needs of SA based rural and remote AHPs.

Introduction

Rural and remote Allied Health Professionals (AHPs) work in wide ranging clinical roles over vast geographical distances. Many rural and remote AHPs work in generalist roles, providing services to people of all ages, in a range of clinical settings and service types and working to the full clinical scope of the profession. Most AHPs who work in rural generalist roles do so without any formal post graduate qualification or training [1].

Recruitment and retention challenges in rural and remote health services are significant with disproportionally more AHPs in metropolitan areas than regional, rural and remote areas [2]. A recent review of allied health recruitment and retention evidence found that although a range of factors are known to influence AHPs' choice to work and stay in a rural or remote area, there is limited evidence measuring the effectiveness of interventions in improving workforce outcomes in rural and remote areas [2].

The Allied Health Rural Generalist Pathway (AHRGP) is a post graduate training course for AHPs working in rural or remote areas designed to develop generalist practice skills and knowledge. The pathway is offered in two levels through James Cook University (JCU), level one for early career AHPs with up to 3 years of experience (1-2 years part time) and level two for AHPs with more than 2 years of experience (2-3 years part time) [3].

In 2019, following a successful funding submission to the Rural Health Workforce Strategy Steering Committee, the Minister for Health and Wellbeing approved the allocation of funds to introduce the AHRGP in rural and remote SA for the first time. The funding also enabled the provision of centralised project manager support and a contract with Flinders University to undertake formal research and evaluation of the initiative.

In 2019 Flinders University undertook a pre-pathway evaluation of the SA AHRGP, the full report is available online. Phase one explored the intentions of the pathway in SA, the demographics and baseline data of trainees, the initial perceptions of key stakeholders and a range of retention factors. This report also provides more detail on the implementation and evolvement of the AHRGP in Australia.

In phase 2 the perceptions and experiences of trainees, clinical supervisors, line managers, advanced clinical leads (ACLs) and project managers are further explored as the trainees reach the midpoint of the pathway. The effectiveness of the AHRGP as a suitable strategy for improving workforce and clinical outcomes will continue to be measured in this phase as well as in phase 3 in 2021. The outcomes of this research will also inform SA Health regional LHNs about the needs of AHPs, their clinical supervisors, line managers and consumers and will assist in planning recruitment, retention and career development strategies for the future.

Funding for this research has been provided through the Rural Health Workforce Strategy, and ethics approval was received from the Southern Adelaide Local Health Network Human Resource Ethics Committee (HREC/19/SAC/170).

Research Aims

The overarching aim of the research is to investigate the outcomes of the AHRGP in SA Health regional LHNs.

The specific aims include:

1. To explore workforce challenges and opportunities for AHPs in rural and remote SA
2. To explore the experience of the AHPs participating in the AHRGP and the impact on their skills, abilities and knowledge for practice
3. To understand the impact and perceptions of the AHRGP on supervisors, clinical leads and line managers working with rural generalist trainees
4. To explore how the AHRGP has impacted consumers' perceptions, access and quality of allied health service delivery and development
5. To identify where the rural generalist program works, which professions, locations and individual characteristics are particularly suited to the AHRGP
6. To explore the costs and benefits of the AHRGP.

Methods

The SA AHRGP is being evaluated in four phases, details of which can be found in the phase one report completed in December 2019. The second 'midway' phase is the focus of this report. Mixed methods are being utilised to form a robust research approach. Kirkpatrick's four levels of evaluation have been used to guide the structure and approach to the evaluation [4].

During phase 2, trainees participated in a survey to measure a range of quantitative factors relating to their progress at the midway point of the pathway, and were also interviewed to qualitatively explore their experience in more depth. Trainees' clinical supervisors, line managers and ACLs were also invited to be interviewed to explore their experience in supporting trainees and to discuss the interim outcomes and impacts they had experienced during the pathway implementation.

The project management team were also interviewed to discuss the interim outcomes; and data has been collected from the Rural Support Service (RSS) and pooled with participant data to begin a cost benefit analysis.

In phase 1 trainees completed a Temperament and Characteristics Inventory (TCI) [5] to allow the research team to build a comprehensive understanding of the trainees personal attributes in order to explore factors impacting on success of the pathway. The interim findings from this inventory are outlined in this report and will be further explored in phase 3.

See Appendix 1 for more details of methods used

Results and Discussion

Trainee information

In July 2019 13 AHPs working in rural and remote SA commenced the AHRGP as trainees. Within the first 12 months four of the original level 1 trainees withdrew from the pathway, and one trainee moved from level 1 to level 2. Two replacement level 1 trainees were recruited and commenced the program in early 2020, but have also since left the pathway. At the time of this report, there are 9 trainees participating. Table 1 outlines the number of trainees in 2019 and 2020.

Table 1. Trainee numbers

	Number of trainees commenced in 2019	Number of trainees commenced in 2020	Number of trainees who have left the program	Number of trainees continuing in 2020
Level 1 trainees	9	2	6	4*
Level 2 trainees	4	1*	0	5
Total			6	9

*one trainee moved from level 1 to level 2 program in 2020

Employment type

All 9 trainees participating at the time of this report are employed on a permanent basis. This is an 38% increase in permanent positions from phase 1. Trainees in phase 1 discussed ongoing employment as being an important factor in their intention to stay. It is positive to see all of the trainees now in permanent roles.

Allied Health Profession and Local Health Network distribution

Trainees were distributed across five allied health professions and all six regional Local Health Networks (LHNs). Table 2 and 3 outline the distribution of trainees by profession and LHN comparing the number who commenced and those continuing beyond July 2020. Each of the five allied health professions involved in the pathway have had one or more trainees withdraw. Across LHNs, Yorke and Northern LHN have had four trainees withdraw, Riverland Mallee Coorong LHN and Barossa Hills Fleurieu LHN have had one withdrawal each, and one of the Flinders and Upper North LHN trainees moved to Eyre and Far North LHN, but was able to continue the pathway in their new role.

Table 2. Trainee distribution by profession

	Commenced in 2019/2020	Continuing beyond July 2020
Occupational Therapists	4	3
Physiotherapists	3	2
Podiatrists	4	3
Speech Pathologists	3	1
Social Workers	1	0

Table 3. Trainee distribution by LHN

	Commenced in 2019/2020	Continuing beyond July 2020
Eyre and Far North LHN	1	2
Flinders and Upper North LHN	4	3
Limestone Coast LHN	1	1
Riverland Mallee Coorong LHN	4	3
Yorke and Northern LHN	4	0
Barossa Hills Fleurieu LHN	1	0

Aim 1: To explore workforce challenges and opportunities for AHPs in rural and remote SA.

In phase 1 of this research, a range of challenges and opportunities for early career AHPs in rural and remote SA were discussed. Trainees, clinical supervisors, line managers and ACLs shared their experiences and perceptions of personal, professional and organisational retention factors; see here for more details.

Withdrawn trainees

At the time of this report, 6 level 1 trainees have withdrawn from the AHRGP. These trainees reported a range of factors contributing to their decision to leave and for many it was a challenging decision to make. Three withdrew from the pathway but continued working in a rural area while the other three moved to a metropolitan area. Table 4 outlines the motives for withdrawing and the number of trainees that reported these.

Table 4. Motives for withdrawing from AHRGP

	Number of trainees reporting this as a factor
Challenges with clinical support	5
Wanting to move closer to family or partner	4
Job opportunities in metropolitan area	3
Challenges with organisational support	3
Workload pressures	3
Changes in personal circumstances	2

Demographics of trainees

Demographic data was collected in phase 1 to enable the monitoring of factors over time that may contribute to positive or negative outcomes for trainees and the pathway overall. The following table outlines key demographics of trainees who have withdrawn from the pathway:

Table 5. Demographics of trainees discontinuing with the pathway

	Trainees commenced 2019/2020	Number of trainees who have left the pathway
All trainees	15	6 (40%)
Level 1	10	6 (60%)
Level 2	5	0 (0%)
Leave rural area regularly on weekends or commute each day	5	3 (60%)
Mostly stay rural on weekends	10	3 (30%)
Metropolitan raised	7	3 (43%)
Rural raised	8	3 (38%)

Evidence into retention in rural areas has found that the turnover of early career AHPs in rural and remote areas is high [6] and all of the level 1 trainees had been working for less than 2 years on commencement of the program. This may account for the higher turnover rate in the level 1 group.

There are a higher proportion of trainees who spent their weekends out of their rural community who have withdrawn compared to those who tend to stay rural on their weekends. In phase one, the line managers, clinical supervisors and ACLs discussed retention factors and many commented that those AHPs who are more integrated in a rural area are more likely to stay than those who go back to Adelaide on Friday afternoons. It is interesting to note these results are consistent with this observation.

The same number of metropolitan and rurally raised trainees have left the pathway, although proportionally, slightly more rural raised trainees are remaining. Recent published evidence has indicated retention rates are often better for AHPs with a rural background [2] so it will be interesting to track this outcome in phase 3 to ascertain whether rural background is identified as a factor related to retention in this research.

Trainees Intention to stay in a rural area

Of the nine trainees continuing in the pathway beyond August 2020, most are planning to remain working in a rural or remote area for at least 3 years (7 of the 9). A range of factors were reported as impacting on their intention to stay. For some trainees, the AHRGP was having a positive impact on their retention, while others described it had minimal impact, reporting they would stay or leave regardless of their involvement in the pathway. Factors raised by trainees as impacting on their intention to stay are outlined below;

- Developing a better understanding of **the rural generalist role and scope of practice**:
  "it's showing me how broad my role is, and I think if it was in a metro setting it would be a lot more refined, so giving me lots of really good opportunities to develop my skills and become a bit more competent as well." (Participant 10)

  "I think I can see how it would be beneficial to me wanting to stay longer because obviously if I am going to be here longer any additional skills in a generalist role are going to be helpful." (Participant 13).

- Recognising **rural generalism as a specialty area** and not needing to work in a metropolitan area to be a specialist clinician:

  "Just having the backing of going, yeah, like it is a specialty, that its recognised, that it isn't just a stop-gap to doing something else, it is actually a specialty.. that recognition both from the organisation and from a profession sort of perspective as well is really important" (Participant 12).

- **Career progression opportunities,** having a career path, the opportunity for growth and professional development:
  "the reason I am working at …. Is for the opportunities out there…. I'm hoping that I can progress a little bit more quickly, so if those opportunities arise, then I'll be quite happy working out there." (Participant 3)

  "it certainly makes me more willing to stay employed with country health and Local Health Networks in knowing that you've got support for career development" (Participant 12)

- **Job satisfaction and desired clinical work,** happy trainees were more willing to stay longer, unhappy trainees planned to leave:

  "My intention to stay.. well, I really enjoy my clinical load here so that definitely plays a big part in my desire to stay in this particular position." (Participant 13)

- **Job opportunities,** some trainees were keen to move for a job in a metropolitan area while others were staying because of the job opportunities available in rural areas.
- **Workplace culture;** high workloads, consistent staff vacancies and communication with teams:

  "there's no real room for me to progress when I'm doing work above and beyond my level already and if that opportunity exists somewhere else, then I'd be moving for that, I think." (Participant 11)

  "I want to be a lifelong learner, and I feel like I can't do that if I don't have anyone here to give me a hand. I haven't pursued anything, but I have been actively thinking about it for four months, fairly seriously considering leaving at the end of the year." (Participant 1).

- **Clinical support;** trainees who had withdrawn reported clinical support as a deciding factor in them leaving, whilst trainees who were staying reported this was a significant factor in them choosing to stay or leave in the future:

  "I probably would stay if there was consistent support" (Participant 1).

"things that would make me leave would be, yeah, if I didn't feel like I was getting enough clinical support" (Participant 12).

"I didn't feel like I had enough support or enough supervision to stay in my role" (Participant 7).

- **A desire to complete the AHRGP and the service development projects:**

  "Obviously, change has to happen as it needs to, but there's still so many little jobs I want to get done and project work I want to do, but I haven't been able to use the pathway to do any of that, I don't think." (Participant 2).

  "Now that I've started this project, I'm more inclined to because I'm actually working towards something, I think." (Participant 11).

- **Not having a partner or other commitments**:

  "And I think because I don't have a partner or anything and I don't have a house, so I'm a bit like, oh I could really do whatever I want…Everyone is trying to sell off their sons…it would have to be a pretty impressive job or a pretty impressive person to make me leave so..I don't know, everyone was like, oh you'll meet a farmer and never come home… I don't know where he is yet." (Participant 2).

  "I would go wherever the work is." (Participant 11).

- **The lifestyle and the location of family and friends**, changes in relationships and family circumstances:

  "My family and partner are here, so that's a factor in itself so I won't be going anywhere." (Participant 13).

  "If we go outside of work… lifestyle, I just really like (this location) … I grew up in the country, well supported with friends and family. It's a bit of a no brainer." (Participant 4).

  "My boyfriend's in Adelaide. Most of my friends are in Adelaide" (Participant 7).

  ". I've also had some family things happen… and I just feel like I need to be closer to them. Its hard to travel back and in between and now that I don't have anything in my personal life tying me here, I feel like it's the time…" (Participant 42).

Aim 2 - To explore the experience of the AHPs participating in the AHRGP and the impact on their skills, abilities and knowledge for practice

Job Satisfaction

Trainees were asked to rate their overall job satisfaction from 0 (not at all satisfied) to 100 (extremely satisfied). Pre-program and mid program job satisfaction ratings have been compared below in Table 8. On average, job satisfaction has decreased for both level 1 (down 13%) and level 2 trainees (down 9%).

At the time of the phase 2 survey, trainees were working with restrictions and challenges relating to the COVID19 crisis which may have impacted on overall job satisfaction and wellbeing. It is interesting to note that level 1 trainees were on average less satisfied than the level 2s, this data includes level 1 trainees who were not continuing in the program beyond July 2020. When withdrawn trainees' satisfaction data is removed, the overall job satisfaction for continuing level 1 trainees is very similar to level 2, indicating the trainees who chose to leave the pathway earlier had a lower job satisfaction than those who are planning to continue. The overall reduced job satisfaction may also be attributed to the higher workload trainees were facing in 2020, with study and service development commitments associated with the AHRGP, which were not a factor when they were surveyed in phase 1.

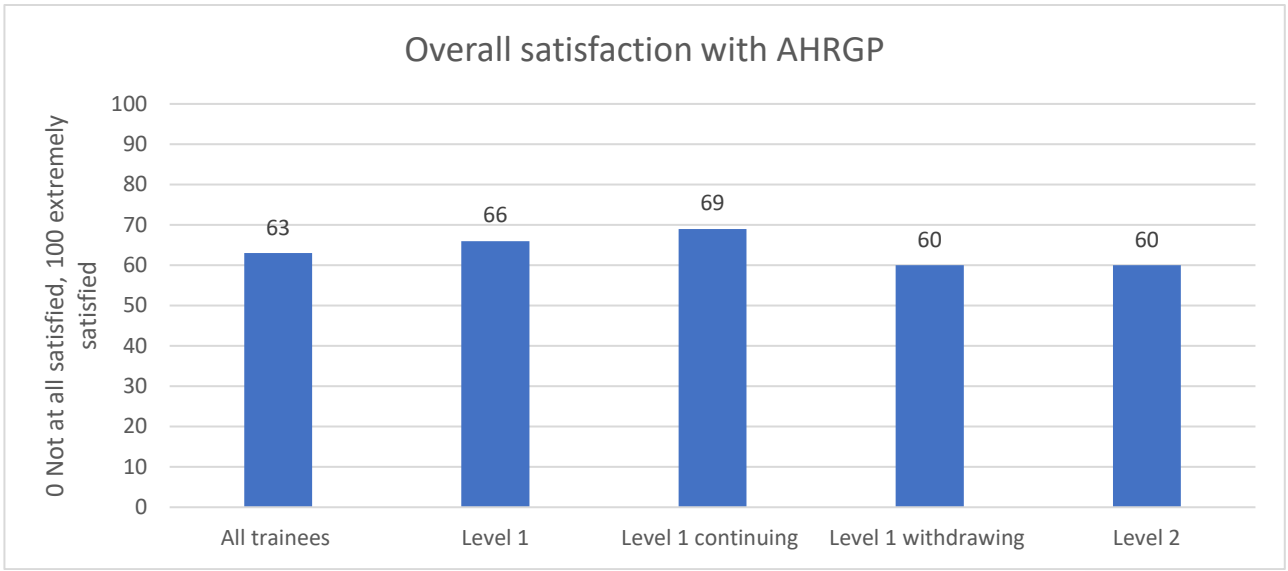
Table 6. Trainee Job Satisfaction

	Average Job satisfaction		
	Level 1 (all trainees)	Level 1 (excluding withdrawing trainees)	Level 2
Early pathway	78/100	n/a	79/100
Mid pathway	62.5/100	69/100	70/100

Satisfaction with AHRGP

Trainees were asked to rate their overall satisfaction with the AHRGP (see chart 1). It is interesting to note that the level 1 trainees who are continuing in the pathway were the most satisfied while level 1's who withdrew in 2020 and level 2 trainees were less satisfied. These ratings will be reviewed again at the conclusion of the AHRGP. The impact of COVID-19 and additional pressure on trainees while they juggled their competing work demands and study may have contributed to their overall satisfaction with the AHRGP.

Chart 1: Trainees satisfaction the AHRGP



Benefits of doing the pathway:

Trainees discussed a range of benefits from being involved in the AHRGP. Being able to **put learnings into practice** to **improve service delivery and quality outcomes for clients** was reported to be a major benefit of the pathway. A range of other benefits were discussed:

- Quarantined **time for learning and upskilling**
- **Sharing knowledge** with other team members
- **Collaboration and sharing** opportunities with other trainees
- **Greater understanding of the organisational** structure, services and regions
- Better understanding of their profession's and the **rural scope of practice**
- **Confidence boost** getting the scholarship and knowing the organisation was supportive of their learning
- **Networking opportunities** with a broader range of people in the organisation who they wouldn't have otherwise known
- Having more **skills and abilities to apply for a promotional position**
- Opportunities to **work in different clinical areas** to develop and consolidate generalist skills, learning **broad clinical skills** and **evidence for practice**
- **Building knowledge, skills and competence.** Reinforcing learning and extending skills in a range of areas relating to rural practice, clinical areas, project management and culturally appropriate practice

  "I found the course content quite good, quite solid, certainly extending beyond standard scope of practice and lots of, quite just generally interesting information" (Participant 12).

- The **opportunity to get feedback** and interact with teaching staff at JCU
- Assignments having a focus on trainees' current clinical presentations to ensure **the learning is relevant and has direct benefit for service provision**
- Being able **to choose topics that are practical and relevant** to trainees' work roles and client types, this was especially relevant for physiotherapy and occupational therapy trainees
- Learning more about the **generalist role and recognising this as a specialty area**
- **Developing written communication** skills for different audiences and purposes
- Learning about different **learning styles**, how to structure education and training activities and how to evaluate them effectively
- **Strategic thinking**, learning about how the organisation is structured, where funding comes from, what outcomes the service is working towards and how their role fits in the big picture
- **Telehealth**, how to use the technology and possibilities for their service
- Learning the process of **project management and quality improvement** and the key factors to consider for success.

  "I guess the big thing would be the quality improvement stuff. That's probably changed my practice just in terms of I think sometimes as a new graduate you're keen to contribute to things, and you kind of maybe see, like, a gap at your site that you can contribute to. And I definitely probably now understand the process that goes behind that and who to kind of talk to." (Participant 8).

  "the thing that sticks with me is always that idea of, which I hadn't really thought about before, but any project can succeed if you have unlimited time and unlimited financial resources. That's not a measure of a good project. So the idea of making a project measurable to the time, to the resources and working out what you can and you can't deliver. So that I actually found quite helpful because it went outside of my discipline, but it was actually really relevant to my role." (Participant 12).

Challenging aspects of the AHGRP

Trainees reported some aspects of the AHRGP were challenging. They found the workload busy, and discussed a range of other challenges:

- **Fitting study into work hours**, many hours were spent at home completing assignments that were unable to be done at work, this was reported to impact on wellbeing and work life balance.
- **Limited time to implement service development projects**. Learning about project management or quality improvement processes and the opportunity to develop a project proposal during the modules was a significant benefit. After completing the proposal, there were a range of challenges in being able to implement their proposals before starting the next training block.
- **Access to the right clients and clinical presentations.** It could be difficult to find clients that were relevant to the clinical modules due to their highly variable caseloads, particularly in the level 1 program.
- **Workplace understanding and expectations of outcomes of the pathway**. Some participants reported there was pressure to generate tangible outcomes for workplaces despite the modules at times, not directly relating to clinical work.
- **Satisfaction with the training**. The AHRGP was not meeting the expectations of some trainees who stated it would have been helpful to have more information about the training before commencing.
- **Applicability of course content.** At times it was challenging to align the course content with clinical roles and caseload; some of the topics and assignments were theoretical in nature rather than being directly applicable to clinical activities.
- Some modules appeared to **not specifically relate to rural practice or allied health** including topics that appeared to be written for nursing or for metropolitan service types.
- Some **commonly treated conditions** in rural SA did not appear to be well covered in the available modules in the level 1 program.
- **Limited topics and content relevant to podiatry and speech pathology**. Topic choices, content and resources were limited for podiatry and speech pathology in the level 1 program, while the options for occupational therapy and physiotherapy were extensive. It was frustrating when **modules were not available to choose for particular professions**.
- Some assignment **expectations and parameters were too broad or vague.**
- **Limited interaction amongst other trainees and teaching staff.** Some topics were structured with pre-recorded presentations, links to other websites or readings and independent study tasks with limited opportunity for discussion.
- **Some topics in level 2 had extensive weekly readings** which left minimal time for assignment completion.
- **Module outlines are very brief** and it is difficult to choose without detailed information about the content and assessment pieces.
- Across some modules in the level 1 program, the **assessment pieces and content were similar**. The repetition was frustrating, and it would be more beneficial to learn something new rather than repeating learning from a previous module.
- Some modules were perceived to be **not advanced enough for a post graduate level** and there needed to be options for extending learning further:

  "I'm not just studying this as part of my qualifications, I'm already qualified, I'm already working in the field, I want tasks and I want it set up in a way that facilitates my actual role, not just getting information for the sake of any information, because I can already do the role, I can already treat these patients, I can already do that work, but I want to do it better." (Participant 12).

Protected study time (actual and satisfaction)

Trainees should have access to half to one day a week protected study time as an expectation of participating in the AHRGP. On average the trainees reported they were studying for 5.75 hours per week in work hours, falling within this timeframe. Trainees were also at times spending up to 10 hours a week outside of work on study related activities. Some trainees were undertaking one module at a time, but most were completing two modules in each study period.

On average, the level 2 trainees were spending less time studying at work than the level 1s, this may have been associated with the level 1s being more directly supported to quarantine their time rather than the level 2s who are potentially more responsible for their own workload allocation. Some trainees also reported challenges in fitting in their study time with competing demands and priorities while others had felt more able to quarantine the time.

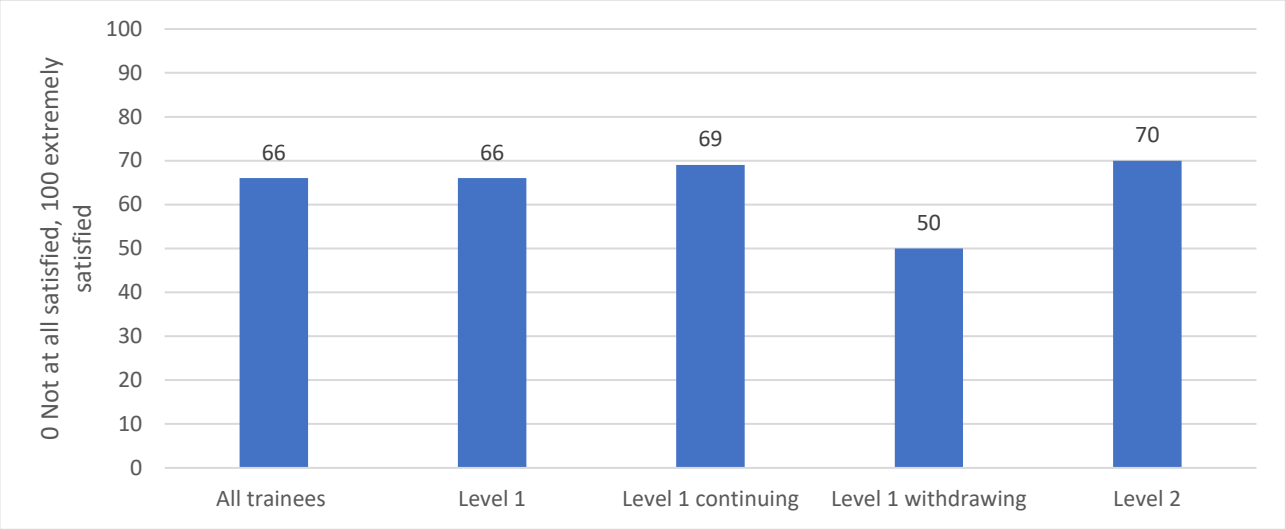
Several trainees reported they found they could manage the weekly module activities within work hours but needed to complete assignments in their own time. JCU suggests the modules in the level 1 program should take 3.5-4 hours per week, the trainees agreed, however noted the completion of assignments did not fit into this time.

The level 2 modules are variable in length from 6 -16 weeks. The level 2 trainees reported the workload in the intensive 6-week modules was more challenging to manage within work hours, however they enjoyed the shorter bursts of content compared to the longer 16 week modules. When trainees were doing intensive modules, they generally did not increase their study time at work but did the extra hours at home. A range of trainees reported being reluctant to increase their study time in work hours as their clinical roles were busy and they did not want to further impact their team.

Trainees were very appreciative of the allocated study time at work and recognised that they needed to also study in their own time. They found it challenging to find the motivation to undertake study activities if they were not relevant to their work roles or were not extending their knowledge.

Trainees discussed the impact that COVID-19 had on their study time. Some found it challenging to prioritise study when work was very busy preparing for the pandemic. Others found time to study while the service was restricted to essential or high priority clients only. Overall trainees were satisfied with the structure and amount of time for study and supervision, however as outlined in chart 2, the withdrawing trainees were less satisfied overall.

Chart 2: Trainee satisfaction with the structure and time for study and supervision



Confidence and Competence

The trainees who reached midway point of the pathway were asked to rate their *confidence* in 3 different areas of rural generalist practice**,** and clinical supervisors and line managers of trainees who reached the midpoint of the pathway were also asked to rate their trainee's *competence* in the same 3 areas (see Table 8 and 9). For ease of comparison, trainees and their clinical supervisors and line managers were then asked to rate the trainees**'** overall *confidence* as a rural generalist. These are reported and compared from pre-pathway to mid-pathway and will continue to be tracked as the pathway continues.

Trainee *confidence* ratings in level 1 and 2 improved slightly in the areas of delivering a large variety of services and working across health settings; remained the same (level 1) or reduced (level 2) for working across the age spectrum; and was 2% lower in overall *confidence* as a rural generalist clinician. A range of factors may account for these differences; through undertaking the pathway trainees may have learnt more about themselves and the rural generalist role, which may have influenced a feeling of *confidence* in their rural generalist skills. Additionally, some trainees have widened their scope of practice since starting the AHRGP to include a more diverse range of client ages and service types, potentially impacting on their level of *confidence* as they establish themselves in new areas.

Clinical supervisors and line managers of trainees in both training groups felt the *competence* of the trainees was improving across all three domains. They also perceived that the trainees' overall *confidence* as a rural generalist had improved since the beginning of the program (see Table 7 and 8 for full details).

It is interesting to note that the line managers rated trainees' *confidence* and *competence* higher in both phase 1 and phase 2. Anecdotally the line managers were impressed with the growth they had noticed in the trainees and felt they were very confident and competent in their roles. The clinical supervisors generally noticed some changes in the trainees' *competence* and *confidence* and recognised further areas for growth in the second half of the pathway. It is also important to note that the supervisors and line managers of trainees who withdrew before the midpoint of the pathway are not included in this analysis, which may contribute to the increased ratings in comparison to pre-pathway ratings. These *confidence* and *competence* ratings will continue to be tracked for changes in phase 3.

Table 7. Level 1 trainee, clinical supervisor and line manager perceived confidence and competence

0 – not at all confident/competent 90 – extremely confident/competent	Level 1 Trainees Average **confidence** rating		Clinical supervisors Average **competence** rating		Line managers average **competence** rating	
	Pre pathway	Mid pathway	Pre pathway	Mid pathway	Pre pathway	Mid pathway
Working with clients across the age spectrum (e.g. infants, children and adolescents, adults and older people)	66	66	59	64	70	83
Delivering a large variety of health services (e.g. health promotion, early intervention, acute hospital, sub-acute, ambulatory, chronic disease management, aged care, palliative care)	65	68	60	69	76	90
Working across a large variety of health settings (e.g. hospitals, health centres and clinics, patient homes, community venues)	65	70	60	74	73	87
Confidence as a rural generalist (an overall rating of the trainee's confidence)	66	64	52	74	83	87

*Table 8. **Level 2 trainee**, clinical supervisor and line manager perceived confidence and competence*

0 – not at all confident/competent 90 – extremely confident/competent	Level 2 Trainees Average **confidence** rating		Clinical supervisors Average **competence** rating		Line managers average **competence** rating	
	Pre pathway	Mid pathway	Pre pathway	Mid pathway	Pre pathway	Mid pathway
Working with clients across the age spectrum (e.g. infants, children and adolescents, adults and older people)	78	72	75	79	70	83
Delivering a large variety of health services (e.g. health promotion, early intervention, acute hospital, sub-acute, ambulatory, chronic disease management, aged care, palliative care)	67	72	70	79	70	85
Working across a large variety of health settings (e.g. hospitals, health centres and clinics, patient homes, community venues)	67	82	73	84	80	85
Confidence as a rural generalist (an overall rating of the trainee's confidence)	76	74	70	79	70	85

Changes in practice

Trainees discussed the impact the AHRGP was having on their clinical practice. A few trainees felt the pathway had not impacted on their skills or the way they practiced clinically. Some reported the content was too theoretical to have a direct impact on their practice, while other trainees felt that although the content had not been directly related to what they were doing clinically, it was helping them to broaden their thinking and perspectives.

> *"Yeah, I think it's allowed me to step back and look at the big picture a little bit more. So it's very easy to put your physio blinkers on."* (Participant 3)

Several trainees reported the pathway helped them feel more **confident and competent** to justify their decisions, being able to use **evidence more effectively** and to be able to **probe more deeply into clinical issues and problems.**

> *"Being able to justify different things and have some of that evidence base behind you now to be able to justify why you might be either recommending something or why you might be putting a proposal through to management, so some of that." (Participant 5)*

> *"Yeah, definitely. Yeah. And being able to do that research into areas that come up semi-regularly... actually being able to look a bit deeper and think about, well what else can we do while they're here, to then make sure they're not re-admitting and just even little things that might be able to change their practice, and recommendations as well." (Participant 10)*

A range of trainees discussed **clinically relevant learning** from the AHRGP that they had been able to use in their practice. They commented on tangible changes they have made to their practice and the way they approach clinical interactions.

> *"I think I've just got more of an awareness that was like all around rural health, so that was a really good one to start with. That just gave me more of an awareness to different strategies to implement within rural health, not that we weren't doing them, but just to bring them back to the forefront of actually that could be an option of doing that." (Participant 5)*

"And I've been implementing some yarning with a lady that I've been working with…. just having a yarn with her to actually be able to build her trust. Because when I first went and saw her, she told me to go away, and we're about four sessions in now and she's … disclosing more information to me, she's asking questions about who I am, and I can see that she has a bit more trust in my clinical skills." (Participant 13)

Consistently, trainees discussed their consumers and local community needs as drivers for undertaking the AHRGP, for their choice in modules and for the focus of their assignments which was positive to see. They could see benefits for their consumers:

"Having a bit more knowledge, feeling confident in their health workers, knowing that they would have expertise about working in a rural area and not having to worry that if we don't have specialists around, that they don't have to travel x amount of kilometres to receive a good quality health service." (Participant 7).

Service development projects

The AHRGP has a service development or quality improvement component built into some of the modules. The trainees have been involved in a range of projects that have been relevant to their work role. They have found doing work related projects and assignments useful, helping them consolidate their learning and produce something that is relevant and beneficial for their teams.

In phase 3 of this evaluation final outcomes and progression of projects will be revisited. Some of the projects initiated in the first half of the pathway are outlined in table 9:

Table 9: Examples of trainee projects:

Telehealth	• A **high risk foot remote service** telehealth proposal. • A **telehealth hand therapy** proposal linking local and metropolitan occupational therapists to consumers.
Delegation to support workers (e.g. AHAs)	• **A remote AHA podiatry training** program and protocol. • An **AHA led arthroplasty rehabilitation** group program. • An occupational therapy **AHA proposal** to improve team efficiencies
Extended scope of practice including skill sharing (trans-professional practice)	• The development of speech pathology **training packages** on modified diets for nurses across multiple sites. • The development of profession specific **education and training sessions**.
Partnerships supporting inter-agency and rural-urban service integration	• Local **physiotherapy hydrotherapy service** development linking local and metropolitan pain services. • Formalising a partnership with a specialist provider to facilitate the prescription of complex assistive technologies to local clients via telehealth
Other resource development	• An occupational therapy **position statement** informing the use of yarning with Aboriginal people. • A proposal for an arthritis **rehabilitation exercise program**. • A speech pathology **assessment inventory** with guidelines for their use and application. • Various consumer brochures and treatment plans relevant to specific health conditions • Development of profession and team specific orientation manuals

Enablers and barriers for project success

Trainees reported that the people in their organisations were strong enablers for project success. They also found the project modules with JCU to be informative, and they felt confident they would be able to undertake projects and quality improvement activities in the future;

Table 10. Enablers

The quality improvement and project planning processes taught by JCU ensured the projects were well considered and high quality.	*"I guess the big thing would be the quality improvement stuff. That's probably changed my practice just in terms of I think sometimes as a new graduate you're keen to contribute to things, and you kind of maybe see, like, a gap at your site that you can contribute to. And I definitely probably now understand the process that goes behind that and who to kind of talk to."* (Participant 8).
Encouragement to undertake small projects or projects that were current priorities for the service.	
Colleagues' willingness to help with projects, spending time sharing their knowledge and resources, answering questions and linking to the right people.	*"I think the enablers has been sort of my colleagues, their willingness to spend time answering my questions and linking me in with the right people."* (Participant 3).
Teleconferencing with the project team and ACLs to discuss projects, learning and relevance of assignments to work.	*"I think as well, just having those sort of scheduled catch-ups with everyone within country health that was doing the pathway and just being able to hear where other people were up to.."* (Participant 7).
Support trainees from clinical supervisors or senior clinicians to develop robust and relevant projects	*"I think having a very supportive senior, so I would do a bit of work on it and then I'd send it to her, and then she'd send it back with some annotations. We were able to sit down, talk about it, we looked at the resources she'd used previously to try and develop the (project) for staff … in the hospital."* (Participant 10).
Supportive teams who were keen for the change it made the process easier to implement.	

Table 11. Barriers

Some supervisors and colleagues had limited knowledge and understanding of project management processes.	*"And I guess, like I have a really great relationship with both of my supervisors, but obviously their understanding of what a project is and what the core of the project needs to be, and even just their general experience of managing a project, it's quite variable."* (Participant 12).
Funding; some projects required resourcing and submitted proposals were waiting for approval from management.	*"It got sent up for approval well before COVID, but then yeah, it's probably at the start of the year, and then I guess COVID came along, so then I would say that it wasn't a priority for them."* (Participant 4).
COVID-19 prevented some projects from progressing as service priorities changed and staff were directed to work in different areas.	
Finding the right project to undertake while learning the processes and concepts	*"I think some of the barriers have been understanding the scope of the project and knowing what's an appropriate choice of project, in terms of size, in terms of outcomes, in terms of ability to translate into practice."* (Participant 12).
Some projects were large and required multiple stakeholder involvement over large geographical areas	*"The project is going to probably be quite big because there are so many stakeholders involved, so it really needs to be the right time for everyone, and I don't*

	think that time has kind of been there yet." (Participant 13).
Time to complete the project beyond the initial proposal as the modules required proposals but not the implementation of projects	*"I feel like I've started a lot of projects, but then haven't been able to finish them properly… Well, the way that it's written in the course, is, you know, we would write, 'All right, these are the things that we'll do with this timeline' which could be six months down the track, and then once the course finishes, being an AHP1, there's an 80 per cent client face-to-face case load in that, so there's - I'm not really sure who's going to follow that work up."* (Participant 3).
Timing, finding the right time to implement the project:	*"So, although you get that time allocated to the rural generalist project, all of that time is kind of spent, for me, actually doing the modules, and I don't really have a lot of spare time to actually be implementing the projects, if that makes sense."* (Participant 13).
Finding time to evaluate projects within the AHRGP.	*"I think we've implemented some really good changes, but yeah, we haven't been able to do our proper feedback collection and make recommendations and those sorts of things, just to round everything off."* (Participant 4).

At the midpoint of the AHRGP, the extent to which projects had been disseminated was reported to be varied: some trainees had shared their learnings broadly with their teams or professions while others had considered how they might be able to do this in the future. In phase 3, the outcomes of projects will be summarised.

Accessing research and translating to practice

The trainees were asked to rate their confidence accessing current research and translating research into practice in order to monitor the impact of the training pathway on their ability to participate in evidence-based practice activities. Interestingly the level 1 trainees felt more confident accessing and translating evidence than the level 2s. The level 1s are less experienced clinicians but are more recent graduates who would have had more recent exposure to evidence-based teaching principles at university which may explain the difference in confidence ratings. Table 12 below outlines the average ratings.

Table 12. Trainee confidence with research

	Level 1 trainees	Level 2 trainees
Confidence in accessing current research (average)	77/100	68/100
Confidence in translating research into practice (average)	64/100	53/100

Aim 3 - To understand the impact and perceptions of the AHRGP on supervisors, clinical leads and managers working with rural generalist trainees

In phase 2 the clinical supervisors, ACLs, line managers and project managers provided rich and wide-ranging perspectives on their experience of the AHRGP in the first 12 months of implementation. Overall, this group felt the regional LHNs were committed to the success of the AHRGP and for trainees to feel supported to undertake the training and associated activities. The time trainees were taking to undertake study related activities is significant and impacts on the activity outcomes of the organisation, however there was a recognition, especially amongst the line managers that this was a short-term pain for a long-term gain. It was recognised that giving trainees this scholarship, time and support to undertake the pathway was a way of demonstrating that the organisation values their commitment to rural services.

At the midpoint of the pathway, trainees were beginning to demonstrate changes in their practice that were having significant impacts on themselves, their organisation and their consumers; these impacts are outlined in tables 13, 14 and 15. The benefits were reported to be wide ranging depending on the individual trainee's commitment to the pathway and their personal traits: some trainees appeared to be passionately and openly sharing their learning with their teams and recognising the AHRGP as an opportunity for the whole service to benefit, while others appeared to be predominantly undertaking the pathway for their own personal benefits and gains. When appointing trainees it would be challenging to screen for this difference in focus, although it may be possible in the future to more intentionally direct trainees to share their learnings as a core expectation.

Although there were a range of similarities and common themes that emerged from the interviews, a few differences were noted. Clinical supervisors and ACLs were focused on the skills and clinical outcomes that were emerging from the AHRGP. They spoke about the trainees' confidence, competence, reflective practice and generalist skill development. The line managers were more focused on the impacts on their teams and service provision, they spoke about how the trainees were assisting to improve the quality of service provision and the sharing of skills across the team. The project managers were able to take a broader perspective as they were working with all trainees and LHNs: they were noticing trends in improved communication between stakeholders, the increasing profile of allied health and the AHRGP and an awareness of the support requirements of early career AHPs.

Table 13. Trainee outcomes

Confidence	
In their approach to work	*"I think probably the program has helped to do that in terms of building their confidence, giving them more scope to stretch themselves and grow their skills."* (Participant 28). *"The early meetings, it was very much trying to pull out information on what they were working on and what they were doing. Whereas, the more recent meetings over this year, it's definitely improved in terms of what people are working on and talking, some of the initiative they've shown in scoping out projects."* (Participant 35).
Making clinical decisions	
Taking on new clinical areas or rosters	
Supporting other staff	
Speaking up in meetings	
Sharing their experiences with others	
Competence	
More independent managing complex situations	*"Both have increased their skills and competences, both have grown in confidence, and so I see them being able to manage more complexities and issues much better. Their tool bag is bigger, so in*
More flexible and adaptable to different clinical situations	

Prioritising caseloads and work effectively	*a sense is when they're managing issues they are doing really well."* (Participant 19).
More autonomous and relying less on other for support	*"I think she's shown a high level of understanding in some really tricky situations, and I think she just.. I don't think she flinches much around that. She is happy to lay out her understanding and her reasoning and what she would recommend and she's happy to take on feedback. But all in all, she does a really good job of making those decisions."* (Participant 23).
Fast tracking skill development for new clinicians in a broad range of areas	
Generalist skill development	
Better understanding and appreciation of the generalist role as a specialty area	*"She has taken on some more outreach work; she feels more confident to actually broaden her work, so she's taking on the learning she's got and been able then to implement that into a more generalist role so when she, we've allocated her a region she's got to pick up everything in that region."* (Participant 19).
Broad skill development relevant across ages and service types	
Managing outreach rosters and providing services to a whole community	
Reflective practice	
Effectively reviewing practice	*"She certainly had some really good reflections. She'll often compare her practice now to before she'd done her studies. So she might say to me in supervision, oh, beforehand these were my thoughts around... Or this is what I've done in the past with this … client. Now that I've done my studies I've learnt this and I was able to embed this into my practice."* (Participant 34)
Identifying areas for improvement in their skill development	
Relying less on prompting in reflective practice	
Reviewing learning and changes in practice	
Leadership	
Applying for higher level positions	*"It makes her a more flexible, adaptable worker to the context in which we work and certainly, her stepping up and taking on this caseload management and so on has been something that I've really observed."* (Participant 26).
Supervising and supporting others	
Taking on higher duties and leadership roles	
Applying for reclassification	

Table 14. Organisation impacts

Implementing new skills	
High performing staff implementing new skills and knowledge in work tasks	*"Massive, it was well worth it. I think what we've lost in productivity we've gained tenfold after that, without a doubt. What we've got now in our clinicians is paying dividends massively, so brilliant for it."* (Participant 19).
Using assignments to make changes to their clinical practice	*"Now, she's the face and prioritising who needs to be in the programme. So, that's what we have found that she is a bit proactive in that and she's been involved in other non-clinical decisions within the programme, deciding on how we can, how that could be improved, the way the team is functioning."* (Participant 21).
Sharing of skills and knowledge	
Sharing learning with team members	

Sharing learning with staff they are supervising	*"We've got very junior staff, so how she is able to come in and to being able to guide them, mentor them, and assist them from that generalist point of view is really crucial, because it's quite difficult when you're a new AHP, and (the participant) been able to embed them in really smoothly."* (Participant 19).
Improving communication channels within LHNs	
Quality improvement	
Identifying how services could be improved for consumers through quality improvement initiatives	*"she's expressed a lot about how she doesn't want to just do the course to get the certificate at the end of it. It's more than that. It's about how she can bring ideas into her region to really improve on clinical services that are provided to that community."* (Participant 24). *"(The trainee) has used the modules to really support all of the work that she needed to do in terms of the service redevelopment for (the LHN), and it's been really good from that, it's given a rigor to what she has needed to do that she wouldn't have necessarily done before."* (Participant 17).
Identifying areas for improvement and making recommendations to management	
Better links between and within teams as a result of quality improvement activities	
Retention	
Improved retention has flow on effects to the whole team and community	*"Yeah, I think we get better outcomes for our communities if we've got confident, competent staff that are here for the long run, and overall, that helps to build a stronger team, because your team morale and everything increases, if you've got happy and confident skilled staff to work with."* (Participant 28).
Support requirements	
Supports that early career AHPs require are becoming clearer	*"to some LHNs in particular, it might have been a known issue, but I think having a focus on the program has really highlighted the need for supervision and support for early career graduates."* (Participant 36). *"There are some lessons learnt in the importance of onsite supervision and support, in terms of the retention of trainees."* (Participant 37).
Onsite support for early career AHPs	

Table 15. Consumer impacts

Advocating for consumers	
Identifying barriers and needs for clients more effectively	*"It was through her leadership, and this was during COVID times as well, it was a lot of communication, it was a lot of teamwork and she led all of that to ensure that that person got seen within a few days, when really, if she hadn't pushed hard and hadn't advocated for that consumer, it might have been a different outcome."* (Participant 23).
Effective service provision	
Deeply considering consumer needs	*"I think it was exciting for her to think, oh, I've got this person who presents in this way and I've got an ability now to really think through what I'm going to do with them… It's got to be of benefit that you're getting someone who's kind of trying to be as progressive in their practice as possible by constant learning and reflection."* (Participant 27). *"she's expressed a lot about how she doesn't want to just do the course to get the certificate at the end of it. It's more than that. It's about how she can bring ideas into her region to really improve on clinical services that are provided to that community."* (Participant 24).
More evidence based in their approach	
Consumers receiving more appropriate interventions	
Better continuity of service with more consistent staff	
More holistic perspectives	

Safer practice	
Better understanding of skills and limitations	*"So, at the end of the day, the consumer is always going to benefit that, from any person who takes on new learning and looks at, inwardly, at their behaviour and how they need to work with the new learnings…. So, I think the benefit though, just through stealth of learning, is that the clinical skills and competence would increase over time for that individual."* (Participant 43).

Further changes anticipated

The clinical supervisors, line managers, ACLs and project managers were anticipating a range of further changes in the trainees during the second half of the pathway:

Table 16. Further changes anticipated

Further application of knowledge and skills to clinical work	*"More strategies to draw on and also, so you know sometimes you go I need to do this, I just don't even know where to start, her going this is where I start. It's not knowing all of the steps, at least be able to get started so that then when she gets to the point of okay I don't know what to do next, there's already a good chunk of things done to then take to, say, myself as her supervisor or one of her seniors or her team leader."* (Participant 32). *"I would really like to see what she's learnt through Rural Generalist brought back to our team, and even just brought back to allied health to looking in a way that we can involve other disciplines and implement things that she's learnt"* (Participant 16).
Development of leadership skills	
Better retention in rural and remote areas	
Confidence continuing to grow	
Consumers will be able to access high quality and more relevant services	
Taking on more quality improvement activities	
Broader more strategic thinking	
Consumers benefiting from service development projects	
Influencing system changes to find ways of providing more effective services into the future	
Sharing learning with teams, profession and LHN so others can learn from the AHRGP	
Supervising students on placement	

Challenges of AHRGP

A range of challenges were explored with the clinical supervisors, line managers, ACLs and project managers. Challenges discussed were wide ranging relating to the recruitment and retention, supporting trainees, the structure and content of the pathway and time. These are outlined in Table 17. Despite these wide-ranging challenges, all clinical supervisors, ACLs and line managers were happy to support more trainees in the future and were either likely or very likely to recommend that pathway to others. Some clinical supervisors and ACLs commented on the importance of ensuring the right people were recruited into the pathway in order to increase the chance of success. See aim 5 for more details on this.

COVID-19 amplified some of the challenges faced during the AHRGP in the beginning of 2020. The project management team provided additional support to trainees, line managers and clinical supervisors to ensure trainees could continue with the pathway wherever possible.

Table 17. Challenges reported by clinical supervisors, line managers, ACLs and project managers

Recruitment and retention challenges	
Recruitment	Significant or long-standing vacancies impacting on ability to support trainees in the future
	Challenges for teams with recruitment issues to meet key performance indicators and funding requirements while also supporting a trainee

	Challenge to protect study time while meeting organisational requirements for teams with significant vacancies
	Reluctance to support future trainee nomination in teams with ongoing vacancies
Retention	Trainees withdrawing from the AHRGP was an unexpected challenge
	Stakeholders were interested in gaining insight into the reasons for withdrawal
	Identifying ways of supporting early career AHPs in the pathway as the trainees that withdrew early were early in their career
"I guess we've definitely had some challenges along the way with withdrawn trainees.... interested in looking into that area more, in terms of some of the factors that are influencing trainees to withdraw from the program, which seems to be largely based around no longer having an intention to work in rural areas. So that's definitely been a challenge." (Participant 35)	
Supporting trainees	
Knowing how to support trainees	*"I think it's really important that the supervisor has a really good idea of what subjects the person has chosen, what kind of assignments they're going to be working on, because in my experience I feel like it's very reliant on how much the participant wants to tell you and wants to use up their supervision time to talk about their studies, which I find a bit challenging because I don't like feeling out of the know but I also don't want to put pressure on people to say 'Tell me more about your studies.'"* (Participant 34).
Having more information about modules in order to better support trainees	
Ascertaining the best communication channels between key groups to ensure they feel supported but not overburdened	
Challenges with supervision, knowing how to best support trainees	*"as a supervisor I've found in these settings we've had really great discussion and it's been really productive space, other times we haven't reflected a supervision where I think you've not got the most out of it or got the most out of me and what we can do."* (Participant 16). *"The problem was that we were having profoundly limited contact time."* (Participant 25).
Supervision sessions spent discussing clinical issues with limited time for AHRGP related discussions	*"at the time it's been on the back burner because there's so much else going on."* (Participant 32).
Inconsistent manager support, some line managers were meeting with trainees regularly to provide support and guidance while others were providing indirect support through the supervisor or senior clinicians	*"I do it informally and ad hoc, but I think probably more structured would be better… I'm certainly happy to put in a three monthly maybe check-in review with them, a couple of months, and organise a meeting for them to come and sit with me and see how they're going."* (Participant 28). *"I think for it to be successful I'd recommend other people do the same thing right at the start, commit to it, and say, "This is what we're prepared to give you in order for you to be successful,"… If you look at the results we've got… if we hadn't have committed to it, it would have been a waste of time."* (Participant 19)
Large cohort of trainees, challenge to support them all centrally	*"I'd probably also, I think, limit the number of trainees to about five or six at a time… whether that's every six or 12 months, but it was a big group to bring in to start with. And it was really hard to get to know each of them and their local situation, and make contact with all the right support..."* (Participant 35).

Challenges with AHRGP training	
Challenges with meeting varying needs of AHPs in pathway	*"I know (the trainee) really reflected that with me as well on oh there's this topic, I'm just hoping to get it done, haven't really learnt much from it 'cause it was stuff I already knew. And then there's other topics which I think they are learning…"* (Participant 32)
Relevance to practice, some content was challenging to apply to the local context	*"So some of her assignments have been based around QI projects. They haven't necessarily translated into practice… she didn't think that they would be applicable until sometime in the future..."* (Participant 34).
Limited outcomes for LHNs	
Limited module choices for some professions and interest areas	*"So I think, well there's not a huge choice of modules. Like for example I think there perhaps were another one or two that she could have chosen from..."* (Participant 20).
Challenges with the quality of the modules	*"Personally, I would have expected a little bit more maturity of the program than I guess we're getting a sense of, from some of the feedback that we're getting from the trainees…"* (Participant 36).
Challenges with time	
Heavy workloads and challenges quarantining study time	*"They still have to sort of make sure that they are undertaking their clinical roles and the roles that are required by their teams and the organisation and in some ways the pathway is put last in terms of priorities."* (Participant 20).
Interruptions and urgent work arising	*"I think at times they have, I think sometimes you know, the urgent clinical activity comes up and it overtakes the priorities I suppose. And being clinicians, they'll want to be responsive to those urgent client needs so."* (Participant 22).
Impact on client wait times and key performance indicators	*"We've got a business model in place, and you know, with Commonwealth activity… Just activity, we were losing on KPIs. So we did find that quite challenging."* (Participant 15).
Impact on other team members who need to manage increase in workload	*"So, it does impact a little bit, but I mean, everyone's got to do training, so that's sort of just something you have to factor in... At the end of the day, people are still meeting their KPIs and things like that, but they're just very, very busy."* (Participant 44).
Trainees not taking study time despite encouragement	*"So I've had to help her to be quite structured with her time to really say "We need to get you off our floor. Myself and your team leader need to know what half days we're going to set aside" so we can almost take her offline and stop people from finding her."* (Participant 34).

The clinical supervisors discussed a range of **strategies they were using to assist the trainee to protect their time including**;

- Finding a separate space to study at work that is free of distractions
- Studying at home if suitable
- Blocking out time in schedules so clients cannot be booked in
- Letting the team know when the trainee is not available
- Setting aside shorter blocks of time to make them more achievable to protect
- Being flexible with timing
- Reassuring the trainee that the study time is important and needs to be protected

Service development projects

Clinical supervisors, ACLs, line managers and project managers were impressed with the projects that had been initiated by the trainees, and commented on the high quality and the impact on the whole LHN;

"It was a huge piece of work. I didn't really, to be honest, think that we would ever see it happen. So she's put a lot of time and effort into creating what will be really a foundation piece of work for that and it will provide consistency of care for all of our aged care residents across the region…. So that was quite an amazing piece of work. It's just in the process of being endorsed by multiple directors of nursing across all of our sites." (Participant 23).

Other clinical supervisors commented on the **sharing of resources across teams and the opportunity for future collaboration** across departments as being a great outcome of the AHRGP;

"What it has led to has been that collaboration across the departments within the region, so when we have our regional meetings we're checking on what resources people have put together….So, we're in a way, as you say, that sort of project work is then, you know, you do one step and then the next step and the next step sort of builds upon that. So, that's been an asset for sure." (Participant 32).

The requirement for trainees to undertake service development activities has enabled some teams to have **projects actioned that had been waiting** for someone to have the time to action, which has been a positive outcome for LHNs.

As discussed with the trainees, the evaluation of projects was an aspect that appears to be challenging to find the time to manage. Clinical supervisors were concerned that **a range of projects have been initiated but potentially not followed up on.**

"but yeah I think it's very unlikely that any of the projects have actually been evaluated for their outcomes to see if what was aimed was actually achieved." (Participant 20).

Aim 4: To explore how the AHRGP has impacted consumers' perceptions, access and quality of allied health service delivery and development.

This aim was initially explored in phase one and will be completed in phase three.

Aim 5: To identify where the AHRGP works, which professions, locations and individual characteristics are particularly suited to the AHRGP.

The clinical supervisors, line managers, ACLs and project coordinators provided a range of insights into where, for whom and under what circumstances the AHRGP is potentially suited to. These perceptions will continue to be explored and measured as the pathway progresses but at the midpoint of this evaluation, it may be useful to make early recommendation for future implementation of the pathway in SA.

Locations for AHRGP

When discussing locations suitable for the AHRGP, participants in this group felt that any regional, rural or remote location would be suitable. Peri-urban locations were identified by some as being a lower priority as there was a perception that there were less workforce challenges closer to metropolitan areas, however others felt this was not the case. The ACLs discussed the availability of supervision and other support structures as being more important than the geographical location of trainees. Some participants also felt that if small or isolated teams nominated AHPs to participate in the AHRGP, that additional supports and opportunities for networking and resource sharing would need to be considered.

Professions suited to the AHRGP

Line managers, clinical supervisors and ACLs thought that all of the allied health professions were well suited to participation in the AHRGP. Many noted that the level 1 training appeared to be well suited to occupational therapy and physiotherapy and was not as well developed for other professions, but it was hoped that more suitable modules would be developed in the future for speech pathology, podiatry and social work.

Line managers were keen for the professions that they had difficulty recruiting and retaining to be involved in the future including Occupational Therapists, Physiotherapists and Podiatrists and they also noted that professions with small numbers would be challenging to support, as the quarantined study time would have a bigger impact on team workload and outcomes.

Timing of enrolment into the program

James Cook University state that level 1 trainees are ideally recent graduates (0-3 years' experience) when starting the program while level 2 trainees should have more than 2 years of clinical experience (3). The six SA based trainees who have not continued with the pathway were all in level 1 of the program. These trainees on average had slightly less experience working in a rural or remote area before commencing the program than the continuing level 1 trainees.

Table 18. Length of time worked in rural area before commencing program

	Average	Range
Level 1 trainees continuing	12.5 months	4 - 24 months
Level 1 trainees not continuing	8 months	2 – 19 months
Level 2 trainees	41 months	27-60 months

The clinical supervisors, line managers, ACLs and project team generally felt the pathway should be offered to AHPs who had some experience and a chance to embed themselves in the service and community before

commencing. When asked to quantify when a good time to start would be all groups recommended at least 12 months experience for the level 1 program and at least two to three years for the level 2 program.

"Not too early. Like I think you need to be, particularly if you're new to a rural area and you're establishing yourself and you've got the cognitive load that comes with all of that, probably two years into your practice or at least in your second year, somewhere in your second year, maybe more….I think you've sort of maybe made some decisions by then too about, do you like being in a rural area? Do you like the caseload? Do you like the potential isolation? Have you made good enough community connections to stay there? Whereas I think if we get them too early, maybe that stuff is a bit less known." (Participant 27).

Some participants felt the level 2 program would be ideal for AHPs new to senior positions or for those looking to move into senior positions in order to assist them to develop skills for the higher level role.

"I think also for those who are looking for that little bit more so they might have been working in a regional area for a few years already, be developing more specialised skills and looking for something to challenge themselves a bit more as well, within that regional context knowing that our structure can often by quite flat. So giving them that opportunity of, you know to work towards something." (Participant 22).

The project coordinators also discussed the varying skills, knowledge and needs of the trainees that existed irrespective of their years of experience with some clinicians with 2 years of experience ready for the level 2 program while others with a similar level of experience more suited to the level 1 option. This variance relates to a range of factors and it is challenging to predict the capacity and readiness of trainees. It is anticipated that by following this first cohort through the evaluation phases that some of these factors will become clearer.

Personal attributes suited to the AHRGP

A range of personal attributes were identified by the line managers, clinical supervisors, ACLs and project team as desirable for AHRGP trainees. The first 12 months of the pathway has allowed them to make a range of observations on the traits and abilities that suit the pathway well:

- **Initiative and motivation**, trainees should be able to manage study autonomously, be proactive and driven
- **Assertive and confident**, trainees need to be able to advocate for their needs and be confident enough to seek others out to collaborate on projects and information gathering
- **Team player and willingness to share**, trainees should be passionate about sharing their knowledge broadly so that other may benefit
- **Managing competing demands**, trainees will be working in busy environments with clinical and study commitments and it is important that they can manage this without becoming overwhelmed but also being able to ask for help when needed

  "I think that ability to manage, undertaking ongoing education from an academic perspective, and balancing that with your workload commitments. Most definitely being able to balance that." (Participant 43).

- **Inquisitive,** trainees should be curious and interesting in finding out more, being eager to find out more and have an ability to think outside the square
- **Driving own learning and supervision**, trainees need to be able to identify what they need and seek out support.
- **Organisation and time management**, trainees need to be able to effectively manage their time and organise their schedule around study commitments
- **Open to learning across clinical areas**, as the pathway is about developing generalist skills, it is important that trainees are passionate to learn broad skills relevant to their local area

- **Ability to learn**, it is helpful if trainees have a natural affinity for learning or are passionate about lifelong learning as the modules have significant reading, assignments and applicability to clinical roles which can be challenging
- **Commitment**, the trainees should be committed to seeing the pathway through and making a difference in their community, committed to quality improvement and rural health

  "I think you need to be committed, you really need to be wanting to do it because in a sense is to get the true benefit out of it, if you're just doing it because it just sounds nice or somebody's asked you to do it, I just don't think you'll get the best out of it." (Participant 19).

- **A growth mindset and high emotional intelligence**, they need to be able reflect on their own skills and abilities, identify their gaps and areas for growth, take on feedback and consider others perspectives
- **Resilience,** many trainees will be living away from home in new and challenging role with the added pressure of study so a degree of resilience is helpful
- **Leadership**, particularly for the level 2 program, it was felt that leadership qualities were important to be able to drive change and work with teams to identify areas for quality improvement.

Temperament and Characteristics of trainees

Individuals are attracted to working in rural areas for a range of reasons. The trainees in the AHRGP reported in phase one of this research that they came for the lifestyle, to be closer to family, to gain employment in the public sector, to be able to work as a generalist or because of their passion for rural health.

Several studies have investigated the personal characteristics and temperaments of individuals that are attracted to rural and remote practice [7-10]. The Temperament and Characteristic Inventory (TCI) [11] is a 140 question Likert scale survey that is designed to describe individual's personal traits against seven categories. The TCI uses a biopsychosocial model with four temperament traits and three character traits. Temperament traits are associated with genetic inheritance and less easily modified. Character traits are influenced by environment and life experiences and may therefore modify over time. Although each individuals' personality is the result of the seven traits interacting together to influence behaviour and actions, the TCI does provide individuals with a score, or level, for each trait (very low through very high) [11]. See Table 19 which outlines the seven traits and associated descriptions of high and low scorers.

Table 19. TCI temperament and characteristics descriptions

Temperament traits	High Scorers	Low Scorers
Harm avoidance	Worrying and pessimistic Fearful and doubtful Shy, fatigable	Relaxed and optimistic Bold and confident Outgoing, vigorous
Novelty seeking	Exploratory and curious Impulsive, disorderly Extravagant and enthusiastic	Indifferent, reflective Frugal and detached Orderly and regimented
Reward dependence	Sentimental and warm Dedicated and attached Dependent	Practical and cold Withdrawn and detached Independent
Persistence	Industrious and diligent Hard-working Ambitious and overachiever Perseverant and perfectionist	Inactive and indolent Gives up easily Modest and underachiever Quitting and pragmatist
Character traits		
Self-directedness	Mature and strong Responsible and reliable Purposeful, self-accepted Resourceful and effective Habits congruent with long-term goal	Immature and fragile Blaming and unreliable Purposeless, self-striving Inert and ineffective Habits congruent with short-term goals
Cooperativeness	Socially tolerant Empathic, helpful Compassionate and constructive Ethical and principled	Socially intolerant Critical, unhelpful Revengeful and destructive Opportunistic
Self-transcendence	Patient Creative and self-forgetful United with universe	Impatient Pride and lack of humility Scientific/objective

[10]. adapted from Cloninger et al. 1994.

Research trends in relation to SA AHRGP

A range of Australian studies have utilised the TCI to explore the personal attributes of health professionals and students working in rural and remote areas in order to better understand possible influences of personality on workforce recruitment and retention [7, 8, 10, 12]. For this reason, the research design in Phase 1 included the TCI in order to provide trainees with insight into their personal traits and how this might influence their decisions around work location choices. It has also facilitated the research team to explore any patterns or trends in this first SA trainee cohort.

Table 21 outlines the seven trait levels for the SA AHRGP trainee cohort and compares them with the results found in four other Australian studies [7, 8, 10, 12]. Potentially the results of these studies demonstrate patterns of the traits that may be more suited to rural and remote practice.

The AHRGP trainees are mostly female (11 of the 13) and under the age of 30 years, which is similar to the subset of participants noted in Campbell et al.'s 2013 study outlined in Table 21. The other studies were less similar to the AHRGP trainees' demographic, but their TCI findings are somewhat similar to Campbell et al. For example, all of the studies found on average, the rural clinicians scored high to very high traits for reward dependence, persistence, self-directedness and cooperativeness and average for novelty seeking.

The 15 AHRGP trainees have varying TCI results from very high to very low rankings across the seven traits, but when pooled together for reporting as a group, their results are largely average compared to the normative sample [11]. Although the trainee sample is small it is interesting to note the similarities and differences of this current sample with the four studies in Table 20 but it is not possible to draw definitive conclusions.

Table 20. TCI comparison of findings

			Temperament			Character			
Researchers and year of study	**Participant demographics**	**Sample size**	**Novelty seeking**	**Harm avoidance**	**Reward dependence**	**Persistence**	**Self-directedness**	**Cooperativeness**	**Self-transcendence**
SA AHRGP Trainees (2019)	Rural AHPs, Young, mostly female less than 30	15	Average	Average	Average	Average	Average	Average	Low
Campbell, Eley and McAllister (2013)	Subset of cohort Rural/remote AHPs, mostly female, average less than 30	228	Average	High	Very high	Very high	Very high	Very high	Low
Eley, Laurence, Cloninger and Walters (2015)	Total cohort, mostly younger, female registrars, working rural interested in rural practice	451	Average	High	High	High	High	High	Low
Eley, Young, Shrapnel (2008)	Total cohort, Rural GPs mostly male, mostly older (at least 7 years' experience)	13	Average	Average	Very high	Very high	Very high	Very high	Very low
Eley, Eley, Young, Rogers-Clark (2011)	Total cohort, Rural Nurses and nursing students, mostly female, mostly older	404	High	Average	Very high	Very high	Very high	Very high	Average

Trainee characteristics

Since the AHRGP trainee numbers are low, it may be more useful to review the results individually. Table 21 outlines the individual results of the de-identified trainees. This demonstrates that the traits of the trainees are highly variable.

Table 21. AHRGP trainee TCI results

	Temperament				Character		
Trainee	Novelty seeking	Harm avoidance	Reward dependence	Persistence	Self-directedness	Cooperativeness	Self-transcendence
Level 1 continuing							
A	Average	High	Very High	Average	Average	High	Very High
B	Average	High	Low	Average	Average	Low	Very Low
C	Very low	High	Very Low	Low	Average	High	Very Low
D	Very Low	Average	Average	Very High	High	Very High	Average
Level 1 withdrawn							
E	Very low	Very High	Very low	Average	Average	Average	Very low
F	Very High	Low	Average	Average	High	Very High	Average
G	High	Very High	Very High	Very Low	Low	Average	Average
H	Average	Very High	Very High	Average	Average	Average	Average
I	Low	Average	High	Very High	Average	Average	Low
J	Average	Average	High	Average	High	Very High	Average
Level 2							
K	Very High	Low	Low	Low	Very Low	Average	Average
L	Very Low	Very High	Very High	Low	Low	Average	Very Low
M	Average	High	Average	Average	High	Very High	Very Low
N	Low	Average	Low	Average	Average	Average	Low
O	Average	Very Low	Very Low	Average	Average	Very Low	Very Low

When individuals know more about their personal traits through undertaking an inventory such as the TCI, they may gain some insights into their behaviours, reactions and decision-making tendencies, including career decisions and actions. The trainees have been provided with their individual TCI results and these will be explored further with them in phase 3 in terms of associations between their trait levels and their experience in the AHRGP. In phase 3 the research team will also explore the profiles of the trainees who report positive experiences in the AHRGP versus negative and identify any emerging patterns or trends. These results may also be useful for trainees to share with their clinical supervisors or line managers to consider how the organisation can consider the varying traits of trainees and work with them to identify ways of meeting their needs and building on their strengths.

Aim 6: To explore costs and benefits of the AHRGP

A cost effectiveness analysis is planned in order to capture the costs and benefits of the AHRGP and to make recommendations for the future of the pathway. At this mid-point in the project the known costs and early benefits have been reported. A full analysis will be completed in phase three. Benefits in terms of retention of trainees and associated savings have been compared to overall retention rates of rural LHNs across SA and are outlined below. These comparisons will be revisited in phased three.

A range of costs associated with the AHRGP have been considered including the direct costs of the program, project staff and evaluation costs. Indirect in-kind costs including time for supervision, support and other AHRGP related activities have also been reported:

Direct costs

James Cook University module enrolment fees:

Original budget = $199,805

- Estimated Total JCU expenditure from June 2019 - June 2020 = $112,461

Project manager:

For wages + on-costs Jan 2019 to June 2020 = $79,016

(Noting this is below the original budgeted amount of $91,581 for January 2019 to June 2020 due to the position not being filled until March 2019)

Evaluation:

- 2018/19 (phase 1) and 2019/20 (phase 2) = $55,000 (incl GST)

Total direct costs at June 2020 = $246,477

Trainee supervision time cost

The SA Health Allied Health Clinical Supervision Framework [13] outlines minimum standards of clinical supervision for AHPs. The following is recommended:

- 4 hours per month for new graduates and base grade clinicians, this may reduce over time
- 1 hour per 4-6 weeks for experienced clinicians noting that hours may increase in circumstances requiring acquisition of new skills or moving into a new work setting.

The following figures are based on the above recommendations and assume AHPs within their first year of practice should be receiving 4 hours clinical supervision per month (or the equivalent of 1 hour of supervision per week). Clinicians with more than 12 months' experience in an AHP1 position may reduce to around 1 hour clinical supervision per fortnight, and AHP2 or 3 clinicians should receive a minimum of 1 hour clinical supervision per month.

On average the level 1 trainees were receiving no additional clinical supervision for completion of the AHRGP than what is recommended in the Supervision Framework. In some instances, trainees were actually receiving less clinical supervision than recommended.

The level 2 trainees in established roles were receiving adequate supervision given their AHP2 status (1.3 hours per month), while level 2 trainees who had moved into new senior level (AHP3) positions were receiving a higher level of supervision on average (4 hours per month). This additional clinical supervision time for the AHP3 level 2 trainees could be attributed the trainees requiring additional support as they transitioned into new roles rather than requiring additional support for the AHRGP specifically. The Supervision Framework does make this allowance "noting that hours may increase in circumstances requiring the acquisition of new skills or moving into a new work setting" [13] Page 7]. Therefore, these additional hours will not be reported as a cost of the AHRGP.

Table 22. Trainee supervision hours per month

	Recommended supervision hours [7] per month	Average hours of supervision received per month
Level 1 trainees (AHP1)	2 - 4 hours	2.7 hours
Level 2 trainees (AHP2 and AHP3) in new roles	2 - 4 hours	4 hours
Level 2 trainees (AHP2 and 3) in established roles	1 hour	1.3 hours

Quarantined study time cost

It is a requirement of the program that trainees be allocated 0.1-0.2FTE study time for the AHRGP (15-30 hours per month); this includes time for module completion as well as time spent progressing quality activities and service development projects to benefit the broader team and LHN. The following table outlines the average hours and associated costs for the study time and related service development activities completed at work. Costs have been calculated based on the current South Australian Public Sector Enterprise Agreement [14].

These figures appear significant however it should be noted that trainees are spending a significant amount of their study time working on proposals for service development and quality improvement activities, on consumer related research and knowledge building and other activities that will benefit both themselves and their broader team and LHNs.

Trainees are also undertaking significant hours of study outside of work time and this has not been captured for the purpose of this analysis.

Table 23. Trainee study time and associated costs

	Average study hours undertaken in work hours per month	Average trainee study time cost per year
Level 1 trainees (AHP1)	25.4 hours	$11,280
Level 2 trainees (AHP2 and AHP3)	20.8 hours	$10,044

Clinical Supervisor time cost

Clinical Supervisors reported on the number of hours they are spending supervising trainees and participating in other activities that relate to the AHRGP including meetings and administrative tasks. Table 24 outlines the hours attributed to the AHRGP.

Anecdotally, clinical supervisors reported that supporting trainees' AHRGP quality activities and providing clinical supervision fit within their usual roles. There was significant variability in the number of hours clinical supervisors reported spending in supervision and associated activities. As stated earlier, some trainees were working in new roles requiring additional support while others were in established roles.

It is surprising to note that some level 1 trainees were receiving less supervision than recommended in the Clinical Supervision Framework and this is potentially a broader workforce issue that requires further exploration.

As the time attributed to the AHRGP did not exceed usual role expectations and the clinical supervisors reported time was spent on standard activities for their roles, the hours will be considered as in-kind costs rather than additional costs of the pathway.

Table 24. Clinical supervisor time

	Hours of supervision recommended per month [7]	**Average** supervision and related activities provided per month	**Range** of supervision and related activities provided per month
Supervisors of level 1 trainees	2-4 hours*	2.9 hours	0.25 - 4 hours
Supervisors of level 2 trainees in new roles	2-4 hours*	4 hours	4 hours
Supervisors of level 2 trainees in established roles	1 hour	2 hours	1 - 3 hours

*Depending on level of experience

Line manager time cost

SA Health does not have a framework for how much support line managers should spend supporting AHPs, making it difficult to quantify the amount of additional support they have spent supporting the trainees. Anecdotally the line managers reported the AHRGP was not significantly impacting on their time. Most line managers reported they would be supporting the trainee regardless of if they were in the pathway, with no additional time required at this stage. Some line managers reported that initially when trainees were beginning the pathway they were required to complete some paperwork and approve the study leave, but otherwise the time was within the scope of their usual duties. The time that line managers were spending with trainees was reported to be variable with some more directly involved than others: This pattern may be unrelated to the AHRGP and instead related to general differences between line managers and LHNs. See Table 25 below for details of the time associated with line manager support. As this time was reported to be within their normal job roles, line manager time will also be reported as in-kind support.

Table 25. Line manager time

	Average hours per month managing trainees and working on AHRGP related activities	Range of hours per month managing trainees and working on AHRGP related activities
Level 1 managers	1 hour	0 – 2 hours per month
Level 2 managers	40 minutes	0 – 2 hours per month

ACL time cost

Two of the four ACL's were directly supervising trainees while the other two were providing indirect support. Compared to the clinical supervisor and line manager group, the ACLs are spending the most time on AHRGP related activities. They have been a significant support for the pathway directly through supporting trainees in the consultation and development of resources, as well as supporting the pathway more broadly as a key workforce strategy. The ACL role is heavily involved in new initiatives for AHPs across rural and remote SA Health services and it is anticipated that this time investment may reduce in the future as the pathway is further established. Table 26 below outlines the time ACLs are spending on AHRGP related activities excluding time spent directly supervising trainees.

Table 26. ACL time

	Average ACL hours per month spent supervising trainees and working on AHRGP related activities	Range of hours per month attributed to AHRGP
ACLs	5.5 hours	1 - 10 hours per month

Benefits

Improved retention and decreased costs for recruitment are an intended benefit of the AHRGP. The RSS provided the research team with estimated allied health retention data for staff employed in regional LHNs from 2016-2020. These results have been used as a comparator with the retention rates for trainees in the AHRGP (see Table 27 below) and will also be compared and analysed in phase three. Despite a number of early withdrawals in the level 1 pathway, at the time of this report the retention rate for AHP1 trainees is higher than the average overall AHP1 retention rate reported by the RSS. The AHP2 and AHP3 trainees have on average been in their positions for a shorter period than average, as earlier reported, some of them are new the senior positions which they have been appointed to since the pathway began in 2019.

Table 27. Retention rates SA regional LHNs versus AHRGP trainees

Trainee classification	RLHN average length of stay	RLHN median length of stay	AHRGP average length of stay	AHRGP median length of stay
AHP1	1.5 years	1 years	1.9 years	1.6 years
AHP2	8.7 years	7 years	4.9 years	4.9 years
AHP3	12.5 years	11 years	4.5 years	4.7 years

Recruitments cost benefits

It is challenging to capture the economic benefits of retention as the costs are wide ranging, and many studies have explored retention strategies but few have measured their effectiveness [2, 15]. Measuring the cost of recruitment rather than the benefit of retention is one way of quantifying these costs. Chisholm, Russell and Humphreys measured the cost of turnover of AHPs in regional, rural and remote areas [6], which will be used to measure the approximate costs associated with recruitment in this research. By measuring the cost of recruiting new AHPs, in conjunction with average regional LHN turnover data and the AHRGP trainee retention rates reported above it is possible to approximate the benefits of the AHRGP in SA.

Chisholm, Russell and Humphries (2011) included the following costs in their analysis:

- Vacancy costs (cost of locums, overtime and expenses related to patients being unable to be seen)
- Recruitment costs (cost of advertising, searching, interviewing and relocating of new staff)
- Orientation and training costs for new AHPs

The average total costs for recruiting a new AHP based on these cost factors are outlined in table 28 below. Key economic statistics from the Australian Bureau of Statistics [16] have been used to adjust costs from the 2011 Chisholm study to current prices. It can be seen in Table 28 that the costs increase significantly for remote health services as compared to rural and regional services.

Table 28. Average turnover costs

	Average total cost of recruiting a new AHP	Average total cost of recruiting a new AHP (2020 adjusted)
All health services	$26,721	$32,867
Regional health services	$23,010	$28,302
Rural health services	$26,721	$32,867
Remote health services	$45,781	$56,311

(adapted from Chisholm, Russell & Humphries 2011)

Chisholm, Russell and Humphries (2011) used the following categories in their analysis: Regional (less than 200km from metro with a population of more than 10,000), rural (more than 200km from metro and more than 5000 population) and remote (more than 200km and less than 5000 population). According to this classification, the trainees are all based in rural areas except Murray Bridge which is regional.

In phase 3, these figures will be used to provide an estimate of the economic benefits of any improvement in retention rates among the AHRGP trainees compared to usual retention rates for AHP in similar areas reported by SA Health. Furthermore, in phase 3 the costs and benefits will be analysed together to determine the cost effectiveness of the AHRGP in SA.

Summary

Phase 2 of the SA AHRGP has explored the perspectives and experiences of 15 trainees as well as their clinical supervisors, line managers, ACLs and the project management team across all six regional LHNs. Interim outcomes, progress, costs and benefits have also been measured, for a full analysis to be completed in phase 3.

Six level 1 trainees have withdrawn from the AHRGP, and a total of nine trainees are continuing beyond the midpoint. A range of reasons for withdrawing were identified, including; clinical supervision and line manager support, workload pressures, a desire to move closer to family and friends and a desire to work in a metropolitan setting. Despite these early withdrawals, when the length of stay of AHRGP trainees was compared with the average turnover of all AHPs in regional LHNs, it appears that the AHP1 trainees have on average stayed in a regional or rural area longer than the overall regional LHN average. These rates will continue to be monitored in the second half of the pathway for further trends and to identify cost benefits where relevant.

The trainees reported mixed experiences at the halfway point of the pathway. For many the training has been useful to increase their skills across a range of clinical areas and to learn more about service development and quality improvement processes. Some trainees have had difficulty aligning the training content with their clinical roles or have found limited relevant options for their profession. Generally, trainees were enjoying the opportunity to be involved in service development activities, especially those who were early in their career who may not have otherwise had the opportunity to do so. Trainees consistently reported challenges in implementing these activities beyond the scope of the proposal or project plan due to limited time within their workload.

Clinical supervisors, line managers, ACLs and project managers were generally positive about the AHRGP and could see a range of benefits and positive outcomes for their LHNs and professions. They were happy to recommend the pathway to others and be involved again. This group also noted that time was a limiting factor for trainees to be able to reap the full benefits of the pathway but that they were impressed with the learning they had witnessed. Some were concerned about the quality and relevance of some the JCU modules and were hoping to see improvements in the future.

A range of factors for trainee success were explored including temperament and characteristics, years of experience, location, profession, rural background and time spent in the rural area. These will continue to be explored and measured for trends in phase 3.

Trainees continuing in the pathway beyond July 2020 mostly reported a desire to continue working in rural and remote areas for at least 3 years, with some commenting on the desire to see their projects through and make positive changes to their services before they felt they could leave.

Consistently participants in phase 2 recognised the support available from clinical supervisors, senior clinicians, line managers, ACLs and the project management team as significant enablers for the success of the pathway. Trainees were relying on the supports around them to consolidate their learning, develop relevant project proposals and for having opportunities to extend their skills.

A cost effectiveness analysis was outlined, and preliminary data was collected. In phase 3, the costs and benefits will be summarised to give recommendations for the future sustainability of the pathway in SA.

Recommendations

At the conclusion of phase 2 of the AHRGP evaluation, a range of recommendations can be made, as detailed below:

- Continue to invest in the AHRGP as a workforce strategy; all participants of this research agreed that it was a worthwhile and important initiative for SA regional LHNs.
- Continue to promote the AHRGP widely as a strategy for raising the profile of allied health and the specialty skills that generalists bring to rural areas.
- Review supervision and line manager support arrangements for trainees to ensure they receive adequate support during the AHRGP.
- Continue to quarantine study time for trainees in order to ensure the pathway related activities are manageable, with consideration be given to these hours being provided flexibly when trainees are undertaking intensive modules or service development projects.
- Explore opportunities for trainees to be able to implement the service development and quality improvement projects beyond the scope of the study modules. This may involve organisational support for implementation and identifying the possibility of trainees building one project across multiple study modules.
- Consider how projects can be evaluated, disseminated and shared across LHNs for the benefit of others.
- Continue to liaise with JCU to maximise module options for all professions and ensure the relevance of modules to rural and allied health.

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Appendix 1: Methods and participants

Table 29. Phase 2 methods

Phase 2 2020 Mid-Point	Trainee survey and interview	As trainees reached the midway point of the pathway, they were invited to complete a survey and interview exploring their initial impressions of the training, their experience in the pathway and the impact it has had on their practice. These took place between February and July 2020.
	Line manager, clinical supervisor and ACL interviews	Between April and July 2020 trainees' line managers, clinical supervisors and ACLs were invited to be interviewed to explore their impressions of the program to date, what it had been like supporting a trainee, what the challenges and opportunities had been and what impact the pathway was having on their services.
	Project management team interview	The project management team were interviewed in June 2020 to discuss the AHRGP progress and to ascertain broadly what has been working well, what has been challenging and to explore the financial implications of the program. The team also provided the researcher with data relating to costs, recruitment and retention for analysis.

Details of participants

All fifteen trainees who commenced the training in 2019 or 2020 consented to participate in the evaluation. Mid program interviews and surveys were completed between February and July 2020 depending on when the trainees reached the midpoint of the JCU training.

The two trainees who started in 2020 started after the phase 1 report was completed and participated in the early stages of the pathway only. As a result, their experiences and perceptions of the pathway are included in this phase where relevant only.

Ten clinical supervisors, six line managers and four ACLs were interviewed in phase 2. Two of the ACLs were also supervising trainees and so their responses have been included for both groups, where relevant. Several line managers had changed since 2019 and some of the new line managers did not rate trainees' competence or confidence as they did not feel they knew the trainees well enough. The project management team were interviewed, and also provided the research team with workforce and financial data for analysis.

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