Impact and feasibility of the Allied Health Professional Enhancement Program placements – experiences from rural and remote Queensland

Priya Martin1,2
Saravana Kumar2
Melinda Stone1
Lujana Abernathy1
Vanessa Burge1
Lucylyn Lizarondo3

1Allied Health Education and Training, Cunningham Centre, Darling Downs Hospital and Health Service, Toowoomba, QLD, 2International Centre for Allied Health Evidence (ICAHE), School of Health Sciences, University of South Australia, 3Joanna Briggs Institute, University of Adelaide, Adelaide, SA, Australia

Background: Allied health professionals practicing in rural and remote areas are often faced with barriers that prevent them from accessing professional development opportunities. In order to address this barrier, a tailored professional development program was developed and implemented by the Cunningham Centre in Queensland, Australia. The purpose of this study was to investigate the benefits of the program to participants and their work units.

Methods: This study used a concurrent mixed methods longitudinal design to investigate the medium- to long-term benefits of one Allied Health Professional Enhancement Program placement. Surveys and individual interviews provided data at 2 weeks and at 6 months post-placement. The study participants included the placement participant (a physiotherapist), their line manager, clinical supervisor, and the placement facilitator.

Results: Results demonstrated that the placement resulted in various reported benefits to the placement participant, as well as to service delivery in their home location. Benefits of the placement reported by the participant included increased confidence, improved knowledge and skills, increased access to professional networks, and validation of practice. Benefits to service delivery reported included improved efficiencies, improved patient outcomes, and positive impact on other team members.

Discussion: This study found that the Allied Health Professional Enhancement Program placement investigated was beneficial to the participant and to service delivery. In addition, the benefits reported were sustained at 6 months post-placement. Despite the fact that this study showcases experiences from one setting, the findings from this study and the lessons learnt may be transferrable to other similar programs elsewhere due to its methodological strengths (such as rich descriptions of the program and use of typical case sampling). While this study provides emergent evidence of usefulness of the program to participants and their work units, further studies are warranted to investigate the direct benefits of such placements on patient care, which remains as the holy grail of the impact of professional development opportunities.

Conclusion: Allied Health Professional Enhancement Program placements can result in important benefits to the participant, their health service, and positively influence health care service delivery.

Keywords: allied health, placements, rural, remote, professional development

Introduction
The international literature highlights the challenges inherent in ensuring effective service delivery in highly dispersed populations such as those found in Queensland, Australia.1,2 Queensland is a geographically large state with a population of 4.5 million, two-thirds of which is clustered in the southeast corner.1 Allied health professionals practicing in rural areas of the state often practice in professional isolation with...
the nearest professional colleague hundreds or thousands of kilometers away. A lack of local training and support opportunities, prohibitive costs associated with off-site training attendance, minimal discipline-specific support on site, and a varying “generalist-specialist” scope of practice are some of the issues faced by remote, rural, and regional health practitioners. Access to training and professional development activities for these practitioners is limited as most training activities take place in bigger centers.

Origin of Allied Health Professional Enhancement Program
To address some of the barriers outlined earlier, the Royal Children’s Hospital Allied Health Department ran a pilot clinical experience program funded by the Rural Health Support, Education and Training Grants Program between 1998 and 1999. Following a recommendation from the Director General’s Allied Health Recruitment and Retention Taskforce, Queensland Health extended this program throughout the state, with the introduction of the Allied Health Professional Enhancement Program (AHPEP) in 2000. The Cunningham Centre has been solely responsible for its administration since 2009. The Cunningham Centre is a registered training organization that has been providing high-quality training, education, and support initiatives for health personnel in rural and remote areas of Queensland since 1989.

AHPEP: current form
AHPEP provides eligible regional, rural, and remote allied health professionals and assistants with access to individually tailored placement opportunities that focus on improving services and health outcomes for their clients. The program has laid emphasis on assisting participants to meet their local service priorities, with placements focusing on themes such as clinical- or evidence-based practice, skill development, succession planning, investigation of new service delivery models, and clinical education. The participant is required to identify specific learning goals for their proposed placement. The AHPEP coordinator then identifies a suitable host site and organizes placements of up to 10 days in order to meet these goals.

The AHPEP placements are available to staff from all employment categories including full-time, part-time, casual, temporary, and permanent. Applicants are required, however, to demonstrate that their clinical duties account for at least 25% of their total workload. Eligible professions include audiology, clinical psychology, clinical measurements, dietetics, exercise physiology, medical imaging, occupational therapy, physiotherapy, podiatry, prosthetics and orthotics, radiation therapy, social work, speech pathology, and allied health assistance. Between July 2009 and June 2014, 393 placements were completed. The top three professions to use AHPEP were occupational therapy (30%), physiotherapy (17%), and speech pathology (16.8%).

A variety of placement types are offered through AHPEP to enable participants to achieve a range of learning goals. The most commonly used type is the individual placement, which involves the visiting of an allied health professional or assistant to another facility. For example, a physiotherapist from a regional center may be placed with a physiotherapist from a tertiary hospital to refine and advance their skills in antenatal and postnatal care. Another placement type is the expert clinician visit, where a clinician with expertise in the area the participant is seeking to develop their skills in visits the participant’s place of work to assist with service and/or skill development. For example, a senior podiatrist from a regional hospital may visit a podiatrist at a rural facility to review and provide advice on the diabetic foot care management and outreach service. A further placement model involves a team of two or three multidisciplinary allied health staff from one service visiting another facility. In all instances, the AHPEP applicants must identify the desired model requested and demonstrate why that is the most suitable model for the achievement of their specified learning goals. Of the 393 placements completed between July 2009 and June 2014, the majority (91.9%) were individual placements.

AHPEP provides an opportunity for allied health professionals at all levels of practice to learn from others’ experience and to bridge the gap between education and practice. Participants are able to devote their full attention to learning as they are usually away from their regular workplace when undertaking the placement. They are able to rehearse and practice the skills with their facilitator to achieve their learning goals. The social learning theory of Bandura underpins the practice of role modeling. Successful role models can demonstrate techniques and approaches that are appropriate and effective in practice, and encourage the development of a positive attitude toward learning, resulting in the learning being personally fulfilling as well as functional.

Each AHPEP placement completed between July 2009 and June 2014 was evaluated as part of a continuous quality improvement cycle using a post-user satisfaction survey and informal interviews. However, limited evidence was
available regarding the impact of AHPEP in the medium-to-long term. To address this gap, this study investigated the impact and feasibility of one AHPEP placement using a mixed methods longitudinal design. The aim of this study was to explore the perceptions of the impact and benefits of the AHPEP placements on service delivery and the clinician’s knowledge, skills, and confidence in the medium-to-long term. This paper reports on the design of this study, the results, and implications.

Methods

Design

This study used a concurrent mixed methods longitudinal design, which was applied to evaluate a single AHPEP placement. Mixed methods research involves the application of both quantitative and qualitative approaches in a single study.10,11 This approach is considered to be useful in cases where several different but related research questions are examined or when the purpose is to triangulate quantitative and qualitative data addressing one research question.12 While using a concurrent mixed methods design, quantitative and qualitative approaches are applied simultaneously.13 In this study, quantitative and qualitative data were collected at 2 weeks and at 6 months following the completion of the placement.

Setting

Public health services in Queensland are offered by 16 Hospital and Health Services where almost 5,000 professionals from 16 discipline groups are employed.14,15 This study took place across two regional Hospital and Health Services in Queensland, Australia.

Participants

A physiotherapist from a rural town was recruited to participate in the study following written, informed consent. Typical case sampling – a type of purposive sampling technique where the sample is illustrative of other similar samples – was used to recruit this participant.16 This sampling technique was chosen as it helps to showcase a typical, normal, or average sample for a particular phenomenon and by doing so aims to achieve representativeness or comparability.17 The physiotherapist chosen for this study worked as a sole physiotherapist in a rural town. This town is located in a region that is known to face significant health and workforce challenges. The physiotherapist received clinical supervision from a physiotherapist at another center via telephone. The physiotherapist’s line manager, clinical supervisor, and the AHPEP placement facilitator were also recruited to the study to investigate multiple stakeholder perspectives.

Procedure

Data were collected at 2 weeks and at 6 months post-placement. Quantitative data were collected using a survey. The survey was piloted with three volunteers having expertise in survey development to test its usability. Some of the questions in the survey were around the participant’s placement learning goals and if they were met; improvement in their skills and knowledge post-placement; and the impact the placement had on the participant’s workplace, patients, and the broader team. Qualitative data were collected through individual, semistructured interviews conducted by a trained research investigator external to the Cunningham Centre. Each individual interview lasted between 20 and 40 minutes. The interview guide followed by the research investigator while completing the interviews is presented in the Supplementary material.

Data analysis

To facilitate the analysis of survey data, Likert-scale responses were collapsed into three categories: positive (strongly agree and agree), neutral (neither disagree nor agree), or negative (strongly disagree and disagree). Responses at 2 weeks and at 6 months post-placement were compared descriptively for every respondent.

Qualitative data from the interviews were recorded with permission and transcribed verbatim. Themes were generated from the data using the inductive content analysis process as described by Elo and Kyngas.18 Three phases are involved in this process: preparation, organization, and reporting. In the preparation phase, the researcher becomes familiar with the data by reading it several times. The researcher strives to make sense of the data. The organization phase includes open coding (notes and headings are written in the text while reading it), creating categories (by grouping the data), and abstraction (formulating a general description of the research topic from the categories generated). Subsequently, these categories and themes were reported, which constitutes the reporting phase.18 Peer checking and member checking were undertaken on a proportion of data to promote trustworthiness of the analysis process.19 Data were de-identified to ensure participant confidentiality.

Ethics

Ethics approval was obtained from the Darling Downs Hospital and Health Service Human Research Ethics Committee.
(Reference number – HREC/13/QTDD/36). Following this, site-specific approvals were obtained from the two regional Hospital and Health Services involved in the study.

The AHPEP placement
The AHPEP placement protocol followed for this study was a week-long placement completed at a larger regional Hospital and Health Service in Queensland. The physiotherapist’s learning goals for the placement included enhancement of knowledge and skills related to musculoskeletal assessment and treatment techniques, and to increase the knowledge regarding various chronic and complex patient conditions related to physiotherapy and associated management strategies. This AHPEP placement was identified as a suitable development activity for the participant by their clinical supervisor. The AHPEP placement facilitator was an experienced physiotherapist with advanced clinical skills in musculoskeletal physiotherapy.

Results and discussion
Quantitative results
Responses at 2 weeks and at 6 months post-placement from the placement participant, placement facilitator, line manager, and clinical supervisor were compared. Overall, the survey data indicated that all the stakeholders reported the placement to be of benefit to the AHPEP participant (the physiotherapist). These benefits initially reported at 2 weeks post-placement were sustained at 6 months. It is worth noting that the clinical supervisor’s responses regarding improvement in the AHPEP participant’s skills, knowledge, and confidence post-placement were neutral at 2 weeks and positive at 6 months. Table 1 shows a summary of the survey responses at 2 weeks and at 6 months post-placement.

Table 1 Survey responses at 2 weeks and at 6 months post-placement

<table>
<thead>
<tr>
<th>Attributes/objectives</th>
<th>Participant 2 weeks</th>
<th>Participant 6 months</th>
<th>Placement facilitator 2 weeks</th>
<th>Placement facilitator 6 months</th>
<th>Line manager 2 weeks</th>
<th>Line manager 6 months</th>
<th>Clinical supervisor 2 weeks</th>
<th>Clinical supervisor 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning goals were met</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Knowledge, skills, experience improved</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (A)</td>
</tr>
<tr>
<td>Professional confidence increased</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Clinical reasoning improved</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Assessment skills improved</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Treatment/intervention skills improved</td>
<td>Positive (A)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Teamwork skills improved</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Neutral (neither)</td>
<td>Neutral (neither)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Validated practice</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Gained skills to assist with service delivery and caseload planning</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Neutral (neither)</td>
<td>Positive (A)</td>
</tr>
<tr>
<td>Shared knowledge, skills, and ideas gained with the team and other colleagues</td>
<td>Neutral (Neither)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Neutral (neither)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Neutral (neither)</td>
<td>Positive (A)</td>
</tr>
<tr>
<td>Accessed additional professional/peer support networks</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
</tr>
<tr>
<td>Obtained additional resources to introduce to local practice</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (SA)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
</tr>
<tr>
<td>Assisted with meeting local Hospital and Health Service priorities</td>
<td>Positive (A)</td>
<td>Positive (SA)</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Helped with improving patient outcomes in the local community</td>
<td>Positive (SA)</td>
<td>Positive (SA)</td>
<td>Neutral (neither)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (A)</td>
<td>Positive (SA)</td>
</tr>
</tbody>
</table>

Note: Neither, neutral.
Abbreviations: SA, strongly agree; A, agree;
responses at 2 weeks and at 6 weeks post-placement for all stakeholders.

**Qualitative findings**

Content analysis of the data from interviews at 2 weeks and at 6 months post-placement resulted in two broad categories of information, namely benefits of the AHPEP placement to the participant and benefits of the AHPEP placement to service delivery in the participant’s work unit.

**Benefits of the AHPEP placement to the participant**

Several themes emerged in relation to the benefit of the placement to the participant. These included improved confidence, improved knowledge and skills, increased professional support, and validation of practice. These themes emerged from the interview data at 2 weeks and were sustained at 6 months.

**Increased confidence**

A predominant theme arising from interviews with all the stakeholders was “increased confidence” of the participant. The opportunity to spend a week with an advanced physiotherapist enabled the participant to observe and practice physiotherapy assessment and treatment techniques used in managing patients with complex and chronic conditions. The AHPEP participant commented: “Yes, being more confident that this particular treatment technique should work more so over another one …”

The participant’s clinical supervisor had this to say at the 6-month interview: “… the last six months she’s definitely had a lot more confidence with her musculo-skeletal case presentations …”

**Improved knowledge and skills**

All stakeholders commented on the participant’s increased skills and knowledge in the assessment and treatment of patients with chronic and complex conditions. In particular, the data highlighted that the participant’s clinical reasoning as well as high-level clinical skills had improved post-placement. The clinical supervisor commented:

… her [the participant’s] musculo-skeletal case presentations have been really, really thorough … there has been a big change since we started supervision two years ago, so that’s been a really nice change to see as a supervisor … that she got that in-depth clinical knowledge now, so that’s been a big improvement.

**Increased professional support**

All the interviewed stakeholders agreed that the AHPEP placement provided the participant with an opportunity to establish new professional connections and link into networks, which ultimately increased professional support. This is especially important for sole practitioners who do not work alongside other staff from their own profession. Increased professional support can reduce professional isolation, which in turn is likely to have a positive impact on the retention of staff in rural areas. The participant’s line manager was asked about the outcomes she expected while sending her staff to the AHPEP placements. She responded thus:

Probably a satisfied workforce. I think again as sole practitioners, you can burn out quite quickly, so I think it’s just again that validation of practice, that sharing of skills and that increased morale … I suppose that the job you are doing, that you are doing it well. Hopefully you’ve got a happier workforce that are happy to stay.

**Validation of practice**

The last theme that emerged in this category was that the placement provided an opportunity to validate practice. As the participant was a sole practitioner with access to the clinical supervisor only via telephone, the placement provided an opportunity for face-to-face learning. The AHPEP participant said: “… I certainly learnt some new assessment skills, but really fine tuning skills I had learnt previously, especially with really complex patients …”

**Benefits of the AHPEP placement to service delivery**

The second category of information that resulted from analysis of the interview data was that the AHPEP placement had numerous benefits to service delivery in the participant’s work unit. Some of these benefits included improved efficiency, improved patient outcomes, and a positive influence on other team members.

**Improved efficiency**

Improvements in the participant’s skills, knowledge, clinical reasoning, and confidence were considered to subsequently improve the service efficiency. The participant felt that she was surer of the assessment and treatment techniques she used and was able to ascertain with more ease when to refer the patient on to someone else. The participant’s clinical supervisor highlighted that the participant also implemented a new model of care using telehealth following the placement:

She [the participant] did some telehealth video conferencing appointments with a fellow who had a musculo-skeletal
condition who she couldn’t get out to see for two or three weeks. So, that as a fairly recent graduate is quite a daunting task to take on to do physio assessments over videoconference … I think, the physio she did the placement with was doing some telehealth appointments … she’d never done one up until she had done that placement …

Improved patient outcomes
Increased confidence, skills, and knowledge of the participant following the placement program were also attributed to increased patient safety, more holistic care, reduced need for patient travel, and reduced amount of time the participant spent in consultations. The line manager said:

Complex patients may need to be less likely to be transferred out – so if she [the participant] is confident to deal with the issue then the impact on patients is that they will have to travel less from rural and remote areas and they can stay where they live.

Positive influence on other team members
Finally, the AHPEP placement was considered to leave the participant feeling enthused about learning and professional development. This was seen to positively influence the participant’s colleagues to pursue similar professional development opportunities. The participant’s line manager stated: “… I think if you’re willing to go off and learn it’s kind of saying to the rest of the team ‘yeah, I am experienced but there are areas that I still need to develop’ …”

Thus, the AHPEP placement was considered to be beneficial to the participant and to service delivery in the participant’s work unit at multiple levels. As many of the themes emerged at baseline and were sustained and strengthened at 6 months, it appears that benefit of this AHPEP placement was sustained over time.

Conclusion
Allied health professionals practicing in rural areas of Queensland, Australia, often practice in professional isolation with the nearest professional colleague hundreds or thousands of kilometers away. Access to training and professional development activities for these practitioners is limited as most training activities take place in bigger centers.7 In order to address these gaps and inequity confronting allied health professionals in nonmetropolitan regions, AHPEP provides eligible regional, rural, and remote allied health professionals and assistants with access to individually tailored placement opportunities. The potential benefits of the AHPEP placements can be wide-ranging. From the perspective of allied health professionals and assistants, the AHPEP placements, in addition to providing access to ongoing professional development opportunities, can also assist to increase knowledge and skills, enhance clinical confidence (through feedback), validate practice, and assist in networking and collaboration. Furthermore, the AHPEP placements provide unique opportunities to gain experience firsthand of “doing” which can be useful for kinesthetic and visual learners (as opposed to others who gain knowledge and skills merely through reading). From the perspective of the health service, the AHPEP placements can assist in sharing of resources, supporting and developing the workforce, and highlight opportunities for expanded services (resultant from a renewed workforce). From the perspective of the patient, the AHPEP placements can improve access to health care services which enhance continuum of care and reduce travel costs and waiting times.

While these are the potential widespread benefits of the AHPEP placements, this study investigated the medium- to long-term impact and feasibility of one AHPEP placement using a mixed methods design. This study found that the placement investigated was beneficial to the participant and to service delivery. The participant, facilitator, and the line manager agreed that the AHPEP placement met the participant’s learning goals; resulted in improvements in knowledge, skills, and confidence; and assisted in accessing professional support and obtaining additional resources. In addition, the benefits reported were sustained at 6 months post-placement.

As this study reports on the experiences from one participant from a single discipline, the transferability of its findings may be limited. However, the rich descriptions of the program and use of typical case sampling aim to ameliorate some of these limitations. While this study provides emergent evidence about the usefulness of the program to participants and their work units, further studies are warranted to investigate other professional groups, in a range of settings, and ultimately evaluate what, if any, are the direct benefits of such placements to patient care and outcomes.

Author contributions
PM designed the project, obtained ethics approval, and led the research project. SK assisted with the project design and ethics application, and conducted the interviews. MS assisted with participant recruitment. LL assisted with data analysis. PM, SK, MS, LA, VB, and LL contributed to drafting and finalizing the manuscript. All authors contributed toward data analysis, drafting and critically revising the paper and agree to be accountable for all aspects of the work.
Acknowledgment
The authors would like to thank the AHPEP case study participants for their contribution to this research project.

Disclosure
The authors report no conflicts of interest in this work.

References
7. Martin P, Abernathy L, Kumar S. Making the most of what you have: challenges and opportunities from funding restrictions on health practitioners' professional development. *LIAMSP*. 2013;11(4).
Supplementary material

Interview guide

1. Introduction questions
   - Tell me about your recent AHPEP placement experience
   - How did you find the placement?
     Probes: What aspects did you find useful/not useful? What aspects most benefitted/least benefitted you?
     Probes – Can you think of an example?

2. Benefits of the placement to yourself
   - Can I get your perspective in regards to whether or not the placement was beneficial to you?
     Probes – List a few words you would use to describe it?
     Probes – How has this placement affected the routine duties you carry out within your work unit?
     Probes – How has it affected the way you feel about your professional skills/clinical skills/knowledge; your confidence; teamwork skills; clinical reasoning; assessment skills; intervention skills?

3. Benefits of the placement to your work unit
   Now let’s think about the benefits of the placement to your work unit
   - Can I get your perspective in regards to whether or not the placement has been beneficial to your work unit?
     Probes – In what way? Can you give an example?
   - Has the placement assisted you with service delivery issues and caseload planning?
     Probes – Do you have an example you can share with me?
   - If you could make a change (or changes) to routine practice/s in your work unit as a result of the placement, what would it/they be? What would make it easy to make these changes? What might make it hard to make these changes?
   - In what ways does the AHPEP placement affect patient outcomes?
   Would you like to comment on any other aspect of your AHPEP placement experience?