

INTERPROFESSIONAL LEARNING:

The transformation of a student-led health clinic in rural Australia from a face-to-face service to a telehealth model: Evaluation of student and client experiences during a COVID-19 driven transition

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Abstract

Introduction: The COVID-19 pandemic has necessitated the rapid transition of many face-to-face health services to alternate modes of service delivery. The objective of this study was to explore the benefits, challenges and perceived quality of a telehealth service delivery model from the perspective of clients and students. Further, students' perceptions relating to the quality of the educational experience were also explored.

Methods: The study was set in a student-led interprofessional health and wellness clinic in rural Queensland, Australia. A qualitative case study design was used, including semi-structured student interviews and client open-response survey data. Participants were nursing and allied health students who completed a student-led interprofessional clinic placement and adults with low to rising risk of chronic disease who attended the clinic for telehealth delivered services.

Results: Themes identified following analysis included: new or adapted skills needed for success; challenges, limitations and the need for resources, training and support; quality interprofessional education experiences can be achieved in telehealth; coming away with a new set of skills; the important role of the client for success; and benefits and disadvantages of telehealth for clients.

Conclusions: The findings support that telehealth-based service-learning models are a feasible way to deliver health and wellness services from the perspective of students and clients and provide students with important skills for rural health service delivery.

Keywords: interprofessional; service learning; clinical placement; eHealth; telehealth

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Introduction

There is increasing acknowledgment of the importance of interprofessional collaboration to deliver quality care, particularly in rural and remote healthcare (Jones et al., 2015; Pullon et al., 2016). As such, a key skill for future health professionals is the ability to work in interprofessional teams. Interprofessional education is defined as occasions when two or more professions learn from, with and about each other to improve collaboration and quality of care (Barr et al., 2017). Interprofessional education can be delivered to health students via a range of methods, including clinical simulation, problem-based learning and work-integrated learning experiences (Jones et al., 2015). Service-learning models—so called as students engage in experiential learning activities that deliver health services to the communities in which they operate—are an emerging way in which interprofessional education is delivered (Forbes et al., 2020).

Literature relating to interprofessional service-learning models has traditionally focused on face-to-face service delivery (Haines et al., 2014; Kent et al., 2016; Stetten et al., 2019). Telehealth service delivery is an important strategy to address issues of geographical remoteness in rural and remote Australia and has gained additional attention in the context of the COVID-19 pandemic, where access to face-to-face services has been restricted (National Rural Health Commissioner, 2020). A range of guidelines and recommendations exist for delivering telehealth services more generally and providing interprofessional care via telehealth (AHPA, 2020; Gustin et al., 2020; RACGP, 2019). These focus on ensuring client safety and privacy, as well as practical considerations regarding etiquette, technology and facilities for telehealth. There has also been some recent interest in using telehealth to deliver interprofessional education (O'Shea et al., 2019; Porter Lipscomb & Zupec, 2020; Rutledge et al., 2020). Despite this, there is limited literature relating to interprofessional service-learning models delivered via telehealth (Bautista et al., 2020; Winship et al., 2020). Given the likelihood that the future rural health workforce will be required to engage with telehealth service delivery, including practising interprofessional collaboration within a telehealth environment, there is benefit in exploring the feasibility of incorporating telehealth service delivery into interprofessional service-learning models. This study describes the transition of an interprofessional student-led clinic in rural Australia from a face-to-face service-delivery model to a telehealth model during the COVID-19 pandemic. In doing so, this study aims to address the following:

1. To explore the key benefits and challenges of a telehealth service-delivery model from the perspective of clients and students
2. To investigate how students perceive the quality of educational experiences when using an interprofessional telehealth service-delivery model
3. To understand how clients and students perceive the quality of care delivered via a telehealth service-delivery model.

The health and wellness clinic model

Southern Queensland Rural Health (SQRH), as a Commonwealth-funded University Department of Rural Health, established a student-led interprofessional health and wellness clinic (HaWC) in July 2019. The Toowoomba-based clinic aims to provide a holistic, client-centred, goal-orientated and time-limited service to clients with low to rising risk of developing a chronic disease. Clients are referred by a medical practitioner and triaged for eligibility to participate in the HaWC program. HaWC services are tailored to client needs and include formal exercise programs, health education sessions, individual consultations and cooking demonstrations. Services are delivered by students and staff from nursing, physiotherapy, exercise physiology, dietetics, psychology and social work. The program also includes an interprofessional intake assessment, regular interprofessional case conferences and client review sessions as well as transitional activities to support clients to transition from the clinic program into self-managed health and wellness in the community. The structured program for clients is approximately 4 months' duration, with follow-up contact at 6 and 12 months after transition from the program.

The HaWC provides nursing and allied health students with a unique placement experience in a rural, interprofessional setting. Students are exposed to a range of interprofessional opportunities, including observations of other disciplines, participating in interprofessional case conferences and delivering services in conjunction with students from other professions in collaborative teams. Students are supervised and assessed by clinical educators from their own profession and receive support and supervision from clinical educators from other professions.

COVID-19: The impetus for SQRH transition to telehealth service delivery

From July 2019 to March 2020, all services were delivered in-person. However, in March 2020, the novel coronavirus COVID-19 was declared a global pandemic by the World Health Organization (2020), which had major implications for healthcare delivery in Australia. States and territories implemented a range of public health regulations to slow the spread of the disease, including introducing 1.5 metre social distancing between individuals, urging workers who were able to work from home to do so and ordering non-essential businesses to close.

As a result of this situation, all in-person services at HaWC were ceased in March 2020 due to risks associated with the COVID-19 pandemic. To allow ongoing service delivery for clients and for scheduled student placements to continue, a decision was made to rapidly transition the HaWC service-delivery model to a telehealth model.

SQRH transition to telehealth and consequent service activity

A range of strategies were implemented. Firstly, service delivery was moved to an adjacent building that had several rooms with existing videoconferencing facilities, including

video and audio recording and large screens. Skill-building sessions on how to use the videoconferencing equipment and telehealth software were delivered to clients, clinical educators and students on placement at the time of transition. An interprofessional case conference was held with clinical educators and students to discuss existing HaWC clients, to identify whether clients were likely to need additional supports to access telehealth and to prioritise telehealth services for clients. Existing HaWC clients were contacted to reconfirm their informed consent in relation to receiving services via telehealth, and a telehealth preparation session was scheduled with each client to test the telehealth technology prior to a clinical session. For clients' initial telehealth services, longer appointments were scheduled to accommodate any technological issues. Paper-based forms and documents were adapted to be completed by clients online.

Services were delivered fully via telehealth for 10 weeks from 6 April to 12 June 2020. Fourteen clients received telehealth services during this time. Most services were able to continue, including individual nursing, physiotherapy, exercise physiology, dietetics, social work and psychology individual appointments and group health education sessions. Group pool sessions were not able to continue, however group exercise sessions (usually conducted in a gymnasium) were able to be conducted with some clients using equipment available in their homes. The interprofessional nature of service delivery continued, with students and clinical educators conducting regular interprofessional case conferences and multiple professions collaborating to conduct client care. For example, individual appointments and group sessions were jointly planned and delivered by two professions. A total of 220 occasions of services were conducted via telehealth. Most services were conducted via the online videoconferencing platform Zoom, with some services delivered via telephone due to technical issues.

In addition to the 14 clients who received telehealth services, six clients withdrew from the program or chose not to transition to telehealth service delivery for telehealth and COVID-19-related reasons. Reasons for withdrawal included clients' preference to receive services face to face, clients not being able to access the pool or gym facilities, a lack of trust in online technology and COVID-19 affecting access to carer respite services or necessitating homeschooling responsibilities, thereby affecting ability to attend services.

Fourteen students completed a placement at HaWC during telehealth service delivery. Although most students received face-to-face supervision during HaWC telehealth service delivery, several students were supervised remotely by clinical educators. Students continued to receive interprofessional education, for example, through observations of other disciplines via telehealth and collaborating with other professions to deliver care.

Methods

This evaluation study used a qualitative design with a general inductive approach (Thomas, 2006), drawing on semi-structured interviews with students and client

written responses within an electronic survey. A general inductive approach for analysis of qualitative evaluation data involves the following steps: (a) condensing raw textual data into a brief summary format, (b) establishing clear links between the evaluation or research objectives and the summary findings derived from the raw data and (c) developing a framework of the underlying structure of experiences or processes that are evident in the raw data (Thomas, 2006).

Participants

Participants for this study were nursing and allied health students who were undergoing or had completed a placement at HaWC and clients who received HaWC services during telehealth service delivery (i.e., April to June 2020). All eligible students and clients were contacted via email by HaWC administrative staff and invited to participate in the evaluation. It was made clear to students that their participation or lack thereof in the evaluation would not affect their involvement with the HaWC. Written consent was obtained from students before interviewing, and clients gave consent to participate when completing the survey.

Data collection

All students who consented to participate were invited by the lead researcher (CW) to participate in a semi-structured interview via phone or videoconferencing during or following the final 2 weeks of their placement. Informed consent was confirmed before the commencement of the interview. The interview was conducted according to a semi-structured interview guide developed by the research team and explored students' experiences of completing a placement with telehealth-based service delivery. Open interview questions were used to elicit in-depth responses, with probing questions used to clarify meaning (Table 1). The interview was conducted by a member of the research team not associated with the students' placement or assessment (CW). The interviews ranged from 20 to 33 minutes (mean 25 minutes), excluding introductions and confirmation of informed consent. Interview audio recordings were transcribed to assist with analysis.

Table 1

Example Student Interview Questions

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1. Tell me about your learning experience during your telehealth placement. How has this placement contributed to your readiness for practice?
 2. How has this model contributed to your development as a professional to work in a team with other professions?
 3. Do you believe your telehealth placement provided adequate/appropriate opportunities for interprofessional collaborative practice and learning opportunities to occur effectively? How do you think this compares to a face-to-face placement?
 4. How did the telehealth-based placement compare to other placements you've completed with face-to-face service delivery?
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As part of standard practice, HaWC clients were invited to complete an anonymous feedback survey at the completion of the 4-month HaWC program. Clients were emailed a link to the online survey, which was hosted on Qualtrics®. The survey asked general questions about experience of HaWC services and receiving services via telehealth and provided an open response in relation to the following questions:

- What do you see are the advantages of receiving HaWC services via telehealth (video and/or phone calls)?
- What do you see are the disadvantages of receiving HaWC services via telehealth (video and/or phone calls)?

Analysis

All data were analysed directly using a general inductive approach to allow exploration of specific issues (Thomas, 2006). Initial coding was undertaken separately by two researchers trained in qualitative analysis (CW, RF) through manual coding by reading through the first six transcripts (students) and all responses (clients) and using an iterative process of coding and categorising to identify the initial coding scheme. The initial coding scheme was then used as the analytical framework, which was then applied to subsequent transcripts. This process of analysis included key phases of familiarisation, coding, searching, reviewing and naming (Braun & Clarke, 2006). Saturation was determined through a preliminary analysis alongside data collection with discussion and negotiation, firstly between the two lead researchers followed by the research team. The researchers conferred with an experienced clinical educator who supervised students at HaWC regarding the qualitative interview data, codes, themes and corresponding quotes to aid verification and trustworthiness of the data. To support reflexivity, the research team met regularly throughout data collection and analysis to identify and consider potential biases and assumptions. For verification purposes, summaries of each transcript, including context, main themes, impressions and exemplary quotations, were also prepared and compared with memos written during the interviews.

Ethics approval

The study was approved by the University of Queensland, Health and Behavioural Sciences, Low & Negligible Risk Ethics Sub-Committee (2020000789).

Results

Nine of the 15 eligible students participated in an interview relating to their placement experience. All students were domestic students and from exercise physiology (3), physiotherapy (1), dietetics (2), social work (1) and psychology (2) disciplines. Two thirds of students were female. Students' placement duration at HaWC ranged from 3 to 17 weeks. All students were in their final year of study for their course, and most had no

prior clinical experience of telehealth service delivery. Five students had experienced a combination of face-to-face and telehealth service delivery while on placement at HaWC, while four students only experienced telehealth service delivery during their HaWC placement.

Four of the 14 clients who received telehealth services completed an anonymous feedback survey at the end of the HaWC program, which contained sufficient open-response data to enable analysis. All clients included in the study received HaWC services face to face prior to the transition to receiving services via telehealth.

Data analysis identified six themes and associated subthemes from the student interviews and client surveys that informed the study's aims. These are described below and are accompanied by illustrative quotations. Student participants are referred to as "SP", and client participants are referred to as "CP".

Theme 1: New or adapted skills needed for success

SPs reflected that their clinical skills needed rapid and, often significant, adaptations to engage effectively with clients, teams and educators in a telehealth setting. This primarily related to a need for effective communication skills, rapport and managing telehealth technology. Despite the rapid change, most SPs felt they were able to adapt, and some were "surprised" at this success.

I thought, how is this going to work? I can't even touch these people. I can't be near these people, but I really didn't find that. I had a client as well—English was their second language—and we still communicated really well. (SP 1)

Another student highlighted the importance of developing rapport with clients.

I think it's particularly important that you try to build some rapport—even more than usual. Just because people are more distracted. But it's just more unusual. So I think that rapport side of things is particularly important again. (SP 3)

Conversely, some SPs felt a strong similarity between the skills needed for effective in-person care and the skills required for effective telehealth consultations.

I thought it was going to be really different through telehealth and the way that we would deliver the exercise, but it did end up being quite "samey" there. Like, we do the same sort of exercises, just with different in-home equipment, so I was kind of surprised to see that and how easy it was to do it as well. (SP 2)

Theme 2: Challenges, limitations and the need for resources, training and support

Although SPs were able to adapt many of their face-to-face clinical skills to telehealth delivery, there were a range of limitations in the delivery mode and initial technical challenges.

Usually, I haven't had too many issues with connectivity, but there have been times where I needed to change from a Zoom video platform to just using the telephone, and with the telephone, there's obviously the lack of visual cues, lack of the, you know, non-verbal language. Even in a video session, you are limited in trying to interpret non-verbal language with the client. (SP 8)

SPs strongly recognised the importance of clients and themselves receiving training and support in relation to telehealth to ensure effective client care could be achieved.

So if it was to be a known—say telehealth placement—it would be interesting to learn some of those communication strategies that you always—at uni you're learning face to face, you're trying to learn how to build rapport and all of that physical, body language, stuff like that. So I think it could have been beneficial to know that going in to be a bit more prepared. (SP 3)

The fact that (clients) get a prep appointment before their actual appointment, it's a lot of preparation for them, ... to make sure that things do run smoothly, but I don't think it could get better. (SP 1)

Theme 3: Quality interprofessional education experiences can be achieved in telehealth

SPs reflected on valuable and authentic interprofessional experiences that were achieved despite the sudden move to telehealth. These experiences played a strong role in students' learning, especially in relation to role recognition and teamwork.

With telehealth, we were able to communicate a bit more. Communication was more important through telehealth because of its newness and that it wasn't as common for clients to participate through that, so really making sure that we check in with each other to ensure their—that we're all on the same page and if there were some small thing we could all work together and ensure. (SP 4)

The telehealth aspect definitely wasn't a negative. I think in some ways you could utilise that even better in the real world with joint [interprofessional] sessions, and that sort of thing, that wouldn't be possible in a physical environment. (SP 3)

Theme 4: Coming away with a new set of skills

SPs reflected on the unique and sustained skills that they were able to acquire, practise and master through dedicated time using telehealth to deliver health services. SPs felt that these skills would be particularly valuable in their future endeavours as a health professional.

I feel like telehealth gave me more experience ... to go into the workforce with that skillset and ... more awareness and skills on what sort of different platforms you can use with telehealth and the things that you need to consider if you're going to go into

telehealth services, where I don't feel like a lot of other professions have been exposed to that or it's not something that you learn at uni or anything like that. (SP 4)

It could continue to be a really valuable part of student placement. Particularly in rural Australia, which is obviously what SQRH is all about. ... Maybe even keeping the telehealth aspect in some way ... could continue [to be] a beneficial experience for students. (SP 3)

Theme 5: The important role of the client for success

SPs reflected on the role of the client and their engagement in determining the success of using telehealth and determining the outcomes of the care provided. There was a realisation that quality care could be provided when the client is willing and able to engage using the platform.

There [were] a lot of [clients] who were really engaged face to face, and they didn't let COVID or the move to telehealth services push them down because they were so focused and they could see the benefits that they were getting out of the clinic and the support that we were providing, and they were really onboard with trying new things and learning new things. (SP 4)

I think it was kind of cool to learn with that generation and go, "Oh wow, I can see how not being tech savvy can be really difficult, and I think it was a big eye-opener to go, "Hang on a minute, ... if I'm going to provide any type of health advice or anything like that, I first need to understand the program so I can empower them." So that was really fun. (SP 6)

Theme 6: Benefits and disadvantages of telehealth for clients

CPs and SPs valued the continuity of service delivery that telehealth afforded during the COVID-19 pandemic and also noted the benefits of telehealth in relation to reduced travel time.

The telehealth service kept me on track with my program. (CP 2)

A lot less travel ... doing in the privacy of your home. (CP 4)

It increases flexibility on the psychologist's side as well as the client's side because it reduces travel time. It means that the clients are able to work from home, so throughout COVID it means we're able to still be in touch with clients as opposed to not being in touch with them at all. There are advantages to the telehealth modality specifically in the facilities, such as being able to screenshare, being able to watch videos together. ... You can still work on documents together and get their signature and things like that. (SP 8)

However, CPs and SPs noted limitations associated with telehealth service delivery for clients, including not being able to use gym and pool facilities and not receiving hands-on services. CPs valued social interactions with other clients at HaWC and found that telehealth service delivery affected this element of their HaWC experience.

Under the circumstances, not being able to attend the group hydro sessions. (CP 2)

Especially in [exercise physiology] and physio, you don't get the hands-on advice and the ability for the clinician to make any slight adjustments to your technique that may be needed. (CP 4)

Having to switch to telehealth as you didn't get a chance to just chat with other [clients]. (CP 1)

So that was a really big thing for them and because a lot of the [clients] are already socially isolated, they found that coming and doing face to face with the health and wellness clinic was something huge for them and really provided that "me" time a lot of them mentioned and that one-on-one time that they needed to get out of the house. (SP 4)

Discussion

This study has explored student and client perspectives of a student-led, interprofessional clinic's transition to telehealth in the context of the COVID-19 pandemic with an aim of exploring the benefits, challenges and perceived quality of a telehealth service-delivery model from the perspective of clients and students as well as students' perceptions relating to the quality of the educational experience. As HaWC rapidly transitioned to telehealth service delivery, students and clients were required to learn new skills and adapt to a new model of delivery. Results suggest that students have gained valuable telehealth skills, while simultaneously receiving exposure to interprofessional education. Students perceived that quality interprofessional experiences could be facilitated within a telehealth service-delivery model and identified that the telehealth model used required them to prioritise interprofessional skills, such as communication and role clarity.

While some clients were able to adapt to the new mode of delivery, others were not able or chose not to continue to receive services via telehealth. It should be recognised, however, that this transition occurred in the midst of the COVID-19 pandemic, within an environment of heightened anxiety and uncertainty, which may have affected clients' ability to engage with telehealth services. There were also some perceived challenges relating to telehealth service delivery, from the perspective of both students and clients. These included limitations in services available, being able to complete physical assessments and clients not experiencing the same level of peer support (Fisher et al., 2018) through face-to-face engagement with other clients. Despite these challenges, students and clients identified that reduced travel time was a pragmatic advantage of this service-delivery model.

Students and clients expressed a perceived need for additional support to transition to telehealth service delivery. Students identified that client engagement was central to the success of a telehealth model, and as such, clients need to be supported in the transition to telehealth to support this engagement. Students are likely to benefit from education in relation to managing service delivery via telehealth (Barrett, 2013), in particular,

communicating and building rapport with clients remotely and adapting face-to-face clinical skills to telehealth services. Staff, students and clients need appropriate training in the operation of videoconferencing equipment and technology to ensure an effective telehealth consultation (AHPA, 2020). Due to the likely ongoing demand for telehealth service delivery in rural Australia, there may be benefits in more consistently integrating telehealth into health student curricula and work-integrated learning experiences. Further research is needed to explore appropriate pedagogical approaches to telehealth education, including delivering interprofessional education and care via telehealth and how this is best integrated into university curricula and work-integrated learning (Chike-Harris et al., 2020; Edirippulige et al., 2018).

Although there is limited literature relating to telehealth service delivery in student-led interprofessional clinics in rural settings, several relevant case studies have been published since the commencement of this study. Winship and colleagues (2020) described the transition of an interprofessional service-learning model within a wellness education and care coordination service for low-income older adults from a face-to-face to a telephone delivery method. Clients and students appreciated the service continuity during COVID-19, and students received exposure to telehealth service delivery, however there were some challenges associated with delivering care and interprofessional education using a telephone delivery method. Bautista and colleagues (2020) described an interprofessional outreach service delivered by medical and pharmacy students that was implemented in response to the COVID-19 pandemic. The study found that the model was an effective format for interprofessional education and that students were able to meet their learning objectives, however it also noted a number of technological challenges. Similarly, the current study identified challenges relating to the use of technology by some students and clients, of which a new set of skills were both required and valued. The findings of the current study present an additional and unique perspective of telehealth delivery from both students and clients in the rapid transition of a rural interprofessional student-led clinic to a telehealth model and has demonstrated the benefits that could still be achieved through interprofessional care delivery that is not face to face.

The experience of transitioning HaWC to telehealth service delivery has demonstrated that the delivery of student-led interprofessional services using a telehealth mode of delivery appears feasible from the perspective of students and service users. As such, a decision has been made to offer ongoing HaWC services via a blended model of face-to-face and telehealth service delivery. This blended delivery may have additional benefits for the student learning experience and, further, may mitigate the challenges associated with a telehealth-only placement for students. This also allows for expansion of HaWC's service-delivery footprint to additional rural locations beyond Toowoomba and reduced travel time for some clients living outside the rural hub of Toowoomba.

This study demonstrates a viable model to develop health student telehealth skills in a student-led, interprofessional, work-integrated learning context. This study also demonstrates that the transition of an existing student-led clinic to telehealth is feasible from the perspective of key stakeholders, even within a limited timeframe. Other student-led clinics, particularly in rural settings, may consider a service-delivery model that includes face-to-face in combination with telehealth services to balance the benefits and challenges of both delivery modes.

Limitations

Due to the small number of clients and students, this study was not able to significantly inform the impact of telehealth on client health outcomes and student performance outcomes. Additionally, the study only collected data from clients who continued to receive HaWC services and, therefore, did not collect the perspectives of clients who withdrew from HaWC during or after the transition to telehealth service delivery. There would be benefits to capturing the qualitative perspectives of this group of clients to better understand barriers and enablers to telehealth service delivery.

Conclusion

This study has described the transition of an interprofessional student-led clinic from a face-to-face to telehealth model in a rural Australian setting in the context of the COVID-19 pandemic. It explored the benefits, challenges and perceived quality of a telehealth service-delivery model from the perspective of clients and students as well as students' perceptions relating to the quality of the educational experience. While students and clients were required to adapt to telehealth service delivery, the model facilitated continuity of service delivery during the COVID-19 pandemic. It provided both valuable student learning opportunities in telehealth service delivery and interprofessional experience while also delivering ongoing care to those with low and rising chronic health complaints. The findings of this study suggest telehealth-based service-learning models are a feasible way to deliver health and wellness services from the perspective of students and, potentially, service users. Findings indicate that telehealth service-delivery models require additional preparation, training and support for students and service users. With future research in this area relating to client and student outcomes and satisfaction, telehealth services may be able to provide students with important skills for rural health service delivery and service the needs of clients with low to rising chronic health issues who are not able to access face-to-face support.

Conflicts of interest and funding

Southern Queensland Rural Health is funded by the Australian Government Department of Health as part of the Rural Health Multidisciplinary Training Program. There are no conflicts of interest to report.

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