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University staff perspectives on determinants of high-quality health professions student placements in regional, rural and remote Australia: protocol for a mixed-method study

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ABSTRACT

Introduction In rural areas, work-integrated learning in the form of health student placements has several potential benefits, including contributing to student learning, enhancing rural health service capacity and attracting future rural health workforce. Understanding what constitutes a high-quality rural placement experience is important for enhancing these outcomes. There is no current standardised definition of quality in the context of rural health placements, nor is there understanding of how this can be achieved across different rural contexts. This study is guided by one broad research question: what do university staff believe are the determinants of high-quality health professions student placements in regional, rural and remote Australia?

Methods and analysis This study will adopt a convergent mixed-method design with two components. Component A will use explanatory sequential mixed methods. The first phase of component A will use a survey to explore determinants that contribute to the development of high-quality health student placements from the perspective of university staff who are not employed in University Departments of Rural Health and are involved in the delivery of health student education. The second phase will use semistructured interviews with the same stakeholder group (non-University Department of Rural Health university staff) to identify the determinants of high-quality health student placements. Component B will use a case study Employing COnceptUal schema for policy and Translation Engagement in Research mind mapping method to capture determinants that contribute to the development of high-quality health student placements from the perspective of University Department of Rural Health university staff.

Ethics and dissemination The University of Melbourne Human Ethics Committee approved the study (2022-23201-33373-5). Following this, seven other Australian university human research ethics committees provided external approval to conduct the study.
The results of the study will be presented in several peer-review publications and summary reports to key stakeholder groups.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Conducting this study across different Australian geographical settings and engaging with diverse stakeholder groups will enable researchers to identify the determinants that contribute to the development of high-quality health student placements in regional, rural, remote and very remote areas of Australia.
⇒ The mixed-method study design involves rural health professionals and academics as authors and engages participants iteratively throughout the study to encourage reflection and dialogue.
⇒ This study does not capture student, service user and other community member perspectives of high-quality student placements.

INTRODUCTION

In Australia, people living in regional, rural and remote communities (herein known as rural communities) experience poorer health outcomes and typically have poorer access to healthcare compared with their metropolitan counterparts.[1] Primarily, the paucity of healthcare access in rural communities is driven by a maldistributed health workforce which creates workforce shortages in rural areas.[2] In response to this, a range of mechanisms have been used to develop the rural health workforce, particularly the provision of higher education in rural communities via rural study locations and student placements.

Rural health student placements are a form of work-integrated learning.[3] Like health student placements more generally, rural health student placements vary significantly across health professions, particularly in duration and activity. However, rural health

student placements are common in that they occur in a range of rural settings, including community health, private practice, hospitals, schools and specific communities.[4] Rural health student placements have an impact on a range of stakeholders including health, education and human service organisations that are often understaffed and rural community members who are typically underserved.[5] Student placements are considered an important educational tool as they allow students to develop and apply their occupational skills within a workplace setting.[6] Rural health student placements therefore need to be of good quality to meet the expected student educational outcomes, but also positively benefit rural communities.

The literature has gone some way to describe and define quality in work-integrated learning.[7–9] For example, Winchester-Seeto[9] list nine quality dimensions of work-integrated learning (authenticity of experience, being embedded in curriculum, student preparation, supporting learning activities, supervision including feedback, reflection, debriefing, assessment and inclusive approach to work-integrated learning). In Australia, current higher education legislation and frameworks shape how rural health student placement quality is understood. In 2011, the federal government passed the Tertiary Education Quality and Standards Agency (TEQSA) Act 2011, which provides national consistency to regulate higher education provision in Australia. In 2021, TEQSA outlined quality higher education through the Higher Education Standards Framework.[10] Within this framework, TEQSA describes seven domains presented in an ecological model to guide higher education providers to design and deliver quality higher education.[11] Student placement standards are discussed throughout several domains: particularly in domain one (student participation and attainment of higher education) around learning outcomes relating to employment and assessments; in domain two (learning environment) where quality of the learning environment and student safety are emphasised; in domain three (teaching) where the quality of course design, staffing and student supervision, learning resources and educational supports are noted; and in domain five (institutional quality assurance) where quality assurance of student placements at the institutional level is highlighted.[11]

Beyond government legislation and frameworks, broader higher education thinking suggests that high-quality higher education is not simply evidenced by educational outputs or outcomes, but from educational design and delivery mechanisms. For instance, the idea of 'quality work' in higher education, as described by Elken and Stensaker,[12] suggests the day-to-day activities embedded in educational processes beyond the management and culture mechanisms impact the quality of higher education. Following this thinking, it could be useful to explore how day-to-day activities and practices in different contexts influence the quality of student placements in rural communities.

What comprises a high-quality *rural* health student placement is yet to be defined. A scoping review of the literature on the quality of rural health student placements by Green *et al*[4] found that some literature focused on proxy indicators of quality, such as student satisfaction and perceived value of the placement. The scoping review identified four domains relating to features of rural health student placement quality: (1) learning and teaching in a rural context, (2) rural student placement characteristics, (3) key relationships and (4) required infrastructure. Green *et al*[4] also identified that some of the features within the domains are difficult to conceptualise and further research is warranted to measure these in rural contexts. The scoping review found that the perspectives of university staff involved in developing, facilitating and evaluating rural health student placements were largely absent in the literature.

There are two distinct perspectives to consider within the university staff stakeholder group. University Departments of Rural Health (UDRHs) university staff are funded by the Australian Government Department of Health and Aged Care to carry out much of the work involved with the design and delivery of rural health student placements.[13] UDRHs are embedded in Australian universities, and as such, UDRH staff are university employees. Non-UDRH university staff employed in other health-based university departments, faculties or colleges (many of whom are based in metropolitan areas) also shape the design and delivery of rural health student placements.

A range of perspectives will need to be captured in the work to identify determinants of high-quality rural health student placements, including students, service users and other community members. Due to limitations with research capacity to rigorously explore the full range of stakeholder perspectives, this present study focuses on the university staff perspective as per the gap demonstrated by Green *et al*.[4] Consecutive phases of the project to capture student, service user and community member perspectives are planned to commence in 2025.

With a deeper understanding of the perspectives of university staff and other stakeholders regarding what comprises high-quality rural health student placements, informed strategies can be developed to optimise future rural health professions student placements.

Aims

This study is guided by one broad research question: what do university staff believe are the determinants of high-quality health professions student placements in regional, rural and remote Australia?

METHODS AND ANALYSIS

Theoretically informed from a rural standpoint,[14] this study will adopt a convergent mixed-method design (QUAN-qual + QUAL), and concurrently conduct data collection and analysis for two research components: component A (explanatory sequential mixed methods (QUAN-qual)) and component B (qualitative methods

Table 1 Non-exhaustive list of health professions represented in rural health student placements (adapted from Green *et al*[4])

Medicine	Midwifery
Nursing	Dietetics/nutrition
Occupational therapy	Psychology
Physiotherapy	Podiatry
Speech pathology	Medical radiation science
Dentistry	Paramedicine
Oral health therapy	Exercise therapy
Pharmacy	Physiology
Social work	

(QUAL)).[15] This convergent mixed-method design was selected to ensure a range of university staff (both UDRH and non-UDRH) perspectives could be captured appropriately and equally influence the findings of the first empirical study to explore determinants of high-quality health student placements in rural Australia on a national scale.

Different methods will be used to collect and analyse data with the two participant groups (UDRH and non-UDRH university staff) due to the differing nature and extent of their involvement in developing and facilitating rural health student placements. Non-UDRH university staff may support the design and implementation of rural placements; however, their roles are more general and not typically focused on rural health student placements. Conversely, UDRH university staff hold roles that are typically focused on rural health student placements and often work alongside other UDRH colleagues who are equally focused on this work. For this reason, we will approach data collection and analysis with non-UDRH university staff in a way that allows their individual participation. Further, we will approach data collection and analysis in a way that harnesses the collective experience of UDRH university staff. Individual health professions will not act as inclusion criteria for participants. For a non-exhaustive list of potential health professions that may be reflected on by participants in this study, see table 1.

Figure 1 demonstrates the methodological approach to the research and how different methods are linked at various time points.

Component A: data collection and analysis

Component A of this study seeks to recruit non-UDRH university staff from across Australia who have a role in designing, delivering, administrating and/or evaluating rural health student placements. Recruiting from universities across Australia will allow the researchers to explore the concept of high-quality rural student placements from a national perspective. There are 43 universities located in Australia and the researchers will recruit participants from each of these institutions. Invitations will be sent via email correspondence with staff from faculties responsible for health degrees in which students undertake placements in rural areas. Each research team member will be allocated a group of universities for which they will be responsible for correspondence and recruitment. Contact with each university will be via email, initially through networks and web searches. Following initial contact, a snowballing technique will be used whereby participants are asked to forward the survey on to their

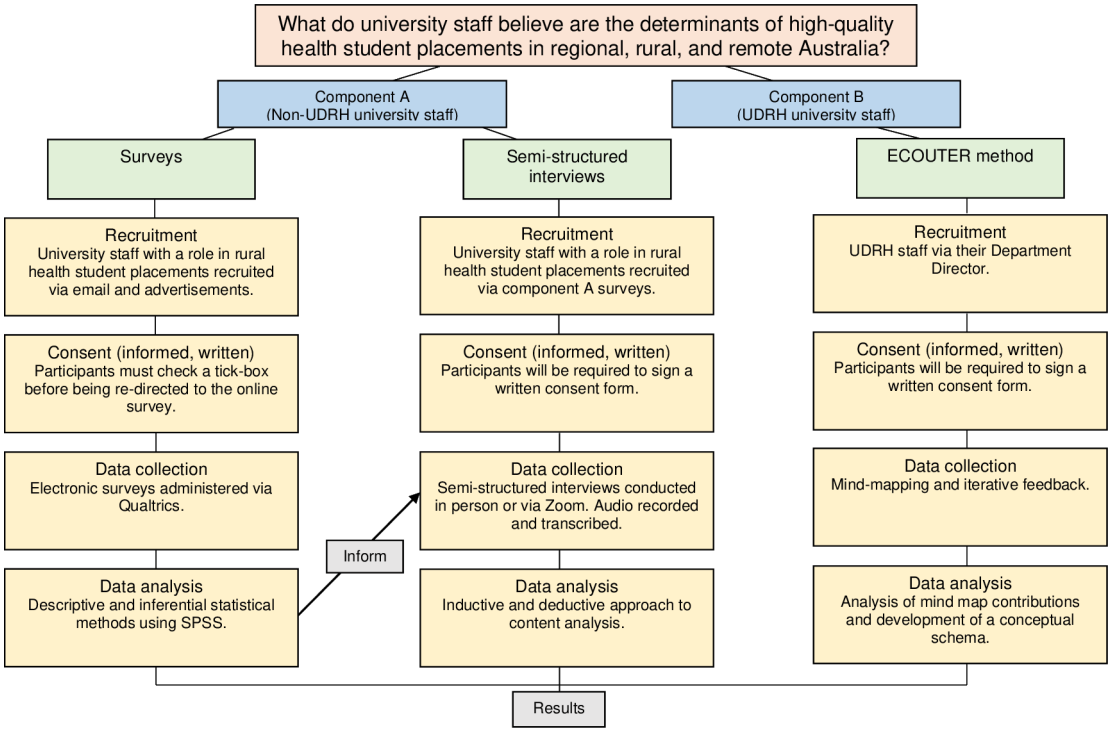

Figure 1 Component A and B recruitment, consent, data collection and data analysis processes.

own contacts. Data collection in component A consists of two forms of data collection: an online survey and individual semistructured interviews.

Survey

Phase one of component A will survey non-UDRH university staff (academics and professional) who are involved in the design, delivery, administration and/or evaluation of rural health student placements. The survey consists of Likert scale questions, open and closed questions, and nominal questions, as well as additional demographic questions including location, professions supported through their role and role in the organisation (see online supplemental file 1). Survey data will be collected electronically via the Qualtrics^{XM} survey platform[16] and is expected to take 15–20 min to complete. At the end of the survey, respondents have the option to provide their details if they are interested in being interviewed by the researchers.

Survey data will be analysed using descriptive and inferential statistical methods using IBM SPSS for Windows 10, V.26.[17] This will include frequency analysis to identify participants' views on the determinants of high-quality rural health student placements and using analysis of variance, t-tests and Pearson's r to examine differences among the participants' demographics. To assess the level of agreement between the questions of the survey, a Cronbach's alpha score will be calculated for survey responses. Manifest content analysis[18] will be conducted on answers to the open-ended questions.

Semistructured interviews

Non-UDRH university staff (academics and professional) who are involved in the design, delivery, administration and/or evaluation of rural health student placements, and who registered interest in being interviewed following the survey, will be invited to participate in individual semistructured interviews. These interviews will be conducted by a research team member and used to capture determinants of high-quality rural health professions student placements. Interviews will follow an interview guide and encourage a free-flowing dialogue, and each is expected to take approximately 45 min (see online supplemental file 2). Questions asked in the semistructured interviews will be based on the findings of the survey data and allow the researchers to further explore or explain the results. Interviews will be audio recorded and transcribed, with any names or identifying data removed from transcripts before analysis to ensure interviewees remain anonymous. If an interview participant does not consent to be audio recorded, a paper-based system will be used to record key responses, with the participant assigned a pseudonym to be used in notetaking. Participants will be provided with the opportunity to review the transcript of their interview and edit accordingly to ensure that their responses are appropriately represented.

Deidentified interview transcripts will be read and coded by at least two researchers. Interview transcripts will be analysed using descriptive coding[19] to identify similarities and differences between identified determinants across geographical contexts. Discussion and reflection on the codes among researchers will identify key overarching categories relating to participants' perspectives, experiences and issues within the transcripts. The combined results of the quantitative and qualitative analyses in component A will be used to answer the research question regarding university staff from across Australia (outside of UDRHs), who have a role in designing, delivering, administrating and/or evaluating rural health student placements.

Component B: data collection and analysis

Component B of this study seeks to recruit current UDRH university staff involved in designing, delivering, administrating and/or evaluating rural health student placements. UDRH university staff have significant experience designing and delivering rural health student placements. Component B will use a virtual case study[20] and Employing COnceptUal schema for policy and Translation Engagement in Research (ECOUTER) mind mapping methodology[21] to capture UDRH university staff perspectives of determinants of high-quality rural health professions student placements. The ECOUTER methodology involves an iterative data collection and analysis process that allows any number of participants to contribute to the development of knowledge on any given topic through mind mapping and analysis.[21] All 19 UDRHs will be invited to participate as a case study and involve between 5 and 15 participants per case study site (up to 255 participants in total).

The ECOUTER methodology includes four stages: (1) engagement and knowledge exchange, (2) analysis of mind map contributions, (3) development of a conceptual schema and (4) iterative feedback. In stage 1, a central question will be posed to UDRH university staff: 'What determines high-quality health professions student placements in rural Australia?' Individual participants will be asked to identify determinants of high-quality rural health professions student placements and then contribute data by adding those determinants to the online UDRH mind map.

Stage 2 comprises two parts and involves researchers analysing data in line with within-case analysis and ECOUTER methodology.[20 21] Part a: two researchers will conduct a 'light touch' analysis on the first order concepts provided by participants, by identifying overlap in listed determinants and organising these into top-level themes and subthemes, and identifying determinants requiring further explanation. Part b: researchers will meet with participants in each UDRH case in a virtual focus group to discuss the respective mind map. During these focus groups, first-order constructs provided by participants will be discussed, meanings clarified and attached to relevant literature, and documented (see online supplemental file 3). The organisation of top-level themes and subthemes will also be discussed, agreement or disagreement noted,

and UDRH case mind maps finalised. Stage 2 focus groups will last between 60 and 90 min. To complete this stage, researchers will write a short description of the relationships between the top-level themes and subthemes, drawing on descriptions provided by participants in the focus groups and in mind map comments.

In stage 3, all UDRH case short descriptions and mind maps will be analysed as one data set using descriptive coding,[19] which is consistent with cross-case analysis methods.[20] Second-order constructs will be developed by researchers through this process. An overall mind map and a draft conceptual schema will be developed, drawing on first-order constructs (participant identified determinants) and second-order constructs (researcher identified concepts) as high-quality rural health student placement determinants.

In stage 4, one participant from each UDRH case will be invited to participate in a focus group to discuss the overall mind map and draft conceptual schema (see online supplemental file 4). The stage 4 focus group will last between 60 and 90 min. Following the focus group, researchers will finalise the overall mind map and conceptual schema report, including a summary of each identified concept regarding determinants of high-quality rural health professions student placements.

Integration of the findings from components A and B

Data from each component, analysed separately, will subsequently be integrated. Integration will occur at the interpretation and reporting level using a narrative weaving approach with joint displays,[15 22] illustrating concordance between quantitative and qualitative findings relating to determinants of high-quality health professions student placements in rural Australia.

ETHICS AND DISSEMINATION

Ethics

This study has been approved by eight university human research ethics committees. The University of Melbourne's Human Ethics Committee provided initial approval (2022-23201-33373-5), with external approvals following from The University of Western Australia (2022/ET000770), The University of Newcastle (H-2022-0353), Flinders University (Project ID: 5724), La Trobe University (022-23201-32675-3), Charles Sturt University (H22398), The University of Notre Dame (2022-145B) and James Cook University (H8934). The study commenced in February 2023. Data analysis is expected to commence in December 2023 and full study completion is expected by December 2024.

Dissemination

The findings of this study will be published in peer-reviewed journals in the fields of rural health and higher education. The findings will also be presented at conferences and to participating UDRHs. A study report will also be made available via the Australian Rural Health Education Network website (https://arhen.org.au/).

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Contributors CQ, EG and RLR developed the protocol. CQ and EG drafted the manuscript. All authors contributed to the development of the manuscript and reviewed iterative drafts. CQ leads the QSP project and will oversee the completion of component B. RLR will oversee the completion of component A. All authors have read and approved the final manuscript.

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Competing interests None declared.

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