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BMJ Open

Identifying determinants of high-quality health profession student placements in regional, rural, and remote Australia: protocol for a mixed-methods study

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Complete List of Authors:	<p>Quilliam, Claire; The University of Melbourne, Department of Rural Health</p> <p>Green, Elyce; Charles Sturt University,</p> <p>Rasiah, Rohan; The University of Western Australia, Western Australian Centre for Rural Health</p> <p>Sheepway, Lyndal; La Trobe University, La Trobe Rural Health School</p> <p>Seaton, Catherine; James Cook University, Centre for Rural and Remote Health</p> <p>Moore, Leigh; Flinders University, Flinders University Rural and Remote Health</p> <p>Bailie, Jodie; The University of Sydney, University Centre for Rural Health</p> <p>Matthews, Kylie; The University of Notre Dame Australia, Majarlin Kimberley Centre for Remote Health</p> <p>Ferns, Jane; The University of Newcastle, Department of Rural Health</p> <p>Debenham, James; The University of Notre Dame Australia, Majarlin Kimberley Centre for Remote Health</p> <p>Taylor, Carolyn; La Trobe University, La Trobe Rural Health School</p> <p>Fitzgerald, Kathryn; The University of Western Australia, Western Australian Centre for Rural Health</p> <p>Ridd, Melissa; Flinders University, Flinders University Rural and Remote Health</p>
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Identifying determinants of high-quality health profession student placements in regional, rural, and remote Australia: protocol for a mixed-methods study

AUTHORS

Quilliam, C*., Green, E., Rasiah, R. L., Sheepway, L., Hays, C., Moore, L., Bailie, J.,
Matthews, K. M., Ferns, J., Debenham, J., Taylor, C., Fitzgerald, K., Ridd, M.

*Corresponding author

*Dr Claire Quilliam
claire.quilliam@unimelb.edu.au
Department of Rural Health, The University of Melbourne, Shepparton, VIC, Australia
<https://orcid.org/0000-0002-7344-0133>

Dr Elyce Green
elgreen@csu.edu.au
Three Rivers University Department of Rural Health, Charles Sturt University, Wagga
Wagga, NSW, Australia
<https://orcid.org/0000-0002-7291-6419>

Associate Professor Rohan L Rasiah
rohan.rasiah@uwa.edu.au
Western Australian Centre for Rural Health, School of Population and Global Health, The
University of Western Australia, Karratha, WA, Australia
<https://orcid.org/0000-0003-3798-822X>

Dr Lyndal Sheepway
l.sheepway@latrobe.edu.au
La Trobe Rural Health School, La Trobe University, Wodonga, VIC, Australia
<https://orcid.org/0000-0001-5133-5714>

Ms Catherine Seaton
catherine.hays@jcu.ed.au
Centre for Rural and Remote Health, James Cook University, Mount Isa, QLD, Australia
<https://orcid.org/0000-0002-9190-4368>

Ms Leigh Moore
leigh.moore@flinders.edu.au
Flinders University Rural and Remote Health, Finders University, Darwin, NT, Australia
<https://orcid.org/0000-0001-6106-1120>

Dr Jodie Bailie

jodie.bailie@sydney.edu.au

The University of Sydney, University Centre for Rural Health, Lismore, NSW, Australia
<https://orcid.org/0000-0003-4393-5773>

Mrs Kylie Maree Matthews

kylie.matthews@nd.edu.au

Majorlin Kimberley Centre for Remote Health, Broome, WA, Australia
<https://orcid.org/0000-0002-4563-1776>

Ms Jane Ferns

Jane.Ferns@newcastle.edu.au

Department of Rural Health, University of Newcastle, Taree, NSW, Australia
<https://orcid.org/0000-0001-9551-3869>

Dr James Debenham

james.debenham@nd.edu.au

Majorlin Kimberley Centre for Remote Health, Broome, WA, Australia
<https://orcid.org/0000-0003-0662-9048>

Dr Carolyn Taylor

Carolyn.taylor@latrobe.edu.au

La Trobe Rural Health School, La Trobe University, Bendigo, Victoria, Australia

Mrs Kathryn Fitzgerald

Kathryn.fitzgerald@uwa.edu.au

Western Australian Centre for Rural Health, The University of Western Australia, Geraldton, WA, Australia

Melissa Ridd

Melba.ridd@flinders.edu.au

Flinders University Rural and Remote Health, Flinders University, Darwin, NT, Australia

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 and University Departments of Rural Health (UDRH) staff believe are the determinants of high-quality health student placements in regional, rural, and remote Australia?

Methods and analysis

This study will adopt a convergent mixed-methods design with two components. Component A will use explanatory sequential mixed-methods. The first phase of Component A will use a survey to explore determinant that contribute to the development of high-quality health student placements from the perspective of university employees involved in the delivery of health student education. The second phase will utilise semi-structured interviews with university employees to identify the determinants of high-quality health student placements. Component B will use a case study ECOUTER mind mapping method to capture determinants that contribute to the development of high-quality health student placements from the perspective of UDRH employees.

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 determinant

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that contribute to the development of high-quality health student placements in regional, rural, remote, and very remote areas of Australia.

- The mixed-methods study design involves rural health professionals and workforce professionals as authors and engages participants iteratively throughout the study to encourage reflection and dialogue.
- This study does not capture student and 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 to 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, which are a form of work-integrated learning, vary significantly across health disciplines, 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. 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 (3). Student placements are considered an important educational tool as they allow students to develop and apply their occupational skills within a workplace setting

(4). Rural health student placements therefore need to be of good quality to meet the expected student educational outcomes, but also positively benefit 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. (5) 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. (5) 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 also found the perspectives of university staff involved in developing, facilitating, and evaluating rural health student placements were largely absent in the literature. With a deeper understanding of the perspectives of these and other stakeholders regarding what comprises high-quality rural health student placements, informed strategies can be developed to optimise future rural health student placements.

AIMS

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

METHODS AND ANALYSIS

Theoretically informed from a rural standpoint (6), this study will adopt a convergent mixed-methods 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 (QUAL)) (7). This convergent mixed-

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methods design was selected to ensure a range of university employee perspectives could be captured appropriately and equally influence the findings of the first empirical study to explore determinants of high-quality health profession student placements in Australia on a national scale. Figure 1 demonstrates the methodological approach to the research and how different methods are linked at various time points.

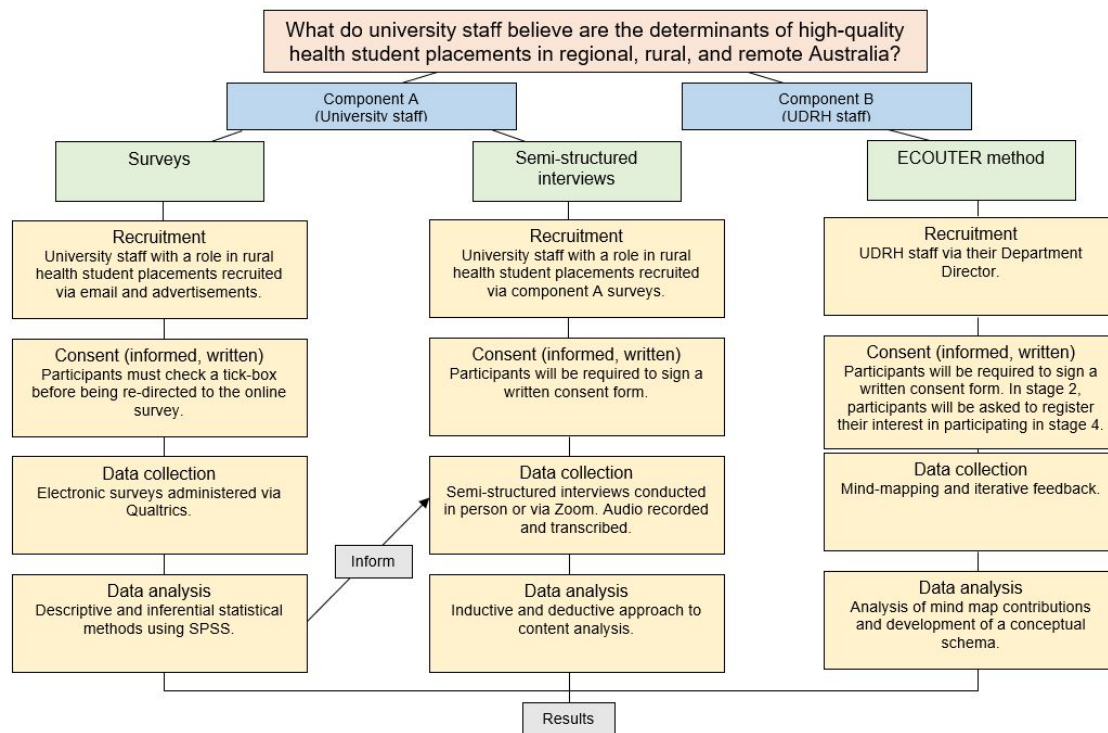


Figure 1. Component A and B recruitment, consent, data collection, and data analysis processes.

Component A: Data collection and analysis

Component A of this study seeks to recruit university staff from across Australia who have a role in designing, delivering, administering and/or evaluating rural health student placements. Recruiting from universities across Australia will allow the researchers to explore the concept of high-quality rural 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 own contacts. Data collection in Component A consists of two forms of data collection: an online survey, and individual semi-structured interviews.

1. Survey

Phase one of the study will survey university staff (academics and professional) who are involved in the design, delivery, administration and/or evaluation of 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 Supplementary file 1). Survey data will be collected electronically via the Qualtrics^{XM} survey platform (8) and is expected to take 15-20 minutes 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, version 26 (9). This will include frequency analysis to identify participants' views on the facilitators of high-quality health student rural placements and using ANOVA, 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 (10) will be conducted on answers to the open-ended questions.

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2. Semi-structured interviews

University staff (academics and professional) who are involved in the design, delivery, administration and/or evaluation of health student placements, and who registered interest in being interviewed following the survey, will be invited to participate in individual semi-structured interviews. These interviews will be conducted by a research team member and used to capture determinants of high-quality health profession student placements. Interviews will follow an interview guide and encourage a free-flowing dialogue, and each is expected to take approximately 45 minutes (see Supplementary File 2). Questions asked in the semi-structured 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 utilised 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 (11) 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, administering and/or evaluating rural health student placements.

Component B: Data collection and analysis

Component B of this study seeks to recruit current UDRH employees involved in designing, delivering, administrating and/or evaluating rural health student placements. UDRH employees have significant experience designing and delivering rural health student placements. Component B will use a virtual case study (12) and Employing COncceptUal schema for policy and Translation Engagement in Research (ECOUTER) mind mapping methodology (13) to capture UDRH employees' perspective of determinants of high-quality rural health profession 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 (13). 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 employees: “What determines high-quality health profession student placements in rural Australia?”. Individual participants will be asked to identify determinants of high-quality rural health profession 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 (12, 13). 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 sub-themes, and identifying determinants requiring further explanation. Part b: researchers will meet with individual UDRH case participants in a virtual focus group for data analysis

meetings. During these focus groups, first order constructs provided by participants will be discussed, meanings clarified and attached to relevant literature, and documented (see Supplementary File 3). The organisation of top-level themes and sub-themes will also be discussed, agreement reached, and UDRH case mind maps finalised. Stage 2 focus groups will last between 60-90 minutes. To complete this stage, researchers will write a short description of the relationships between the top-level and sub-themes, 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 (11), which is consistent with cross-case analysis methods (12). 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 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 Supplementary File 4). The stage 4 focus group will last between 60-90 minutes. 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 health professions student placements.

Integration of the findings from Component 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 (7, 14), illustrating concordance between quantitative and

qualitative findings relating to determinants of high-quality health profession 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).

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 orally to individual participating UDRHs. A report of the study findings will also be made available via the Australian Rural Health Education Network website (<https://arhen.org.au/>).

CONCLUSION

This study will provide insight into the perceptions of what determines high-quality rural health professions student placements from the perspective of university and UDRH employees. Exploring the way in which high-quality rural health profession student placements are conceptualised, designed, and delivered may enable a range of stakeholders, including universities, health departments, UDRHs, schools and others, to review and reconsider the input and process mechanisms embedded in rural health student placements across different contexts. The findings may lead to the development of national level policy

changes, benchmarking, and quality assurance, and may be useful for the development of an evaluation framework.

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Authors' contributions

CQ, EG, and RR 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. RR will oversee the completion of Component A. All authors read and approved the final manuscript.

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Patient and Public involvement

Neither patients nor members of the public were involved in the development of this study protocol.

Competing interests

None declared.

REFERENCES

1. Australian Institute of Health and Welfare. Rural and remote health: Australian Government; 2022 <https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health>. Accessed 30 March 2023.

2. National Rural Health Commissioner. Report for the Minister for Regional Health, Regional Communications and Local Government on the improvement of access, quality and distribution of allied health services in regional, rural and remote Australia 2020 <https://www.health.gov.au/resources/publications/final-report-improvement-of-access-quality-and-distribution-of-allied-health-services-in-regional-rural-and-remote-australia>. Accessed 12 June 2023.

3. Salter C, Oates RK, Swanson C, Bourke L. Working remotely: Innovative allied health placements in response to COVID-19. *International Journal of Work-Integrated Learning*. 2020;21(5):587-600.

4. Green E, Seaman CE, Smith B. Exploring localized learning during a short-term health student placement. *International Journal of Work-Integrated Learning*. 2022;23(4):527-42.

5. Green E, Quilliam C, Sheepway L, Hays CA, Moore L, Rasiah RL, et al. Identifying features of quality in rural placements for health students: scoping review. *BMJ Open*. 2022;12(4):e057074.

6. Roberts P. Researching from the standpoint of the rural. 2014. In: *Doing Educational Research in Rural Settings: Methodological Issues, International Perspectives and Practical Solutions* [Internet]. New York, NY: Routledge; [280-303]. Available from: <https://ebookcentral.proquest.com/lib/unimelb/reader.action?docID=1682232&ppg=1>.

7. Feters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs-principles and practices. *Health services research*. 2013;48:2134-56.

8. Qualtrics. The experience management platform™ 2023 <https://www.qualtrics.com/frontline/>. Accessed 18 June 2023.

9. IBM. IBM SPSS statistics 2023 <https://www.ibm.com/products/spss-statistics>. Accessed 18 June 2023.

10. Bengtsson M. How to plan and perform a qualitative study using content analysis. *NursingPlus Open*. 2016;2:8-14.

11. Saldaña J. *The coding manual for qualitative researchers*. 4th ed. London, UK: Sage; 2021.

12. Stake RE. *The art of case study research*. Thousand Oaks, CA: Sage; 1995.

13. Murtagh MJ, Minion JT, Turner A, Wilson RC, Blell M, Ochieng C, et al. The ECOUTER methodology for stakeholder engagement in translational research. *BMC Med Ethics*. 2017;18(1):24.

14. Guetterman TC, Feters MD, Creswell JW. Integrating quantitative and qualitative results in health science mixed methods research through joint displays. *Ann Fam Med*. 2015;13(6):554-61.

SUPPLEMENTARY FILES

Supplementary File 1: Component A survey instrument

Supplementary File 2: Component A draft semi-structured interview guide

Supplementary File 3: Component B Stage 2 focus group guide template

Supplementary File 4: Component B Stage 4 focus group guide template

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Supplementary File 1: Component A survey instrument

Rural Placements – Development of a Quality Educational Framework survey – Inclusion questions

This survey is to be completed by university academics and professional staff that have a role in the design, delivery, administration and/or evaluation of **health profession (AQF level 7 [Bachelor degree or higher])** placements in rural Australia.

- 1. Are you involved in the design, delivery, administration and/or evaluation of placements within health profession courses at a AQF level 7 or higher?
☐ Yes
☐ No
(if N – end survey)
- 2. Are you involved in the design, delivery, administration and/or evaluation of rural placements (as defined by MMM 2-7)? *[provide examples]*
☐ Yes
☐ No
(if N – end survey)

University Department of Rural Health (UDRH) staff do not need to complete this survey. UDRH staff will have an opportunity to contribute to this project through a concurrent investigation and will be contacted through their UDRH.

- 3. Are you employed by a UDRH?
☐ Yes
☐ No
(if Yes – end survey)

Rural Placements – Development of a Quality Educational Framework survey

Demographics of participant

1. Please select the university you work at: (Drop down menu) –

Australian Catholic University	Swinburne University of Technology
Australian National University	Torrens University Australia
Bond University	University of Adelaide
Central Queensland University	University of Canberra
Charles Darwin University	University of Divinity
Charles Sturt University	University of Melbourne
Curtin University	University of Newcastle
Deakin University	University of New England
Edith Cowan University	University of New South Wales
Federation University Australia	University of Notre Dame Australia
Flinders University	University of Queensland
Griffith University	University of South Australia
James Cook University	University of Southern Queensland
La Trobe University	University of the Sunshine Coast
Macquarie University	University of Sydney
Monash University	University of Tasmania
Murdoch University	University of Technology Sydney
Queensland University of Technology	University of Western Australia
RMIT University	University of Wollongong
Southern Cross University	Victoria University
	Western Sydney University

2. What is the postcode of the location where you spend **most** of your work time? (Please select only one postcode)
3. With regards to Rural Placements, please state the locations/regions that you organise placements for:
 - State (please indicate all that apply)
 - ☐ NSW
 - ☐ ACT
 - ☐ TAS
 - ☐ VIC
 - ☐ WA
 - ☐ SA
 - ☐ NT
 - ☐ QLD
 - Please indicate the rural areas that your student placements cover using the Modified Monash Model Classification (please indicate all that are applicable) – For examples please refer to table below

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- ☐ MM 1
- ☐ MM 2
- ☐ MM 3
- ☐ MM 4
- ☐ MM 5
- ☐ MM 6
- ☐ MM 7

Modified Monash Category (MMM 2019)	Description (including the Australian Statistical Geography Standard – Remoteness Area (2016))
MM 1	Metropolitan areas: Major cities accounting for 70% of Australia’s population All areas categorised ASGS-RA1.
MM 2	Regional centres: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are in, or within a 20km drive of a town with over 50,000 residents. For example: Ballarat, Mackay, Toowoomba, Kiama, Albury, Bunbury.
MM 3	Large rural towns: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 and are in, or within a 15km drive of a town between 15,000 to 50,000 residents. For example: Dubbo, Lismore, Yeppoon, Busselton, Wagga Wagga, Tamworth, Broken Hill
MM 4	Medium rural towns: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 or MM 3, and are in, or within a 10km drive of a town with between 5,000 to 15,000 residents. For example: Port Augusta, Charters Towers, Moree, Young, Casino, Gunnedah
MM 5	Small rural towns: All remaining Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas. For example: Mount Buller, Moruya, Renmark, Condamine, Coonabarabran, West Wyalong
MM 6	Remote communities: Remote mainland areas (ASGS-RA 4) AND remote islands less than 5kms offshore. For example: Cape Tribulation, Lightning Ridge, Alice Springs, Mallacoota, Port Hedland, Hillston. Additionally, islands that have an MM 5 classification with a population of less than 1,000 without bridges to the mainland will now be classified as MM 6 for example: Bruny Island.
MM 7	Very remote communities: Very remote areas (ASGS-RA 5). For example: Longreach, Coober Pedy, Thursday Island, Wilcannia and all other remote island areas more than 5kms offshore.

4. Please select your classification:

- ☐ Professional/General staff
- ☐ Academic staff

5. Please select your work role (Drop down menu) –

- University Executive
- Head of Faculty/College of Schools
- Head of School
- Discipline Lead
- Head of Course (e.g., Nursing, Midwifery, Allied Health, Pharmacy)
- Unit/Subject coordinator
- Clinical Educator/Lecturer (Academic Level A-E)
- Director of Placements/Fieldwork Coordinator
- Placement Officer (Administration/Professional Officer)
- Research/Project Staff

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Other: _____

6. Please select the health professions that you support (multiple selections possible)

Aboriginal and Torres Strait Islander Health Practice	Optometry
Audiology	Osteopathy
Chiropractic	Paramedicine
Chinese Medicine	Pharmacy
Dental	Physiotherapy
Diabetic Education	Podiatry
Dietetics	Prosthetics
Exercise Physiology	Psychology
Medical Radiation Practice	Speech Pathology
Nursing	Social Work
Nutrition	Other
Medicine	Not applicable
Midwifery	
Occupational Therapy	

7. Features of high-quality rural health professions student placements

In this survey, a high-quality rural health student placement is defined as a placement that optimally meets the needs of all stakeholders, including students, host/placement organisations (e.g., health service provider, schools, not for profit organisations), communities in which the placement is located, health service clients, and universities.

From a review of the literature (E. Green et al. BMJ Open, 2022) the investigators have identified a number of design and delivery features of quality health student placements in rural Australia. We want to understand your perception about the extent to which these features are important in high-quality rural health student placements.

Please indicate how you rate each of the following features on a scale of Not important to Very important. For each of the features, complete the following sentence:

To what extent is/are the availability of _____ important in ensuring high-quality rural health student placements?

There is no correct response.

Feature	Not important	somewhat important	Neither important or unimportant	Important	Very important	Unsure
Learning and teaching						
Interprofessional education and collaborative practice						
Local Aboriginal and Torres Strait Islander Cultural Security training						
Specific rurally focused placement learning outcomes						
Supervisor of student on placement training/support						
Supervisor training and support provided by our university						
Supervisors who have more than 2 years' experience and/or as required by the professional accrediting body						
Rural placement characteristics						
Low number of client presentations						
High number of case/client presentations						
Acuity of client presentations in rural locations						
Discipline specialists in the area						
Telehealth clinical learning opportunities for students						
Sustainability						
Interest from local health professions to supervise students on placement						
Opportunities in the rural location to facilitate service learning and/or student clinics						
Placement in non-health sites (eg Schools) provides alternative sites for rural placements						

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Allocation to placement						
Student choice around completing a rural placement (i.e. not compulsory)						
Key relationships						
Structured community engagement opportunities for students with the rural community (community immersion).						
Local entertainment venues/coffee shops/restaurants and opportunities for students to explore the surrounding environment/country						
Close liaison between the student, supervisor and university						
Opportunities for students to interact with other health profession students who are placed in the same area						
Required infrastructure and support						
Safe and affordable student accommodation						
Highspeed broadband (NBN/5G)						
Transport in the placement site						
Financial assistance						
Personal safety of a student						

8. Please describe any features of high-quality placements not included in the list above.

9. We value your comments. Please feel free to comment or provide feedback on any aspect of this survey, or about high-quality rural placements generally.

We are providing an opportunity for you to participate in a follow-up interview with a member of the research team. This will involve questions that are related to the broad findings of the survey you have just completed. The interview data will provide further depth to this study, will inform the development of a framework for the development of high-quality rural health student placements.

Are you willing to be contacted and invited to participate in a follow-up interview? The interview will be conducted on the phone or via Teams and last for around 45 minutes.

- ☐ Yes
- ☐ No

If you consent to be contacted, please indicate how we can best contact you.

- ☐ Email
- ☐ Phone

Please note that your contact details will not be stored with your responses from this survey and will be used and stored for the purpose of invitation to participate in the interview only. Please provide your phone number and/or email address.

Email: _____
Phone: _____

If you are willing, please provide your name to assist us in making contact clear:

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Supplementary File 2: Component A draft semi-structured interview guide

Identifying features of high-quality health profession student placements in regional, rural, and remote Australia

Interview Prompt Guide

Note: *These questions will be adapted from the findings of the survey.*

Important Information:

Notes for interviewer: Prior to interview confirm with interviewee that the interviewee has read and understood the Participant Information Form and provides consent. Confirm with interviewee the confidentiality and protection of information processes and the option to withdraw at any point during the interview.

Interview Prompt Guide:

1. Background and Demographics (these questions will be provided in a Qualtrics survey that the interviewee will complete prior to or at the start of the interview)
 - 1.1. What University are you affiliated with?
 - 1.2. What is role at the University?
 - 1.3. What is the postcode of the location where you spend **most** of your work time? (Please select only one postcode)
 - 1.4. Could you explain how your university facilitates rural health student placements?
 - 1.5. With regards to rural placements, please outline the location(s)/region(s) that you organise placements for.
 - 1.6. With regards to you position, are you classified as academic or professional/general staff?
 - 1.7. What health disciplines do you service?
 - 1.8. Could you please tell me what is your profession (if applicable)?
 - 1.9. How many years have you worked in your role?
2. Placement/Work Integrated Learning Experience
 - 2.1. In your opinion, could you explain how health student placements impact on student learning?
 - 2.2. Do you consider rural health student placements to differ to metropolitan health student placements? If so, in what ways? If not, why?
 - 2.3. What challenges have you witnessed students experience when on rural health student placements?
3. Features of a high-quality rural health student placement
 - 3.1. What do you think contributes to high-quality rural health placements for students?

- 3.2. What do you think is the most important feature to consider when designing or facilitating high-quality rural health student placement?
- 3.3. To what extent do these features change if you focus on health placements more generally?

Prompts (if areas not covered in previous question):

- Supervisors
- Accommodation
- Case load
- Case complexity
- Community engagement
- Aboriginal and Torres Strait Islander Cultural Security training
- Interprofessional Learning opportunities
- Student safety
- Availability of transport
- High quality connectivity (AV and Internet)

4. Enablers and Barriers to features of high-quality rural health student placements.

- 4.1. From your experience, what gets in the way of these features of high-quality rural placements being present in all placements? How can these be overcome/addressed?
- 4.2. What factors enable high-quality placements to become part of all rural placements, from your experience?

5. Relationship with the Home University

- 5.1. Please describe the relationship that your university/program has with the supervisor/preceptor in the design and delivery of the rural student placements
- 5.2. At your university, approximately what proportion of your students elect to undertake a rural placement? Which, if any, disciplines have rural placements as compulsory?
- 5.3. What are the barriers to students choosing to undertake a rural placement?
- 5.4. What are the enablers to students choosing to undertake a rural placement?
- 5.5. From your perspective, describe the experiences (positive or negative) that students say when they have completed a rural placement

6. Would you like to add anything else to this interview?

Ask additional questions that may arise in response to issues highlighted by above questions.

Thank interviewee for their time.

Supplementary File 3: Component B Stage 2 focus group guide template

Questions and prompts
Ice breaker
Q1. How is the UDRH involved in the design and delivery of rural health student placements?
Mind map discussion (moderator to acknowledge complexity in determinants, read through the determinants, then ask questions)
<p>Q2. What do you think of the mind map?</p> <ul style="list-style-type: none"> a) How reflective is the map of your experiences working at the UDRH to support high quality rural health student placements? b) Is there anything missing from the map? How should these determinants be captured on the map? (moderator to add determinants as they are identified during the focus group) c) Are there any 'points of contention' on the mind map that as a group you do not agree on (check discussion in comments)? What do you agree with? Why? What do you have concerns or questions about? Why? d) What does [insert determinant name] mean? [ask of any vaguely named determinants] e) Which determinants are most relevant to the work undertaken at the UDRH? Why? f) Which determinants are least relevant to the work undertaken at the UDRH?
Organisation of determinants (before asking questions- moderator to explain what they have done with the determinants, explain what top-level and sub-themes are, briefly go through all top-level themes and their underpinning determinants)
<p>Q3. To what extent are the determinants organised in a way that accurately reflects the work around student placements at the UDRH?</p> <ul style="list-style-type: none"> a) Should the determinants currently listed as top-level themes, be considered top-level or sub-level themes? b) What should be listed as top-level theme? c) Should the determinants currently listed as sub-themes, be considered sub-themes or top-level themes?

d) What should be listed at a sub-theme level?
e) How can the determinants be better arranged?
Relevance to the literature
Q4. Are there any determinants of high-quality placements that are obvious in the work carried out by the UDRH, but poorly evidenced in the literature?
a) Which determinants should receive more research attention?
b) What literature really stands out for you when you see these determinants?
Potential use for the map
Q5. How might this mind map be used by the UDRH?
a) How would <i>you</i> like to see the map used?
Other
Q6. Is there anything else you would like to add?

Supplementary File 4: Component B Stage 4 focus group guide template

Questions and prompts
Ice breaker
Q1. How do UDRHs work to support rural health student placements?
Mind map discussion (acknowledge complexity, number of top-level and sub themes)
<p>Q2. What do you think of the mind map?</p> <ul style="list-style-type: none"> a) How reflective is the map of your experiences working to support high quality rural health student placements? b) Is there anything missing from the map? How should these determinants be captured on the map? (moderator to add determinants as they are identified during the focus group) c) Are there any 'points of contention' on the mind map that as a group you do not agree on (check discussion in comments)? What do you agree with? Why? What do you have concerns or questions about? Why? d) Which determinants are most relevant to the work undertaken at UDRHs? Why? e) Which determinants are least relevant to the work undertaken at UDRHs?
Organisation of <i>determinants</i> (before asking questions- moderator to explain what they have done with the <i>determinants</i>, explain what top-level and sub-themes are, briefly go through all top-level themes and their underpinning <i>determinants</i>)
<p>Q3. To what extent are the determinants organised in a way that accurately reflects the work around student placements at the UDRH?</p> <ul style="list-style-type: none"> a) Should the determinants currently listed as top-level themes, be considered top-level or sub-level themes? b) What should be listed as top-level theme? c) Should the determinants currently listed as sub-themes, be considered sub-themes or top-level themes? d) What should be listed at a sub-theme level? e) How can the determinants be better arranged?
<p>Q3. What literature really stands out for you when you see these determinants?</p> <ul style="list-style-type: none"> a) What does the literature add to this map?

b) What are the implications of the literature for this map?
Relevance to the literature
Q4. Are there any determinants of high-quality placements that are obvious in the work carried out by the UDRH, but poorly evidenced in the literature?
a) Which determinants should receive more research attention?
b) What literature really stands out for you when you see these determinants?
Potential use for the map
Q4. How might this mind map be used by the UDRHs or ARHEN?
a) How would <i>you</i> like to see it used?
Conceptual schema
Q5. Prior to this meeting, we sent you some information about the conceptual schema that came out of analysing this map. What do you think about this way of understanding the findings?
a) In your mind, what is the strength of the conceptual schema?
b) How could the conceptual schema be used to support the implementation of high-quality rural health student placements?
c) In your mind, how could the conceptual schema be improved?
d) What is missing from the conceptual schema?
Other
Q6. Is there anything else you would like to add?

BMJ Open

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

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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-methods study

AUTHORS

Quilliam, C*, Green, E., Rasiah, R. L., Sheepway, L., Seaton, C., Moore, L., Bailie, J., Matthews, K. M., Ferns, J., Debenham, J., Taylor, C., Fitzgerald, K., Ridd, M.

*Corresponding author

*Dr Claire Quilliam

claire.quilliam@unimelb.edu.au

Department of Rural Health, The University of Melbourne, Shepparton, VIC, Australia

<https://orcid.org/0000-0002-7344-0133>

Dr Elyce Green

elgreen@csu.edu.au

Three Rivers University Department of Rural Health, Charles Sturt University, Wagga Wagga, NSW, Australia

<https://orcid.org/0000-0002-7291-6419>

Associate Professor Rohan L Rasiah

rohan.rasiah@uwa.edu.au

Western Australian Centre for Rural Health, School of Population and Global Health, The University of Western Australia, Karratha, WA, Australia

<https://orcid.org/0000-0003-3798-822X>

Dr Lyndal Sheepway

l.sheepway@latrobe.edu.au

La Trobe Rural Health School, La Trobe University, Wodonga, VIC, Australia

<https://orcid.org/0000-0001-5133-5714>

Ms Catherine Seaton

catherine.hays@jcu.edu.au

Centre for Rural and Remote Health, James Cook University, Mount Isa, QLD, Australia

<https://orcid.org/0000-0002-9190-4368>

Ms Leigh Moore

leigh.moore@flinders.edu.au

Flinders University Rural and Remote Health, Flinders University, Darwin, NT, Australia

<https://orcid.org/0000-0001-6106-1120>

Dr Jodie Bailie

1 jodie.bailie@sydney.edu.au
2 University Centre for Rural Health, The University of Sydney, Lismore, NSW, Australia
3 School of Public Health, The University of Sydney, Sydney, NSW, Australia
4 https://orcid.org/0000-0003-4393-5773
5
6 Mrs Kylie Maree Matthews
7 kylie.matthews@nd.edu.au
8 Majarlin Kimberley Centre for Remote Health, Broome, WA, Australia
9 https://orcid.org/0000-0002-4563-1776
10
11 Ms Jane Ferns
12 Jane.Ferns@newcastle.edu.au
13 Department of Rural Health, University of Newcastle, Taree, NSW, Australia
14 https://orcid.org/0000-0001-9551-3869
15
16 Dr James Debenham
17 james.debenham@nd.edu.au
18 Majarlin Kimberley Centre for Remote Health, Broome, WA, Australia
19 https://orcid.org/0000-0003-0662-9048
20
21 Dr Carolyn Taylor
22 Carolyn.taylor@latrobe.edu.au
23 La Trobe Rural Health School, La Trobe University, Bendigo, Victoria, Australia
24
25 Mrs Kathryn Fitzgerald
26 Kathryn.fitzgerald@uwa.edu.au
27 Western Australian Centre for Rural Health, The University of Western Australia, Geraldton,
28 WA, Australia
29
30 Miss Melissa Ridd
31 Melba.ridd@flinders.edu.au
32 Flinders University Rural and Remote Health, Flinders University, Darwin, NT, Australia
33

34 **ABSTRACT**

35 **Introduction**

36 In rural areas, work-integrated learning in the form of health student placements has
37 several potential benefits, including contributing to student learning, enhancing rural health
38 service capacity, and attracting future rural health workforce. Understanding what constitutes
39 a high-quality rural placement experience is important for enhancing these outcomes. There
40 is no current standardised definition of quality in the context of rural health placements; nor
41 is there understanding of how this can be achieved across different rural contexts. This study

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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-methods 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 utilise semi-structured 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 ECOUTER 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.

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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-methods 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 to 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

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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 Act 2011, which provides national consistency to regulate higher education provision in Australia. In 2021, the Tertiary Education Quality and Standards Agency (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

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1 Five (Institutional quality assurance) where quality assurance of student placements at the
2 institutional level is highlighted (11).

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

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

22 There are two distinct perspectives to consider within the university staff stakeholder
23 group. University Departments of Rural Health (UDRHs) university staff are funded by the
24 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 in the scoping review (4). Consecutive phases of the project to capture student, service user and community member perspectives is 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-methods design (QUAN-qual + QUAL), and concurrently conduct data collection and analysis for two research components: Component A (explanatory sequential

1 mixed-methods (QUAN-qual)) and Component B (qualitative methods (QUAL)) (15). This
2 convergent mixed-methods design was selected to ensure a range of university staff (both
3 UDRH and non-UDRH) perspectives could be captured appropriately and equally influence
4 the findings of the first empirical study to explore determinants of high-quality health student
5 placements in rural Australia on a national scale.

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

19 Table 1. Non-exhaustive list of health professions represented in rural health student
20 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	

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

Please place Figure 1 about here

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, administering and/or evaluating rural health student placements. Recruiting from universities across Australia will allow the researchers to explore the concept of high-quality rural 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 own contacts. Data collection in Component A consists of two forms of data collection: an online survey, and individual semi-structured interviews.

1. 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 health student placements. The survey consists of Likert scale questions, open and closed questions, and nominal questions, as well as additional demographic questions including

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location, professions supported through their role, and role in the organisation (see Supplementary file 1). Survey data will be collected electronically via the Qualtrics^{XM} survey platform (16) and is expected to take 15-20 minutes 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, version 26 (17). This will include frequency analysis to identify participants' views on the facilitators of high-quality health student rural placements and using ANOVA, 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.

2. Semi-structured interviews

Non-UDRH university staff (academics and professional) who are involved in the design, delivery, administration and/or evaluation of health student placements, and who registered interest in being interviewed following the survey, will be invited to participate in individual semi-structured interviews. These interviews will be conducted by a research team member and used to capture determinants of high-quality health profession student placements. Interviews will follow an interview guide and encourage a free-flowing dialogue, and each is expected to take approximately 45 minutes (see Supplementary File 2). Questions asked in the semi-structured 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

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audio recorded, a paper-based system will be used to record key responses, with the participant assigned a pseudonym to be utilised 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, administering 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, administering 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 COncceptUal 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 profession 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).

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1 The ECOUTER methodology includes four stages: 1) engagement and knowledge
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5 2) exchange, 2) analysis of mind map contributions, 3) development of a conceptual schema,
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8 3) and 4) iterative feedback. In Stage 1, a central question will be posed to UDRH university
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10 4) staff: “What determines high-quality health professions student placements in rural
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12 5) Australia?” Individual participants will be asked to identify determinants of high-quality rural
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14 6) health profession student placements and then contribute data by adding those determinants
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16
17 7) to the online UDRH mind map.

8 Stage 2 comprises two parts and involves researchers analysing data in line with
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10 within-case analysis and ECOUTER methodology (20, 21). Part a: Two researchers will
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12 conduct a ‘light touch’ analysis on the first order concepts provided by participants, by
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14 identifying overlap in listed determinants and organising these into top-level themes and sub-
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16 themes, and identifying determinants requiring further explanation. Part b: researchers will
17
18 meet with participants in each UDRH case in a virtual focus group to discuss the respective
19
20 mind map. During these focus groups, first order constructs provided by participants will be
21
22 discussed, meanings clarified and attached to relevant literature, and documented (see
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24 Supplementary File 3). The organisation of top-level themes and sub-themes will also be
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26 discussed, agreement or disagreement noted, and UDRH case mind maps finalised. Stage 2
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28 focus groups will last between 60-90 minutes. To complete this stage, researchers will write a
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30 short description of the relationships between the top-level and sub-themes, drawing on
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32 descriptions provided by participants in the focus groups and in mind map comments.

33 In Stage 3, all UDRH case short descriptions and mind maps will be analysed as one
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35 data set using descriptive coding (19), which is consistent with cross-case analysis methods
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37 (20). Second order constructs will be developed by researchers through this process. An
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39 overall mind map and a draft conceptual schema will be developed, drawing on first order
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constructs (participant identified determinants) and second order constructs (researcher identified concepts) as high-quality 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 Supplementary File 4). The Stage 4 focus group will last between 60-90 minutes. 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 health professions student placements.

Integration of the findings from Component 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.

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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 individual participating UDRHs. A study report will also be made available via the Australian Rural Health Education Network website (<https://arhen.org.au/>).

ACKNOWLEDGEMENTS

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Authors' contributions

CQ, EG, and RR developed the protocol. CQ and EG drafted the manuscript. CQ, EG, RR, LS, CS, LM, JB, KM, JF, JD, CT, KF, and MR contributed to the development of the manuscript and reviewed iterative drafts. CQ leads the QSP project and will oversee the completion of Component B. RR will oversee the completion of Component A. CQ, EG, RR, LS, CS, LM, JB, KM, JF, JD, CT, KF, and MR have read and approved the final manuscript.

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Patient and Public involvement

Neither patients nor members of the public were involved in the development of this study protocol.

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Competing interests

None declared.

REFERENCES

1. Australian Institute of Health and Welfare. Rural and remote health: Australian Government; 2022. Available from: <https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health>.
2. National Rural Health Commissioner. Report for the Minister for Regional Health, Regional Communications and Local Government on the improvement of access, quality and distribution of allied health services in regional, rural and remote Australia 2020. Available from: <https://www.health.gov.au/resources/publications/final-report-improvement-of-access-quality-and-distribution-of-allied-health-services-in-regional-rural-and-remote-australia>.
3. Billett S. Curriculum and pedagogic bases for effectively integrating practice-based experiences. Australian Learning and Teaching Council; 2011.
4. Green E, Quilliam C, Sheepway L, Hays CA, Moore L, Rasiah RL, et al. Identifying features of quality in rural placements for health students: scoping review. *BMJ Open*. 2022;12(4):e057074.
5. Salter C, Oates RK, Swanson C, Bourke L. Working remotely: Innovative allied health placements in response to COVID-19. *International Journal of Work-Integrated Learning*. 2020;21(5):587-600.
6. Green E, Seaman CE, Smith B. Exploring localized learning during a short-term health student placement. *International Journal of Work-Integrated Learning*. 2022;23(4):527-42.
7. Smith C. Evaluating the quality of work-integrated learning curricula: a comprehensive framework. *Higher Education Research & Development*. 2012;31(2):247-62.
8. Campbell M, Russell L, Thomson K, Tunny R, Smith L, McAllister L. The construction and testing of a framework to assure the institutional quality of work-integrated learning. *International Journal of Work-Integrated Learning*. 2021;22(4):505-19.
9. Winchester-Seeto T. Quality and standards for work integrated learning Australian Council of Deans of Science 2019. Available from: <https://www.acds.edu.au/wp-content/uploads/Winchester-Seeto-Literature-Review-Quality-and-Standards.pdf>. [cited 16 October 2023].
10. Australian Government Tertiary Education Quality and Standards Agency. Contextual overview of the HES Framework 2021 2022 <https://www.teqsa.gov.au/how-we-regulate/higher-education-standards-framework-2021/contextual-overview>. Accessed 9 May 2023.
11. Australian Government Tertiary Education Quality and Standards Agency. Guidance note: Work-integrated learning. 2022.
12. Elken M, Stensaker B. Conceptualising 'quality work' in higher education. *Quality in Higher Education*. 2018;24(3):189-202.
13. Australian Government Department of Health and Aged Care. Rural Health Multidisciplinary Training (RHMT) program. 2023. <https://www.health.gov.au/our-work/rhmt>. Accessed 26 October 2023.
14. Roberts P. Researching from the standpoint of the rural. In: White S, Corbett M, editors. *Doing Educational Research in Rural Settings: Methodological Issues, International Perspectives and Practical Solutions*. New York, NY: Routledge; 2014. p. 280-303.

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15. Fetters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs-principles and practices. *Health services research*. 2013;48:2134-56.

16. Qualtrics. The experience management platform™ 2023. <https://www.qualtrics.com/frontline/>. Accessed 18 June 2023.

17. IBM. IBM SPSS statistics. 2023. <https://www.ibm.com/products/spss-statistics>. Accessed 18 June 2023.

18. Bengtsson M. How to plan and perform a qualitative study using content analysis. *NursingPlus Open*. 2016;2:8-14.

19. Saldaña J. The coding manual for qualitative researchers. 4th ed. London, UK: Sage; 2021.

20. Stake RE. The art of case study research. Thousand Oaks, CA: Sage; 1995.

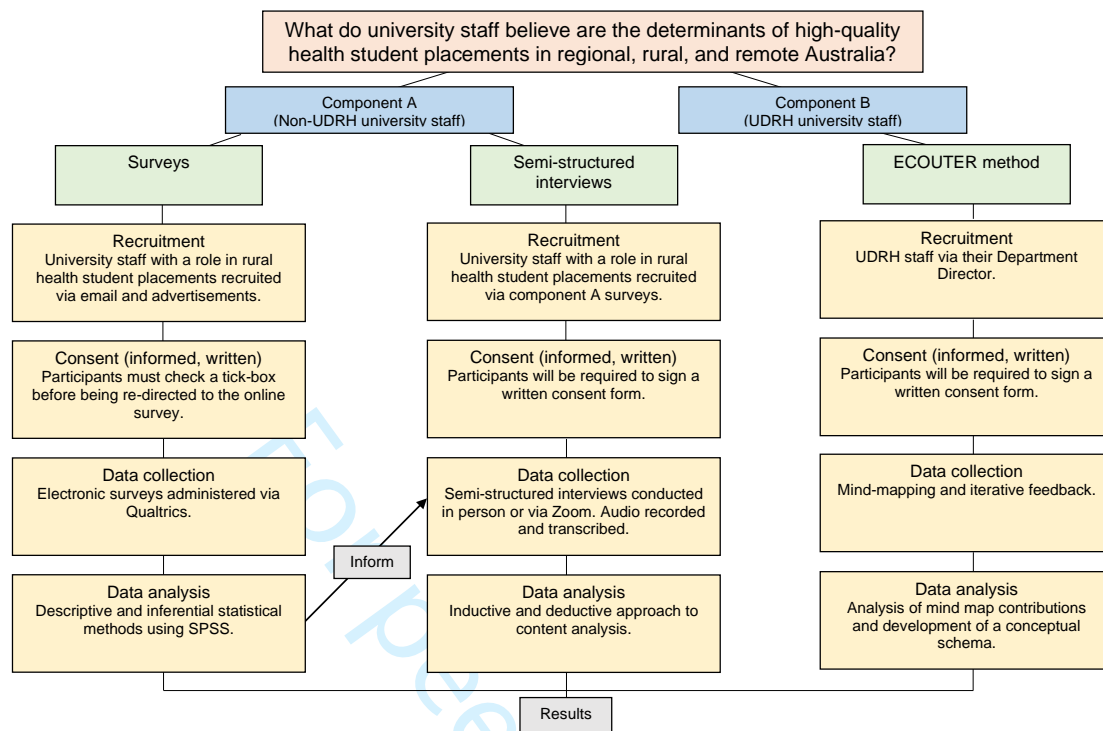
21. Murtagh MJ, Minion JT, Turner A, Wilson RC, Blell M, Ochieng C, et al. The ECO-UTER methodology for stakeholder engagement in translational research. *BMC Med Ethics*. 2017;18(1):24.

22. Guetterman TC, Fetters MD, Creswell JW. Integrating quantitative and qualitative results in health science mixed methods research through joint displays. *Ann Fam Med*. 2015;13(6):554-61.

SUPPLEMENTARY FILES

- Supplementary File 1: Component A survey instrument
- Supplementary File 2: Component A draft semi-structured interview guide
- Supplementary File 3: Component B Stage 2 focus group guide template
- Supplementary File 4: Component B Stage 4 focus group guide template

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Supplementary File 1: Component A survey instrument

Rural Placements – Development of a Quality Educational Framework survey – Inclusion questions

This survey is to be completed by university academics and professional staff that have a role in the design, delivery, administration and/or evaluation of **health profession (AQF level 7 [Bachelor degree or higher])** placements in rural Australia.

- 1. Are you involved in the design, delivery, administration and/or evaluation of placements within health profession courses at a AQF level 7 or higher?
☐ Yes
☐ No
(if N – end survey)
- 2. Are you involved in the design, delivery, administration and/or evaluation of rural placements (as defined by MMM 2-7)? *[provide examples]*
☐ Yes
☐ No
(if N – end survey)

University Department of Rural Health (UDRH) staff do not need to complete this survey. UDRH staff will have an opportunity to contribute to this project through a concurrent investigation and will be contacted through their UDRH.

- 3. Are you employed by a UDRH?
☐ Yes
☐ No
(if Yes – end survey)

Rural Placements – Development of a Quality Educational Framework survey

Demographics of participant

1. Please select the university you work at: (Drop down menu) –

Australian Catholic University	Swinburne University of Technology
Australian National University	Torrens University Australia
Bond University	University of Adelaide
Central Queensland University	University of Canberra
Charles Darwin University	University of Divinity
Charles Sturt University	University of Melbourne
Curtin University	University of Newcastle
Deakin University	University of New England
Edith Cowan University	University of New South Wales
Federation University Australia	University of Notre Dame Australia
Flinders University	University of Queensland
Griffith University	University of South Australia
James Cook University	University of Southern Queensland
La Trobe University	University of the Sunshine Coast
Macquarie University	University of Sydney
Monash University	University of Tasmania
Murdoch University	University of Technology Sydney
Queensland University of Technology	University of Western Australia
RMIT University	University of Wollongong
Southern Cross University	Victoria University
	Western Sydney University

2. What is the postcode of the location where you spend **most** of your work time? (Please select only one postcode)

3. With regards to Rural Placements, please state the locations/regions that you organise placements for:

- State (please indicate all that apply)

- ☐ NSW
- ☐ ACT
- ☐ TAS
- ☐ VIC
- ☐ WA
- ☐ SA
- ☐ NT
- ☐ QLD

- Please indicate the rural areas that your student placements cover using the Modified Monash Model Classification (please indicate all that are applicable) – For examples please refer to table below

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- ☐ MM 1
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- ☐ MM 5
- ☐ MM 6
- ☐ MM 7

Modified Monash Category (MMM 2019)	Description (including the Australian Statistical Geography Standard – Remoteness Area (2016))
MM 1	Metropolitan areas: Major cities accounting for 70% of Australia’s population All areas categorised ASGS-RA1.
MM 2	Regional centres: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are in, or within a 20km drive of a town with over 50,000 residents. For example: Ballarat, Mackay, Toowoomba, Kiama, Albury, Bunbury.
MM 3	Large rural towns: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 and are in, or within a 15km drive of a town between 15,000 to 50,000 residents. For example: Dubbo, Lismore, Yeppoon, Busselton, Wagga Wagga, Tamworth, Broken Hill
MM 4	Medium rural towns: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 or MM 3, and are in, or within a 10km drive of a town with between 5,000 to 15,000 residents. For example: Port Augusta, Charters Towers, Moree, Young, Casino, Gunnedah
MM 5	Small rural towns: All remaining Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas. For example: Mount Buller, Moruya, Renmark, Condamine, Coonabarabran, West Wyalong
MM 6	Remote communities: Remote mainland areas (ASGS-RA 4) AND remote islands less than 5kms offshore. For example: Cape Tribulation, Lightning Ridge, Alice Springs, Mallacoota, Port Hedland, Hillston. Additionally, islands that have an MM 5 classification with a population of less than 1,000 without bridges to the mainland will now be classified as MM 6 for example: Bruny Island.
MM 7	Very remote communities: Very remote areas (ASGS-RA 5). For example: Longreach, Coober Pedy, Thursday Island, Wilcannia and all other remote island areas more than 5kms offshore.

4. Please select your classification:

- ☐ Professional/General staff
- ☐ Academic staff

5. Please select your work role (Drop down menu) –

- University Executive
- Head of Faculty/College of Schools
- Head of School
- Discipline Lead
- Head of Course (e.g., Nursing, Midwifery, Allied Health, Pharmacy)
- Unit/Subject coordinator
- Clinical Educator/Lecturer (Academic Level A-E)
- Director of Placements/Fieldwork Coordinator
- Placement Officer (Administration/Professional Officer)
- Research/Project Staff

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Other: _____

6. Please select the health professions that you support (multiple selections possible)

Aboriginal and Torres Strait Islander Health Practice	Optometry
Audiology	Osteopathy
Chiropractic	Paramedicine
Chinese Medicine	Pharmacy
Dental	Physiotherapy
Diabetic Education	Podiatry
Dietetics	Prosthetics
Exercise Physiology	Psychology
Medical Radiation Practice	Speech Pathology
Nursing	Social Work
Nutrition	Other
Medicine	Not applicable
Midwifery	
Occupational Therapy	

7. Features of high-quality rural health professions student placements

In this survey, a high-quality rural health student placement is defined as a placement that optimally meets the needs of all stakeholders, including students, host/placement organisations (e.g., health service provider, schools, not for profit organisations), communities in which the placement is located, health service clients, and universities.

From a review of the literature (E. Green et al. BMJ Open, 2022) the investigators have identified a number of design and delivery features of quality health student placements in rural Australia. We want to understand your perception about the extent to which these features are important in high-quality rural health student placements.

Please indicate how you rate each of the following features on a scale of Not important to Very important. For each of the features, complete the following sentence:

To what extent is/are the availability of _____ important in ensuring high-quality rural health student placements?

There is no correct response.

Feature	Not important	somewhat important	Neither important or unimportant	Important	Very important	Unsure
Learning and teaching						
Interprofessional education and collaborative practice						
Local Aboriginal and Torres Strait Islander Cultural Security training						
Specific rurally focused placement learning outcomes						
Supervisor of student on placement training/support						
Supervisor training and support provided by our university						
Supervisors who have more than 2 years' experience and/or as required by the professional accrediting body						
Rural placement characteristics						
Low number of client presentations						
High number of case/client presentations						
Acuity of client presentations in rural locations						
Discipline specialists in the area						
Telehealth clinical learning opportunities for students						
Sustainability						
Interest from local health professions to supervise students on placement						
Opportunities in the rural location to facilitate service learning and/or student clinics						
Placement in non-health sites (eg Schools) provides alternative sites for rural placements						

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Allocation to placement						
Student choice around completing a rural placement (i.e. not compulsory)						
Key relationships						
Structured community engagement opportunities for students with the rural community (community immersion).						
Local entertainment venues/coffee shops/restaurants and opportunities for students to explore the surrounding environment/country						
Close liaison between the student, supervisor and university						
Opportunities for students to interact with other health profession students who are placed in the same area						
Required infrastructure and support						
Safe and affordable student accommodation						
Highspeed broadband (NBN/5G)						
Transport in the placement site						
Financial assistance						
Personal safety of a student						

8. Please describe any features of high-quality placements not included in the list above.

9. We value your comments. Please feel free to comment or provide feedback on any aspect of this survey, or about high-quality rural placements generally.

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We are providing an opportunity for you to participate in a follow-up interview with a member of the research team. This will involve questions that are related to the broad findings of the survey you have just completed. The interview data will provide further depth to this study, will inform the development of a framework for the development of high-quality rural health student placements.

Are you willing to be contacted and invited to participate in a follow-up interview? The interview will be conducted on the phone or via Teams and last for around 45 minutes.

☐ Yes
☐ No

If you consent to be contacted, please indicate how we can best contact you.

☐ Email
☐ Phone

Please note that your contact details will not be stored with your responses from this survey and will be used and stored for the purpose of invitation to participate in the interview only. Please provide your phone number and/or email address.

Email: _____
Phone: _____

If you are willing, please provide your name to assist us in making contact clear:

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Supplementary File 2: Component A draft semi-structured interview guide

Identifying features of high-quality health profession student placements in regional, rural, and remote Australia

Interview Prompt Guide

Note: *These questions will be adapted from the findings of the survey.*

Important Information:

Notes for interviewer: Prior to interview confirm with interviewee that the interviewee has read and understood the Participant Information Form and provides consent. Confirm with interviewee the confidentiality and protection of information processes and the option to withdraw at any point during the interview.

Interview Prompt Guide:

1. Background and Demographics (these questions will be provided in a Qualtrics survey that the interviewee will complete prior to or at the start of the interview)
 - 1.1. What University are you affiliated with?
 - 1.2. What is role at the University?
 - 1.3. What is the postcode of the location where you spend **most** of your work time? (Please select only one postcode)
 - 1.4. Could you explain how your university facilitates rural health student placements?
 - 1.5. With regards to rural placements, please outline the location(s)/region(s) that you organise placements for.
 - 1.6. With regards to you position, are you classified as academic or professional/general staff?
 - 1.7. What health disciplines do you service?
 - 1.8. Could you please tell me what is your profession (if applicable)?
 - 1.9. How many years have you worked in your role?
2. Placement/Work Integrated Learning Experience
 - 2.1. In your opinion, could you explain how health student placements impact on student learning?
 - 2.2. Do you consider rural health student placements to differ to metropolitan health student placements? If so, in what ways? If not, why?
 - 2.3. What challenges have you witnessed students experience when on rural health student placements?
3. Features of a high-quality rural health student placement
 - 3.1. What do you think contributes to high-quality rural health placements for students?

- 3.2. What do you think is the most important feature to consider when designing or facilitating high-quality rural health student placement?
- 3.3. To what extent do these features change if you focus on health placements more generally?

Prompts (if areas not covered in previous question):

- Supervisors
- Accommodation
- Case load
- Case complexity
- Community engagement
- Aboriginal and Torres Strait Islander Cultural Security training
- Interprofessional Learning opportunities
- Student safety
- Availability of transport
- High quality connectivity (AV and Internet)

4. Enablers and Barriers to features of high-quality rural health student placements.

- 4.1. From your experience, what gets in the way of these features of high-quality rural placements being present in all placements? How can these be overcome/addressed?
- 4.2. What factors enable high-quality placements to become part of all rural placements, from your experience?

5. Relationship with the Home University

- 5.1. Please describe the relationship that your university/program has with the supervisor/preceptor in the design and delivery of the rural student placements
- 5.2. At your university, approximately what proportion of your students elect to undertake a rural placement? Which, if any, disciplines have rural placements as compulsory?
- 5.3. What are the barriers to students choosing to undertake a rural placement?
- 5.4. What are the enablers to students choosing to undertake a rural placement?
- 5.5. From your perspective, describe the experiences (positive or negative) that students say when they have completed a rural placement

6. Would you like to add anything else to this interview?

Ask additional questions that may arise in response to issues highlighted by above questions.

Thank interviewee for their time.

Supplementary File 3: Component B Stage 2 focus group guide template

Questions and prompts
Ice breaker
Q1. How is the UDRH involved in the design and delivery of rural health student placements?
Mind map discussion (moderator to acknowledge complexity in determinants, read through the determinants, then ask questions)
<p>Q2. What do you think of the mind map?</p> <ul style="list-style-type: none"> a) How reflective is the map of your experiences working at the UDRH to support high quality rural health student placements? b) Is there anything missing from the map? How should these determinants be captured on the map? (moderator to add determinants as they are identified during the focus group) c) Are there any 'points of contention' on the mind map that as a group you do not agree on (check discussion in comments)? What do you agree with? Why? What do you have concerns or questions about? Why? d) What does [insert determinant name] mean? [ask of any vaguely named determinants] e) Which determinants are most relevant to the work undertaken at the UDRH? Why? f) Which determinants are least relevant to the work undertaken at the UDRH?
Organisation of determinants (before asking questions- moderator to explain what they have done with the determinants, explain what top-level and sub-themes are, briefly go through all top-level themes and their underpinning determinants)
<p>Q3. To what extent are the determinants organised in a way that accurately reflects the work around student placements at the UDRH?</p> <ul style="list-style-type: none"> a) Should the determinants currently listed as top-level themes, be considered top-level or sub-level themes? b) What should be listed as top-level theme? c) Should the determinants currently listed as sub-themes, be considered sub-themes or top-level themes?

<p>d) What should be listed at a sub-theme level?</p> <p>e) How can the determinants be better arranged?</p>
Relevance to the literature
<p>Q4. Are there any determinants of high-quality placements that are obvious in the work carried out by the UDRH, but poorly evidenced in the literature?</p> <p>a) Which determinants should receive more research attention?</p> <p>b) What literature really stands out for you when you see these determinants?</p>
Potential use for the map
<p>Q5. How might this mind map be used by the UDRH?</p> <p>a) How would <i>you</i> like to see the map used?</p>
Other
<p>Q6. Is there anything else you would like to add?</p>

Supplementary File 4: Component B Stage 4 focus group guide template

Questions and prompts
<i>Ice breaker</i>
Q1. How do UDRHs work to support rural health student placements?
<i>Mind map discussion (acknowledge complexity, number of top-level and sub themes)</i>
<p>Q2. What do you think of the mind map?</p> <ul style="list-style-type: none"> a) How reflective is the map of your experiences working to support high quality rural health student placements? b) Is there anything missing from the map? How should these determinants be captured on the map? (moderator to add determinants as they are identified during the focus group) c) Are there any 'points of contention' on the mind map that as a group you do not agree on (check discussion in comments)? What do you agree with? Why? What do you have concerns or questions about? Why? d) Which determinants are most relevant to the work undertaken at UDRHs? Why? e) Which determinants are least relevant to the work undertaken at UDRHs?
Organisation of <i>determinants</i> (before asking questions- moderator to explain what they have done with the <i>determinants</i>, explain what top-level and sub-themes are, briefly go through all top-level themes and their underpinning <i>determinants</i>)
<p>Q3. To what extent are the determinants organised in a way that accurately reflects the work around student placements at the UDRH?</p> <ul style="list-style-type: none"> a) Should the determinants currently listed as top-level themes, be considered top-level or sub-level themes? b) What should be listed as top-level theme? c) Should the determinants currently listed as sub-themes, be considered sub-themes or top-level themes? d) What should be listed at a sub-theme level? e) How can the determinants be better arranged?
<p>Q3. What literature really stands out for you when you see these determinants?</p> <ul style="list-style-type: none"> a) What does the literature add to this map?

b) What are the implications of the literature for this map?
Relevance to the literature
Q4. Are there any determinants of high-quality placements that are obvious in the work carried out by the UDRH, but poorly evidenced in the literature?
a) Which determinants should receive more research attention?
b) What literature really stands out for you when you see these determinants?
Potential use for the map
Q4. How might this mind map be used by the UDRHs or ARHEN?
a) How would you like to see it used?
Conceptual schema
Q5. Prior to this meeting, we sent you some information about the conceptual schema that came out of analysing this map. What do you think about this way of understanding the findings?
a) In your mind, what is the strength of the conceptual schema?
b) How could the conceptual schema be used to support the implementation of high-quality rural health student placements?
c) In your mind, how could the conceptual schema be improved?
d) What is missing from the conceptual schema?
Other
Q6. Is there anything else you would like to add?