





BMJ Open Identifying features of quality in rural placements for health students: scoping review

Elyce Green,¹ Claire Quilliam ,² Lyndal Sheepway,³ Catherine A Hays,⁴ Leigh Moore ,⁵ Rohan L Rasiyah,⁶ Jodie Bailie ,⁷ Christine Howard,¹ Sarah Hyde ,⁸ Imo Inyang,⁹ Kylie Matthews,¹⁰ Jane Ferns,¹¹ Leanne J Brown,¹¹ Sara Jones,¹² Marjorie Collett¹³

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For numbered affiliations see end of article.

Correspondence to

Dr Claire Quilliam;
claire.quilliam@unimelb.edu.au

ABSTRACT

Objectives To explore and synthesise the evidence relating to features of quality in rural health student placements.

Design Scoping review.

Data sources MEDLINE, CINAHL, Embase, ProQuest, Informat, Scopus, ERIC and several grey literature data sources (1 January 2005 to 13 October 2020).

Study selection The review included peer-reviewed and grey literature from Organisation for Economic Co-operation and Development listed countries that focused on quality of health student placements in regional, rural and remote areas.

Data extraction Data were extracted regarding the methodological and design characteristics of each data source, and the features suggested to contribute to student placement quality under five categories based on a work-integrated learning framework.

Results Of 2866 resulting papers, 101 were included for data charting and content analysis. The literature was dominated by medicine and nursing student placement research. No literature explicitly defined quality in rural health student placements, although proxy indicators for quality such as satisfaction, positive experiences, overall effectiveness and perceived value were identified. Content analysis resulted in four overarching domains pertaining 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.

Conclusion The findings suggest that quality in rural health student placements hinges on contextually specific features. Further research is required to explore these findings and ways in which these features can be measured during rural health student placements.

INTRODUCTION

Health student placements facilitate student translation of theory to practice using authentic work-related tasks in different settings. Health student placements often involve the student delivering elements of care directly to service clients. As such, student placements are essential for skill

Strengths and limitations of this study

- This review offers a systematised overview of the literature relating to features of quality in rural health student placements.
- The scoping review methodology allowed for the inclusion and mapping of peer and non-peer-reviewed literature and greater conceptual clarity of the phenomenon of interest.
- It was difficult to differentiate findings specifically related to student placements in regional, rural and remote locations due to variation in contextual information provided in each data source.
- Literature not reporting on research conducted in a practice setting and not published in English were excluded.

development in complex health environments.¹ In Australia, health student placements are considered a form of work-integrated learning (WIL),² and defined as an unpaid period of time in which a student attends an approved professional workplace as a requirement of the course they are studying.³ Health student placements occur in a broad range of settings, including hospitals, private practice, community health and specific communities, and within metropolitan, regional, rural and remote settings. Context has an important role in any student learning. Geographical features of context which may afford or constrain different elements of learning, especially in relation to clinical skills experiences and supervision, have long been absent from considerations of quality and curriculum design in student placements.⁴

Placing students in rural, regional and remote (referred to collectively as rural herein) settings exposes them to skills and experiences unique to this area of practice and embedded within the social complexities



of a rural community.^{5 6} In addition to providing relevant learning opportunities, rural student placements can enhance delivery of health services, foster rural identity, encourage future clinicians to practice rurally and promote cultural safety by developing skills required to effectively work with clients and peers from culturally diverse backgrounds.^{1 7 8} There are elements of rural practice that differ from metropolitan settings. For example, rural health student placements enhance learning outcomes by providing greater opportunities for patient contact and developing an understanding of community through opportunities to socially integrate on a microlevel.^{4 9}

To date, the understanding of student placement quality has been broadly guided by professional accreditation standards, national WIL recommendations and higher education quality systems.^{10 11} These standards, recommendations and systems acknowledge that high-quality WIL involves a range of stakeholders and encompasses temporal dimensions that speak to features beyond merely outcomes of WIL. As such, the term 'quality' in the context of WIL may be defined differently by different stakeholder groups and in various settings. Reflecting this (and to allow for an inductive process) this review did not adopt a predetermined definition of 'quality' in WIL. Instead, this review allowed multiple viewpoints on what constitutes quality in WIL and collected these understandings from grey and published literature from the perspective of all WIL stakeholders.

Published standards and recommendations for high-quality WIL also typically offer educational WIL models that are generalist in nature. Subsequently, the defining features of quality in the evaluation of student placements have been based on educational WIL models that are generic and do not account for the rural context and/or the unique nature of rural communities and practice. There are complexities in assessing the quality of rural health student placements when these activities are embedded within the broader learning curriculum.¹² Predetermined definitions of quality student placements have invoked an assumed norm which is most frequently metropolitan in character due to the dominance of urban populations and privilege.¹³ This has resulted in deficit positioning and othering of rural communities compared with metropolitan centres.^{9 14}

A critical pedagogy of place is a framework gaining traction that could be used to underpin rural health student placement design and evaluation.^{4 15} Place is more than a location. A sense of place forms a strong part of one's identity.⁹ Using a place-based approach in research provides a lens which assumes that place impacts the learning environment, sense of community, social relations, access to resources and community, and opportunities for engagement in community. Commensurate with this pedagogy is rural standpoint theory,¹⁶ which uses a rural frame of reference, and assumes a marginalised rural identity to understand an issue. As a rural-focused network, the authors have used their combined knowledge of rural

communities and professional practice and used place-based pedagogy and rural standpoint theory as a lens to discuss the findings of this scoping review.

Considering the uniqueness of professional practice in a rural location and the professional development opportunities associated with student placements in these areas, there is a need to ensure quality health student placements specific to rural environments. Identifying the possible mechanisms that lead to high-quality rural health student placements may assist education institutions and industry partners to design placements that have positive outcomes for stakeholder groups such as health students, rural communities, health organisation staff and education providers.

OBJECTIVE

The objective of this review was to explore and synthesise the evidence relating to features of quality in rural health student placements. To achieve this objective, we sought to answer the following research question: What comprises quality in rural health student placements?

METHODS

Scoping review

This review followed the Joanna Briggs Institute scoping review methodology¹⁷ and is reported as per the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews.¹⁸ The scoping review methodology was deemed appropriate for this study as there is significant diversity in the body of knowledge related to this topic and no standardised definition of quality for rural student placements.^{19 20} In line with the purpose of a scoping review suggested by Peters *et al*,¹⁷ this review sought to map key concepts and provide an overview of current literature focused on the review topic. This scoping review was approached from a subjectivist epistemology, allowing the researchers to find, engage with and subjectively interpret several sources of knowledge.²¹ The researchers are situated within Australian University Departments of Rural Health (UDRHs) and have experience in designing, coordinating or evaluating rural health student placements. UDRHs provide education and support for health students with the aim of developing the Australian rural health workforce.²² Within this stance, the researchers incorporated broad evidence sources that contributed multiple viewpoints of quality in rural health student placements. In recognition that rural WIL affects multiple stakeholder groups (ie, health students, educators, rural communities, rural health organisations and their staff) this review included sources that presented the viewpoints of any placement stakeholder group. The researchers also used reflexivity to engage with each scoping review step and actively interpret review findings through recognition and connection with their own experiences. The subjectivist approach to this review allowed for the final results to detail features

of rural health student placements that contribute to quality, based on the data sources and the research team's experiences, expertise and knowledge.¹⁹

Eligibility criteria

Population of interest

This review considered articles that included rural, regional and remote student placement stakeholder groups (ie, tertiary health students, university staff or education providers, host or health organisation staff including supervisors, administrators, health professionals, service users and other community members).

Concept

Articles were included if they discussed the quality or effectiveness of rural, regional or remote student placement, particularly features, indicators or aspects of placements that contributed to understandings of quality from the perspective of the stakeholder groups. This was a complex undertaking, considering the subjective nature of the definition of quality and the lack of any universal definition of quality in rural student placements. For this reason, an existing WIL framework was used¹⁰ to inform the development of the data extraction tool. Campbell *et al*'s framework to support assurance of institution-wide quality in WIL is an evidence-based and comprehensive instrument that groups elements required for high quality WIL into four domains: student experience, curriculum

design, institutional requirements and stakeholder engagement.^{10 23} The tool designed for data collection to conduct this scoping review used the four domains suggested by Campbell *et al*¹⁰ and an additional category labelled 'other' to group the data that was extracted. This approach enabled categorisation of the data and was used for guidance due to the subjective nature of the term quality.

Context

This review focused on research conducted in regional, rural and remote areas in Organisation for Economic Co-operation and Development listed countries because rural health student placements may differ significantly in non-listed countries (table 1).²⁴ For all Australian data sources, the term 'rural' incorporated all areas outside of Australia's major cities, and thus is inclusive of rural, remote and regional settings.²⁵ For international data sources, the reviewers used author-reported context for inclusion, that is, if an international study reported the study location as rural, regional or remote, it was included.

Information sources

This scoping review considered all published articles that reported on primary research with quantitative, qualitative or mixed-methods design. Descriptive observational study designs including case series, individual case reports and descriptive cross-sectional studies were considered

Table 1 Inclusion and exclusion criteria	
Inclusion criteria	Exclusion criteria
<ol style="list-style-type: none"> 1. Population: All student placement stakeholder groups including university level students, university course coordinators, UDRH workers, host organisation staff including supervisors, administrators, health professionals, service users and other community members. 2. Concept: Health students completing student placements (including but not limited to medicine, allied health, psychology, physiotherapy, speech pathology, occupational therapy, social work, pharmacy, podiatry, nutrition, dietetics, radiography, medical imaging, medical laboratory science, medical radiation, audiology, chiropractic, dentistry, exercise physiology, optometry osteopathy, nursing, midwifery, paramedicine, prosthetics, Aboriginal health), factors, influences or characteristics that impact placements. 3. Context: student placements implemented in regional, rural or remote areas in OECD countries: Australia, Austria, Belgium, Canada, Chile, Columbia, Czech republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, NZ, Norway, Poland, Portugal, Slovak republic, Slovenia, Spain, Sweden, Switzerland, Turkey, UK, USA. 4. Student placements conducted in practice setting for example, hospitals, community health services, school settings, disability services. 	<ol style="list-style-type: none"> 1. Does not meet inclusion criteria for population 2. Does not meet inclusion criteria for concept, that is, not about health students completing student placements 3. Does not meet inclusion criteria for context that is, regional, rural or remote student placements in OECD countries 4. Does not report on factors, influences or characteristics that impact student placements 5. Does not report on research conducted in a practice setting, that is, focused purely on simulation 6. Was not published in or after 2005 7. Full text is not published in English 8. Systematic review focused on a research question that met any exclusion criteria 9. Publication is a report of a research protocol (no findings included) 10. Full text not available

OECD, Organisation for Economic Co-operation and Development; UDRH, University Departments of Rural Health.

for inclusion. Reviews that focused on research questions that met the inclusion criteria were included as a data source. Grey literature, opinion papers, reports and doctoral theses were also included.

Search

Part A: peer-reviewed articles

An initial search of MEDLINE and CINAHL was conducted by three researchers to identify articles that explored the review topic and create a list of relevant search terms. Four researchers piloted the search terms in eight rounds of searches using different keyword combinations. After the pilot round, database searches using the same keywords were conducted in MEDLINE, CINAHL, Embase, ProQuest, Informit, Scopus and ERIC on 13 October 2020. Peer-reviewed articles published from 2005 to 2020 were included in this scoping review. The keyword combinations and database searches used in this review are shown in online supplemental appendix A.

Source of evidence selection

The resulting papers were collated and uploaded into Covidence (www.covidence.org) and duplicates were removed. After pilot testing, researchers assessed the titles and abstracts of the resulting papers against the inclusion/exclusion criteria for the review (table 1), with each paper being assessed by two researchers. Where there was a discrepancy between reviewers a third party made the final decision for inclusion or exclusion. Potentially relevant sources were then retrieved in full, and their citation details imported into Covidence. The full text of selected papers were assessed against the inclusion criteria by two independent reviewers. Again, where there was a discrepancy between reviewers, a third party made the final decision. Reasons for exclusion of papers at the full text stage were recorded. The results of the search and the study inclusion process are reported in figure 1.

Part B: grey literature

A subgroup of researchers contacted each of the sixteen Australian UDRHs, outlining the focus of scoping review and requesting any known relevant grey literature. Searches were also conducted on six relevant Australian websites. Due to resource limitations, further searching of the grey literature was not feasible. Doctoral theses identified in the database searches for peer-reviewed literature were added to the list of grey literature if their data was not already available in peer-reviewed publications. Opinion pieces sourced via database searches were included in the grey literature.

Source of evidence selection

The full text of all grey literature was assessed by two independent reviewers. The articles that were identified in the grey literature search were subject to assessment against the same inclusion and exclusion criteria as the peer-reviewed literature, excluding any criteria specific to research documents (ie, exclusion criteria 5, 8 and 9 were

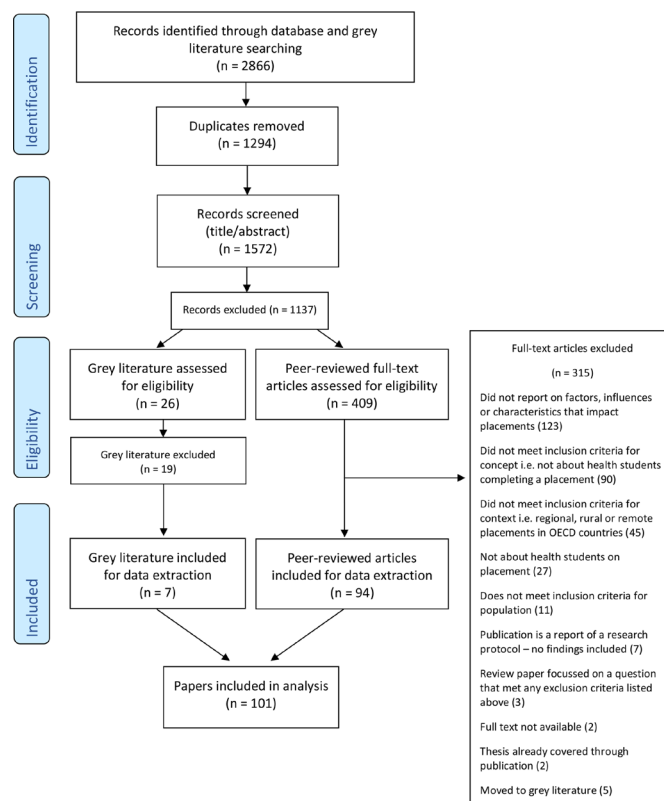


Figure 1 PRISMA flow diagram of article selection for inclusion in the review. OECD, Organisation for Economic Co-operation and Development; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

not applied). Where there was a discrepancy between reviewers a third party made the final decision.

Data charting process

A data extraction tool was created in Covidence (for peer-reviewed literature) and replicated in Microsoft Excel (for grey literature). The tool was designed to extract the methodological and design characteristics of each data source, as well as the features suggested to contribute to student placement quality. The extraction of features related to quality in student placements were organised under five categories based on Campbell *et al's* WIL framework,¹⁰ and included student experiences, curriculum design, institutional requirements, stakeholder engagement and other factors. The tool was trialled by two researchers and after discussion with the research team, the tool was agreed on. Data extraction and charting of the literature was then completed by 10 researchers. Each article underwent extraction by one researcher and was checked by another. The researchers conducting data extraction met frequently to discuss the use of the extraction tool and raise any questions. Throughout this process, some articles that did not meet the inclusion criteria for the review were identified. These were sent back for full text review and an independent researcher made the final decision regarding inclusion, exclusion or inclusion in grey literature. The data that were extracted included specific details about the participants, concept,

context, study methods and key findings relevant to the review questions. A data chart comprised of the information extracted from each data source is shown in online supplemental appendix B.

Data analysis and synthesis of results

This scoping review used tabular, descriptive and narrative methods to present the data extracted from the included studies. Content analysis was used to answer the research question and map the themes found in the literature. An inductive approach to content analysis using the phases, suggested by Erlingsson and Brysiewicz,²⁶ was used by five researchers who completed data extraction and charting. Data had been extracted from papers in the form of short excerpts, each of which was treated as individual ‘meaning units,’ and not further condensed. The extraction of excerpts of text were guided by the data extraction tool as explained in the data charting process above. Each member of the data analysis team coded an allocated number of meaning units. The researchers then discussed and cross-checked the codes to ensure consistency. The frequency of code presentations was used to give weight to and identify features that were more common and frequently associated with student placement quality. At the completion of these tasks, codes were organised into categories that were amalgamated into overarching domains. During each step of the data extraction, charting, coding and arranging domains, the researchers reflected on and discussed the emerging findings from a rural standpoint. These reflective sessions were used to assist with conceptual clarity. The final version of the analysis therefore resulted in a conceptual map of domains that contribute to placement quality and the features existent within those domains.

Patient and public involvement

No patients were involved in this scoping review.

RESULTS

A total of 2866 records were identified during the database search. After title and abstract screening and removal of duplicates, 435 papers (409 peer-reviewed and 26 grey literature) were included for full-text assessment. After application of the inclusion and exclusion criteria a total of 101 papers were included in the final analysis (94 peer-reviewed and 7 grey literature, see online supplemental appendix C). The number of evidence sources and those included/excluded are shown in figure 1.

Characteristics of sources of evidence

As shown in the data chart (online supplemental appendix B) and summary of included literature (table 2), most of the literature is based in the Australian context (n=77).^{8 22 27–101} There is variability in the sites in which student placements were undertaken, and the length of placement varied from 6 days to 52 weeks. Published research focused on placements for medicine (n=45) and nursing students (n=42).

No literature explicitly defined quality in rural health student placements, although all papers described features of quality. Examples of proxy indicators for quality included in the literature were ‘satisfaction’,^{10 55} ‘positive experiences’,^{98 102} ‘overall effectiveness’,¹⁰³ and ‘perceived value’.¹⁰⁴ The literature also demonstrated a bias towards reporting the positive aspects of rural student placements. However, some negative aspects of the domains were identified, for example, geographical isolation^{49 68 105} and poor-quality supervision,^{67 74 106} although these were mentioned less frequently.

Table 2 Summary of study characteristics from the included literature

Study characteristics	Summary of findings (no of studies)
Year of publication	Range 2005–2020
Country of publication	Australia ⁷⁷ ; Canada ¹⁷ ; USA ⁵ ; England ¹ ; Mixed ¹
Methods used in study	Interviews ⁵² ; Survey ⁴⁷ ; Focus groups ²⁷ ; Textual analysis ¹² ; Literature review ⁶ ; Observations ¹ ; Academic performance. ¹ Studies that used mixed or multi-methods (³⁶ ; 36%)
Population studied	Students ⁸² ; Supervisors ³⁹ ; Host organisation staff ²⁵ ; Education organisation staff ¹² ; Community members ⁶ ; Graduates ⁵ Studies that included mixed populations ⁴¹ (40%)
Placement sites	Mixed/multiple sites ⁴⁹ ; not reported ²⁴ ; hospital or multipurpose service ¹⁵ ; First Nations service provider or community ⁶ ; private practice ⁴ ; community setting ² ; school ¹
Discipline/s included in study population	Medicine ⁴⁵ ; nursing ⁴² ; occupational therapy ¹⁹ ; physiotherapy ¹⁵ ; speech pathology ¹⁴ ; dentistry ¹⁴ ; pharmacy ¹¹ ; allied health (not specified) ¹⁰ ; social work ¹⁰ ; midwifery ⁸ ; dietetics/nutrition ⁷ ; psychology ⁷ ; other or non-specified health course ⁷ ; medical radiation science ⁵ ; podiatry ³ ; paramedicine ³ ; exercise therapy or physiology ² ; oral health therapy ¹
Length of placement	Reported placement lengths (33 studies); Range: 6 days to 52 weeks (average 10 weeks) Study included placements of mixed lengths (22 studies) Placement length not reported (46 studies)

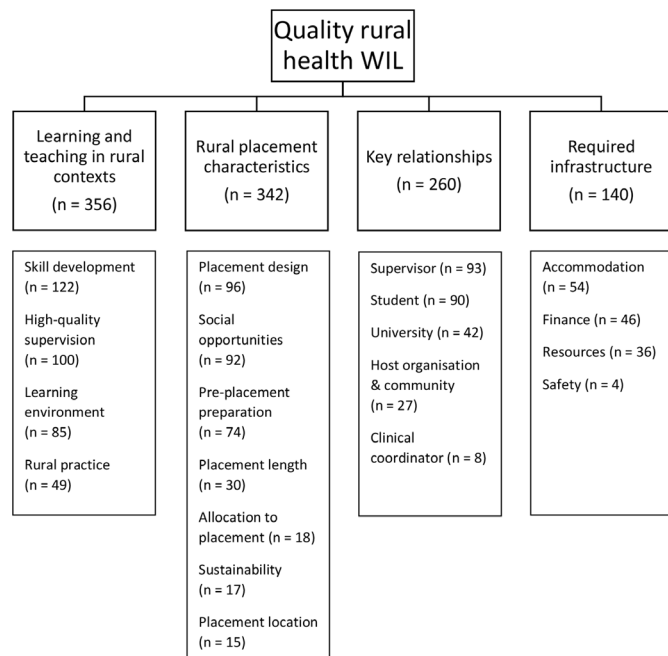


Figure 2 Features of quality in rural health student placements within four overarching domains (n=count number from content analysis). WIL, work-integrated learning.

Synthesis of results

From the included literature, the team inductively developed 83 codes for features of quality in rural health student placements. Of these, the five most prominently coded features were positive opportunities for developing relationships between student/s and the community (n=49)^{22 27 28 32–34 36 37 39 41 42 44 48 50 53 54 57–61 63 66 75 78–81 84 88–91 94–98 100–102 104 107–112}; opportunities to learn about rural practice (n=49)^{27 29 30 32 33 37 41–44 48 50 53 54 57–60 63 66–68 78–80 82 85 86 88 93–96 98 100–102 108–117}; exposure to a broad clinical caseload (n=39)^{27–30 32–37 40 43 45–50 52 57 59 60 66 67 71 79 80 82 85 88 96 100 103 104 113 114 116 118 119}; positive clinical learning environment (n=37)^{27 29 30 32 34 38 40–43 50 52 54 57 59 67 69 71 76 77 79 85 87 88 91 92 100 102 104–106 108 110 115 119–121} and opportunities to develop generic health professional skills (n=37)^{9 30 33 34 37 39–41 43 44 46 47 50 52 59–61 66 68 71–73 81 83 85 87 92–94 100 101 103 106 107 109 115 116}.

The 83 codes were organised into 21 categories and four overarching domains pertaining to features of quality in rural health student placements. The overarching domains were learning and teaching in rural contexts, rural student placement characteristics, key relationships and required infrastructure. The number of times each feature of quality was coded in the literature is shown in figure 2.

Learning and teaching in rural contexts

The learning and teaching in rural contexts domain comprised five categories focused on the learning environment, skill development, supervision, rural practice and capability development. Codes relating to the 'learning environment' focused on positive clinical learning environments, students feeling welcomed and valued, and having access to a range of learning

opportunities including cultural learning, reciprocal learning with supervisors, interprofessional and peer learning. 'Skill development' referred to opportunities to develop profession-specific and generic skills and access to a broad clinical caseload to enhance skill development. 'High-quality supervision' was related to the method of teaching used by supervisors, adequate access to supervisors, the supervision process fitting with the workload and supervisor benefits of providing student supervision. 'Rural practice' related to opportunities to learn about the nature of rural practice during placement, while capability development related to the opportunities provided during placement to develop a sense of identity and belonging, confidence, autonomy and cultural awareness.

Rural student placement characteristics

The rural student placement characteristics domain incorporated five categories including allocation of placement, length of placement, preplacement preparation, social opportunities and placement design. Codes relating to 'allocation of placements' described the recognition of the effect of geographical isolation, the opportunity for students to choose a rural placement and student needs being considered in allocation. 'Length of placement' referred to the positive and negative aspects of placement duration. The 'preplacement' preparation category comprised codes describing a range of preparation activities for students, including cultural and general orientation, social and peer preparation, and educational preparation. 'Social opportunities' referred to community immersion activities and other opportunities to support students to participate in social activities and explore rural areas. 'Placement design' related to the sustainability of the placement, placement goals and objectives aligning with stakeholder needs, adequate student workload and placements enhancing service capacity.

Key relationships

The key relationships domain comprised six categories surrounding a range of stakeholders, including universities, clinical coordinators, host organisations and communities, supervisors and the students. Codes relating to the 'university' category were focused on relationship maintenance and communication with other stakeholders. The 'clinical coordinator' category codes related to the availability of the coordinator role to other stakeholders, and maintenance of communication and relationships with other stakeholders. The 'host organisation and community' category related to codes regarding the inclusion of the host organisation and rural community in placement design, and support for them to prepare for student placements. The 'supervisor' category referred to the positive relationship and communication of supervisors with other stakeholders, their work to build and demonstrate community relationships, and support for supervisors. The 'student' category comprised codes about the positive relationships and communication with

other stakeholders, availability of peer support and the supported well-being of students.

Required infrastructure

The required infrastructure domain comprised four categories including accommodation, safety, finance and resources. Codes relating to the ‘accommodation’ category referred to the availability of accommodation that is affordable and provides suitable social experiences. ‘Safety’ referred to the physical safety of students and other stakeholders during placement, including safety on the roads. Codes regarding the ‘finance’ category referred to adequate funding for the placement site, for students and for any travel during placement. Other resources within the infrastructure theme included access to the internet, physical or clinical equipment and learning spaces for students.

DISCUSSION

This scoping review identified and explored the literature related to features of quality in rural health student placements. The review did not find a published definition of quality in rural health student placements or any existing frameworks of quality specific to rural health student placements. Using a subjectivist approach, researchers mapped a broad range of features of quality in rural student placements and organised these within four domains: learning and teaching in rural contexts, rural student placement characteristics, key relationships and required infrastructure.

Understanding the possible mechanisms that lead to high-quality rural health student placements may assist education institutions and industry partners to design and benchmark placements that have positive outcomes for diverse stakeholder groups. Some of the identified features of quality in rural health student placements that were identified in this review can be mapped and measured quantitatively. These features constituted the overarching domain of required infrastructure and were also present across other quality domains such as rural student placement characteristics. Measurable features of quality in rural health student placements include the availability and affordability of accommodation and financial support; student access to resources such as internet, clinical equipment and vehicles; the processes of placement design; activities included in the placement; placement learning objectives and access to clinical supervision. These features could be systematically implemented and measured to promote high-quality rural health student placement experiences, although measurement tools specific to rural health student placements and suitable for use across different rural contexts and universities would be required to track more quantitatively measurable features.

In contrast to the measurable features of placement quality identified in this review, three of the four domains that contribute to placement quality reflect features

that are more conceptual and difficult to measure. This is where the complexity of implementing and fostering experiences that create quality in rural health student placements lie. These features include social and cultural connection, feeling safe, opportunities to grow autonomy, fostering belonging, building confidence, developing professional identity, feeling welcomed and valued, and high-quality supervision. These features are more nuanced and uniquely experienced by individuals and are yet to be well conceptualised in the rural health literature, as seen with the capability development concepts of identity and belonging in the WIL and broader education literature.^{122–124}

From a rural standpoint¹⁶ and drawing from the ideas of Handley *et al*,¹²² Trede¹²³ and Levett-Jones *et al*,¹²⁴ identity and belonging are interrelated due to their dynamic, relational and contextual underpinnings. By engaging in rural healthcare systems and practice, and with rural people and communities, students may develop a broader sense of professional identity—one which incorporates an understanding of their role to meet the health needs of all people (including rural people) and, that is, rural-informed, drawing on relational approaches embedded in rural healthcare. In addition, the development of workforce mechanisms that further emphasise and enhance a sense of belonging for students on rural health student placements could support student learning in rural clinical settings. However, these quality features of rural health student placements and their potential impact are not currently well measured or celebrated in university assessment processes. Further research is required to measure nuanced meanings of quality related to identity, belonging, connection and confidence in rural health student placements.

The rigour of included studies was not assessed in this scoping review, which is consistent with scoping review methods discussed by Arksey and O’Malley.¹⁹ However, common features and gaps in the literature identified through this review could shape the direction of future research to measure the quality of rural health student placements. The studies reported here predominantly focused on perception, positive experiences and satisfaction of stakeholders as measures of quality. While these perspectives and experiences of stakeholders are valuable, objective measures of rural health student placement quality and theoretically informed research is lacking. In the literature, some stakeholders were represented more often, for example, students and supervisors; with some represented less often, such as community members or representatives. Community partnerships and relationships are integral to rural health student placements and should be included further in research related to rural health placement quality. Another stakeholder voice largely missing from the literature is that of university staff. Given the reported value of rural student placements for other stakeholders, and the responsibility of universities to ensure the quality



of higher education, universities and rural communities need to be privileged as stakeholders in future research to ensure a more complete view of quality in rural health student placements.

The strength of this scoping review was its rigorous, systematic approach to finding, charting and mapping the literature. The generalisability of the findings to individual health disciplines is limited as many data sources combined findings from several different disciplines. In particular, the evidence was dominated by sources focused on medicine and nursing student placements, which may not be applicable to other disciplines. The published literature is also predominantly focused on the Australian setting (77 of 101 articles were Australian), which may reduce the generalisability or applicability of the findings to other countries. This dominance may also signify the importance of conducting further research in other countries that use rural health student placements as part of tertiary curriculum so that standards for quality in this area can more adequately reflect international needs.

The reviewers relied on the contextual definition provided within each data source to identify information related to rural locations and thus the review results could not be differentiated for those in rural, regional and remote contexts. This may limit the application of the findings to specific placement contexts. This review was not able to differentiate the effect of different placement models on rural health student placement quality as many data sources either did not state the placement design or combined findings from several placement types. Educational-based or community-based activities undertaken in a rural setting were not included in this review unless specifically attached to rural health placements. This review, therefore, does not provide evidence related to the quality of rural educational or standalone community engagement activities.

A further consideration is whether the features pertaining to high-quality health student placements that were found in this review are also applicable to health student placements conducted in other settings such as those in metropolitan locations. The framework for quality assurance of WIL published by Campbell *et al*¹⁰ provides a generic approach to ensuring quality across different WIL contexts and was used as a basis for the data extraction tool used in this review. Many of the placement elements found in this review may be applicable to both rural and metropolitan settings, however, this would need to be investigated in future research as health placements are contextually influenced. This is exemplified by the way the review findings did not replicate but extended the framework proposed by Campbell *et al*.¹⁰ The findings of this review should, therefore, be considered as a reflection of the rural context from which the literature was derived.

CONCLUSION

This scoping review identified and explored peer-reviewed and grey literature related to features of quality in rural health student placements. No universal definition of quality in rural health student placements was found. The findings of the review demonstrate that quality in rural health student placements hinges on contextually specific domains relating to learning and teaching in rural contexts, rural student placement characteristics, key stakeholder relationships and required infrastructure. Some of the quality features that constitute these domains are measurable, while others are nuanced and require further research to conceptualise how they can be implemented and measured in rural contexts. The findings of this review can be used by those responsible for developing and coordinating rural health student placements to enhance the quality of these activities for involved stakeholders.

Author affiliations

- ¹Three Rivers University Department of Rural Health, Charles Sturt University, Wagga Wagga, New South Wales, Australia
- ²Department of Rural Health, The University of Melbourne, Shepparton, Victoria, Australia
- ³La Trobe Rural Health School, La Trobe University, Wodonga, Victoria, Australia
- ⁴Centre for Rural and Remote Health, James Cook University, Mount Isa, Queensland, Australia
- ⁵Rural and Remote Health, Flinders University, Darwin, Northern Territory, Australia
- ⁶Western Australian Centre for Rural Health, The University of Western Australia, Karratha, Western Australia, Australia
- ⁷University Centre for Rural Health, The University of Sydney, Lismore, New South Wales, Australia
- ⁸Joint Program in Medicine School of Rural Medicine, Charles Sturt University, Orange, New South Wales, Australia
- ⁹Centre for Rural Health, University of Tasmania, Launceston, Tasmania, Australia
- ¹⁰Majarlin Kimberley Centre for Remote Health, The University of Notre Dame, Broome, Western Australia, Australia
- ¹¹Department of Rural Health, The University of Newcastle, Taree, New South Wales, Australia
- ¹²Department of Rural Health, University of South Australia, Whyalla, South Australia, Australia
- ¹³Western Australian Centre for Rural Health, The University of Western Australia, Geraldton, Western Australia, Australia

Twitter Jodie Bailie @JodieBailie1

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ORCID iDs

Claire Quilliam <http://orcid.org/0000-0002-7344-0133>

Leigh Moore <http://orcid.org/0000-0001-6106-1120>

Jodie Bailie <http://orcid.org/0000-0003-4393-5773>

Sarah Hyde <http://orcid.org/0000-0001-9858-9527>

REFERENCES

- Moran A, Nancarrow S, Cosgrave C, *et al*. What works, why and how? A scoping review and logic model of rural clinical placements for allied health students. *BMJ Health Serv Res* 2020;20:866.
- Billett S. *Curriculum and pedagogical bases for effectively integrating practice-based experiences – final report*. Australian Learning and Teaching Council, 2011.
- Fair Work Ombudsman. Student placements. Australian government; n.d. Available: <https://www.fairwork.gov.au/pay/unpaid-work/student-placements> [Accessed 17 Aug 2021].
- Reeve C, Johnston K, Young L. Health profession education in remote or geographically isolated settings: a scoping review. *J Med Educ Curric Dev* 2020;7:238212052094359.
- Billett S. The Practices of Using and Integrating Practice-Based Learning in Higher Education. In: Kennedy M, Billett S, Gherardi S, *et al*, eds. *Practice-Based learning in higher education*. Dordrecht, 2015: 15–30.
- Held FP, Roberts C, Daly M, *et al*. Learning relationships in community-based service-learning: a social network analysis. *BMJ Med Educ* 2019;19:113.
- Conradie H, Reid S, Daniels-Felix D. The effect of undergraduate students on district health services delivery in the Western Cape Province, South Africa. *Afr J Health Prof Educ* 2018;10:56–60.
- Thackrah RD, Thompson SC. Learning from follow-up of student placements in a remote community: a small qualitative study highlights personal and workforce benefits and opportunities. *BMJ Med Educ* 2019;19:331.
- Couch D, O'Sullivan B, Russell D, *et al*. 'It's so rich, you know, what they could be experiencing': rural places for general practitioner learning. *Health Sociol Rev* 2020;29:76–91.
- Campbell M, Russell L, McAllister L. *A framework to support assurance of institution-wide quality in work integrated learning*. Australian Collaborative Education Network, 2019.
- Tertiary Education Quality and Standards Agency. Guidance note: academic quality assurance. Australian government, 2017. Available: <https://www.teqsa.gov.au/latest-news/publications/guidance-note-academic-quality-assurance>
- Yorke J, Vidovich L. Quality policy and the role of assessment in work-integrated learning. *Asia-Pacific Journal of Cooperative Education* 2014;15:225–39.
- Roberts P, Guenther J, Rural F. Remote: Key Issues, Debates, Definitions, and Positions in Constructing Rural and Remote Disadvantage. In: Roberts P, Fuqua M, eds. *Ruraling education research*. Singapore: Springer, 2021: 13–27.
- Fors M. Geographical narcissism in psychotherapy: Countermapping urban assumptions about power, space, and time. *Psychoanalytic Psychology* 2018;35:446–53.
- Roberts P, Cosgrave C, Gillespie J, *et al*. 'Re-placing' professional practice. *Aust J Rural Health* 2021;29:301–5.
- Roberts P. Researching from the standpoint of the rural. In: White S, Corbett M, eds. *Doing educational research in rural settings: methodological issues, international perspectives and practical solutions*. Routledge, 2014: 135–48.
- Peters MDJ, Godfrey C, Mclnerney P. In: *Aromataris E, Munn Z, editors*. Joanna Briggs Institute: Joanna Briggs Institute Reviewer's Manual, 2020.
- Tricco AC, Lillie E, Zarin W, *et al*. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med* 2018;169:467–73.
- Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005;8:19–32.
- Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci* 2010;5:69.
- Thomas A, Lubarsky S, Varpio L, *et al*. Scoping reviews in health professions education: challenges, considerations and lessons learned about epistemology and methodology. *Adv Health Sci Educ Theory Pract* 2020;25:989–1002.
- KBC Australia. *Independent evaluation of the rural health multidisciplinary training (RHMT) program – final report*. Australian Government Department of Health, 2020.
- Campbell M, Leoni R, Thomson K. The construction and testing of a framework to assure the institutional quality of work-integrated learning. *IJWIL* 2021;22:505–19.
- OECD. Organisation for Economic Co-operation and Development [OECD]. Where: Global reach, 2020. Available: <https://www.oecd.org/about/members-and-partners/>
- Australian Institute of Health and Welfare. *Rural & Remote Australians*. Australian Government, 2019.
- Erlingsson C, Brysiewicz P. A hands-on guide to doing content analysis. *Afr J Emerg Med* 2017;7:93–9.
- Abuzar MA, Burrow MF, Morgan M. Development of a rural outplacement programme for dental undergraduates: students' perceptions. *Eur J Dent Educ* 2009;13:233–9.
- Adams M, Dollard J, Hollins J, *et al*. Development of a questionnaire measuring student attitudes to working and living in rural areas. *Rural Remote Health* 2005;5:327.
- Astill S, Zournazis H, Marlow A. Improving health student placement experiences in rural Tasmania: the whole of community facilitator model of support. *Australian and International Journal of Rural Education* 2020;30:1–17.
- Barnett T, Cross M, Shahwan-Akl L, *et al*. The evaluation of a successful collaborative education model to expand student clinical placements. *Nurse Educ Pract* 2010;10:17–21.
- Barnett T, E.Walker L, Jacob E, *et al*. Expanding the clinical placement capacity of rural hospitals in Australia: displacing petA to place Paul? *Nurse Educ Today* 2012;32:485–9.
- Bennett P, Jones D, Brown J, *et al*. Supporting rural/remote primary health care placement experiences increases undergraduate nurse confidence. *Nurse Educ Today* 2013;33:166–72.
- Birden H, Wilson I. Rural placements are effective for teaching medicine in Australia: evaluation of a cohort of students studying in rural placements. *Rural Remote Health* 2012;12:2167.
- Birden H, Barker J, Wilson I. Effectiveness of a rural longitudinal integrated clerkship in preparing medical students for internship. *Med Teach* 2016;38:946–56.
- Bowen L, Kable A, Keatinge D. Registered nurses' experience of mentoring undergraduate nursing students in a rural context: a qualitative descriptive study. *Contemp Nurse* 2019;55:1–14.
- Bradley D, Bourke L, Cosgrave C. Experiences of nursing and allied health students undertaking a rural placement - barriers and enablers to satisfaction and wellbeing. *Australian and International Journal of Rural Education* 2020;30:51–63.
- Carriage C, Akers J, Payne K. An immersive model of learning in Aboriginal Community Control Services for MBBS students, Lime Good Practice Case Studies. In: *Faculty of medicine, dentistry and health sciences*. The University of Melbourne, 2017.
- Charleston R, Happell B. Preceptorship in psychiatric nursing: an impact evaluation from an Australian perspective. *Nurse Educ Pract* 2005;5:129–35.
- Cockrell DJ. *Rural clinical placements for dental students: an action research study [PhD Dissertation]*. University of Sydney, 2005.
- Cosgrave C. *Factors determining a 'high-quality' student clinical placement experience in rural public health services: Findings from a Victorian Study*. Wangaratta: The University of Melbourne, 2018.



- 41 Courtney-Pratt H, Ford K, Marlow A. Evaluating, understanding and improving the quality of clinical placements for undergraduate nurses: a practice development approach. *Nurse Educ Pract* 2015;15:512–6.
- 42 Craig PL, Phillips C, Hall S. Building social capital with interprofessional student teams in rural settings: a service-learning model. *Aust J Rural Health* 2016;24:271–7.
- 43 Daly M, Perkins D, Kumar K, et al. What factors in rural and remote extended clinical placements may contribute to preparedness for practice from the perspective of students and clinicians? *Med Teach* 2013;35:900–7.
- 44 Daly M, Roberts C, Kumar K, et al. Longitudinal integrated rural placements: a social learning systems perspective. *Med Educ* 2013;47:352–61.
- 45 D'Amore A, Mitchell EKL, Robinson CA, et al. Compulsory medical rural placements: senior student opinions of early-year experiential learning. *Aust J Rural Health* 2011;19:259–66.
- 46 Denz-Penhey H, Murdoch JC. Reported reasons of medical students for choosing a clinical longitudinal integrated clerkship in an Australian rural clinical school. *Rural Remote Health* 2009;9:1093.
- 47 Dodd B, Castles J, Aar M. A rural clinical placement: Children's outcomes. *Journal of Clinical Practice in Speech-Language Pathology* 2019;21:58–63.
- 48 Fatima Y, Kazmi S, King S, et al. Positive placement experience and future rural practice intentions: findings from a repeated cross-sectional study. *J Multidiscip Healthc* 2018;11:645–52.
- 49 Francis-Cracknell A, Maver S, Kent F, et al. Several strategies for clinical partners and universities are perceived to enhance physiotherapy student engagement in non-metropolitan clinical placements: a mixed-methods study. *J Physiother* 2017;63:243–9.
- 50 Furness L, Tynan A, Ostini J. What supports allied health students to think, feel and act as a health professional in a rural setting? perceptions of allied health staff. *Aust J Rural Health* 2019;27:489–96.
- 51 Furness L, Kaltner M. Facilitating student education and support using videoconference. *Aust J Rural Health* 2015;23:249–53.
- 52 Furness L, Tynan A, Ostini J. What students and new graduates perceive supports them to think, feel and act as a health professional in a rural setting. *Aust J Rural Health* 2020;28:263–70.
- 53 Gum L, Richards J, Walters L, et al. Immersing undergraduates into an interprofessional longitudinal rural placement. *Rural Remote Health* 2013;13:2271.
- 54 Hart B, Cavanagh M, Douglas D. The "Strengthening Nursing Culture Project" – an exploratory evaluation study of nursing students' placements within Aboriginal Medical Services. *Contemp Nurse* 2015;51:245–56.
- 55 Hosken N, Laughton J, Goldingay S. A rotational social work field placement model in regional health. *Advances in social work and welfare education* 2016;18:72–87.
- 56 Isaac V, McLachlan CS, Walters L, et al. Screening for burn-out in Australian medical students undertaking a rural clinical placement. *BMJ Open* 2019;9:e029029.
- 57 Johnson G, Wright FAC, Foster K. A longitudinal evaluation of the rural clinical placement program at the University of Sydney dental school. *Eur J Dent Educ* 2019;23:e59–70.
- 58 Johnson G, Blinkhorn A. Student opinions on a rural placement program in New South Wales, Australia. *Rural Remote Health* 2011;11:1703.
- 59 Johnson G, Blinkhorn A. Faculty staff and rural placement supervisors' pre- and post-placement perceptions of a clinical rural placement programme in NSW Australia. *Eur J Dent Educ* 2013;17:e100–8.
- 60 Jones D, McAllister L, Lyle D. Stepping out of the shadows: Allied health student and academic perceptions of the impact of a service-learning experience on student's work-readiness and employability. *Journal of Teaching and Learning for Graduate Employability* 2015;6:66–87.
- 61 Jones D, McAllister L, Dyson R, et al. Service-learning partnerships: features that promote transformational and sustainable rural and remote health partnerships and services. *Aust J Rural Health* 2018;26:80–5.
- 62 Kerr R, Hemmings BC, Kay R. The Effect of Social Contingencies on Nursing Students' Reactions During a Rural Clinical Placement. *Int J Nurs Educ Scholar* 2013;10:81–90.
- 63 Khalil H, Leversha A, Walker J. Evaluation of pharmacy students' rural placement program: preparation for interprofessional practice. *Aust Health Review* 2015;39:85–8.
- 64 Killam LA, Carter LM. Challenges to the student nurse on clinical placement in the rural setting: a review of the literature. *Rural Remote Health* 2010;10:1523.
- 65 King KR, Purcell RA, Quinn SJ, et al. Supports for medical students during rural clinical placements: factors associated with intention to practise in rural locations. *Rural Remote Health* 2016;16:3791.
- 66 Lalloo R, Evans JL, Johnson NW. Dental students' reflections on clinical placement in a rural and Indigenous community in Australia. *J Dent Educ* 2013;77:1193–201.
- 67 Lea J, Cruickshank M, Paliadelis P, et al. The lure of the bush: do rural placements influence student nurses to seek employment in rural settings? *Collegian* 2008;15:77–82.
- 68 Longman JM, Barraclough F, Swain LS. The benefits and challenges of a rural community-based work-ready placement program for allied health students. *Rural Remote Health* 2020;20:5706–7.
- 69 Lyon PM, McLean R, Hyde S, et al. Students' perceptions of clinical attachments across rural and metropolitan settings. *Assess Eval High Educ* 2008;33:63–73.
- 70 Maloney P, Stagnitti K, Schoo A. Barriers and enablers to clinical fieldwork education in rural public and private allied health practice. *Higher Education Research & Development* 2013;32:420–35.
- 71 McLean RG, Pallant J, Cunningham C, et al. A multi-university evaluation of the rural clinical school experience of Australian medical students. *Rural Remote Health* 2010;10:1492.
- 72 Miles A. The rural communities placement program. *Int J Child Health Hum Dev* 2011;4:115.
- 73 Moffatt JJ, Wyatt JE. Using evaluation to improve medical student rural experience. *Aust Health Rev* 2016;40:174–80.
- 74 Mortimer J, Verma A, Reimann C, et al. Are all rural placements created equal? a national study of placement experiences among multidisciplinary health students. *Aust J Rural Health* 2019;27:118–24.
- 75 National Rural Health Student Network. *Optimising rural placements*. Melbourne: Rural Health Workforce Australia, 2012.
- 76 O'Brien M, Phillips B, Hubbard W. Enhancing the quality of undergraduate allied health clinical education: a multidisciplinary approach in a Regional/Rural health service. *Focus on Health Professional Education* 2010;12:11–22.
- 77 O'Keefe M, Wade V, McAllister S, et al. Improving management of student clinical placements: insights from activity theory. *BMC Med Educ* 2016;16:219.
- 78 Pront L, Kelton M, Munt R, et al. Living and learning in a rural environment: a nursing student perspective. *Nurse Educ Today* 2013;33:281–5.
- 79 Ray RA, Young L, Lindsay D. Shaping medical student's understanding of and approach to rural practice through the undergraduate years: a longitudinal study. *BMC Med Educ* 2018;18:147.
- 80 Roberts C, Daly M, Kumar K, et al. A longitudinal integrated placement and medical students' intentions to practise rurally. *Med Educ* 2012;46:179–91.
- 81 Roberts C, Daly M, Held F, et al. Social learning in a longitudinal integrated clinical placement. *Adv Health Sci Educ Theory Pract* 2017;22:1011–29.
- 82 Rural Health Workforce Australia. *Training for the future: how are rural placements perceived and how do we give our students what they are looking for?* Melbourne: Rural Health Workforce Australia, 2015.
- 83 Saikal A, Pit SW, McCarthy L. Medical student well-being during rural clinical placement: a cross-sectional national survey. *Med Educ* 2020;54:547–58.
- 84 Sen Gupta T, Grant M, Jukka C. Key factors ensuring quality of rural placements. *Int J Child Health Hum Dev* 2011;4:63.
- 85 Sen Gupta TK, Muray RB, McDonnell A, et al. Rural internships for final year students: clinical experience, education and workforce. *Rural Remote Health* 2008;8:827.
- 86 Shannon S, Walker-Jeffreys M, Newbury J, et al. Rural clinician opinion on being a preceptor. *Rural Remote Health* 2006;6:490.
- 87 Consultants SM. *Promoting quality in clinical placements: literature review and national stakeholder consultation*. Adelaide: Health Workforce Australia, 2012.
- 88 Smith T, Cross M, Waller S, et al. Ruralization of students' horizons: insights into Australian health professional students' rural and remote placements. *J Multidiscip Healthc* 2018;11:85–97.
- 89 Spiers MC, Harris M. Challenges to student transition in allied health undergraduate education in the Australian rural and remote context: a synthesis of barriers and enablers. *Rural Remote Health* 2015;15:3069.
- 90 Stone N. The rural interprofessional education project (ripe). *J Interprof Care* 2006;20:79–81.
- 91 Taylor S, Best D, Marriott J, et al. Pharmacy student views on preceptorship during rural placements. *Pharmacy Education* 2006;6:253–66.

- 92 Thackrah RD, Thompson SC, Durey A. "Listening to the silence quietly": investigating the value of cultural immersion and remote experiential learning in preparing midwifery students for clinical practice. *BMC Res Notes* 2014;7:685.
- 93 Thackrah RD, Thompson SC, Durey A. Promoting women's health in remote Aboriginal settings: midwifery students' insights for practice. *Aust J Rural Health* 2015;23:327–31.
- 94 Thackrah RD, Hall M, Fitzgerald K, et al. Up close and real: living and learning in a remote community builds students' cultural capabilities and understanding of health disparities. *Int J Equity Health* 2017;16:119.
- 95 Warren JM, Irish GL, Purbrick B, et al. Developing the future Indigenous health workforce: the feasibility and impact of a student-led placement programme in remote Indigenous communities. *Aust J Rural Health* 2016;24:306–11.
- 96 Webster S, Lopez V, Allnut J, et al. Undergraduate nursing students' experiences in a rural clinical placement. *Aust J Rural Health* 2010;18:194–8.
- 97 Weston KM, Hudson JN. Clinical scholarship among preceptors supervising longitudinal integrated medical clerkships in regional and rural communities of practice. *Aust J Rural Health* 2014;22:80–5.
- 98 Wolfgang R, Dutton R, Wakely K. Creating positive rural experiences for occupational therapy students. *Aust J Rural Health* 2014;22:204–5.
- 99 Wyatt JE, Chater AB. Academic performance of third-year medical students learning in rural settings. *Aust J Rural Health* 2018;26:265–72.
- 100 Young L, Rego P, Peterson R. Clinical location and student learning: outcomes from the LCAP program in Queensland, Australia. *Teach Learn Med* 2008;20:261–6.
- 101 Young L, Kent L, Walters L. The John Flynn placement program: evidence for repeated rural exposure for medical students. *Aust J Rural Health* 2011;19:147–53.
- 102 Cuncic C, Regehr G, Frost H, et al. It's all about relationships : A qualitative study of family physicians' teaching experiences in rural longitudinal clerkships. *Perspect Med Educ* 2018;7:100–9.
- 103 Nayar P, McFarland K, Lange B, et al. Supervising dentists' perspectives on the effectiveness of community-based dental education. *J Dent Educ* 2014;78:1139–44.
- 104 Zink T, Halaas GW, Finstad D, et al. The rural physician associate program: the value of immersion learning for Third-Year medical students. *J Rural Health* 2008;24:353–9.
- 105 Oosterbroek TA, Yonge OJ, Myrick F. "Everybody knows your name": Belonging in Rural Preceptorship. *Online J Rural Nurs Health Care* 2019;19.
- 106 sedgwick monique, Rougeau J. Points of tension: a qualitative descriptive study of significant events that influence undergraduate nursing students' sense of belonging. *Rural Remote Health* 2010;10:1569.
- 107 MacRae M, van Diepen K, Paterson M. Use of clinical placements as a means of recruiting health care students to underserved areas in Southeastern Ontario: Part 1 ? Student perspectives. *Aust J Rural Health* 2007;15:21–8.
- 108 Van Hofwegen L, Kirkham S, Harwood C. The strength of rural nursing: implications for undergraduate nursing education. *Int J Nurs Educ Scholarsh* 2005;2:27.
- 109 Brommelsiek M, Peterson JA. Preparing nurse practitioner students to practice in rural primary care. *J Nurs Educ* 2020;59:581–4.
- 110 Charles G, Bainbridge L, Copeman-Stewart K, et al. Impact of an interprofessional rural health care practice education experience on students and communities. *J Allied Health* 2008;37:127–31.
- 111 Oosterbroek T, Yonge O, Myrick F. Community spirit, cultural connections, and authentic learning in rural preceptorship. *J Nurs Educ* 2019;58:144–51.
- 112 Amundson ML, Moulton PL, Zimmerman SS, et al. An innovative approach to student internships on American Indian Reservations. *J Interprof Care* 2008;22:93–101.
- 113 Yonge O, Ferguson L, Myrick F. Preceptorship placements in Western rural Canadian settings: perceptions of nursing students and Preceptors. *OJRNHC* 2006;6:47–56.
- 114 Bartlett M, Rees EL, McKinley RK. 'Knowledge leech' to 'part of the team': students' learning in rural communities of practice. *Educ Prim Care* 2018;29:5–10.
- 115 Sedgwick MG, Yonge O. 'We're it', 'we're a team', 'we're family' means a sense of belonging. *Rural Remote Health* 2008;8:1021.
- 116 Ross BM, Cameron E, Greenwood D. A qualitative investigation of the experiences of students and Preceptors taking part in remote and rural community experiential placements during early medical training. *J Med Educ Curric Dev* 2019;6:238212051985931.
- 117 Sedgwick MG, Yonge O. Undergraduate nursing students' preparedness to "go rural". *Nurse Educ Today* 2008;28:620–6.
- 118 Campbell CD, Campbell DL, O'Friel M, et al. Practicum training in emergency consultation in a rural hospital. *Train Educ Prof Psychol* 2009;3:177–83.
- 119 Yonge O. Preceptorship rural boundaries: student perspective. *OJRNHC* 2007;7:5–12.
- 120 Sedgwick M, Yonge O. Students' Perception of Faculty Involvement in the Rural Hospital Preceptorship Experience. *Int J Nurs Educ Scholarsh* 2009;6:31.
- 121 Sedgwick M, Yonge O, Myrick F. Rural-hospital-based preceptorship: a multidisciplinary approach. *J Nurses Staff Dev* 2009;25:E1–7.
- 122 Handley K, Sturdy A, Fincham R, et al. Within and beyond communities of practice: making sense of learning through participation, identity and Practice*. *Journal of Management Studies* 2006;43:641–53.
- 123 Trede F. Role of work-integrated learning in developing professionalism and professional identity. *Asia-Pacific Journal of Cooperative Education* 2012;13:159–67.
- 124 Levett-Jones T, Lathlean J. Belongingness: a prerequisite for nursing students' clinical learning. *Nurse Educ Pract* 2008;8:103–11.

Appendix A - Keyword combinations and database searches

S#	Subject headings/search terms	CINAHL	Medline (OVID)
1	Student* OR undergraduate OR postgraduate OR pre-registration	(MH "Students+") **exploded this concept	(exp Students/) **exploded this concept
2	Preceptor OR supervisor OR "clinical supervision" OR "professional supervision"	(MH "Supervisors and Supervision") OR (MH "Clinical Supervision, Mental Health") OR (MH "Clinical Supervision") OR (MH "Student Supervision")	N/A
3	"student placement" OR "clinical placement" OR "community placement" OR "work integrated learning" OR "workplace learning" OR "clinical psychology placement" OR practicum OR fieldwork OR preceptorship OR "experiential placement**"	(MH "Student Placement")	(Preceptorship/)
4	Rural OR Remote OR regional OR non-metropolitan	(MH "Rural Health Centers") OR (MH "Rural Health Personnel") OR (MH "Hospitals, Rural") OR (MH "Rural Population") OR (MH "Rural Health Services") OR (MH "Australian Rural Nurses and Midwives") OR (MH "Rural Health Nursing") OR (MH "Rural Areas") OR (MH "Rural Health")	(Rural Health/ or Hospitals, Rural/ or Rural Population/ or Rural Health Services/)
5	Medic* OR "allied health" OR psychol* OR physiotherap* OR "speech therap**" OR "speech patholog**" OR "occupational therap**" OR "social work" OR pharmac* OR podiatr* OR nutrition* OR diete* OR dieti* OR radiog* OR "medical imaging" OR "medical laboratory scien**" OR "medical techn**" OR "medical radiation" OR audiolog* OR chiropract* OR dental OR dentist OR "exercise physiolog**" OR optometr* OR orthotic* OR osteopath* OR nurs* OR midwife* OR paramedic* OR prostheti* OR "Aboriginal Health" OR "physical therap**" OR "speech language therap**" OR "speech language patholog**" OR "speech and language therap**" OR "speech and language patholog**" OR orthoptic*		
6	1 AND 2 AND 3 AND 4 AND 5	Students Supervision/clinical supervision/student supervision Student placement + preceptorship Rural areas + rural health services/rural population/rural hospitals/remote nursing/rural health	Supervision/clinical supervision/student supervision Preceptorship Rural health services/rural population/rural hospitals/remote nursing/rural health

7	1 AND 3 AND 4 AND 5	Students Student placement + preceptorship Rural areas + rural health services/rural population/rural hospitals/remote nursing/rural health	Preceptorship Rural health services/rural population/rural hospitals/remote nursing/rural health
8	2 AND 3 AND 4 AND 5	Supervision/clinical supervision/student supervision Student placement + preceptorship Rural areas + rural health services/rural population/rural hospitals/remote nursing/rural health	Supervision/clinical supervision/student supervision Preceptorship Rural health services/rural population/rural hospitals/remote nursing/rural health
9	The same keyword combinations were then searched in Embase, ProQuest, Informit, Scopus and ERIC		

Appendix B – Characteristics of sources of evidence (data chart)

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Abuzar et al. 2009	Australia	Cross-sectional study	Survey	Students	dentistry	Placement design Pre-placement preparation Accommodation Skill development Social opportunities Rural practice Capability development Relationships Allocation to placement Placement design Learning environment
Adams et al. 2005	Australia	Before and after study	Survey	Students	medicine, nursing, pharmacy, physiotherapy	Learning environment Skill development Capability development Social opportunities Placement length
Amundson et al. 2008	USA	Cross-sectional study	Survey textual analysis	Students	medicine, occupational therapy, physical therapy, social work, dietetics, nutrition, clinical laboratory science, radiology technology, psychology	Learning environment Student Accommodation Finance Allocation to placement Clinical coordinator High-quality supervision Placement design Pre-placement preparation Capability development Social opportunities Sustainability
Astill et al. 2020	Australia	Qualitative	Individual interviews	Students, supervisors, host organisation staff	nursing, allied health	Pre-placement preparation Placement location Supervisor High-quality supervision Student Clinical coordinator

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Skill development Rural practice Learning environment
Barnett et al. 2010	Australia	Action research	Focus groups and interviews	Students, supervisors	nursing	Skill development Pre-placement preparation Supervisor Capability development Rural practice Learning environment High-quality supervision Relationships Placement design Sustainability
Barnett et al. 2012	Australia	Mixed methods	Individual interviews	Host organisation staff	nursing, medicine, allied health, dentistry	Accommodation Resources High-quality supervision Pre-placement preparation Student Placement design Sustainability
Bartlett et al. 2018	England	Qualitative	Focus groups	Students	medicine	Rural practice Skill development Relationships Learning environment Placement location Resources
Bennett et al. 2013	Australia	Mixed methods	Focus groups and interviews	Students	nursing	Capability development Rural practice Social opportunities Learning environment Placement design
Birden and Wilson 2012	Australia	Mixed methods	Survey and focus group	Students	medicine	Rural practice Allocation to placement Capability development Skill development Pre-placement preparation

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Learning environment Social opportunities Accommodation High-quality supervision Resources
Birden et al. 2016	Australia	Qualitative	Individual interviews	Students (past)	medicine	Capability development Skill development Relationships Social opportunities Learning environment High-quality supervision Placement design Placement location Supervisor
Bowen et al. 2019	Australia	Qualitative	Individual interviews	Supervisors	nursing	Pre-placement preparation Relationships Placement design Allocation to placement Student High-quality supervision Clinical coordinator Capability development Skill development
Bradley et al. 2020	Australia	Qualitative	Individual interviews	Students	nursing, occupational therapy, social work, medical imaging, physiotherapy	Placement location Finance Accommodation Placement length Learning environment Capability development Relationships Social opportunities Skill development Safety Supervisor

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Brommelsiek and Peterson 2020	USA	Mixed methods	Survey, textual analysis and focus groups	Students	nursing	Pre-placement preparation Student Skill development Rural practice Social opportunities Relationships High-quality supervision
Campbell et al. 2009	USA	Cross-sectional study	Survey	Students, supervisors, host organisation staff	psychology	Learning environment Skill development Finance Placement design
Carriage et al. 2017	Australia	Grey literature	Survey	Students, supervisors, host organisation staff	medicine	Learning environment Pre-placement preparation Skill development Rural practice Capability development Relationships High-quality supervision Social opportunities
Charles et al. 2008	Canada	Mixed methods	Individual interviews and surveys	Students, supervisors, host organisation staff	social work, nursing, medicine, physical therapy, occupational therapy, pharmaceutical sciences, speech-language pathology, audiology, laboratory technology, midwifery, psychology	Accommodation Resources Finance Pre-placement preparation Skill development Rural practice Capability development Learning environment Social opportunities Placement design
Charleston and Happell 2005	Australia	Qualitative	Focus groups	Supervisors	nursing	Pre-placement preparation Supervisor Capability development High-quality supervision Learning environment Placement design

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Cockrell et al. 2005	Australia	Grey literature	Interviews, surveys, document review	Supervisors, students, host organisation staff, education providers	dentistry	Skill development Social opportunities Student Resources Accommodation Capability development Placement length Placement design Pre-placement preparation Supervisor Finance
Cosgrave et al. 2018	Australia	Grey literature	Interviews, focus groups	Supervisors, students, host organisation staff, education providers	nursing, allied health	Clinical coordinator High-quality supervision Placement design Relationships Skill development Capability development Sustainability Accommodation Finance Resources Placement length Allocation to placement Pre-placement preparation Learning environment Student
Courtney-Pratt et al. 2015	Australia	Mixed methods	Survey and interviews	Students, supervisors	nursing	Pre-placement preparation Supervisor Student Capability development Skill development Rural practice Social opportunities Learning environment Relationships Placement design

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						High-quality supervision
Craig et al. 2016	Australia	Qualitative	Interviews textual analysis	Supervisors, host organisation staff, university staff	medicine, pharmacy, physio, occupational therapy, nursing.	Pre-placement preparation Supervisor Skill development Rural practice Capability development Learning environment Social opportunities High-quality supervision Placement design
Cuncic et al. 2018	Canada	Qualitative	Individual interviews	Supervisors	medicine	Rural practice Resources Social opportunities Relationships Student High-quality supervision Learning environment Supervisor Placement design
Daly et al. 2013	Australia	Qualitative	Individual interviews	Students, supervisors, host organisation staff	medicine	Skill development Capability development Rural practice Learning environment Pre-placement preparation
Daly et al. 2013	Australia	Qualitative	Individual interviews	Students, supervisors, host organisation staff	medicine	Resources Placement length Capability development Skill development Rural practice Learning environment Social opportunities Placement design Relationships High-quality supervision
D'Amore et al. 2011	Australia	Cross-sectional study	Survey	Students	medicine	Learning environment Social opportunities

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Skill development Placement length
Denz-Penhey and Campbell-Murdoch 2009	Australia	Qualitative	Individual interviews	Students	medicine	Skill development Finance Supervisor Social opportunities
Dodd et al. 2019	Australia	Cross-sectional study	Textual analysis	Community members	speech pathology	Placement length High-quality supervision Learning environment Placement design Student Skill development Capability development
Fatima et al. 2018	Australia	Cross-sectional study	Survey	Students	medicine, nursing, dentistry, pharmacy, allied health, others not specified	Accommodation High-quality supervision Resources Capability development Learning environment Skill development Student Social opportunities Rural practice Placement length
Francis-Cracknell et al. 2017	Australia	Mixed methods	Survey, focus groups	Students, supervisors	physiotherapy	High-quality supervision Skill development Placement location Finance Student Clinical coordinator Pre-placement preparation Allocation to placement Placement length Resources
Furness and Kalter 2015	Australia	Mixed methods	Survey	Students	occupational therapy	Supervisor Student Capability development

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Relationships High-quality supervision Learning environment Social opportunities Placement design
Furness et al. 2019	Australia	Qualitative	Focus groups	Supervisors, host organisation staff	physio, speech, occupational therapy, psychology, social work, nutrition and dietetics, podiatry	Learning environment Skill development Rural practice High-quality supervision Capability development Social opportunities Student Accommodation Placement design Relationships
Furness et al. 2020	Australia	Qualitative	Focus groups	Students, students (past)	physiotherapy, occupational therapy, dietetics, speech therapy, social work, psychology	Skill development Resources Pre-placement preparation Supervisor Rural practice Capability development Learning environment High-quality supervision
Gum et al. 2013	Australia	Qualitative	Focus groups, textual analysis	Students	nutrition and dietetics, speech pathology, paramedicine	Rural practice Learning environment Social opportunities
Hanson et al. 2018	Canada	Qualitative	Individual interviews	Supervisors	nursing	High-quality supervision Placement design High-quality supervision Resources Relationships
Hart et al. 2015	Australia	Mixed methods	Survey	Students	nursing	Capability development Rural practice Social opportunities Learning environment Pre-placement preparation

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Student Supervisor
Hosken et al. 2016	Australia	Mixed methods	Survey, focus groups, individual interviews	Students, supervisors, host organisation staff, university staff	social work	Resources Skill development Learning environment Relationships Placement length Supervisor Student Placement design High-quality supervision Clinical coordinator
Isaac et al. 2019	Australia	Cross-sectional study	Survey	Students	medicine	Skill development Placement length Social opportunities Learning environment
Johnson and Blinkhorn 2011	Australia	Before and after study	Survey	Students	dentistry	Supervisor Student Rural practice Social opportunities Placement length Accommodation Resources Finance
Johnson and Blinkhorn 2013	Australia	Qualitative	Individual interviews	Supervisors, university staff	dentistry	Skill development Resources Pre-placement preparation Student Relationships Rural practice Social opportunities Placement design Capability development Learning environment Sustainability

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Johnson et al. 2019	Australia	Cohort study	Individual interviews	Students (past)	dentistry	Skill development Accommodation Pre-placement preparation Capability development Rural practice Social opportunities High-quality supervision Learning environment Relationships
Jones et al. 2015	Australia	Qualitative	Interviews and focus groups	Students, university staff	speech pathology, occupational therapy	Capability development Learning environment Pre-placement preparation Skill development High-quality supervision Social opportunities Placement design Rural practice Placement length
Jones et al. 2018	Australia	Qualitative	Interviews & focus groups	Community members, students, university staff	speech pathology, occupational therapy	Placement design Skill development Social opportunities Sustainability
KBC Australia 2020	Australia	Grey literature	Interviews, focus groups, document review	University staff, clinical supervisors, students, health service providers, health professionals, jurisdictional officers, community representatives	medicine, nursing, midwifery, allied health, dentistry, oral health	Finance Pre-placement preparation Allocation to placement Student Accommodation Social opportunities Sustainability Placement design Learning environment Capability development Relationships High-quality supervision Supervisor Placement length

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Kerr et al. 2013	Australia	Cross-sectional study	Survey	Students	nursing	Accommodation Finance Resources Allocation to placement Student Placement location
Khalil et al. 2015	Australia	Cross-sectional study	Survey	Students	pharmacy	Pre-placement preparation Accommodation Placement length Rural practice High-quality supervision Supervisor Social opportunities
Killam and Carter 2010	Australia	Review	Literature review	Students	nursing	Placement location Accommodation Finance Resources Allocation to placement Relationships Placement design
King et al. 2016	Australia	Cross sectional study	Survey	Students	medicine	Finance Student Pre-placement preparation Accommodation Safety Learning environment Relationships Supervisor Allocation to placement
Laloo et al	Australia	Mixed methods	Surveys textual analysis	Students	dentistry	Allocation to placement Resources Accommodation Relationships High-quality supervision Rural practice Skill development

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Capability development Social opportunities Placement design Learning environment Placement location
Lea et al. 2008	Australia	Mixed methods	Survey and individual interviews	Students	nursing	Learning environment Allocation to placement High-quality supervision Skill development Rural practice Supervisor Resources
Longman et al. 2020	Australia	Cross-sectional study	Survey	Students	occupational therapy, physiotherapy, speech pathology	Capability development Placement design Learning environment Student Relationships Skill development Rural practice
Lyon et al. 2008	Australia	Cross-sectional study	Survey, focus groups	Students	medicine	Learning environment Skill development Supervisor Capability development
MacRae et al. 2007	Canada	Cross-sectional study	Survey	Students	medical, nursing, occupational therapy, physical therapy, x-ray technology	Finance Learning environment Social opportunities Capability development Skill development High-quality supervision Safety Allocation to placement Placement location
Maloney et al. 2013	Australia	Cross-sectional study	Survey	Supervisors	occupational therapy, physio, psychology, podiatry, speech path, dietetics	High-quality supervision Relationships Placement design Skill development

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Pre-placement preparation Supervisor Social opportunities
McLean et al. 2010	Australia	Cross-sectional study	Survey	Students	medicine	Skill development Learning environment High-quality supervision Placement length Supervisor
Miles 2011	Australia	Evaluation	Interviews, focus groups, survey	Students, community members	medicine	Skill development Social opportunities Skill development Student Placement design Rural practice Learning environment
Moffatt and Wyatt 2016	Australia	Before and after study	Survey	Students, supervisors	medicine	Accommodation High-quality supervision Skill development
Moran et al. 2020	Specified developed countries	Review	Scoping review	Empirical literature	allied health	Finance Resources Finance Learning environment Student High-quality supervision Pre-placement preparation Capability development Relationships Supervisor Allocation to placement Placement design
Mortimer et al. 2019	Australia	Cross-sectional study	Survey	Students	medicine, dentistry, nursing, midwifery, pharmacy, speech pathology, occupational therapy, paramedicine, physiotherapy, medical imaging	Finance Placement location Placement length Social opportunities Sustainability High-quality supervision

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Learning environment Student Allocation to placement Relationships
National Rural Health Student Network 2012	Australia	Grey literature	NA	Students, supervisors, host organisation staff	medical, nursing, midwifery, allied health, pharmacy, dentistry	Capability development Social opportunities Resources Accommodation Finance Student Learning environment Relationships Pre-placement preparation High-quality supervision
Nayar et al. 2014	USA	Cross-sectional study	Survey	Supervisors	dentistry	Skill development Pre-placement preparation Relationships Placement design
O'Brien et al. 2010	Australia	Action research	Interviews, surveys	Students, host organisation staff, university staff	dietetics, exercise therapy, occupational therapy, physiotherapy, podiatry, psychology, social work, speech pathology	Placement length High-quality supervision Placement design Finance Student Supervisor Social opportunities Learning environment
O'Keefe et al. 2016	Australia	Action research	Interviews, focus groups, observations	Students, host organisation staff	dentistry, nurses, midwifery, medicine	Learning environment Placement design High-quality supervision
Oosterbroek et al. 2019	Canada	Action research	Interviews and photo elicitation	Students, university staff	nursing	Social opportunities Capability development Rural practice Placement design
Oosterbroek et al. 2019	Canada	Qualitative	Individual interviews, photo elicitation	Students, university staff	nursing	Relationships Capability development Student

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Social opportunities Placement design Learning environment Placement location
Pront et al. 2013	Australia	Qualitative	Individual interviews	Students, Supervisors	nursing	Capability development Rural practice Sustainability Social opportunities Relationships Placement design
Ray et al. 2018	Australia	Cohort study	Survey	Students	medicine	Skill development Rural practice High-quality supervision Relationships Learning environment Social opportunities Capability development
Roberts et al. 2012	Australia	Before and after	Individual interviews and focus groups	Students, supervisors, host organisation staff	medicine	High-quality supervision Skill development Learning environment Capability development Relationships Social opportunities Supervisor Rural practice Placement length Placement design
Roberts et al. 2017	Australia	Qualitative	Individual interviews	Students	medicine	Learning environment Student Social opportunities Accommodation Pre-placement preparation Placement design Skill development Capability development

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Ross et al. 2019	Canada	Qualitative	Individual interviews focus groups	Students, supervisors	medicine	Relationships Capability development Skill development Rural practice Learning environment Social opportunities Placement design High-quality supervision
Rural Health Workforce Australia 2015	Australia	Grey literature	Survey	Students	medicine	Capability development High-quality supervision Finance Placement location Skill development Rural practice
Saikal et al. 2020	Australia	Cross-sectional study	Survey	Students	medicine	Learning environment High-quality supervision Relationships Skill development Placement design Student
Sedgwick et al. 2008	Canada	Qualitative	Interviews, focus groups, textual analysis	Students, supervisors, host organisation staff	nursing	Capability development Student Learning environment Social opportunities Placement design High-quality supervision Skill development
Sedgwick et al. 2008	Canada	Qualitative	Individual interviews, focus group textual analysis	Students, supervisors, host organisation staff	nursing	Capability development Learning environment High-quality supervision Relationships Student Skill development Rural practice

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
Sedgwick et al. 2009	Canada	Qualitative	Interviews, focus groups, textual analysis	Students, supervisors	nursing	Supervisor Rural practice Pre-placement preparation Relationships
Sedgwick et al. 2009	Canada	Qualitative	Individual interviews	Students	nursing	High-quality supervision Learning environment
Sedgwick et al. 2010	Canada	Qualitative	Interviews, textual analysis	Students	nursing	Capability development Learning environment Pre-placement preparation Relationships Placement design
Sedgwick et al. 2011	Canada	Qualitative	Focus groups, individual interviews	Host organisation staff	nursing, occupational therapy, pharmacy; laboratory science, medicine, social work, dietetics	High-quality supervision Placement design Learning environment Placement length
Sen Gupta et al. 2008	Australia	Action research	Survey, interviews	Students, supervisors, host organisation staff	medicine	Skill development Supervisor Capability development Sustainability Learning environment Rural practice Pre-placement preparation Allocation to placement Resources Accommodation High-quality supervision
Sen Gupta et al. 2011	Australia	Discussion of findings from two mixed methods studies	Interviews, surveys	Students, supervisors, host organisation staff, community members	medicine	Pre-placement preparation Clinical coordinator Social opportunities Placement design Placement length High-quality supervision Accommodation
Shannon et al. 2006	Australia	Cohort study	Survey	Supervisors	medical, nursing, pharmacy, allied health, other students	Rural practice Placement design Relationships

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
					participating in health-related courses	High-quality supervision Learning environment
Siggins Miller Consultants 2012	Australia	Grey literature	Interviews, document review	Supervisors, students, host organisation staff, education providers	nursing, medicine, occupational therapy, dentistry, social work, paramedics, audiology, physiotherapy, speech pathology, radiography, radiation therapy, psychology, physical therapy	Relationships Learning environment Pre-placement preparation Resources Placement design High-quality supervision Skill development Student
Smith et al. 2018	Australia	Cross-sectional study	Survey	Students	nursing, midwifery, medicine, allied health	Pre-placement preparation Rural practice Social opportunities Finance Accommodation Resources Skill development High-quality supervision Learning environment Capability development Placement design
Spiers and Harris 2015	Australia	Review	Scoping review	Students	allied health	Finance Placement location Social opportunities Pre-placement preparation Relationships Placement design Allocation to placement Resources Learning environment
Stone 2006	Australia	Cross-sectional study	Survey	Students, supervisors	nursing, medicine, physiotherapy, pharmacy	Learning environment Capability development Social opportunities Placement design
Taylor et al. 2006	Australia	Mixed methods	Survey focus groups	Students	pharmacy	Relationships Pre-placement preparation

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						High-quality supervision Learning environment Capability development Resources Social opportunities Placement design
Thackrah et al. 2014	Australia	Qualitative	Individual interviews	Students, students (past)	midwifery	Capability development Skill development Learning environment Sustainability
Thackrah et al. 2017	Australia	Qualitative	Individual interviews	Students	speech pathology, occupational therapy, social work, exercise physiology,	Pre-placement preparation Placement location Social opportunities Learning environment Skill development Capability development
Thackrah et al. 2019	Australia	Cohort study	Individual interviews	Students (past)	occupational therapists, speech pathologists, generalist health science	Placement design Pre-placement preparation Finance Resources Capability development Student High-quality supervision Learning environment Social opportunities Skill development Rural practice Sustainability
Thackrah et al. 2015	Australia	Qualitative	Individual interviews	Students	midwifery	Skill development Rural practice Placement length Capability development
Van Hofwegen et al. 2005	Canada	Qualitative	Focus groups individual interviews	Students, host organisation staff	nursing	Social opportunities Rural practice Capability development Learning environment

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Placement design Accommodation Placement location Finance
Warren et al. 2016	Australia	Before and after study	Survey	Students	medicine	Capability development Pre-placement preparation Social opportunities Rural practice Placement length
Webster et al. 2010	Australia	Before and after study	Survey	Students	nursing	Capability development Skill development Rural practice Learning environment Student Resources Pre-placement preparation Social opportunities Finance Placement design
Weston et al. 2014	Australia	Mixed methods	Individual interviews	Supervisors	medicine	High-quality supervision Learning environment Relationships Social opportunities Placement design
Wolfgang et al. 2014	Australia	Cross-sectional study	Survey	Students	occupational therapy	Social opportunities Supervisor Learning environment Rural practice Pre-placement preparation Capability development
Wyatt et al. 2018	Australia	Cohort study	Student academic performance	Students	medicine	High-quality supervision
Yonge 2007	Canada	Qualitative	Individual interviews	Students	nursing	Capability development Relationships Student Social opportunities

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Resources Skill development Learning environment High-quality supervision
Yonge et al. 2006	Canada	Qualitative	Interviews, textual analysis	Students, Supervisors	nursing	Finance Accommodation Supervisor Skill development Capability development Learning environment Relationships Rural practice Resources
Yonge et al. 2013	Canada	Qualitative	Photo elicitation	Students, supervisors	nursing	High-quality supervision Sustainability Learning environment Capability development
Young 2008	Australia	Case study	Survey, interviews	Students, supervisors, community members	medicine	Skill development Placement length Capability development Rural practice Social opportunities Learning environment Safety Relationships
Young et al. 2011	Australia	Cohort study	Survey	Students	medicine	Pre-placement preparation Supervisor Placement length Clinical coordinator High-quality supervision Student Capability development Placement design Learning environment Social opportunities Rural practice

Author	Country	Study type	Methods used in study	Population included	Disciplines involved	Categories of quality measured or suggested
						Skill development Sustainability
Zink et al. 2008	USA	Cross-sectional study	Textual analysis	Students	medicine	Placement length Skill development High-quality supervision Capability development Learning environment Social opportunities Relationships Student Placement design

Appendix C – Data sources included in the review

Peer-reviewed articles (n=94)

- Abuzar, M. A, M. F. Burrow, and M Morgan. 2009. "Development of a rural outplacement programme for dental undergraduates: students' perceptions." *European Journal of Dental Education* 13 (4):233-9. doi: <http://dx.doi.org/10.1111/j.1600-0579.2009.00581.x>.
- Adams, M. E., J. Dollard, J. Hollins, and J. Petkov. 2005. "Development of a questionnaire measuring student attitudes to working and living in rural areas." *Rural Remote Health* 5 (1):10. doi: <https://doi.org/10.22605/RRH327>.
- Amundson, M. L., P. L. Moulton, S. S. Zimmerman, and B. J. Johnson. 2008. "An innovative approach to student internships on American Indian reservations." *Journal of Interprofessional Care* 22 (1):93-101. doi: <http://dx.doi.org/10.1080/13561820701715091>.
- Astill, S., H. Zournazis, and A. Marlow. 2020. "Improving health student placement experiences in rural Tasmania: The whole of community facilitator model of support." *Australian and International Journal of Rural Education* 30 (1):1-17. <https://journal.spera.asn.au/index.php/AIJRE/article/view/276>.
- Barnett, T., M. Cross, L. Shahwan-Akl, and E. Jacob. 2010. "The evaluation of a successful collaborative education model to expand student clinical placements." *Nurse Education in Practice* 10 (1):17-21. doi: <http://dx.doi.org/10.1016/j.nepr.2009.01.018>.
- Barnett, T., L. E. Walker, E. Jacob, K. Missen, M. D. Cross, and L. Shahwan-Akl. 2012. "Expanding the clinical placement capacity of rural hospitals in Australia: Displacing Peta to place Paul?" *Nurse Education Today* 32 (5):485. doi: <http://dx.doi.org/10.1016/j.nedt.2011.08.013>.
- Bartlett, M., E. L. Rees, and R. K. McKinley. 2018. "'Knowledge leech' to 'part of the team': students' learning in rural communities of practice." *Education for Primary Care* 29 (1):5-10. doi: [10.1080/14739879.2017.1362664](https://doi.org/10.1080/14739879.2017.1362664).
- Bennett, P., D. Jones, J. Brown, and V. Barlow. 2013. "Supporting rural/remote primary health care placement experiences increases undergraduate nurse confidence." *Nurse Education Today* 33 (2):166. doi: <http://dx.doi.org/10.1016/j.nedt.2012.02.015>.
- Birden, H., J. Barker, and I. Wilson. 2016. "Effectiveness of a rural longitudinal integrated clerkship in preparing medical students for internship." *Medical Teacher* 38 (9):946-56. doi: [10.3109/0142159X.2015.1114594](https://doi.org/10.3109/0142159X.2015.1114594).
- Birden, H. H., and I. Wilson. 2012. "Rural placements are effective for teaching medicine in Australia: evaluation of a cohort of students studying in rural placements." *Rural and Remote Health* 12 (4):1-13. doi: <https://doi.org/10.22605/RRH2167>.
- Bowen, L., A. Kable, and D. Keatinge. 2019. "Registered nurses' experience of mentoring undergraduate nursing students in a rural context: a qualitative descriptive study." *Contemporary Nurse* 55 (1):1-14. doi: <http://dx.doi.org/10.1080/10376178.2018.1513808>.
- Bradley, D., L. Bourke, and C. Cosgrave. 2020. "Experiences of nursing and allied health students undertaking a rural placement: barriers and enablers to satisfaction and wellbeing." *Australian and International Journal of Rural Education* 30 (1):51-63.
- Brommelsiek, M., and J. A. Peterson. 2020. "Preparing Nurse Practitioner Students to Practice in

Rural Primary Care." *Journal of Nursing Education* 59 (10):581-4. doi: <http://dx.doi.org/10.3928/01484834-20200921-08>.

Campbell, C. D., D. L. Campbell, M. O'Friel, and J. Kennedy. 2009. "Practicum training in emergency consultation in a rural hospital." *Training and Education in Professional Psychology* 3 (3):177-83. doi: <http://dx.doi.org/10.1037/a0015171>.

Charles, G., L. Bainbridge, K. Copeman-Stewart, R. Kassam, and S. Tiffin. 2008. "Impact of an Interprofessional Rural Health Care Practice Education Experience on Students and Communities." *Journal of Allied Health* 37 (3):127-31. <https://pubmed.ncbi.nlm.nih.gov/18847107/>

Charleston, R., and B. Happell. 2005. "Preceptorship in psychiatric nursing: an impact evaluation from an Australian perspective." *Nurse Education in Practice* 5 (3):129-35. doi: <http://dx.doi.org/10.1016/j.nepr.2004.06.002>

Courtney-Pratt, H., K. Ford, and A. Marlow. 2015. "Evaluating, understanding and improving the quality of clinical placements for undergraduate nurses: A practice development approach." *Nurse Education in Practice* 15 (6):512-6. doi: <http://dx.doi.org/10.1016/j.nepr.2015.07.002>.

Craig, P. L., C. Phillips, and S. Hall. 2016. "Building social capital with interprofessional student teams in rural settings: A service-learning model." *Australian Journal of Rural Health* 24 (4):271-7. doi: <http://dx.doi.org/10.1111/ajr.12268>.

Cuncic, C., G. Regehr, H. Frost, and J. Bates. 2018. "It's all about relationships: A qualitative study of family physicians' teaching experiences in rural longitudinal clerkships." *Perspectives on medical education* 7 (2):100-9. doi: <https://dx.doi.org/10.1007/s40037-018-0416-y>.

Daly, M., D. Perkins, K. Kumar, C. Roberts, and M. Moore. 2013. "What factors in rural and remote extended clinical placements may contribute to preparedness for practice from the perspective of students and clinicians?" *Medical Teacher* 35 (11):900. doi: <http://dx.doi.org/10.3109/0142159X.2013.820274>.

Daly, M., C Roberts, K. Kumar, and D. Perkins. 2013. "Longitudinal integrated rural placements: a social learning systems perspective." *Medical Education* 47 (4):352-61. doi: <http://dx.doi.org/10.1111/medu.12097>.

D'Amore, A., E. K. L. Mitchell, C. A. Robinson, and J. E. Chesters. 2011. "Compulsory medical rural placements: Senior student opinions of early-year experiential learning." *Australian Journal of Rural Health* 19 (5):259-66. doi: 10.1111/j.1440-1584.2011.01221.x.

Denz-Penhey, H., and J. Campbell Murdoch. 2009. "Reported reasons of medical students for choosing a clinical longitudinal integrated clerkship in an Australian rural clinical school." *Rural and Remote Health* 9 (1):1093. doi: <https://doi.org/10.22605/RRH1093>.

Dodd, B., J. Castles, M. Aar, V. Hally, J. McKimmie, N. Mitchell, S. Tibbetts, M. Wong, and M. Keage. 2019. "A rural clinical placement: Children's outcomes." *Journal of Clinical Practice in Speech-Language Pathology* 21 (2):58-63. <https://speechpathologyaustralia.cld.bz/JCPSLP-Vol-21-No-2-2019-DIGITAL-Edition/12/>

Fatima, Y., S. Kazmi, S. King, S. Solomon, and S. Knight. 2018. "Positive placement experience and future rural practice intentions: Findings from a repeated cross-sectional study." *Journal of Multidisciplinary Healthcare* 2018 (11):645-52. doi: <http://dx.doi.org/10.2147/JMDH.S178138>.
Francis-Cracknell, A., S. Maver, F. Kent, E. Edwards, and R. Iles. 2017. "Several strategies for clinical partners and universities are perceived to enhance physiotherapy student engagement in non-metropolitan clinical placements: a mixed-methods study." *Journal of Physiotherapy* 63 (4):243-9.

doi: <http://dx.doi.org/10.1016/j.jphys.2017.08.008>.

Furness, L., and M. Kaltner. 2015. "Facilitating student education and support using videoconference." *Australian Journal of Rural Health* 23 (4):249-53. doi: 10.1111/ajr.12148.

Furness, L., A. Tynan, and J. Ostini. 2019. "What supports allied health students to think, feel and act as a health professional in a rural setting? Perceptions of allied health staff." *Australian Journal of Rural Health* 27 (6):489-96. doi: <http://dx.doi.org/10.1111/ajr.12557>.

Furness, L., A. Tynan, and J. Ostini. 2020. "What students and new graduates perceive supports them to 'think, feel and act' as a health professional in a rural setting." *Australian Journal of Rural Health* 28 (3):263-70. doi: <http://dx.doi.org/10.1111/ajr.12607>.

Gum, L. F., J. N. Richards, L. Walters, J. Forgan, M. Lopriore, and C. Nobes. 2013. "Immersing undergraduates into an interprofessional longitudinal rural placement." *Rural and Remote Health* 13 (1):2271. doi: <https://doi.org/10.22605/RRH2271>.

Hanson, S. E., M. L. MacLeod, and C. J. Schiller. 2018. "'It's complicated': Staff nurse perceptions of their influence on nursing students' learning. A qualitative descriptive study." *Nurse Education Today* 63:76-80. doi: <https://dx.doi.org/10.1016/j.nedt.2018.01.017>.

Hart, B., M. Cavanagh, and D. Douglas. 2015. "The 'Strengthening Nursing Culture Project' - an exploratory evaluation study of nursing students' placements within Aboriginal Medical Services." *Contemporary Nurse: A Journal for the Australian Nursing Profession* 51 (2-3):245-56. doi: 10.1080/10376178.2016.1150190.

Hosken, N., J. Laughton, S. Goldingay, S. Vassos, L. Green, R. Van Ingen, and F. Walker. 2016. "A rotational social work field placement model in regional health." *Advances in Social Work and Welfare Education* 18 (1):72-87. <http://hdl.handle.net/10536/DRO/DU:30083334>.

Isaac, V., C. S. McLachlan, L. Walters, and J. Greenhill. 2019. "Screening for burn-out in Australian medical students undertaking a rural clinical placement." *BMJ Open* 9 (7). doi: <http://dx.doi.org/10.1136/bmjopen-2019-029029>.

Johnson, G., and A. Blinkhorn. 2013. "Faculty staff and rural placement supervisors' pre- and post-placement perceptions of a clinical rural placement programme in NSW Australia." *European Journal of Dental Education* 17 (1):e100-e8. doi: <http://dx.doi.org/10.1111/j.1600-0579.2012.00768.x>.

Johnson, G., F. A. C. Wright, and K. Foster. 2019. "A longitudinal evaluation of the Rural Clinical Placement Program at the University of Sydney Dental School." *European Journal of Dental Education* 23 (1):e59-e70. doi: <http://dx.doi.org/10.1111/eje.12401>.

Johnson, G. E., and A. S. Blinkhorn. 2011. "Student opinions on a rural placement program in New South Wales, Australia." *Rural & Remote Health* 11 (2):1-12. doi: <https://doi.org/10.22605/RRH1703>.

Jones, D., L. McAllister, R. Dyson, and D. Lyle. 2018. "Service-learning partnerships: Features that promote transformational and sustainable rural and remote health partnerships and services." *Australian Journal of Rural Health* 26 (2):80-5. doi: <http://dx.doi.org/10.1111/ajr.12381>.

Jones, D., L. McAllister, and D. Lyle. 2015. "Stepping out of the Shadows: Allied Health Student and Academic Perceptions of the Impact of a Service-Learning Experience on Students' Work-Readiness and Employability." *Journal of Teaching and Learning for Graduate Employability* 6 (1):66-87. doi: <https://doi.org/10.21153/jtlge2015vol6no1art574>.

Kerr, R., B. C. Hemmings, and R. Kay. 2013. "The effect of social contingencies on nursing students'

reactions during a rural clinical placement." *International Journal of Nursing Education Scholarship* 10 (1):1-10. doi: <http://dx.doi.org/10.1515/ijnes-2012-0027>.

Khali, H., A. Leversha, and J. Walker. 2015. "Evaluation of pharmacy students' rural placement program: preparation for interprofessional practice." *Australian Health Review* 39 (1):85-8. doi: [10.1071/AH14121](https://doi.org/10.1071/AH14121).

Killam, L. A., and L. M. Carter. 2010. "Challenges to the student nurse on clinical placement in the rural setting: a review of the literature." *Rural and Remote Health* 10 (3):1523. doi: <https://doi.org/10.22605/RRH1523>.

King, K., R. A. Purcell, S. J. Quinn, A. M. Schoo, and L. K. Walters. 2016. "Supports for medical students during rural clinical placements: factors associated with intention to practise in rural locations." *Rural and Remote Health* 16 (2):1-9. doi: <https://doi.org/10.22605/RRH3791>.

Laloo, R., J. L. Evans, and N. W. Johnson. 2013. "Dental students' reflections on clinical placement in a rural and indigenous community in Australia." *Journal of dental education* 77 (9):1193-201. doi: <http://dx.doi.org/>

Lea, J., M. Cruickshank, P. Paliadelis, G. Parmenter, H. Sanderson, and P. Thornberry. 2008. "The lure of the bush: Do rural placements influence student nurses to seek employment in rural settings?" *Collegian* 15 (2):77-82. doi: <http://dx.doi.org/10.1016/j.colegn.2008.02.004>.

Longman, J. M., F. Barraclough, and L. S. Swain. 2020. "The benefits and challenges of a rural community-based work-ready placement program for allied health students." *Rural and Remote Health* 20 (3):5706. doi: <http://dx.doi.org/10.22605/RRH5706>.

Lyon, P. M., R. McLean, S. Hyde, and G. Hendry. 2008. "Students' Perceptions of Clinical Attachments across Rural and Metropolitan Settings." *Assessment & Evaluation in Higher Education* 33 (1):63-73. doi: <https://doi.org/10.1080/02602930601122852>.

MacRae, M., K. van Diepen, and M. Paterson. 2007. "Use of clinical placements as a means of recruiting health care students to underserved areas in Southeastern Ontario: Part 1 - Student perspectives." *Australian Journal of Rural Health* 15 (1):21-8. doi: <http://dx.doi.org/10.1111/j.1440-1584.2007.00845.x>.

Maloney, P., K. Stagnitti, and A. Schoo. 2013. "Barriers and Enablers to Clinical Fieldwork Education in Rural Public and Private Allied Health Practice." *Higher Education Research and Development* 32 (3):420-35. doi: <http://dx.doi.org/10.1080/07294360.2012.682255>.

McLean, R. G., J. F. Pallant, C. E. Cunningham, and D. E. DeWitt. 2010. "A multi-university evaluation of the rural clinical school experience of Australian medical students." *Rural and Remote Health* 10 (3):1492. doi: <https://doi.org/10.22605/RRH1492>.

Miles, Alison. 2011. "The rural communities placement program." *International Journal of Child Health & Human Development* 4 (1):115-21.

Moffatt, J. J., and J. E. Wyatt. 2016. "Using evaluation to improve medical student rural experience." *Australian Health Review* 40 (2):174-80. doi: <http://dx.doi.org/10.1071/AH14195>.

Moran, A., S. Nancarrow, C. Cosgrave, A. Griffith, and R. Memery. 2020. "What works, why and how? A scoping review and logic model of rural clinical placements for allied health students." *BMC Health Services Research* 20 (1):1-18. doi: <http://dx.doi.org/10.1186/s12913-020-05669-6>.

Mortimer, J., A. Verma, C. Reimann, A. Brown, and T. Woolley. 2019. "Are all rural placements created equal? A national study of placement experiences among multidisciplinary health students."

Australian Journal of Rural Health 27 (2):118-24. doi: 10.1111/ajr.12487.

Nayar, P., K. McFarland, B. Lange, D. Ojha, and A. Chandak. 2014. "Supervising dentists' perspectives on the effectiveness of community-based dental education." *Journal of Dental Education* 78 (8):1139-44. <https://pubmed.ncbi.nlm.nih.gov/25086146/>.

O'Brien, M., B. Phillips, and W. Hubbard. 2010. "Enhancing the Quality of Undergraduate Allied Health Clinical Education: A Multidisciplinary Approach in a Regional/Rural Health Service." *Focus on Health Professional Education: A Multi-disciplinary Journal* 12 (1):11-22. <https://search.informit.org/doi/10.3316/informit.574958575728298>

O'Keefe, M., V. Wade, S. McAllister, I. Stupans, and T. Burgess. 2016. "Improving management of student clinical placements: insights from activity theory." *BMC Medical Education* 16 (1):219. doi: <https://dx.doi.org/10.1186/s12909-016-0747-5>.

Oosterbroek, T., O. Yonge, and F. Myrick. 2019a. "Community Spirit, Cultural Connections, and Authentic Learning in Rural Preceptorship." *Journal of Nursing Education* 58 (3):144-51. doi: <http://dx.doi.org/10.3928/01484834-20190221-04>.

Oosterbroek, T., O. Yonge, and F. Myrick. 2019b. "'Everybody knows your name': Experiences of Belonging in Rural Preceptorship." *Online Journal of Rural Nursing and Health Care* 19 (1):64. doi: <http://dx.doi.org/10.14574/ojrnhc.v19i1.548>.

Pront, L., M. Kelton, R. Munt, and A. Hutton. 2013. "Living and learning in a rural environment: a nursing student perspective." *Nurse Education Today* 33 (3):281-5. doi: <https://doi.org/10.1016/j.nedt.2012.05.026>.

Ray, R. A., L. Young, and D. Lindsay. 2018. "Shaping medical student's understanding of and approach to rural practice through the undergraduate years: a longitudinal study." *BMC Medical Education* 18 (147):1-8. doi: <http://dx.doi.org/10.1186/s12909-018-1229-8>.

Roberts, C., M. Daly, F. Held, and D. Lyle. 2017. "Social learning in a longitudinal integrated clinical placement." *Advances in Health Sciences Education* 22 (4):1011-29. doi: <http://dx.doi.org/10.1007/s10459-016-9740-3>.

Roberts, C., M. Daly, K. Kumar, D. Perkins, D. Richards, and D. Garne. 2012. "A longitudinal integrated placement and medical students' intentions to practise rurally." *Medical Education* 46 (2):179-91. doi: <http://dx.doi.org/10.1111/j.1365-2923.2011.04102.x>.

Ross, B. M., E. Cameron, and D. Greenwood. 2019. "A Qualitative Investigation of the Experiences of Students and Preceptors Taking Part in Remote and Rural Community Experiential Placements During Early Medical Training." *Journal of Medical Education and Curricular Development* 6:1-7. doi: <http://dx.doi.org/10.1177/2382120519859311>.

Saikal, A., S. Winona Pit, and L. McCarthy. 2020. "Medical student well-being during rural clinical placement: A cross-sectional national survey." *Medical Education* 54 (6):547-58. doi: <http://dx.doi.org/10.1111/medu.14078>.

Sedgwick, M. 2011. "Rural hospital interdisciplinary team members' experience of undergraduate nursing preceptorship: A qualitative descriptive study." *Nurse Education in Practice* 11 (4):278-82. doi: <http://dx.doi.org/10.1016/j.nepr.2011.01.004>.

Sedgwick, M., and O. Yonge. 2009. "Students' perception of faculty involvement in the rural hospital preceptorship experience." *International Journal of Nursing Education Scholarship* 6 (1):1-14. doi: <https://doi.org/10.2202/1548-923X.1833>.

- Sedgwick, M., O. Yonge, and F. Myrick. 2009. "Rural-hospital-based preceptorship: a multidisciplinary approach." *Journal for nurses in staff development : JNSD : official journal of the National Nursing Staff Development Organization* 25 (5):E1-7. doi: <https://doi.org/10.1097/nnd.0b013e3181ba3acb>.
- Sedgwick, M. G., and J. Rougeau. 2010. "Points of tension: a qualitative descriptive study of significant events that influence undergraduate nursing students' sense of belonging." *Rural and Remote Health* 10 (4):1569. doi: <https://doi.org/10.22605/RRH1569>.
- Sedgwick, M. G., and O. Yonge. 2008a. "Undergraduate nursing students' preparedness to "go rural".
Nurse Education Today 28 (5):620. doi: <http://dx.doi.org/10.1016/j.nedt.2007.09.014>.
- Sedgwick, M. G., and O. Yonge. 2008b. "'We're it', 'we're a team', 'we're family' means a sense of belonging." *Rural and Remote Health* 8 (3):1021. doi: <https://doi.org/10.22605/RRH1021>.
- Sen Gupta, T., M. Grant, C. Jukka, and T. Woolley. 2011. "Key factors ensuring quality of rural placements." *International Journal of Child Health & Human Development* 4 (1):63-74. https://www.researchgate.net/publication/241688897_Key_factors_ensuring_quality_of_rural_placements
- Sen Gupta, T., R. B. Murray, A. McDonnell, B. Murphy, and A. D. Underhill. 2008. "Rural internships for final year students: clinical experience, education and workforce." *Rural and Remote Health* 8 (1): 1-10. doi: <https://doi.org/10.22605/RRH827>.
- Shannon, S. J., M. Walker-Jeffreys, J. W. Newbury, T. Cayetano, K. Brown, and J. Petkov. 2006. "Rural clinician opinion on being a preceptor." *Rural and Remote Health* 6 (1):490. doi: <https://doi.org/10.22605/RRH490>.
- Smith, T., M. Cross, S. Waller, H. Chambers, A. Farthing, F. Barraclough, S. W. Pit, et al. 2018. "Ruralization of students' horizons: Insights into Australian health professional students' rural and remote placements." *Journal of Multidisciplinary Healthcare* 11:85-97. doi: <http://dx.doi.org/10.2147/JMDH.S150623>.
- Spiers, M. C., and M. Harris. 2015. "Challenges to student transition in allied health undergraduate education in the Australian rural and remote context: a synthesis of barriers and enablers." *Rural and Remote Health* 15 (2):3069. doi: <https://doi.org/10.22605/RRH3069>.
- Stone, N. 2006. "The Rural Interprofessional Education Project (RIPE)." *Journal of Interprofessional Care* 20 (1):79-81. doi: <https://doi.org/10.1080/13561820500380790>.
- Taylor, S., D. Best, J. Marriott, L. Dalton, R. Bull, K. Galbraith, A. Leversha, H. Howarth, M. Simpson, and M. Rose. 2006. "Pharmacy student views on preceptorship during rural placements." *Pharmacy Education* 6 (4):253-66. doi: <http://dx.doi.org/10.1080/15602210600888577>.
- Thackrah, R. D., M. Hall, K. Fitzgerald, and S. C. Thompson. 2017. "Up close and real: living and learning in a remote community builds students cultural capabilities and understanding of health disparities." *International Journal for Equity in Health* 16 (119):1-10. doi: <http://dx.doi.org/10.1186/s12939-017-0615-x>.
- Thackrah, R. D., and S. C. Thompson. 2019. "Learning from follow-up of student placements in a remote community: a small qualitative study highlights personal and workforce benefits and opportunities." *BMC Medical Education* 19 (331):1-9. doi: <http://dx.doi.org/10.1186/s12909-019-1751-3>.

Thackrah, R. D., S. C. Thompson, and A. Durey. 2014. "'Listening to the silence quietly': investigating the value of cultural immersion and remote experiential learning in preparing midwifery students for clinical practice." *BMC Research Notes* 7 (685): 1-12. doi: <http://dx.doi.org/10.1186/1756-0500-7-685>.

Thackrah, R. D., S. C. Thompson, A. Durey. 2015. "Promoting women's health in remote Aboriginal settings: Midwifery students' insights for practice." *Australian Journal of Rural Health* 23 (6):327-31. doi: <http://dx.doi.org/10.1111/ajr.12247>.

Van Hofwegen, L., S. Kirkham, and C. Harwood. 2005. "The strength of rural nursing: Implications for undergraduate nursing education." *International Journal of Nursing Education Scholarship* 2 (1):27. doi: <http://dx.doi.org/10.2202/1548-923X.1142>.

Warren, J. M., G. L. Irish, B. Purbrick, J. J. Li, X. Li, D. J. Fitzpatrick, and R. J. Faull. 2016. "Developing the future Indigenous health workforce: The feasibility and impact of a student-led placement programme in remote Indigenous communities." *Australian Journal of Rural Health* 24 (5):306-11. doi: [10.1111/ajr.12281](http://dx.doi.org/10.1111/ajr.12281).

Webster, S., V. Lopez, J. Allnut, L. Clague, D. Jones, and P. Bennett. 2010. "Undergraduate nursing students' experiences in a rural clinical placement." *Australian Journal of Rural Health* 18 (5):194-8. doi: <http://dx.doi.org/10.1111/j.1440-1584.2010.01153.x>.

Weston, K. M., and J. N. Hudson. 2014. "Clinical scholarship among preceptors supervising longitudinal integrated medical clerkships in regional and rural communities of practice." *Australian Journal of Rural Health* 22 (2):80-5. doi: <https://dx.doi.org/10.1111/ajr.12090>.

Wolfgang, R., R. Dutton, and K. Wakely. 2014. "Creating positive rural experiences for occupational therapy students." *Australian Journal of Rural Health* 22 (4):204-5. doi: <http://dx.doi.org/10.1111/ajr.12104>.

Wyatt, J. E., and A. B. Chater. 2018. "Academic performance of third-year medical students learning in rural settings." *Australian Journal of Rural Health* 26 (4):265-72. doi: <http://dx.doi.org/10.1111/ajr.12414>.

Yonge, O. 2007. "Preceptorship rural boundaries: student perspective." *Online Journal of Rural Nursing and Health Care* 7 (1):5-12. doi: <https://doi.org/10.14574/ojrnhc.v7i1.139>.

Yonge, O., L. Ferguson, and F. Myrick. 2006. "Preceptorship placements in western rural Canadian settings: perceptions of nursing students and preceptors." *Online Journal of Rural Nursing and Health Care* 6 (2):17. doi: <http://dx.doi.org/10.14574/ojrnhc.v6i2.155>.

Yonge, O. J., F. Myrick, L. M. Ferguson, and Q. Grundy. 2013. "Nursing preceptorship experiences in rural settings: 'I would work here for free'." *Nurse Education in Practice* 13 (2):125-31. doi: <http://dx.doi.org/10.1016/j.nepr.2012.08.001>.

Young, L., L. Kent, and L. Walters. 2011. "The John Flynn Placement Program: Evidence for repeated rural exposure for medical students." *Australian Journal of Rural Health* 19 (3):147-53. doi: [10.1111/j.1440-1584.2011.01201.x](http://dx.doi.org/10.1111/j.1440-1584.2011.01201.x).

Young, L., P. Rego, and R. Peterson. 2008. "Clinical location and student learning: Outcomes from the LCAP program in Queensland, Australia." *Teaching and Learning in Medicine* 20 (3):261-6. doi: <http://dx.doi.org/10.1080/10401330802199583>.

Zink, T., G. W. Halaas, D. Finstad, and K. D. Brooks. 2008. "The rural physician associate program: the value of immersion learning for third-year medical students." *Journal of Rural Health* 24 (4):353-

9. doi: <https://dx.doi.org/10.1111/j.1748-0361.2008.00181.x>.

Grey literature (n=7)

Battye, K., C. Sefton, J. Thomas, J. Smith, S. Springer, I. Skinner, E. Callander, et al. 2020. *Independent Evaluation of the Rural Health Multidisciplinary Training Program: Final Report to the Commonwealth Department of Rural Health*. Orange NSW: KBC Australia.

Carriage, C., J. Akers, and K. Payne. 2017. *An immersive model of learning in Aboriginal Community Control Services for MBBS students, Lime Good Practice Case Studies*: Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne.

Cockrell, D. J. 2005. "Rural clinical placements for dental students: an action research study." PhD diss, University of Sydney, Faculty of Dentistry.

Cosgrave, C. 2018. *Factors determining a 'high-quality' student clinical placement experience in rural public health services: Findings from a Victorian Study*. Wangaratta: The University of Melbourne.

National Rural Health Student Network. 2012. *Optimising Rural Placements*. Melbourne: Rural Health Workforce Australia.

Rural Health Workforce Australia. 2015. *Training for the future: How are rural placements perceived and how do we give our students what they are looking for?* Melbourne: Rural Health Workforce Australia.

Siggins Miller Consultants. 2012. *Promoting Quality in Clinical Placements: Literature review and national stakeholder consultation*. Adelaide: Health Workforce Australia.