Supporting nursing and allied health student placements in rural and remote Australia: a narrative review of publications by university departments of rural health

Sandra M Walsh[1], Vincent L Versace[2], Sandra C Thompson[3], Leanne J Browne[4], Sabina Knight[5], David M Lyle[6], Geoff Argus[7], Martin Jones[1]

Summary

- University departments of rural health are Commonwealth-funded to improve recruitment and retention of the rural allied health and nursing (including midwifery) workforce, primarily through student placements.
- We examined publications by university departments of rural health that were focused on allied health and nursing students undertaking placements in rural Australia, to understand the characteristics, main findings and implications of the research conducted.
- Interprofessional learning was a key feature of placements and placement education, although other activities such as community engagement added to placement experiences.
- Factors such as quality supervision and being involved in the community contributed to a positive placement experience and increased rural practice intention. Tracking studies showed a relationship between rural placements, rural practice intention and rural practice.
- Rural placements occurred across a variety of settings and in locations consistent with the policy framework. Embedding university departments of rural health in rural communities enabled staff to build relationships and increase placement capacity.

Driven by health workforce maldistribution, and in response to disparities in health and access to health care that exist between rural and metropolitan Australia, university departments of rural health (UDRHs) were initiated in 1996.[1-3] In 2016, the Rural Health Multidisciplinary Training (RHMT) program saw UDRHs and rural clinical schools fall under the same Commonwealth Government funding agreement.[1-3] Their purpose is to provide quality work-integrated learning opportunities to improve recruitment and retention of health care professionals in rural Australia. Positive exposure to rural clinical training is expected to increase the likelihood of university graduates returning to and practising in rural Australia. RHMT program requirements include a focus on conducting research regarding health workforce development, the efficacy of rural workforce programs, graduate outcomes, and health issues that affect rural communities.

In developed countries with large geographic footprints, there is a lack of evidence regarding the effectiveness of policies to address recruitment and retention of nursing and allied health professionals in rural areas.[4] Although there is a substantial body of research on individual place-based outcomes in relation to recruitment and retention policies, there is a paucity of evidence at scale.[4] By examining a range of publications by UDRHs that are focused on allied health and nursing student placements, we can improve our understanding of work conducted under the RHMT policy.

In this article, we examine and synthesise primary research conducted by UDRHs regarding allied health (including occupational therapy, physiotherapy, exercise physiology, paramedicine, podiatry, psychology, chiropractic, speech pathology, social work, pharmacy, public health, health promotion, medical imaging and radiation, and nutrition and dietetics) and nursing (including midwifery) students undertaking placements in rural, regional and remote parts of Australia, and education provided to those students. Hereafter, we use the term "students" to refer to nursing and allied health students, unless specified otherwise, and use the term "rural" to refer collectively to rural, regional and remote, except when describing a specific research setting.[5]

Methods

We examined peer-reviewed articles by UDRHs that were published during the period 2009–2021; we looked at their characteristics, their main findings and implications relating to student rural placements. All sixteen UDRHs operating during this period contributed to an EndNote library that listed all publications that were authored by UDRH staff and published between 1 September 2009 and 31 December 2021. We uploaded the publications in this library to Covidence, and four of us screened titles and abstracts and reviewed full text articles (SMW, MJ, SCT, LJB) using a two-person screening approach. Two of us developed a data extraction tool (MJ, SMW) and two of us trialled this tool (DML, SK), which enabled us to refine it (Supporting Information, box 1). One of us then extracted the data (SMW), including any explicitly mentioned location information, and two of us converted locations into Modified Monash Model (MMM) geographic categories (SMW, VLV).[6,7]

Findings

Of the 3930 publications in the EndNote library, 3619 were excluded following title and abstract screening, and 223 were excluded after full text review (Supporting Information, figure 1). Of the 88 included publications, 29 reported on studies on education of students while on placement. An overview of included publications is presented online (Supporting Information, table 1). Twenty-three studies used quantitative methods, 30 used qualitative methods, and 35 used mixed methods. In total, there were approximately 23 000 participants,

[1] Department of Rural Health, University of South Australia, Whyalla, SA. [2] Deakin Rural Health, Deakin University, Warrnambool, VIC. [3] Western Australia Centre for Rural Health, University of Western Australia, Geraldton, WA. [4] Department of Rural Health, University of Newcastle, Tamworth, NSW. [5] Central Queensland Centre for Rural and Remote Health, James Cook University, Emerald, QLD. [6] Broken Hill University Department of Rural Health, University of Sydney, Broken Hill, NSW. [7] Southern Queensland Rural Health, University of Queensland, Toowoomba, QLD.
sandra.walsh@unisa.edu.au • doi: 10.5694/mja2.52032

and most (about 21 700, 94%) were students. Other participants included clinicians, clinical educators, placement supervisors, staff, and clients. More than half of the publications reported on three or more health disciplines (Supporting Information, table 2). Of those focused on single disciplines, nursing and pharmacy were the most represented (12 and six publications, respectively). Fifty-seven publications had enough location data for us to extract MMM categories,[6] and some of these spanned more than one MMM category. Most activity occurred in the settings of large rural towns (MM3, 39%), small rural towns (MM5, 14%), and very remote communities (MM7, 14%). Metropolitan areas (MM1, 3%) and medium rural towns (MM4, 8%) were least represented (Supporting Information, table 3).

Rural placements and rural practice intention

Several publications considered the influence of placements on rural practice or rural practice intention. Positive placement experience was associated with increased rural practice intention.[8-12] A repeated cross-sectional study found that students satisfied with their placement were more than twice as likely to indicate positive rural practice intention.[8] After graduation, three-quarters of students (76%) who undertook a placement in the Northern Territory stated that their placement positively affected their rural practice intention and almost one-third (31%) had worked in a rural location.[11] Supportive staff and being involved in the community contributed to rural practice intention.[10] In a quantitative data-linkage study of 1130 graduates, longer rural placements positively influenced rural practice, as did rural origin.[13] In a longitudinal study, more than half of the graduates who had undertaken a rural placement were in rural practice 1 year after graduation (67/129); although this decreased to about one-third (9/24) by 3 years after graduation, the return of benefit to rural communities remained positive.[14] Some disciplines may have unique factors that influence rural practice. For medical radiation science students, specialty affected rural practice, as did number and duration of rural placements and rural background.[15] Diagnostic radiography graduates were significantly more likely to be practising rurally than those in nuclear medicine.

Interprofessional learning placements

In locations where recruitment and retention of health professionals is challenging, there is a greater need for clinicians to engage in interprofessional practice. There was a distinction in the publications between placements with interprofessional learning (IPL) as the central tenet, and placements that offered an IPL curriculum. A quantitative before-and-after study evaluated an IPL cross-disciplinary placement model that was a collaboration between two universities, where local health practitioners could propose projects for student IPL teams.[16] Each project had community relevance while also improving students' ability to work interprofessionally. Other studies evaluated IPL placements in primary health care.[17,18] The placements improved participants' understanding of interprofessional practice, competency, autonomy, teamwork skills, interprofessional cooperation, and work readiness. Similar outcomes were noted in a service-learning placement in Broken Hill, where occupational therapy and speech pathology students worked together in primary schools.[19] Students initially felt highly directed as learners, but the placement led to a sense of autonomy, improved work readiness, enhanced understanding, and improved teamwork, all of which improved continuity of care.

In addition to IPL placements, UDRHs provided more discrete units of interprofessional education (IPE) for students. A program evaluation using a before-and-after mixed methods design used rural health case scenarios to develop communication, collaboration and teamwork skills among nursing, medical and pharmacy students.[20] Across 3 years, students experienced significantly improved understanding of clinical problems, IPL, being an effective health care team member, professional roles and responsibilities, and how working interprofessionally can benefit patient outcomes. In a qualitative study that looked at small interdisciplinary student teams working together on complex simulation scenarios, students valued the role of other health professions and had a better understanding of patient needs and care requirements.[21] The experience made them more likely, and more confident, to engage in interprofessional practice. In a before-and-after mixed methods study that piloted an IPL workshop with students from five disciplines and a targeted chronic pain component, students experienced significant increases in understanding of professional roles relating to chronic pain management, self-efficacy and IPL readiness.[22] A mixed methods study using survey and interview examined the implementation of extracurricular multidisciplinary community engagement projects undertaken during rural placements — including health screening at field days and Aboriginal health centres, early childhood programs, and first aid education — and found that students and staff believed that the projects improved student work readiness and employability, confidence, practice capabilities, and understanding of rural practice.[23]

The roles of supervisors and providers in interprofessional education and learning

Students need to have opportunities to engage in IPE and there needs to be a level of buy-in from clinicians. According to a survey of students that was aimed at understanding how IPE was embedded into rural placements at two sites in Victoria, most students (83%) had IPE opportunities, 58% had engaged in activities with students from different disciplines, and 63% had attended IPE education sessions, typically as part of staff education programs.[24] While IPE and IPL may be valued, there can be challenges to staff working interprofessionally and some staff resist working with other professions.[25-27] Mutual respect is fundamental for successful interprofessional relationships.[28-30] Organisationally, staff require training, and successful IPE and IPL requires resourcing, champions and organisational support.[26,30,31] Universities need to consider strategies that enable students from different disciplines to undertake placements concurrently, maximising IPE and IPL opportunities.[26]

For students to receive effective education while on placement, supervisors and academics should be well versed in contemporary approaches to IPE and IPL. In a study that explored collaborative practice between dietitians and speech pathologists, curiosity, willingness and momentum were identified as core contributors to success.[32] Collaborative practice required a willingness to build and entrench opportunities, and to position interprofessional activity as a part of normal positive practice. However, negative interactions with clinicians from other disciplines can affect attitudes, so reflection on and closer

examination of these attitudes is required to effectively enable IPE.[27]

Supervision for placements and workforce retention

Quality supervision was indicative of a positive placement and supervising students was related to increased job satisfaction.[8,10,33,34] Quality placements and supervision were associated with student placement satisfaction, improving rural practice intention, and leading to recruitment.[8-10,33,35,36] In a study looking at barriers and enablers to clinical fieldwork education, two-thirds of allied health professionals surveyed had supervised students, primarily in the public sector.[34] Their supervising experience was positive and associated with increased job satisfaction. As job satisfaction could improve retention, the potential for supervision to contribute to rural workforce retention warrants further attention. In remote areas, supervision could have additional challenges relating to workload and cross-cultural practice.[36,37] In the Northern Territory, supervisors identified the need for more student support, although half were unaware of available supports.[36] Upskilling UDRH staff and supporting local clinicians to improve supervision capacity can increase opportunities to host students.[38] The need to build capacity for placements and quality supervision are reinforced by findings from a study which described sustainable outcomes resulting from a quality improvement project.[39]

Student placements that include working with First Nations peoples

Rural placements have barriers and enablers. What is evident from the literature is the need for broader consideration that allows placements to occur in a safe and supportive environment for all participants, including patients and students.[40,41] This is particularly evident in placements focused on providing health care for First Nations peoples.[37,42-45] The complexity of the social determinants of health can be overwhelming for some students, particularly if they do not have adequate previous exposure to First Nations communities. In a study of dietetic placements at Gomeroi gaaynggal ArtsHealth in Tamworth, students developed cultural awareness and understanding of the complex health disparities, and it helped some students address preconceptions.[43] In a study that explored clinical placements for midwifery students in remote Aboriginal communities, the placements were highly valued by students and considered to be profound learning experiences.[44] Students gained firsthand experience within an Aboriginal community and a better understanding of Aboriginal health needs. Geographical and professional isolation highlighted the importance of preparing students for placements. This was addressed in a study that co-constructed virtual tours with Aboriginal health services, which could be viewed in preparation for placement.[46] Collaboration was crucial to producing a mutually useful and culturally informed resource.

Preparing students is important for ensuring successful placements.[9,37,42,43,46] However, educating metropolitan academics is critical for ensuring that they can manage student expectations and apprehension, and help select students who will maximise the opportunities presented through these placements.[47,48] A study that described a "bush camp" for academics, in which metropolitan academics across disciplines and universities were invited to experience health practice around Mount Magnet and Geraldton, reported that participants gained an increased awareness of health issues and services in the area, and became more willing to encourage student participation in placements.[47]

Adding value to rural placements

Although many publications had a strong focus on IPE and IPL as educational activities on placement, technology-enabled education and community engagement activities were also evident. Educational activities enhanced work readiness and employability by improving skills essential for the workplace, such as teamwork, communication, and confidence.[20,22-25,49-54] Several publications reported innovative approaches to delivering educational activity. In one of these, a tele-assistance system that enabled students to undertake a clinical procedure with remote guidance was pilot tested.[55] Supervisors could demonstrate the task, intervene when students needed guidance, and provide audio and visual prompts. The technology facilitated the practice of procedural skills while on placement, although refinements were recommended. Another such study used crash simulation training as an IPL activity.[52] Students acknowledged the importance of working interprofessionally in stressful situations and the crucial role of teamwork and communication. The importance of communication and teamwork was also highlighted in an "escape room" program that engaged multidisciplinary student teams.[56] In a study that used a theatre play to improve students' confidence and understanding of depression, mistreatment and mandatory reporting laws, many students showed improved confidence and understanding but some showed a reduction, which could indicate that students became more aware of the complexities.[53]

Online educational activities can provide an opportunity to overcome the barrier of long distances. One study (post-survey evaluation) looked at using an online learning program with students and professionals to improve preparedness for work-based learning, which used storytelling supported by additional resources as the main learning framework.[57] It facilitated effective IPL and participants found it relevant to practice. A qualitative study described an intensive 1-week interprofessional program, with activities designed to activate student awareness and provide them with a transformative educational experience.[58] "Country Week" challenged students' preconceived notions and stereotypes of working with and in rural and First Nations communities, and better prepared them to work in these communities as health professionals.[58]

Building relationships and placement capacities

A key feature throughout many publications was the underlying community literacy required for success, across people and organisations. Community literacy can be defined as having the skills to ascertain the "motivation and ability of health students, academics, and professionals to gain access to, understand, and use community knowledge and information that enables them to be 'community intelligent' in the ways they promote and maintain good community engagement practices that reflect and respond to community contexts, needs, priorities and expectations".[59] Rural experiences for metropolitan academics and preparation for rural placements could be considered vehicles for enabling community literacy.[9,43,46-48,60] It has been argued that all organisations and people involved in student placements should be community literate.[59] By understanding

rural communities, students and the health workforce are better prepared to work there. Community literacy enables a greater understanding of community needs and can maximise the benefits of student placements. A mixed methods study using placement data and interviews looked at experiences and challenges relating to student placements within a host organisation, finding that the organisation could increase its capacity to host students by addressing possible obstacles.[61] However, some challenges would require university responses, such as scheduling placements to maximise concurrent interdisciplinary placements.

Some authors have stated that key factors in building partnerships with host organisations are commitment to the community, work and social relationships, and trust; and they have argued that these factors are more likely to exist in rural communities.[62] Other authors, in discussing the role of UDRHs in enabling the transmission of community literacy, have stated that it was evident that "local administrative staff were significantly more often the source of learning about the local contextual factors".[63] A whole-of-community facilitator model has been reported as being effective in enabling community-literate placements, by engaging and supporting stakeholders before, during and after placements, and allowing transmission of relevant community information throughout placement sites.[64,65] In the absence of UDRHs, transmission of nuanced community literacy to students and the broader university could be challenging.

Potential benefits of rural placements for clients

There is tentative indication that rural placements can have direct benefits for people in rural communities. In 2010, 231 school students received speech pathology assessments through a student-delivered clinic in Broken Hill, and half of the school students subsequently received an intervention delivered by the placement students.[66] As a result, speech pathology waiting lists decreased from 250 to eight clients in 1 year. The program has continued, and in subsequent years has continued to deliver benefits for school children in the area.[67] In a student-delivered chronic pain clinic, half of the program clients reported alleviation of pain and almost all rated the program as very beneficial.[68] Students improved their understanding of chronic pain and recognised the importance of IPL. These service-learning programs demonstrate preliminary acceptability and positive impacts for clients, students, services, and communities.[66-68] Although these three studies were the only ones that included information on patient outcomes, they are important in the context of this review.

Successful rural placements require more than just "putting students in the bush", and many of the publications that we reviewed showed that UDRHs understand this. Such understanding is undoubtedly enabled by the fact that UDRHs are located in the regions — an outcome of RHMT policy, which requires staff to live and work in the regions in which they serve.[69,70] A high proportion of studies were conducted in MM3, MM5 and MM7 areas (Supporting Information, table 3). A national analysis identified that Australia's metropolitan areas tended to have greater advantage compared with rural settings.[71] Positioning UDRHs within community networks moves towards redressing this. It would be beneficial if rural researchers consistently reported location rurality and remoteness, as this would help accurately determine where activity is occurring.[5] This would allow policy evaluation at scale and afford additional evidence for the rural integrity of such policies. Variation in reporting and defining rurality has been explored previously, and consistency in reporting that aligns with current government policy is required for any transparent evaluation of policies.[4,5]

Activity in MM2–MM7 areas is consistent with RHMT contracts. Without RHMT investment, it is debatable how much of this work would have occurred. The RHMT evaluation recognised the "economic, social and employment value of rural training sites to their rural communities".[70] Adding to this, we believe that research that wraps around student placement activity builds the intellectual capital of rural communities and the UDRH network itself. Effective student placements require engagement with and appreciation of the rural placement ecosystem, with rurally based academics well suited to lead to achieve local buy-in.

However, looking at the sum of publications, there are opportunities to strengthen the research that supports these endeavours. Given that UDRHs have been operating for more than 20 years, this maturity would suggest potential opportunity for greater collaboration across the rural academic network. Many studies had small sample sizes, rendering generalisation beyond the sample challenging, but replication at different locations may help to address this and highlight the adaptability of strategies. Studies investigating rural placements and longer term rural practice highlight the potential of UDRHs to collaborate.[13] The Nursing and Allied Health Graduate Outcomes Tracking study has the potential to foster these collaborations and strengthen the rural research network, which could lead to influence at a policy level.[72] Finally, community and patient outcomes are areas that warrant further investigation in terms of acceptability, short and long term outcomes, potential harms, and quality assurance.

Limitations

The use of only UDRH publications within a narrative approach may limit the utility of our study for international contexts. However, it highlights the important place of Australia's RHMT policy initiative and essential considerations in building a rural nursing and allied health workforce. Also, we limited our review to articles published during the period 2009–2021, so we did not examine earlier UDRH work.

Conclusion

UDRHs have contributed a significant body of research examining rural placements for allied health and nursing students. Quality supervision contributes to positive rural placements, which influence rural practice intention and rural practice, but the longer term impacts require further consideration. Geographically, the research aligns with the parameters of the RHMT program and undoubtedly brings benefits to the community, although this needs to be explored further in future research. UDRHs have significant potential to develop and lead stronger research collaborations across rural Australia, which could contribute to scaling up, and could further demonstrate the effectiveness of rural placement strategies.

Acknowledgements: We acknowledge University of South Australia for developing the UDRH publication library and thank Joanne Hutchinson and the Australian Rural Health Education Network National Office for maintaining it. We thank Katherine Logan and Ruth Stewart (National Rural Health Commissioner) for their support with the supplement that includes this article.

Open access: Open access publishing facilitated by University of South Australia, as part of the Wiley - University of South Australia agreement via the Council of Australian University Librarians.

Competing interests: We are all employed at UDRHs within the RHMT program, which is funded by the Australian Government Department of Health and Aged Care.

Data sharing statement: The data that support the findings of this review are available on request from the corresponding author.

Provenance: Commissioned; externally peer reviewed. ■

1 Gausia K, Thompson SC, Lindeman MA, et al. Contribution of university departments of rural health to rural health research: an analysis of outputs. *Aust J Rural Health* 2015; 23: 101-106.

2 Humphreys J, Lyle D, Barlow V. University departments of rural health: is a national network of multidisciplinary academic departments in Australia making a difference? *Rural Remote Health* 2018; 18: 4315.

3 Lyle D, Greenhill J. Two decades of building capacity in rural health education, training and research in Australia: university departments of rural health and rural clinical schools. *Aust J Rural Health* 2018; 26: 303-378.

4 Walsh S, Lyle DM, Thompson SCT, et al. The role of national policies to address rural allied health, nursing and dentistry workforce maldistribution. *Med J Aust* 2020; 213 (11 Suppl): S18-S22. https://onlinelibrary.wiley.com/doi/10.5694/mja2.50881

5 Beks H, Walsh S, Alston L, et al. Approaches used to describe, measure, and analyze place of practice in dentistry, medical, nursing, and allied health rural graduate workforce research in Australia: a systematic scoping review. *Int J Environ Res Public Health* 2022; 19: 1438.

6 Australian Government Department of Health and Aged Care. Modified Monash Model – fact sheet. 2020. https://www.health.gov.au/resources/publications/modified-monash-model-fact-sheet (viewed May 2023).

7 Versace VL, Beks H, Charles J. Towards consistent geographic reporting of Australian health research [letter]. *Med J Aust* 2021; 215: 525.

8 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: 645-652.

9 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.

10 Smith T, Sutton K, Pit S, et al. Health professional students' rural placement satisfaction and rural practice intentions: a national cross-sectional survey. *Aust J Rural Health* 2018; 26: 26

11 Campbell N, Farthing A, Lenthall S, et al. Workplace locations of allied health and nursing graduates who undertook a placement in the Northern Territory of Australia from 2016 to 2019: an observational cohort study. *Aust J Rural Health* 2021; 29: 947-957.

12 Wolfgang R, Wakely L, Smith T, et al. Immersive placement experiences promote rural intent in allied health students of urban and rural origin. *J Multidiscip Healthc* 2019; 12: 699-710.

13 Sutton K, Depczynski J, Smith T, et al. Destinations of nursing and allied health graduates from two Australian universities: a data linkage study to inform rural placement models. *Aust J Rural Health* 2021; 29: 191-200.

14 Brown L, Smith T, Wakely L, et al. Preparing graduates to meet the allied health workforce needs in rural Australia: short-term outcomes from a longitudinal study. *Educ Sci* 2017; 7: 64.

15 Farrugia L, Smith T, Depczynski J. Factors influencing medical radiation science graduates' early career principal place of practice: a retrospective cohort study. *J Med Radiat Sci* 2022; 69: 182-190.

16 Craig PL, Barnard A, Glasgow N, May E. Evaluating the health 'hubs and spokes' interprofessional placements in rural New South Wales, Australia. *J Allied Health* 2014; 43: 176-183.

17 Aggar C, Mozolic-Staunton B, Lovi RJ, et al. An interprofessional clinical placement in a primary healthcare setting: a pilot study. *Internet J Allied Health Sci Pract* 2020; 18: 6.

18 Aggar C, Mozolic-Staunton B, Scorey M, et al. Interprofessional primary healthcare student placements: qualitative findings from a mixed-method evaluation. *Int J Work Integrat Learn* 2020; 21: 223-234.

19 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. *J Teach Learn Grad Employability* 2015; 6: 66-87.

20 Woodroffe J, Spencer J, Rooney K, et al. The RIPPER experience: a 3 year evaluation of an Australian interprofessional rural health education pilot. *J Res Interprof Pract Educ* 2012; 2: 230-247.

21 Taylor SM, Fatima Y, Lakshman N, Roberts H. Simulated interprofessional learning activities for rural health care services: perceptions of health care students. *J Multidiscip Healthc* 2017; 10: 235-241.

22 Bridgman H, Bird ML, Heyworth KJ, et al. Evaluating an interprofessional workshop on persistent pain: the role of adult learning and social identity theories. *J Applied Learn Teach* 2020; 3: 129-139.

23 Fisher K, Smith A, Brown L, et al. Value-adding to health professional student placement experiences: enhancing work readiness and employability through a rural community engagement program. *J Teach Learn Grad Employability* 2018; 9: 41-61.

24 Walker LE, Cross M, Barnett T. Students' experiences and perceptions of interprofessional education during rural placement: a mixed methods study. *Nurse Educ Today* 2019; 75: 28-34.

25 Jacob E, Barnett T, Missen K, et al. Australian clinician's views on interprofessional education for students in the rural clinical setting. *J Res Interprof Pract Educ* 2012; 2: 219-229.

26 Missen K, Jacob ER, Barnett T, et al. Interprofessional clinical education: clinicians' views on the importance of leadership. *Collegian* 2012; 19: 189-195.

27 Croker A, Wakely L, Leys J. Educators working together for interprofessional education: from "fragmented beginnings" to being "intentionally interprofessional". *J Interprof Care* 2016; 30: 671-674.

28 Croker A, Fisher K, Smith T. When students from different professions are co-located: the importance of interprofessional rapport for learning to work together. *J Interprof Care* 2015; 29: 41-48.

29 Croker A, Smith T, Fisher K, Littlejohns S. Educators' interprofessional collaborative relationships: helping pharmacy students learn to work with other professions. *Pharmacy (Basel)* 2016; 4: 17.

30 Walker LE, Barnett T, Cross M. Interprofessional education in rural clinical learning environments: the role of clinicians. *Aust J Rural Health* 2021; 29: 248-252.

31 Spencer J, Woodroffe J, Cross M, Allen P. "A golden opportunity": exploring interprofessional learning and practice in rural clinical settings. *J Interprof Care* 2015; 29: 389-391.

32 Croker A, Brown L, Little A, et al. Developing and maintaining collaborative practice: exploring perspectives from dietetics and speech pathology about 'what works well'. *Nutr Dietetic* 2019; 76: 28-37.

33 Campbell N, Moore L, Farthing A, et al. Characteristics of nursing and allied health student placements in the Northern Territory over time (2017-2019) and placement satisfaction. *Aust J Rural Health* 2021; 29: 354-362.

34 Maloney P, Stagnitti K, Schoo A. Barriers and enablers to clinical fieldwork education in rural public and private allied health practice. *Higher Educ Res Develop* 2013; 32: 420-435.

35 Taylor SM, Lindsay D, Glass B. Rural pharmacy workforce: influence of curriculum and clinical placement on pharmacists' choice of rural practice. *Aust J Rural Health* 2019; 27: 132-138.

36 Moore L, Farthing A, Lenthall S, Rissel C. Perspectives of supervisors of allied health and nursing students undertaking work-integrated learning placements in the Northern Territory: the view from here. *Aust J Rural Health* 2021; 29: 259-260.

37 Thackrah RD, Hall M, Fitzgerald K, Thompson SC. 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.

38 Johnston C, Wakely L. Delivering introductory physiotherapy clinical placements incorporating simulated learning experiences in rural settings. *Aust J Rural Health* 2021; 29: 172-180.

39 Smith M, Lloyd G, Lobzin S, et al. Increasing quality and quantity of student placements in smaller rural health services: it can be done. *Aust J Rural Health* 2015; 23: 243-246.

40 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.

41 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.

42 Page AT, Hamilton SJ. Pharmacy students perceptions of a non-traditional rural placement: a pilot programme. *Pharm Educ* 2015; 15: 275-280.

43 Rae K, Bohringer E, Ashman A, et al. Cultural experiences of student and new-graduate dietitians in the Gomeroi gaaynggal ArtsHealth program: a quality assurance project. *Health Promot J Austr* 2016; 27: 162-166.

44 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.

45 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: 327-331.

46 Cross M, Sculthorpe J, Barnett T, Dennis S. Preparing students for placement in Aboriginal health services using online virtual orientation tours: a participatory action approach. *Aust Indigenous Health Bull* 2017; 17(1).

47 Page AT, Hamilton SJ, Hall M, et al. Gaining a 'proper sense' of what happens out there: an 'Academic Bush Camp' to promote rural placements for students. *Aust J Rural Health* 2016; 24: 41-47.

48 Durey A, Lin I, Thompson D. 'It's a different world out there': improving how academics prepare health science students for rural and Indigenous practice in Australia. *Higher Educ Res Develop* 2013; 32: 722-733.

49 Greenlees NT, Pit SW, Ross LJ, et al. A novel blended placement model improves dietitian students' work-readiness and wellbeing and has a positive impact on rural communities: a qualitative study. *BMC Med Educ* 2021; 21: 387.

50 Taylor J, Burley M, Nestel D. Integrating interprofessional education and simulation in community health: evaluation of a practice-based student clinic. *Int J Pract-based Learn Health Social Care* 2015; 3: 94-107.

51 Wakely L, Brown L, Burrows J. Evaluating interprofessional learning modules: health students' attitudes to interprofessional practice. *J Interprof Care* 2013; 27: 424-425.

52 Wenham J, Bennett P, Gleeson W. Crash simulation: an immersive learning model. *Clin Teach* 2018; 15: 467-471.

53 Nash L, Scott K, Pit S, et al. Evaluation of a workshop using verbatim theatre stimuli to address challenging workplace situations: a pilot study. *Clin Teach* 2021; 18: 43-50.

54 Wright N, Smith A, Saurman E. "What are they banging on about?": the student experience of DRUMBEAT as a field education groupwork activity. *Adv Soc Work Welf Educ* 2021; 23: 37-54.

55 Barnett T, Huang W, Mather C. Pilot test of a collaborative "Helping Hands" tele-assistance system for the development of clinical skills. *Comput Inform Nurs* 2017; 35: 491-495.

56 Moore L, Campbell N. Novel interprofessional learning for healthcare students: an escape room pilot. *Focus Health Prof Educ* 2019; 20: https://doi.org/10.11157/fohpe.v20i1.306.

57 Paliadelis PS, Stupans L, Parker V, et al. The development and evaluation of online stories to enhance clinical learning experiences across health professions in rural Australia. *Collegian* 2014; 22: 397-403.

58 Prout S, Lin I, Nattabi B, Green C. 'I could never have learned this in a lecture': transformative learning in rural health education. *Adv Health Sci Educ Theory Pract* 2014; 19: 147-159.

59 Jones D, Lyle D, McAllister L. Community-based service-learning: a rural Australian perspective on student and academic outcomes of participation. *Int J Res Serv Learn Community Engagem* 2016; 4: 181-198.

60 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.

61 Barnett T, Walker LE, Jacob E, et al. Expanding the clinical placement capacity of rural hospitals in Australia: displacing Peta to place Paul? *Nurse Educ Today* 2012; 32: 485-489.

62 Kirby S, Held FP, Jones D, Lyle D. Growing health partnerships in rural and remote communities: what drives the joint efforts of primary schools and universities in maintaining service learning partnerships? *Prim Health Care Res Dev* 2018; 19: 503-517.

63 Held F, Roberts C, Daly M, Brunero C. Learning relationships in community-based service-learning: a social network analysis. *BMC Med Educ* 2019; 19: 113.

64 Zournazis HE, Marlow A, Mather C. Whole of community facilitator support model: the rural preceptors' experience. *Collegian* 2018; 25: 371-375.

65 Coe S, Marlow A, Mather C. Whole of community facilitators: an exemplar for supporting rural health workforce recruitment through students' professional experience placements. *Int J Environ Res Public Health* 2021; 18: 7675.

66 Jones D, Grant-Thomas D, Bourne E, et al. Model for rural and remote speech pathology student placements: using non-traditional sites and partnerships. *Aust J Rural Health* 2011; 19: 52-53.

67 Kirby S, Claire B, David L, et al. Design and delivery of an innovative speech pathology service-learning program for primary school children in Far West NSW. *Public Health Res Pract* 2018; 28: e28231806.

68 Bridgman H, Todd A, Maine G, et al. Piloting an interprofessional chronic pain management program: perspectives of health students and community clients. *J Interprof Care* 2021; 35: 842-851.

69 Australian Government Department of Health and Aged Care. Rural Health Multidisciplinary Training (RHMT) program framework 2019–2020. 2021. https://www.health.gov.au/resources/publications/rural-health-multidisciplinary-training-rhmt-program-framework-2019-2020 (viewed May 2023).

70 KBC Australia. Independent evaluation of the Rural Health Multidisciplinary Training program. Orange: KBC Australia, 2020. https://www.health.gov.au/sites/default/files/2023-03/evaluation-of-the-rural-health-multidisciplinary-training-rhmt-program-final-report.pdf (viewed May 2023).

71 Versace VL, Skinner TC, Bourke L, et al. National analysis of the Modified Monash Model, population distribution and a socio-economic index to inform rural health workforce planning. *Aust J Rural Health* 2021; 29: 801-810.

72 Sutton KP, Beauchamp A, Smith T, et al. Rationale and protocol for the Nursing and Allied Health Graduate Outcomes Tracking (NAHGOT) study: a large-scale longitudinal investigation of graduate practice destinations. *Rural Remote Health* 2021; 21: 6407. ■

Supporting Information

Additional Supporting Information is included with the online version of this article.