

## RESEARCH ARTICLES

# Early career nurses' self-reported influences and drawbacks for undertaking a rural graduate nursing program

## AUTHORS

ELYCE GREEN RN, PhD<sup>1</sup>

CLAIRE ELLEN SEAMAN PhD<sup>1</sup>

REBECCA BARRY MSocialWk<sup>2</sup>

JAYNE LAWRENCE RN, RM, MMid<sup>3</sup>

ANNIE SKIPWORTH RN, MN<sup>4</sup>

MELISSA SINCLAIR RN, GC(CritCare), MHSM<sup>4</sup>

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

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

3 School of Nursing, Paramedicine and Healthcare Sciences, Charles Sturt University, Port Macquarie, NSW, Australia

4 Nursing and Midwifery Directorate, Murrumbidgee Local Health District, Wagga Wagga, NSW, Australia

## CORRESPONDING AUTHOR

ELYCE GREEN Three Rivers University Department of Rural Health, Charles Sturt University, Locked Bag 588, Wagga Wagga NSW, Australia 2678 Email: [elgreen@csu.edu.au](mailto:elgreen@csu.edu.au)

## ABSTRACT

**Objective:** To identify self-reported influences and drawbacks for early career nurses to work in a rural location.

**Background:** The international shortage of rural nursing workforce is increasing. As a result, evidence that focuses on mechanisms to recruit early career nurses to these areas is important. This research focuses on the influences and drawbacks for early career nurses to undertake a rural graduate nursing program, aimed at providing evidence that can inform the design of rural nurse recruitment programs.

**Study design and methods:** Manifest content analysis of open-ended questions in a cross-sectional survey that was administered in two rural Local Health Districts (LHDs) in New South Wales, Australia. Early career nurses commencing employment in either of the research locations in 2019 and 2020 were eligible to complete the survey. In two open-text questions, respondents were asked to respectively describe what the most influential factor was in their decision to commence

employment in their location, and what were the drawbacks of this location, if any.

**Results:** Of the 175 early career nurses invited to complete the survey, 165 (94.29%) returned a completed survey. Four themes were identified as influencing rural early career nurse employment; proximity to social and/or familial ties, being attracted to rural clinical practice, taking advantage of a job offer in a limited market, and wanting a rural lifestyle. Where drawbacks were described, themes referred to distance from social and/or familial ties, rural lifestyle factors, resource challenges, and a perception of less professional opportunity.

**Discussion:** There may be an opportunity to attract and retain rural nurses through targeted social initiatives and creating community ties, particularly among those early career nurses who have no close friends and family nearby. This reflects other literature and the growing understanding of the importance of social connection, familial ties and life course in early career nurse decision making.

## RESEARCH ARTICLES

**Conclusion:** The results of this research demonstrate that proximity to social and/or familial ties is both the biggest influence and drawback for early career nurses to accept employment in a rural location.

**Implications for research, policy, and practice:**

Strategies that capitalise on practical ways to integrate social connection and life course approaches in early career nurse onboarding in rural areas should be explored in future research with a view to creating guidance for rural health organisations and policy makers.

**What is already known about the topic?**

- Australia is facing a significant and growing deficit in the number of nurses choosing to practice rurally.
- Rural origin and rural placements influence rural practice intention.

- Early career nurse programs are an initiative aimed to support the transition of nurses into practice from undergraduate study and can act as a pathway for nurses to enter rural careers.

**What this paper adds:**

- Family and social ties are the most influential reasons for choosing a rural location for early career nurses.
- Commensurate with this is the greatest drawback for choosing a rural location for early career employment was being away from family and/or friends.
- Future research should explore practical strategies that capitalise on the importance of social connections, familial ties, and life course for rural nurse career decisions.

**Keywords:** employment; nurse; rural health; social determinants of health; work location; workforce

## INTRODUCTION

For almost 20 years, both federal and state Australian governments have attempted to address the issue of rural health workforce shortages through policy and program initiatives.<sup>1</sup> Despite reports of some improvements, significant shortages continue to exist across the rural health workforce in Australia.<sup>2</sup> These shortages are predicted to increase for the nursing workforce as approximately 40% of nurses are aged over 50 years and demand for nurses is growing beyond supply.<sup>1</sup> With a global shortage of nurses, nursing students have potentially abundant opportunities for graduate employment, making it imperative to emphasise the importance of working in areas with critical workforce shortages.<sup>3</sup>

This research focused on early career nurses commencing employment in two rural Local Health Districts (LHDs) in New South Wales, Australia. At the commencement of their employment in these rural locations, the nurses completed a survey that collected biographical, social, and professional information. This article presents the findings of a manifest content analysis conducted on the open-ended responses to questions about the main influences and drawbacks for working as an early career nurse in a rural location. The findings are used to reflect on current initiatives to attract early career nurses to rural areas, with recommendations made for future research and policy that acknowledges the importance of social connection, familial ties, and life course on health workforce location.

## BACKGROUND

Internationally, the nursing workforce is facing significant shortages.<sup>4</sup> This issue has been acknowledged in rural Australia for decades and, as a result, there has been work undertaken to understand what attracts and retains nurses in rural locations.<sup>5,7</sup> For the purpose of this research, rural is defined as areas considered regional, rural or remote using the Modified Monash Model (MM2-7).<sup>8</sup> In Australia, concerns around rural nurse recruitment and retention are complicated by the increasing juniority of the nursing workforce due to growth in graduate numbers aimed at filling workforce gaps.<sup>9</sup> This creates a situation in which early career nurses form a large proportion of the nursing workforce and have limited access to senior nurses for support. There is also a changing health organisation and policy landscape in Australia in which most early career nurses are offered short-term contracts and thus may not view their position as a long-term role.<sup>9,10</sup> Research has been undertaken to examine influences on recruitment of early career nurses to rural areas, with a particular focus on rural origin and rural placement experiences.<sup>10-15</sup> Despite this growing body of evidence, the rural nursing workforce deficit remains. There is a need to further explore factors that may influence the practice locations of early career nurses, so that policy initiatives can capitalise on factors that can influence recruitment and retention.

## RESEARCH ARTICLES

This research sought to contribute to the growing discussion of what influences early career nurses in Australia to choose a rural practice location. These results form part of a larger mixed methods study that explored the relationship between biographical factors, rural experience, and the attractiveness of rural practice for early career nurses commencing employment in a rural area. The purpose of presenting the content analysis of open-ended responses as the first part of the findings is to commence discussion around the importance of social connection, familial ties and life course on early career nurses' decision making, and to compare this to current initiatives to recruit rural nurses.

### OBJECTIVE

The research questions addressed in this paper are:

1. What do early career nurses report as the most influential factor for commencing a position in a rural location in New South Wales, Australia?
2. What do early career nurses report as drawbacks for commencing a position in a rural location in New South Wales, Australia?

### METHODS

#### STUDY DESIGN

A manifest content-analysis was conducted using open-ended survey responses that formed part of a larger, mixed methods study. The mixed methods study employed a sequential explanatory design (cross-sectional survey followed by semi-structured interviews) to explore the relationship between biographical factors, rural experience, and the attractiveness of rural practice for early career nurses commencing employment in a rural area. The survey aimed to capture the demographic qualities, care responsibilities, perceptions of practice location, influential factors in choosing the rural site, and intentions for the type and location of future practice. Two open-ended questions were included in the survey:

- 1) 'For your situation, what factor was the most influential on you taking your nursing position in this Local Health District?', and
- 2) 'For your situation, what are the drawbacks (if any) of living and working in a non-metropolitan area, like [name] Local Health District?'

#### DATA COLLECTION

Nurses commencing employment at two rural LHDs were invited to participate in the survey. Recruitment was conducted at each iteration of the early career nurses' orientation sessions held in the two rural LHDs during 2019 and 2020. During the orientation, one of the researchers (EG) explained the project to the potential respondents and answered any questions, then handed out paper copies of

the survey, before leaving the room along with all managerial and educational staff. The nurses were given time to complete the surveys. All early career nurses present at the rural LHD orientation sessions in 2019 and 2020 were eligible to participate in the research. Consent for the surveys was implied by the participants filling them out and returning them.

#### DATA ANALYSIS

Manifest content analysis was used to analyse the results of the open-ended survey responses due to the nature of the data. The open-ended responses were generally presented as dot points or one-two sentence summaries and thus the researchers did not attempt to discern deep meaning from the data but rather count the times certain concepts were mentioned. Some responses were coded across multiple categories. The survey responses were analysed by two researchers (EG & CS) using the stages suggested by Bengtsson (2016) including<sup>16</sup>:

- 1) Decontextualization: Two researchers (EG & CS) read the responses in full and became familiarised with the data. Individual responses were used as meaning units and codes were inductively developed by the first researcher (EG), then checked by the second researcher (CS). Any discrepancies were discussed until consensus was reached between the two researchers.
- 2) Recontextualization: After agreement on codes, the first researcher (EG) revisited all responses to identify any omitted text.
- 3) Categorisation: Codes were amalgamated into categories and each response was re-checked to determine its contribution to the understanding of that category.
- 4) Compilation: In line with manifest analysis, original meanings were captured through exemplification of the categories using the respondents' words. The categories were combined to create themes and counts were used to determine how many responses fell into each theme.

#### ETHICAL APPROVAL

This research was granted human research ethics approval by the Greater Western Human Research Ethics Committee, approval number 2019/ETH00108.

### RESULTS

Of the 175 early career nurses invited to complete the survey, 165 (94.29%) returned a completed survey. A descriptive summary of the respondents is provided in Table 1. The respondents were mostly female (87.88%) and had a mean (SD) age of 28.09 (8.56). Respondents were evenly split between the LHDs, with 84 (50.91%) from LHD 1 and 81 (49.09%) from LHD 2.

## RESEARCH ARTICLES

**TABLE 1. DESCRIPTIVE SUMMARY OF SURVEY RESPONDENTS**

Variable	Valid n	Category	%
LHD	165	LHD 1	50.91
		LHD 2	49.09
Gender	165	Male	12.12
		Female	87.88
Has ever lived in a rural area	165	No	27.88
		Yes	72.12
Whether moved for this position	164	No	33.94
		Yes – from a city area	38.18
		Yes – from another rural area	27.88
Age	164	20–22 years	28.66
		23–25 years	29.27
		26–30 years	16.46
		31–40 years	13.41
		41–59 years	12.20
Married or in de facto relationship	165	No	60.00
		Yes	40.00
Has dependent children or other care responsibilities	165	No	71.52
		Yes	28.48

**REPORTED INFLUENCES FOR CHOOSING A RURAL GRADUATE PRACTICE LOCATION**

There were 162 valid responses (three respondents left this question blank) to the question, ‘what factor was most influential on you taking your nursing position in this Local Health District?’. Following coding, 12 categories were used and later amalgamated into four themes.

Example responses allocated to each theme related to influences for choosing rural practice can be found in Table 2. The participants stated the greatest influence on their uptake of the nursing position was ‘proximity to social and/or familial ties’, which comprised the first theme in the content analysis. This factor was coded in 79 (49%) of the 162 responses and generally denoted family reasons such as care giving or partner considerations, being from the area, or having local social connections.

The second most common category in the content analysis was ‘being attracted to rural clinical practice’ (or metropolitan practice being unattractive). This was coded in 65 (40%) of the 162 responses. The respondents identified the attractiveness of the increased breadth of rural clinical practice, diverse experiences and a ‘hands on’ approach as influential. In addition to the career factors that influenced the participants, the support they perceived would be provided to them in the rural area was important and, for some, had already been demonstrated during the recruitment process.

The third theme reflected comments from respondents who came to this location because they were ‘taking advantage of a job offer in a limited market’. For some, this was the only job offer they received while others noted that it was important to take a job when it was offered. This category was coded in 25 (15%) of the 162 responses.

‘Wanting a rural lifestyle’ was the fourth theme identified and was coded in 24 (15%) of the 162 responses.

**REPORTED DRAWBACKS FOR CHOOSING A RURAL GRADUATE PRACTICE LOCATION**

There were 138 responses to the question, ‘what are the drawbacks (if any) of living and working in a non-metropolitan area, like [name] Local Health District?’. Twenty-seven respondents stated there were no drawbacks. The remaining 111 valid responses were coded and allocated to 13 categories that were used to create four themes. Example drawbacks identified in relation to being in the current rural location are shown in Table 3.

The most cited drawback of living and working in a rural area was ‘distance from social and/or familial ties’. Responses were allocated to this theme if the respondents identified the lack of local family/friends and/or the distance to travel to them as a drawback. This theme was coded in 74 (67%) of the 111 survey responses.

The second most common drawback of living and working in a rural area was ‘rural lifestyle factors’ which was coded in 33 (30%) of the 111 responses and referred to less access to leisure activities, commute distance and road safety, and being unfamiliar with the local culture.

‘Resource challenges’ were identified in 24 (22%) of the 111 survey responses. The respondents identified cost of living (largely due to moving out of home), lack of access to a vehicle, difficulty finding accommodation and access to goods and services as their primary concerns.

Finally, 16 (14%) of the 111 responses were coded for ‘less professional opportunity’ which identified a lack of exposure to specialty care and decreased access to resources for career advancement and professional education.

## RESEARCH ARTICLES

TABLE 2. SUMMARY OF CONTENT ANALYSIS OF INFLUENCES ON RURAL GRADUATE PRACTICE LOCATION CHOICE

Theme	Category	Example respondent quotes coded to this category
Proximity to social and/or familial ties	Family reasons	"My responsibilities to my family especially my children's school and care management." "My children and partner's needs for school and work determined my reasoning for the area I am working." "Partner & our future together as his family is on the land around the area."
	From local area	"Giving back to the area of NSW that I was raised in." "Moving back to my hometown of [name], so [location] was a good opportunity within a good driving distance - close to family and partner."
	Social connections	"Close to support networks." "Being a local member of the community, family and friends, community."
Attracted to rural clinical practice (or metropolitan practice being unattractive)	Increase breadth of clinical role and experience	"I think I will get more exposure to clinical skills and can nourish my nursing knowledge. Fresh evidence practice." "Larger range of clinical experience."
	More 'hands on' approach to nursing	"More hands on & diverse nursing." "I can get a more diverse and hands-on nursing experience as well as be involved in a community."
	More career opportunities	"Good career opportunity and growth." "Opportunity to understand more about rural health issues and progress my career."
	Increased support	"Rural area will allow me to learn in a smaller facility and feel more supported." "I have a more diverse learning opportunity and more support."
Wanting a rural lifestyle	An opportunity to try something new	"... new experience, different cultural awareness, become part of a community and make a difference, job grant, helps attaining PR." "Needed a "tree change" and wanting rural experience as would like to travel in rural/remote areas and work." "More experience opportunities keen to try something & somewhere new."
	Desire to be part of the community	"Become part of a community and make a difference." "It was where I was offered a job, I love [town] and the quieter lifestyle and pace of life and friendly community."
Taking advantage of a job offer in a limited market	Perception of limited positions	"New grad programme spots are very limited, you accept what you are offered." "The fact that I was offered a position at all was most influential."
	Accepting the first offer available	"Honestly at first I accepted this offer due to it being available to me and not having any responsibilities holding me back."
	Unable to secure other employment	"I missed out on a [location] new grad position and got offered one at [town] so took it in fear of not having a job." "[I] was unsuccessful in gaining a position at my preferred location."

## RESEARCH ARTICLES

TABLE 3. SUMMARY OF CONTENT ANALYSIS OF DRAWBACKS ON RURAL GRADUATE PRACTICE LOCATION CHOICE

Theme	Categories	Example respondent quotes coded to this category
Distance from social and/or familial ties	Distance from family and/or friends	"Moving out. Moving away from family (including elderly grandparent) and friends." "...most importantly and stressfully, I don't have family support to help care for my children. This is by far my BIGGEST stressor in completing this grad start program."
	Distance from hometown	"Far from home..." "Far away from close friends, potential for social isolation"
	Travel required to see family and/or friends	"Being far away from family, friends and loved ones. Having a long travel distance." "More difficult to travel interstate to see family e.g. Grandparents"
Resource challenges	Concerns around lack of public transport or access to a vehicle	"Having to get a car and budgeting for it." "Lack of public transport = necessity of a car"
	Access to stores or grocery items	"Variety of goods available - not bad just different."
	Difficulty finding appropriate accommodation	"I will be separated from my children due to no accommodation supports." "[I] am on my own to find accommodation and not much time between change over locations."
	Expenses related to moving	"It was expensive and stressful to move here."
Less professional opportunity	Limited exposure to specialty practice	"Whilst clinical experience is diverse in some regards, not exposed to a lot e.g. theatre, surgical, specialists etc." "Not a lot of chance to work in specialist areas."
	Less access to career advancement opportunities	"Not a lot of career advancement opportunities." "Lack of certain specialties. Scared that may limit career in long run."
	Less access to educational opportunities	"Reduced educational support." "Limited opportunities to gain skills due to workload and staffing."
Rural lifestyle factors	Less access to leisure activities such as sports teams, beach	"Less events for young people." "Limited opportunities in area, sporting teams etc." "I left the beach."
	Commute distance and road safety	"Driving to work with wildlife & minimal people on the road." "180km trip one-way to work."
	Unfamiliar with local culture	"...unfamiliar living in a rural environment, adjusting to new living conditions." "...everything is so different, it's a lot to get used to." "You are a common acquaintance to most patients and colleagues." "New placement, don't know the local secrets." "I feel lost and sense of non-belonging to this area."

## DISCUSSION

The results of this research demonstrate that for this sample of early career nurses proximity to social and/or familial ties is both the biggest influence and drawback in selecting an early career nursing location. The influence of familial and social ties on employment location has previously been identified in the professions of medicine,<sup>17</sup> nursing,<sup>18</sup> and allied health,<sup>18,19</sup> while a study of first-year paramedics has found that a spouse or partner's career opportunities were the most influential factor for work location.<sup>20</sup> Furthermore, close social ties are not just a factor in taking up employment in a rural area but are also key to the decision to stay there.<sup>21,22</sup> Using social gatherings as a means to enhance connection has been suggested by early career nurses as a strategy to improve their job satisfaction and retention.<sup>5</sup> Considering

this evidence and the results of our study, there may be an opportunity to attract and retain nurses through targeted social initiatives and creating community ties, particularly among those early career nurses who have no close friends and family nearby.

Much of the existing literature on early career nurses' transition to practice has focused on how programs such as orientation can ease the transition into the workplace and potentially influence staff retention.<sup>23</sup> Orientation and transition programs may affect several of the influences and drawbacks noted by the early career nurses in this study, including their attraction to rural clinical practice and their perception of educational supports,<sup>24,25</sup> however, these programs often do not account for the largest influence and drawback noted by the nurses in this study – the desire to be

## RESEARCH ARTICLES

close to friends and family. This was noted in a systematic review conducted by Edwards et al. which focused on programs that aimed to support new nurses to transition into the workplace.<sup>24</sup> When examining the effect of these programs on nurse retention, the authors acknowledged that “all studies agree however, that many factors affect retention that could not be controlled, such as family relocation, changes in health status, family responsibilities, or other personal or family issues”.<sup>24(p.1266)</sup> This suggests there is an opportunity to increase the attractiveness of rural practice locations by capitalising on opportunities that extend beyond the clinical environment and create social ties. These ties are particularly important considering the nurses who have moved for early career employment are less likely to have social support and more likely to experience resource stress associated with relocation. This is likely to apply to early career nurses from a non-rural background and those with a rural background who are moving to location in which they have no historical ties.

The emphasis the nurses placed on close social and familial ties may be partly reflective of the demographic characteristics of the study sample, including that they are predominately female (88%), with 40% married or in a de facto relationship and more one-quarter with dependent children or other care responsibilities. The sample of nurses in this research reflects the widespread and persistent predominance of women in nursing professions which uniquely characterises nursing from dentistry, medicine, and many allied health professions.<sup>22,26-29</sup> Embedding health organisations with structures and processes that recognise the familial care responsibilities and time demands of their staff may be crucial for increasing the recruitment and retention of rural nurses.

The way that nurses in this research described perceived professional opportunities as both an influencing factor and drawback provides evidence for informing recruitment and retention strategies. Specifically, the results indicate recruitment efforts should emphasise the ways in which the unique diversity and breadth of rural nursing practice can benefit early career nurses professionally. Conversely, the lack of specialisation and fears around the depth of knowledge and experience for career advancement described as drawbacks show that the provision of substantial educational and other specialist practice opportunities are likely to be integral for ongoing retention; and that this might require innovative solutions in the rural context.

Examining the results of this study in the context of current initiatives to attract nurses to rural areas, there are several implications for organisations looking to recruit early career nurses. In line with the World Health Organization's recommendations to improve attraction, recruitment, and retention of health workers in remote and rural areas,<sup>27</sup> many organisations and policy makers have focused on education strategies, regulatory change, financial incentives, and

personal and professional support for rural nurses.<sup>28-30</sup> These initiatives are important however may not fully realise the importance of societal and familial connection to an area, as has been argued by Cosgrave (2020).<sup>31</sup> Cosgrave's 'Whole-of-Person' Retention Improvement Framework gives equal weighting to three domains: community/place, role/career and workplace/organisational - where the community/place domain is influenced by “feeling settled in, being socially connected and having a sense of belonging”.<sup>31(p.3)</sup> Colbran et al. (2022) add to this concept the importance of a person's life stage on the likelihood they will be recruited and retained in rural locations.<sup>32</sup> Like Cosgrave, they argue the importance of considering a person's societal and familial ties within the context of their life course.<sup>31,32</sup> These approaches add a layer of depth to the financial and policy initiatives currently used in Australia to enhance recruitment and retention of rural nurses.<sup>33,34</sup>

Some literature has considered social and familial approaches to recruitment and retention and suggested strategies such as using colleagues to reduce social isolation,<sup>35</sup> management practices that encourage community engagement,<sup>35</sup> and facilitating friendships and support networks.<sup>36</sup> The provision of support that extends to the health workers' families has also been discussed in the literature and suggested strategies include tailored financial incentives, psychological support and 'time out',<sup>37</sup> childcare supports,<sup>38</sup> marketing a location as a good place to raise children,<sup>39</sup> and assisting with employment opportunities for partners.<sup>39</sup> These strategies should be explored in future research with a view to creating practical guidance for rural health organisations and policy makers to capitalise on social and community connections when onboarding early career nurses. This work will be integral in shaping future recruitment and retention strategies for the rural nursing workforce.

## LIMITATIONS

The recruitment method and use of a survey for this study enabled a high participation rate, however, a cross-sectional survey does not support in-depth assessment of early career nurse decision-making and future intentions. This paper presented descriptive results of open-ended survey questions that explored the perspectives of early career nurses at one point in time. As such, the results of the research may not be generalisable to the broader rural health workforce and should be viewed as a platform for further research to be conducted. It should also be noted that as these nurses had already accepted a rural position the drawbacks and influences do not represent factors that may affect the cohort of nurses who elected to work in other areas (i.e. those who chose metropolitan locations).

## RESEARCH ARTICLES

## CONCLUSION

The results of this research demonstrate that proximity to social and/or familial ties is both the biggest influence and drawback for early career nurses to accept employment in a rural location. This reflects other literature and the growing understanding of the importance of social connection, familial ties and life course in early career nurse decision making. There has been movement in the literature to conceptualise the importance of social and familial ties in employment decision-making, but further work is required to translate this information into practical guidance for rural health organisations.

## IMPLICATIONS FOR RESEARCH, POLICY AND PRACTICE

This research has highlighted the need to now understand and trial what strategies can be employed to create and capitalise on social and familial ties to rural locations. Strategies that take advantage of practical ways to integrate social connection and life course approaches in early career nurse onboarding in rural areas should be explored in future research with a view to creating guidance for rural health organisations and policy makers.

**Acknowledgements:** Some of the authors of this research are employees of Three Rivers Department of Rural Health, funded by the Australian Government under the Rural Health Multidisciplinary Training (RHMT) Program.

**Funding Support:** Nil

**Declaration of conflicting interests:** Nil

## REFERENCES

- Cosgrave C, Maple M, Hussain R. An explanation of turnover intention among early-career nursing and allied health professionals working in rural and remote Australia-findings from a grounded theory study. *Rural Remote Health*. 2018;18(3):1-17.
- Australian Institute of Health and Welfare (AIHW). *Rural and remote health*. 2023. [cited 2023 Dec 21] Available from: <https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health>.
- Andrews G, Brodie D, Andrews J, Wong J, Thomas B. Place (ment) matters: students' clinical experiences and their preferences for first employers. *Int Nurs Rev*. 2005;52(2):142-53.
- Peters M. Time to solve persistent, pernicious and widespread nursing workforce shortages. *Int Nurs Rev*. 2023;70:247-253.
- Rose H, Skaczkowski G, Gunn KM. Addressing the challenges of early career rural nursing to improve job satisfaction and retention: Strategies new nurses think would help. *J Adv Nurs*. 2023;79:3299-3311.
- Rahman R, Jones A, Jiaqing O. A crisis in the countryside – Barriers to nurse recruitment and retention in rural areas of high-income countries: A qualitative meta-analysis. *J Rural Stud*. 2019;72:153-163.
- Lea J, Cruickshank M. The support needs of new graduate nurses making the transition to rural nursing practice in Australia. *J Clin Nurs*. 2015;24(7-8):948-960.
- Department of Health and Aged Care. *Modified Monash Model*: Australian Government. 2023. [cited 2023 Dec 21] Available from: <https://www.health.gov.au/topics/rural-health-workforce/classifications/mmm>.
- Doleman G, Duffield C, Li IW, Watts R. Employment of the Australian graduate nursing workforce: A retrospective analysis. *Collegian*. 2022;29(2):228-235.
- Crossley C, Collett M, Thompson SC. Tracks to postgraduate rural practice: longitudinal qualitative follow-up of nursing students who undertook a rural placement in Western Australia. *Int J Environ Res Public Health*. 2023;20(6), 5113.
- Seaman CE, Green E, Freire K. Effect of rural clinical placements on intention to practice and employment in rural Australia: A systematic review. *Int J Environ Res Public Health*. 2022;19(9), 5363.
- Sutton K, Depczynski J, Smith T, Mitchell E, Wakely L, Brown LJ, 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(2):191-200.
- Playford D, Moran MC, Thompson S. Factors associated with rural work for nursing and allied health graduates 15-17 years after an undergraduate rural placement through the University Department of Rural Health program. *Rural Remote Health*. 2020;20(1):54-60.
- Smith T, Sutton K, Pit S, Muyambi K, Terry D, Farthing A, et al. Health professional students' rural placement satisfaction and rural practice intentions: A national cross-sectional survey. *Aust J Rural Health*. 2018;26(1):26-32.
- Fatima Y, Kazmi S, King S, Solomon S, Knight S. Positive placement experience and future rural practice intentions: findings from a repeated cross-sectional study. *J Multidiscipl Healthc*. 2018;11:645-652.
- Bengtsson M. How to plan and perform a qualitative study using content analysis. *NursingPlus open*. 2016;2:8-14.
- Eley DS, Synnott R, Baker PG, Chater AB. A decade of Australian Rural Clinical School graduates – where are they and why? *Rural Remote Health*. 2012;12(1):138-47.
- Jessup B, Barnett T, Cross M, Obamiro K, Mallick S. Rural employment: A get-go for recent nursing and allied health graduates? *Aust JRural Health*. 2021;29(5):688-700.
- Kumar S, Tian EJ, May E, Crouch R, McCulloch M. "You get exposed to a wider range of things and it can be challenging but very exciting at the same time": enablers of and barriers to transition to rural practice by allied health professionals in Australia. *BMC Health Serv Res*. 2020;20:1-14.
- Ivec N, Beauchamp A, Sutton K, Mitchell E, O'Meara P, Bowles KA, et al. Investigating first-year graduate paramedics' reason for current work location: A cross-sectional, data linkage study. *Aust J Rural Health*. 2021;29(5):678-87.
- Beccaria L, McIlveen P, Fein EC, Kelly T, McGregor R, Rezwanul R. Importance of attachment to place in growing a sustainable Australian Rural Health Workforce: A rapid review. *Aust J Rural Health*. 2021;29(5):620-642.
- Cosgrave C, Malatzky C, Gillespie J. Social determinants of rural health workforce retention: a scoping review. *Int J Environ Res Public Health*. 2019;16(3):314.

## RESEARCH ARTICLES

23. Strauss E, Ovnat C, Gonen A, Lev-Ari L, Mizrahi A. Do orientation programs help new graduates? *Nurse Educ Today*. 2016;36:422-426.
24. Edwards D, Hawker C, Carrier J, Rees C. A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse. *Int J Nurs Stud*. 2015;52(7):1254-1268.
25. Kenny A, Dickson-Swift V, McKenna L, Charette M, Rush KL, Stacey G, et al. Interventions to support graduate nurse transition to practice and associated outcomes: A systematic review. *Nurse Educ Today*. 2021;100:104860.
26. Anderson S, Saar E, Evans J, Rasmussen M, Bayyavarapu SB, Main PAE, et al. Demographic changes in Australia's regulated health professions: 6-year trends. *Aust Health Rev*. 2023;47(2):246-53.
27. World Health Organization. *WHO guideline on health workforce development, attraction, recruitment and retention in rural and remote areas* Geneva: World Health Organisation. 2021. [cited 2023 Dec 21] Available from: <https://apps.who.int/iris/bitstream/handle/10665/341139/9789240024229-eng.pdf>.
28. Commonwealth of Australia. *Nursing Workforce Sustainability: Improving Nurse Retention and Productivity* Canberra: Health Workforce Australia. 2014. [cited 2023 Dec 21] Available from: [https://www1.health.gov.au/internet/main/publishing.Nsf/content/29418ba17e67abc0ca257d9b00757d08/\\$file/nursing%20workforce%20sustainability%20-%20improving%20nurse%20retention%20and%20productivity%20report.Pdf](https://www1.health.gov.au/internet/main/publishing.Nsf/content/29418ba17e67abc0ca257d9b00757d08/$file/nursing%20workforce%20sustainability%20-%20improving%20nurse%20retention%20and%20productivity%20report.Pdf).
29. NSW Ministry of Health. *Health professionals workforce plan 2012-2022* Sydney: NSW Health. 2015. [cited 2023 Dec 21] Available from: <https://www.health.nsw.gov.au/workforce/hpwp/Publications/health-professionals-workforce-plan.pdf>.
30. Walsh S, Lyle DM, Thompson SC, Versace V, Browne LJ, Knight S, 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.
31. Cosgrave C. The whole-of-person retention improvement framework: a guide for addressing health workforce challenges in the rural context. *Int J Environ Res Public Health*. 2020;17(8):2698.
32. Colbran R, Ramsden R, Edwards M, O'Callaghan E, Karlson D. Beyond the workforce training pipeline: embracing the meandering stream of "whole of life" and career to strengthen the retention of health professionals rurally. *J Integr Care*. 2022;30(5):83-92.
33. Department of Health and Aged Care. *Stronger Rural Health Strategy*: Australian Government. 2021. [cited 2023 21 Dec]. Available from: <https://www.health.gov.au/topics/rural-health-workforce/stronger-rural-health-strategy>.
34. Department of Health and Aged Care. *Our work related to the rural health workforce*: Australian Government. 2023. [cited 2023 21 Dec]. Available from: [https://www.health.gov.au/topics/rural-health-workforce/related-work?sort\\_by=title&sort\\_order=ASC&page=1](https://www.health.gov.au/topics/rural-health-workforce/related-work?sort_by=title&sort_order=ASC&page=1).
35. Onnis La. Human resource management policy choices, management practices and health workforce sustainability: Remote Australian perspectives. *Asia Paci J Hum Resour*. 2019;57(1):3-23.
36. Hall D, Garnett ST, Barnes T, Stevens M. Drivers of professional mobility in the Northern Territory: Dental professionals. *Rural Remote Health*. 2007;7(1):1-20.
37. Wakerman J, Humphreys J, Russell D, Guthridge S, Bourke L, Dunbar T, et al. Remote health workforce turnover and retention: What are the policy and practice priorities? *Hum Resour Health*. 2019;17(1):1-8.
38. Buykx P, Humphreys J, Wakerman J, Pashen D. Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence-based policy. *Aust J Rural Health*. 2010;18(3):102-109.
39. Keane S, Lincoln M, Smith T. Retention of allied health professionals in rural New South Wales: a thematic analysis of focus group discussions. *BMC Health Serv Res*. 2012;12(1):1-11.