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Are Australian rural clinical school students' career choices influenced by perceived opinions of primary care? Evidence from the national Federation of Rural Australian Medical Educators survey

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Abstract

Objective: To investigate whether perceived opinions of primary care are associated with student career preferences after graduation among a rural clinical school cohort and whether the preferred location of practice moderates these relationships.

Design: Cross-sectional study using data from the national Federation of Rural Australian Medical Educators survey.

Participants/Setting: Medical students across 18 Australian universities who completed a clinical year in a rural setting in 2019.

Main outcome measure(s): Career preference in primary care after graduation.

Results: The survey was completed by 624 students (response rate = 69.9%). A preference for primary care was reported by 35.5% (95% CI: 29.4-42.0) of students and was more likely among those age 30+ years, with a rural background, or preferring to practise rurally after graduation. Students reported that primary care was more commonly respected by medical academics (66.8%) than peers (24.0%) or junior/hospital doctors (24.0%). In adjusted analysis, none of the perceived opinions were associated with student career preferences. However, among students aiming to work in small rural locations, a career in primary care was associated with more frequent reports that peers had poor opinions of primary care ($P = .004$).

Conclusion: Rural clinical school students perceive negative opinions of primary care, particularly among peers and junior/hospital doctors. Students aiming to work in small towns after graduation are more likely to report negative opinions among their peers, suggesting they may be more attuned to negative attitudes. This points to the need for a community of practice of like-minded peers and clinicians to preserve the career interest of these students.

KEYWORDS

attitude, career choice, family medicine, health workforce, primary health care, rural health

1 | BACKGROUND

Health systems with a strong foundation of primary care provide improved and more equitable health outcomes within the population.[1] To ensure an adequate supply of primary care doctors where they are most needed is a challenge for most countries around the world.[2] This requires an adequate distribution of doctors across General Practitioner (GP) vs non-GP specialities as well as an adequate geographical distribution. In Australia, it is expected that by 2025 there will be a shortage of GPs,[3] which will further aggravate the current urban-rural maldistribution of the medical workforce.[4,5]

Despite recent increases in the number of medical students graduating in Australia, 67% of these new doctors have a preference for non-GP (other/secondary care) specialist careers.[3,6] Female sex, older age at graduation and having a rural background have been reported in the literature as the socio-demographic factors with a positive influence on medical students' decisions to pursue a career in primary care.[7,8] Moreover, a range of career-related factors also seems to make primary care careers attractive for medical students, including work-life balance, continuity of care, preference for rural location and a broader scope of practice.[7]

Negative perceptions of primary care among medical students represent a potential barrier to building the future GP workforce.[9] There are many interacting factors influencing students' perceptions, from individual characteristics, social norms and values, financial status, media coverage, to the opinions of family and friends.[10-14] Studies involving medical students in Australia,[9-11] Canada[15] and the United States[16] suggest that lack of prestige or status of a career in primary care can be a disincentive for choosing that field of work. A review of qualitative studies by Selva Olid et al[17] highlighted the negative perceptions among medical students in most Western countries, with a career in primary care generally regarded as being of low interest or prestige. To some extent, these negative perceptions may be shaped by medical school experiences and the 'hidden curriculum' created by the opinions and comments of other students, medical residents and faculty members.[17-19] A study by Erikson et al[20] examined a student cohort from 20 medical schools in the United States and found that those attending schools with higher reported levels of 'badmouthing' primary care were less likely to preference primary care careers.

Therefore, it is important to understand whether negative perceptions about primary care influence students' career choices and interest in rural general practice. Of particular interest is the influence among Australian students who have shown a predilection for rural practice by undertaking a Rural Clinical School (RCS) placement. In this paper, we aim to report how an Australian cohort of RCS students perceived opinions of primary care among their peers, junior/hospital doctors, medical academics and school deans, and how this influenced students' preferences for a career in primary care. Moreover, we explore whether the intention to work either in rural or in urban locations after graduation moderates these relationships.

What is already known on the subject:

- Australia has a predicted shortage and a rural-urban maldistribution of general practitioners (GPs)
- Negative perceptions of primary care among medical students represent a potential barrier to building the future GP workforce
- The international literature reports negative attitudes towards primary care within medical schools or hospital settings, but mixed evidence about the influence on students' career choices

What this study adds:

- Australian rural clinical school students perceive negative attitudes towards primary care, particularly among their peers. We found no evidence that perceived negative opinions discouraged these students' preference for a primary care career
- Rural clinical school students who prefer a primary care career in a small town are more likely to report negative opinions among their peers and may be more attuned to negative attitudes
- Positive experiences of primary care in rural clinical school may outweigh perceived negative opinions. This highlights the importance of a community of practice of like-minded peers and clinicians to encourage students to pursue their interest in small rural primary care

2 | METHODS

This is a cross-sectional study using national data of all medical students who completed a full academic year in a rural location in 2019. Funded by the Commonwealth Government, 22 RCS and 19 Australian universities, members of the Federation of Rural Australian Medical

Educators (FRAME), provide the opportunity for 25% or more of their medical students to complete a full academic year based in a rural area. FRAME distributes an annual exit survey to all students undertaking these year-long rural placements to provide insight about motivations, educational experience, satisfaction with the program, and possible factors influencing rural career intentions. Additional questions integrated into the 2019 survey aimed to explore students' perceptions of opinions regarding primary care among peers, junior/hospital doctors, medical academics and school deans/leaders. These questions were adapted from the survey used by Erikson et al[20] in their study of US medical students.

Medical students from 18 Australian medical programs who undertook rural placements for a full academic year in 2019 were invited to complete the online survey during the final 4 weeks of their clinical placement. Participants provided their consent to participate in the research electronically at the beginning of the survey. On average, the questionnaire took 15-20 minutes to be completed.

2.1 | Outcome

The career preference upon exit from rural clinical school was investigated based on the question 'Rank your current career preference now upon exit from your RCS. Please rank 1 (most preferred) to 4 (least preferred)'. The response options were as follows: '(a) Rural Generalist (a combination of GP and rural hospital work), (b) GP (rural or urban), (c) Specialist with broad scope (eg general surgeon, general physician, anaesthetist, emergency department), (d) Subspecialist/other'. The binary variable 'prefers primary care' was defined as those who selected 'Rural Generalist' or 'GP' as the most preferred career preference compared to those who selected either 'Specialist' or 'Sub-specialist' as the first option.

2.2 | Independent variables

Students were asked to select a statement that, in their perspective, best described the prevailing opinion of primary care by their (a) peers, (b) junior doctors and hospital clinicians, (c) academic staff and (d) medical school deans and leaders. Students were asked to select one statement from the following for each of these 4 groups of people: 'Primary care is most commonly seen as (a) a fall-back position, (b) neutral or equal mix of supporters and detractors, or (c) most commonly respected.' The 4 variables were analysed as ordinal variables. In the context of Australian medical schools, the term 'primary care' is understood as general practice.

2.3 | Moderator

Students were asked about the geographical locations within Australia where they would most like to practise on completing their medical training ('Regarding your plans for future medical practice…upon exit from your RCS, in which geographical location within Australia would you most like to practise on completing your training? Please rank 1 [most preferred] to 5 [least preferred]'). The 5 descriptors provided to students were as follows: (a) capital or major city, (b) inner regional city or large town (population 25 000 to 100 000), (c) smaller town or outer regional (10 000 to 24 999), (d) small rural or remote community (<10 000) or (e) very remote centre/area. These population-based descriptors for rurality were used because students may not be familiar with using standardised geographical classifications. Students were required to assign a different rank (from 1 to 5) to each of these locations. Based on the location of practice selected by the students as the 'most preferred', they were reclassified in one of the following categories: (a) prefers a major city (the most preferred place is a capital); (b) prefers a large town (the most preferred place is an inner regional city); (c) prefers a small rural practice location (the most preferred place is a smaller town, small rural community or a very remote centre).

2.4 | Covariates for adjustment

Different socio-demographic variables have been associated with medical career intentions[8] and were explored as possible confounders in this paper. They included sex (male, female or other), age (generated based on the date of birth and classified as 20-24, 25-29 or 30+ years), rural background ('Do you consider yourself to come from a rural background?'—yes or no), place in Australia where they have lived the longest ('Location, within Australia, you have lived in the longest'—(a) Capital city, (b) Major urban centre [>100 000], (c) Regional city/large town [25 000-100 000], (d) Smaller town [10 000-24 999], (e) Small rural community [<10 000] or (f) Remote centre/area), aboriginality ('Do you identify as Aboriginal or Torres Strait Islander?'—yes or no), migration status ('Have you and/or your parents immigrated to Australia'—yes or no), if they were the first in the family to attend University ('Are you the first in family to attend University'—yes or no), whether there were medical doctors in the family ('Do you have an immediate family member who is qualified as a medical practitioner'—yes or no), and previous health qualifications ('Do you already have a health professional qualification'—yes or no). For analysis, the place where they have lived in the longest was recoded as (a) major urban centre (capital city or major urban centre), (b) large rural location (regional city/large town), or (c) small rural location (smaller town, small rural community

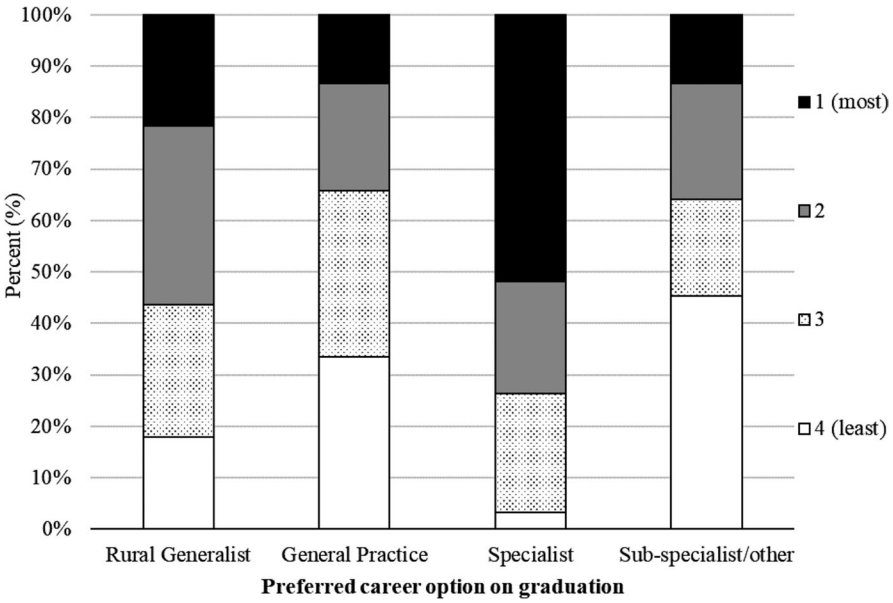

FIGURE 1 Preferred career option after graduation (N = 624). Federation of Rural Australian Medical Educators survey, 2019

or remote centre/area). As no postcode information was collected in the survey, we were unable to explore rurality using other classifications.

2.5 | Data analysis

Categorical variables were expressed in percentages (%) and presented graphically or in tables. The associations between the covariates and the career preference after graduation were tested using chi-square test of heterogeneity or trend, depending on the nature of the exposure variable. The same method was used to evaluate the crude associations between the prevailing opinion of primary care variables and career preference after graduation.

Logistic regression models were used to adjust the results for possible confounders. Adjusted models included sociodemographic variables and prevailing opinion of primary care variables that showed a *P*-value <.10 (crude results) in the association with the career preference after graduation. Maximum-likelihood estimates for the full models were obtained, and Wald tests for trend used to estimate the *P*-values due to the use of clustered weighted data. Results were then expressed as marginal adjusted prevalence instead of odds ratio to facilitate comparison between crude and adjusted estimates.

The preferred location of practice after graduation was investigated as a possible moderator of the investigated relationships. Multiplicative terms between the preferred location of practice and the prevailing opinion of primary care variables were introduced in the logistic regression models and considered as an indicator of heterogeneity when the *P*-value for interaction was <.05. In that case, the marginal adjusted prevalence of students preferring a career in primary care after graduation according to the prevailing opinion of primary care was stratified by the preferred location of practice after graduation and presented graphically with the corresponding 95% confidence intervals (95% CI) and *P*-values for trend.

Determination coefficients (r^2) were used to evaluate the overall model fit, while the variance inflation factor (VIF) was investigated as an indicator of possible collinearity between the explanatory variables. All analyses were performed in STATA 16.0 (StataCorp), weighted to the participation rate within each school, and clustered to the corresponding RCS.

2.6 | Ethics approval

De-identified data with the variables of interest from the survey were provided to the research group for statistical analysis, consistent with the ethics approval granted through the Flinders University Social and Behavioural Research Ethics Committee (Project number 4098).

3 | RESULTS

Of the 893 medical students enrolled at the 18 universities, 624 completed the FRAME survey in 2019 (response rate 69.9%). Most students (51.9%) ranked specialist as their most preferred career option on graduation, followed by rural generalist (21.6%), GP (13.3%) and sub-specialist/other (13.4%) (Figure 1). Overall, a preference for a career in primary care ('Rural Generalist' or 'GP') was reported by 35.5% (95% CI: 29.4-42.0) of students.

Table 1 shows the sample included more females (56.6%) than males, with most students aged 20-29 years (84.2%),

TABLE 1 Factors influencing student preference for a career in primary care. Federation of Rural Australian Medical Educators survey, 2019

		Prefers a career in primary care		
		Yes	No	
	n (%)	%	%	*P*-value[a]
Overall		35.5	64.5	
Sex				
Female	355 (56.6)	40.1	60.8	.079
Male	270 (43.1)	29.2	70.8	
Other	2 (0.3)	0.0	100.0	
Age (y)				
20-24	341 (54.3)	31.5	68.5	.008
25-29	188 (29.9)	35.1	64.9	
30+	64 (10.2)	51.4	48.6	
Not informed	35 (5.6)	42.5	57.5	
Has a rural background				
No	346 (55.3)	27.2	72.8	<.001
Yes	280 (44.7)	46.4	53.6	
Place has lived the longest				
Major urban centre	357 (56.9)	27.7	72.3	<.001
Large rural location	103 (16.4)	41.7	58.3	
Small rural location	167 (26.6)	49.4	50.6	
Aboriginal or Torres Strait Islander				
No	609 (97.8)	35.7	64.3	.294
Yes	14 (2.3)	24.3	75.8	
Parents or himself/herself immigrated to Australia				
No	395 (63.2)	39.3	60.7	.063
Yes	230 (36.8)	28.2	71.8	
First in the family to attend university				
No	522 (84.1)	33.6	66.4	.120
Yes	99 (15.9)	45.0	55.0	
Immediate family member is a medical practitioner				
No	501 (80.3)	36.8	63.2	.253
Yes	123 (19.7)	29.1	70.9	
Has a previous health qualification				
No	563 (90.4)	34.8	65.2	.435
Yes	60 (9.6)	41.0	59.0	
Preferred location of practice after graduation				
Major city	212 (33.9)	12.5	87.5	<.001
Large town	243 (38.8)	36.1	63.9	
Small rural	171 (27.3)	61.6	38.4	

[a]Chi-squared test of heterogeneity.

without a rural background (55.3%), who lived the longest in a major urban centre (56.9%), non-Indigenous (97.8%), non-migrants to Australia (63.2%), who were not the first in their immediate family to attend university (84.1%), without a medical doctor in the family (80.3%) or without a previous health qualification (90.4%). For the preferred location of practice after graduation, 33.9% of students indicated their most preferred location was a major city, 38.8% a large town and 27.3% a small town.

Table 1 also shows a higher preference for a career in primary care was reported by students aged 30+ years (51.4%), with a rural background (46.4%), and those who have lived longest in a small rural location (49.4%). None of the other socio-demographic factors was associated with the investigated outcome. However, a preferred career in primary care was 4.9 times more likely among those who prefer to practise in a small rural location after graduation than those who prefer a major city ($P < .001$).

Figure 2 shows how medical students perceived others' opinions of primary care. Overall, more students reported that primary care was 'most commonly respected' among academic staff and deans/medical school leaders (66.8% and 60.5%, respectively) compared to their student peers (24.0%), or junior/hospital doctors (23.9%). A negative perspective about GP (where primary care was seen as a fall-back position) was perceived to be more frequent among peers (24.3%) and junior/hospital doctors (20.7%) than among academics or dean/leaders (<5% in both cases).

Table 2 shows the associations between the perceived opinions of primary care and students' career preference for primary care ('Rural Generalist' or 'GP'). The perceived opinions of academic staff or deans/leaders did not correlate with student preference for a career in primary care. In crude analysis, reported preference for primary care was nearly one and a half times higher among those students who perceived their peers had poor opinions of primary care (43.4%) than among students who perceived their peers respected it (29.6%). A similar result was seen with opinions of junior/hospital doctors (43.7% vs 26.8%). However, after adjustment for possible confounders, these associations became less evident (*P*-value >.05 in both cases). The overall model fit increased from $r^2 = 5.8$ to 6.8% when the perceived opinion variables were incorporated into the model including socio-demographic variables only. There was no evidence of collinearity between the variables (overall VIF = 2.79).

The preferred location of practice was an effect modifier of the association between the perceived opinion of primary care among peers and the student preferences for a career in primary care (*P*-value for interaction = .045). The variability explained by the model also increased to $r^2 = 17.2\%$ with the inclusion of the interaction term. Figure 3 shows that the perceived opinion of peers has no influence on the preference

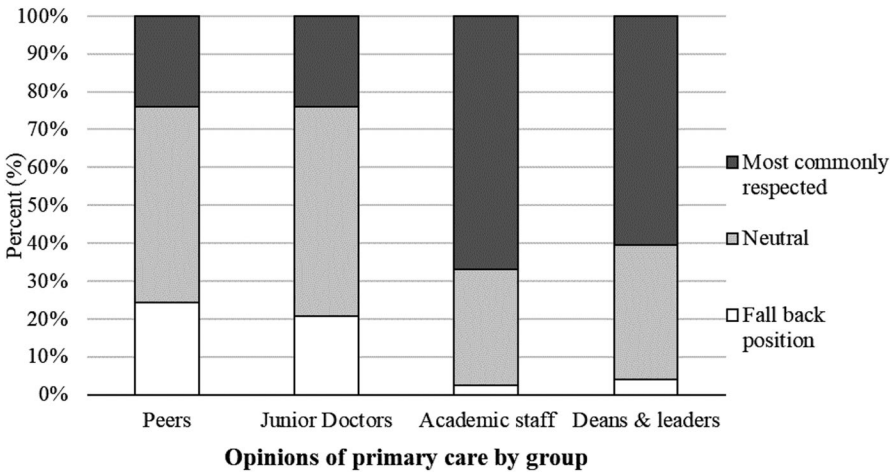

FIGURE 2 Perceived opinions of primary care. Federation of Rural Australian Medical Educators survey, 2019

for a primary care career among those aiming to work in a major city or a large town after graduation. However, among students aiming to work in a small rural location, 73.4% of those who perceived poor opinions of primary care among their peers reported a preference for a career in primary care, compared to 58.6% for those perceiving neutral opinions and 46.4% for those perceiving positive opinions (*P*-value for trend .004). There was no evidence of interaction between the preferred location of practice and the other independent variables (*P*-value for interaction >.20 in all cases).

4 | DISCUSSION

This study explored relationships between perceived opinions of primary care and medical student career preferences within an Australian RCS cohort. In general, most students preferred a career as specialists and most also reported a preference for a non-urban location. Students were more likely to perceive negative attitudes towards primary care among peers and junior/hospital doctors than among medical school academics or deans/leaders. The overall results do not demonstrate any association between perceived opinions of primary care and RCS students' career preferences, except among students aiming to work in small rural locations after graduation where the association was negative.

Our results do not support the premise that perceived negative opinions discourage students from a primary care career; however, we cannot exclude this possibility. We acknowledge that perceptions are subjective and the influence on different individuals is likely to be highly variable. Our finding that students who prefer a small town primary care career are more likely to report negative opinions among their peers is important. A possible explanation is that these students receive unfavourable feedback about their career plans and are more attuned to negative opinions. This could demonstrate a compounding effect of attitudes towards small rural practice plus primary care.[21] Therefore, countering negative opinions about this career preference may be particularly important in promoting and building the workforce in smaller rural locations. Recognising that professional practice involves social

TABLE 2 Influence of perceived opinions of primary care on student preferences for a career in primary care. Federation of Rural Australian Medical Educators survey, 2019

		Preferred primary care			
		Crude		Adjusted[a]	
	n	%	*P*-value[b]	%	*P*-value[b]
Prevailing opinion of primary care among					
Peers					
Fall-back position	164	43.4	.001	40.6	.079
Neutral	317	34.0		33.1	
Most commonly respected	140	29.6		32.8	
Junior doctors and hospital clinicians					
Fall-back position	135	43.7	.016	39.4	.170
Neutral	343	36.3		35.4	
Most commonly respected	144	26.8		29.5	
Academic staff					
Fall-back position	16	27.4	.838	23.5	.411
Neutral	205	36.3		34.4	
Most commonly respected	401	35.5		35.6	
Medical school deans and leaders					
Fall-back position	29	33.8	.774	31.6	.511
Neutral	233	37.0		32.7	
Most commonly respected	358	34.9		36.5	

[a]Adjusted for sex, age, rural background, place has lived the longest, immigration to Australia and mutual adjustment between variables with a *P*-value <.10 in crude results.

[b]*P*-value for trend.

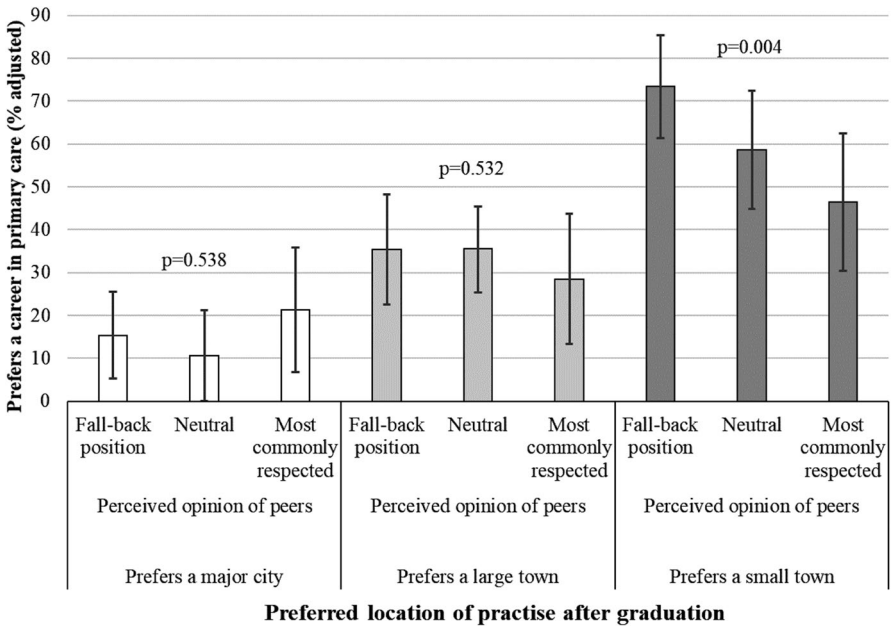

FIGURE 3 Association between the perceived opinion of primary care among peers and the student preferences for a career in primary care, stratified by the preferred location of practice after graduation. Results adjusted for sex, age, rural background, place have lived the longest, immigration to Australia and perceived opinion of junior doctors

learning, the authors recommend ensuring that students interested in small town primary care careers are supported by a community of practice of like-minded peers and clinicians, so they learn to be the very doctors most sought after in rural Australia.[22]

Previous studies exploring how attitudes about primary care affect medical students' career choices have shown mixed results. In the United States and Canada, perceived status has been shown to be influential in students' choice of specialty,[15,20] with some students forming negative perceptions about primary care prior to entering medical school.[16] Qualitative studies involving Australian medical students have also identified lack of prestige as a disincentive for choosing primary care.[9-11] Conversely, Koehler and McMenamin[12] found that Australian medical students with a preference for general practice were more likely to state low prestige and poor pay as disadvantages than students with a non-GP preference. They suggested that students who choose general practice may encounter more negative comments and stereotypes. Campos-Outcalt et al[23] reported similar findings in relation to US medical students; those interested in primary care were more likely to report negative comments about the field. Our findings are consistent with these latter studies. In short, while the international literature consistently identifies negative attitudes towards primary care, it is more difficult to determine the extent of the influence on students' career choices. There are many factors that can draw students towards a career in primary care, including the flexibility, continuity of patient care, work-life balance and broader scope of practice.[12] For many RCS students, it appears that these incentives are sufficient to outweigh perceived negative opinions.

It has been suggested that negative attitudes towards primary care may be fostered by a 'hidden curriculum' in medical school and hospital culture.[18,19] We found that more students reported negativity among junior and hospital doctors than among medical academics, suggesting that negative attitudes are more common in hospital settings. Conversely, positive rural training experiences through RCS can promote future practice in rural settings and in primary care.[24] Approximately two-thirds of the 2019 RCS cohort reported a preference for rural practice (large or small town). Notably, a third of students expressed preference for rural practice, without preference for primary care, highlighting student interest in specialist careers.[8,25,26]

The FRAME survey is conducted nationally and includes students from 18 universities and all jurisdictions. Therefore, our findings can be considered to be representative of the RCS student cohort. However, we cannot generalise our findings to the broader medical student population. RCS students comprise a relatively small proportion of medical students, who apply to undertake the rural program, and in 2019, the proportion reporting a rural background (44.7%) was higher than the broader medical school population (22.8%).[27] Students from rural and urban programs will have exposure to different groups of peers and doctors, and different training experiences, which could influence their perceptions of others' opinions. Exploring the perceptions between the two groups would be a valuable further study.

There are some study limitations related to the survey questions. Firstly, student preferences may be transient and may not be an accurate indicator of final career pathways. Evidence suggests that most doctors become more certain of their specialty choice after graduating from medical school[28];

therefore, follow-up studies are needed to gauge how well intentions predict final practice locations. Secondly, student perceptions may not accurately reflect the opinions of others. Although this was not the intent of this study, the subjective nature of perceptions must be considered in the interpretation of our findings. In the analysis of students' perceived opinions and career preferences, we could not assume the direction of the relationship and we have interpreted our findings accordingly. Finally, the FRAME survey used simple population-based descriptors for rurality. Although standardised rural classifications such as the Modified Monash Model[29] would allow comparison with other research, it was unlikely that students would be able to specify these codes at the time they answered the survey.

Recruiting primary care doctors to where they are needed most is an issue of international interest. The similarities in our findings and those from the United States[23] suggest this study has significance beyond the Australian context. While we have focused on the perceived opinions within the medical school environment, future research could examine influences from other sources, including family and broader social influences.

5 | CONCLUSION

While rural clinical school students perceive negative attitudes towards primary care, our evidence suggests that this is not a significant deterrent for students who have a preference for a primary care career. Students who prefer a primary care career in a small rural location may be more attuned to negative opinions among their peers. This highlights the importance of a community of practice of like-minded peers and clinicians to encourage these students to pursue their interest in small rural primary care.

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CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

All authors provided considerable contributions to this manuscript and its content. DGC supervised and planned this study. DGC and SW were responsible for data extraction and analysis as well as presentation of results. AL, MW, SW and DGC wrote the initial draft and following revisions. LW and LMA contributed to manuscript refinement. All authors have read and approved the final manuscript.

DISCLOSURE

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Exploration of rural physicians' lived experience of practising outside their usual scope of practice to provide access to essential medical care (clinical courage): an international phenomenological study

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ABSTRACT

Objectives Rural doctors describe consistent pressure to provide extended care beyond the limits of their formal training in order to meet the needs of the patients and communities they serve. This study explored the lived experience of rural doctors when they practise outside their usual scope of practice to provide medical care for people who would otherwise not have access to essential clinical services.

Design A hermeneutic phenomenological study.

Setting An international rural medicine conference.

Participants All doctors attending the conference who practised medicine in rural/remote areas in a predominantly English-speaking community were eligible to participate; 27 doctors were recruited.

Interventions Semi-structured interviews were conducted. The transcripts were initially read and analysed by individual researchers before they were read aloud to the group to explore meanings more fully. Two researchers then reviewed the transcripts to develop the results section which was then rechecked by the broader group.

Primary outcome measure An understanding of the lived experiences of clinical courage.

Results Participants provided in-depth descriptions of experiences we have termed *clinical courage*. This phenomenon included the following features: Standing up to serve anybody and everybody in the community; Accepting uncertainty and persistently seeking to prepare; Deliberately understanding and marshalling resources in the context; Humbly seeking to know one's own limits; Clearing the cognitive hurdle when something needs to be done for your patient; Collegial support to stand up again.

Conclusion This study elucidated six features of the phenomenon of *clinical courage* through the narratives of the lived experience of rural generalist doctors.

Strengths and limitations of this study

- Collectively, the researchers have rural clinical practice experience across three continents, enabling interpretation of interviews as informed insiders.
- All participants in the study attended the same international rural health conference which may have resulted in a sample with strong engagement in rural health issues.
- The participants in this study practised rural medicine in a broad range of countries adding to the international transferability of the results.

BACKGROUND

Normative values in clinical medicine tend to frame quality and safety assuming proximal and timely access for patients to specialist and subspecialist care.[1] Rural doctors describe consistent pressure to provide extended care beyond the limits of their formal training in order to meet the needs of the patients and communities they serve. Factors creating this tension include poorer patient access to care, healthcare professional undersupply, hospital resource limitations, overlapping clinical roles and training constraints.[2] In an Australian-wide study of 465 medical students at the completion of their full academic year rural clinical placements, 24% reported that they felt rural practice was too hard.[3]

In remote and rural areas, distance provides a significant barrier to patient access to specialist care, and at times rural doctors can be faced with the choice of providing a service to patients which is not comfortably within their own scope, or facing the reality that their patient or their community will go without. Past President of Australian College of Rural and Remote Medicine, John (Jack) Shepherd is credited with coining the term *clinical courage*, defined by John Wootton as "that space where the needs of our patients

and the extent of our training and experience intersect".[4 5] To date, reference to clinical courage is uncommon, with minimal academic exploration of this phenomenon.[4 6]

This research study sought to understand the lived experiences of rural doctors at times when they have found themselves working at the edges of their scope of practice to provide essential medical care.

METHODS

Hermeneutic phenomenology was used as the study design. Phenomenology seeks to explore the lived experiences of rural doctors providing care for patients outside of their comfort zone in order to describe the 'essence' of this state.[7] Hermeneutics recognises the study participants' self-interpretation of experiences in the process of meaning making. In contrast to empiricist phenomenology, which purports the need to bracket the researchers' presuppositions of clinical courage,[8] hermeneutic phenomenology gives credence to researchers sharing their experience with the participants in the co-construction of the meaning in interviews.[9] The study used an interpretive constructivist lens assuming no single reality exists, but rather that individuals create social constructs through the interpretation of their own experiences.[7] The research team sought to co-construct understandings of clinical courage as features emerged from the material. In this project, DC, IC, JK, RAS and LW are experienced rural doctors, while EC and LG are Australian junior doctors who previously undertook a longitudinal integrated placement for a full academic year in a rural setting.[10]

Participant recruitment occurred at the WONCA Rural Conference, 14th World Rural Health Conference in Cairns, Australia. Rural doctors who practised medicine in a predominantly English-speaking community anywhere in the world were invited to participate through fliers placed on seats in the conference venue. Consent was sought if they approached the booth where LG and EC were in attendance. Snowball sampling occurred by asking participants to invite colleagues who could add diversity to the cohort across a range of demographics including gender, self-reported stage of career, and remoteness of clinical practice.

Semi-structured face-to-face interviews were undertaken using the interview guide provided in box 1. Interviews were 30 to 60 min duration. Recordings were de-identified and allocated a random number. They were then anonymised and transcribed by a transcription service with which the research team holds a confidentiality agreement. Transcriptions were returned to participants to review and approve prior to analysis.

Each transcript was read and annotated for holistic meanings by at least two members of the research team. The international research team then met via videoconference and read a selection of interviews aloud as a group to create consensus regarding the emerging features and discuss the overarching meanings. Notes were taken at these meetings and added to NVivo along with annotations on the transcripts. All interviews were read aloud together by LW and JK and quotes were chosen to demonstrate congruence across the interviews as well as seeking to illustrate the breadth of the experiences.

Box 1 Semi-structured interview questions

Interview questions

1. Tell me a bit about yourself and your current rural practice.
2. Please describe your lived experience of pushing the boundaries of your own scope of practice for your patients.
3. What contexts or situations have typically influenced or affected your experiences?
4. What would you call this?
5. Can you describe a recent time when you have had to draw on your own clinical courage or where you have witnessed a rural colleague draw on their clinical courage?
6. Can you describe your own experience of clinical courage?
7. In this study, we are hoping to develop a better understanding of country doctor's experiences of managing the challenges they face in their clinical roles. Do you have anything else to add before we conclude the interview?

Participant and public involvement

The initial study plan was developed through an international rural research consultation workshop at the Norwegian Centre for Rural Medicine in Tromso, Norway in 2016, where around 30 rural doctors and rural health researchers came together to explore research opportunities considered important to progress the rural health agenda. Snowball sampling engaged participants in choosing others to contribute to the study. Participants were told the study would explore the intersection of access and quality in rural medicine in order to allow the first part of the interview to explore the phenomenon without naming it clinical courage (see interview guide in box 1). Several presentations at rural conferences enabled authors to draw on reactions of rural doctors to reconsider our interpretations of initial results.

RESULTS

In total, 27 interviews were performed, with participants ranging across the stage of their careers and a range of countries including Australia (15 participants), Canada (5), USA (3), New Zealand (2), South Africa (2) and one each from Scotland and Papua New Guinea. Several participants had worked in more than one country during their career. Early career participants included two doctors in their first year after medical school, and three doctors 5–7 years post-graduation (table 1). Middle career participants all described being greater than 7 years post fellowship, and participants who described themselves as experienced clinicians had greater than 20 years of clinical experience often across a number of remote and rural sites.

Table 1 Demographics of research participants

Self-reported stage of career	Female	Male	Participant numbers
Early	Two	Three	15, 18, 19, 20, 25
Middle	Seven	Four	3, 5, 11, 12, 13, 14, 17, 22, 23, 24, 26
Experienced	Nine	Two	1, 2, 4, 6, 7, 8, 9, 10, 16, 21, 27

Participants identify that the choice of rural practice requires courage.

> The courage comes from making the decision to put yourself in that situation. So at the beginning of my contract, when I took up that position as senior doctor. And the same for all these guys that put themselves in remote or rural practice, they know what they're putting themselves in for. They know that there is the potential for somebody really sick to come along or for some emergency to happen that they can't fully deal with within their scope of practice and in their experience. And they know they're going to be pushed to their limits, and they know they're going to be outside of their comfort zone. [26]

They describe working outside their comfort zone with terms like courage and humility and doing one's best for the patients.

> I think the important thing is that doctors have to acknowledge or … understand that it's okay to be outside your comfort zone sometimes. … If you rely on your training and your ingenuity and the support you have, it makes it easier. [7]

> You know it's not about confidence, it's about clinical courage and there has to be humility there, like they're just really important, because the fates can deal you anything they want, and you can't go into it thinking you can do everything. Like, you just have to be recognising that I'm going to be okay, I'll give it a shot. I'm a little nervous, but I'll give it a shot and do whatever I need to do for the patient, which is what it's all about, it's all about the patient. It's not about me. [21]

> I think of courage more as the willingness to go where there's a risk, willingness to try even if I fail because I have no choice; it's me or nobody. So I don't know if that's courage. Some would call it foolhardiness, some would call it head in the sand. I think it's just accepting the reality of where you are and doing the best you can and being okay with however it turns out, recognising that you gave it your best. So yes it's courageous but it's also born out of practise over years. You become more courageous, you become more willing to put yourself there because you've seen it work out well in the past and so it gives you courage to even do more. [1]

Rural doctors do what they do through a deep connection to community and that connection goes both ways.

> It's part of the reason you go into rural health—is that you want to be intimately involved with the community. [3]

> You step up to the plate to help the community because it's the right thing to do, and the people in the community are your community. [21]

> I think because of the nature of our interactions—well definitely for me, the nature of my interactions means that I get to know the patients very well; I get to know the community well and therefore I feel a sense of responsibility, maybe a sense of duty; but I think definitely a sense that I will be supported when I make decisions that are in the best interests of that patient. So I think about the times where adverse outcomes have happened in a remote setting and I haven't been ostracised. [1]

> I think once people understand their patients and their community, I think people build courage. [3]

Rural doctors are attracted to the broad scope of rural practice even though it can be daunting.

> All the things you learn about rural doctors, they're adventurous and they have attention deficit disorder and this and this and that, I think it's all true for me, and I just like doing the full job …. So it's a lot of fun. There's a lot of terror along the way too. [7]

Working at the edge of comfort is part of practice for rural doctors. Some participants identify that a practice confined to one's comfort zone leads to atrophy of knowledge and skills as well as confidence.

> And I would tell students who would come to visit and do a month with me or whatever, … that I better [know] my capabilities because every day I spent my time at the margin of my capabilities, I was always at the margin of my competence. So I often would slip over and back and I always knew where that edge was whereas many of my colleagues practising in the city practised in their comfort zone. And over time their scope of practice became more and more restricted, they became less and less confident and less and less courageous about doing anything that was anywhere close to the margin of their skills whereas I was stretched every day. And it was a great life, good and bad. [1]

Participants identified that they are comfortable with uncertainty.

I've come to accept the fact, and not resigned to the fact, but accept the fact that what I do involves uncertainty, and I'm always being pushed beyond my, not definitely comfort zone, but maybe skillset and knowledge zone … you have to have sometimes courage with every patient, because you can't possibly know and learn everything … [27]

Delivering safe, quality healthcare to patients when stretched beyond ones comfort is top of mind for rural doctors. They describe that this requires clear thinking, having a systematic approach to patients, and includes reflection on their own motivation for going beyond their comfort zone.

We're very well trained …. And as long as they don't panic and they approach things in a systematic manner, to do the things we're trained to do, the ABCs, and to do an appropriate assessment before you jump into action and set your priorities I think then you're prepared for anything that happens, regardless of the severity, you have an approach to meet there. [2]

So I think in my mind I think clinical courage sort of takes you to a point and then you may be beyond that point, then you, you know, it may be dangerous. I don't want to ever be in that situation where I can reflect back and think that I've been dangerous in terms of the care of my patients. [4]

There's a lot of churning of emotions and thought processes; am I doing this because I just want to be a hero, is this really in the patient's best interests? [22]

There is an element of clearing a mental hurdle that allows rural doctors to move beyond their comfort zone. It is for the patient and their doctors to determine who is the best person to do what needs to be done. Having colleagues to confer with is helpful.

Clinical courage is crossing the cognitive threshold. Because quite often when you come to that you know what you need to do but because you don't do it all the time … you know you want to do it …. [O]nce you start that you can't step backwards …. But making the decision to do that, once the decision is made … it's about calling it and saying 'yep, this is what we have to do' and then once you vocalise that then it makes it a bit easier. [3]

So sometimes you have to have the courage of your conviction and I guess that's where they talk about clinical courage. You have to say, 'I have never done a chest tube on a baby, but a chest tube is a chest tube is a chest tube, it's just smaller,' and maybe you have to be a bit more careful. And maybe you [the doctor] will get coronary vasospasm, but … you just have to sort of say, 'If I don't do something things will definitely get worse. If I do something there's a 50% chance or more that the patient will get better.' [7]

I think in my own case you draw upon experience, you draw upon the fact that something needs to be done. Often when I get totally petrified in a situation, I used to be a big rock climber, I think of being in a difficult situation on the rock and you just have to do something. You either have to go up or you have to go down, or you're going to fall off, so you have to make a move. And there's a saying, it's better to make the wrong decision than to make no decision at all. So sometimes you just have to say to yourself, 'I think this is what we have to do,' and usually in my case most of my life there's always been another doctor or two around, who are supportive and at least add numbers if not experience necessarily, and that helps. [7]

I spoke to a specialist anaesthetist who is based in [town name], which is another remote area, and he was really useful because he basically called the situation as it was …. And that was a really steadying influence. If I hadn't had him, I think I really would have struggled, because it just brought back my focus to what I had to do. [12]

Rural doctors acknowledge that the circumstances of rural practice require that they act. When they act, they identify that they need to stay focused no matter how anxious or scared they feel.

Because it's my job and I'm the most qualified one there. And what's the option? There's no option. And I put my hand up to be there, so I have to do it. [6]

… knowing that that can happen and that you're going to have to deal with it and the consequences as and when they arise; from an emotional level, from a professional level, you know, from an impact on your community and individual. You're putting your hand up and saying, 'I'll stand there. I'll do that.' That's where the courage comes. [26]

So, one of the things that—one of the most important clinical interventions to do with someone—I can't remember who taught me this, but is when you walk into a room where everybody's glued to the walls, just take your own pulse, make sure you're okay, and then just breathe out. And, even if you've got a really difficult situation, it's your job to stay calm and figure out what to do next. And, if you do that you'll be okay. And, you may be in the middle of an impossible situation, but that doesn't mean you need to get out of control, you just have to work through it. [21]

It's not a lack of human emotion but it's trying to remove yourself from how scary it really is and trying to focus—task focus on what you need. So, the combination of those skills that you know will get you through, but trying to—knowing that if you think about what could happen if you get it wrong, to try not to do that and really focus on, 'This is what I need to do here and now.' [5]

And sometimes you have to have the courage to say "NO".

> And then they [consultants] push you to do stuff that you maybe shouldn't. So sometimes you have to say, 'No, I'm not going to do this. I'm going to send this patient down to you.' So don't get squashed or squeezed into a spot that you don't want to be. You have the right to say no if it just feels wrong to you or too dangerous to you or the patient. Some stuff is cowboy stuff and you shouldn't be doing it. [7]

They have to persist even when the outcomes aren't what was hoped for.

> … there was a crash C-section with a poor outcome, the baby came out and I resuscitated the baby and I had to do everything in terms of intubation and lines to keep this baby alive but we ended up shipping the baby out and it died within the next 24 hours. So I think those situations are always tough, you know, especially when you're dealing with kids or infants and death, those are tough situations. So I'm not sure if that represents clinical courage or just the difficulties of clinical practice when you lose, especially like you say when children die or infants die that's always difficult. [4]

> I think some form of resilience because if you're not a resilient practitioner you can easily withdraw and go, 'I'm not going to do this ever again because it was too hard, it was too tough.' [20]

Unfortunately, health delivery systems can be unsupportive contexts, failing to afford rural doctors with the opportunity to work at their full scope. Rural doctors have the knowledge and skills to deliver a much broader level of service but lack the resources and system support to do so.

> It's not always the right thing to do in a context. I think its very context specific and so that's where the fuzziness comes in …. There's anxiety of are you good enough to do what you think you can do and bring benefit to the patient. Is this the right context to do it in and working out even what your team is telling you. I think that's very useful. But it's also important professionally to realise when you sometimes have to block off that feedback which is a very, very precarious situation and sometimes it's the wider once you've done it often as well. Of that extreme acts … if it goes well then at least you've got something and you're probably less likely to be questioned about it at the time. I think sometimes if it goes wrong then you expose yourself to an nth degree. [13]

> … with credentialing and limiting scope of practice and specialists saying well you shouldn't do that as a GP, we're actually limiting what people do and at the end of the day it's the patients that suffers. For me as a professional I'm not, I don't need to do this stuff but you're in a situation where you want to be able to help your patients in every situation. [10]

Having a supportive culture is also key to being able to practice at the edge of comfort.

> I think our practice supported that and the culture in our hospital, which is built through the collective action of individuals over time. But over time a place develops a culture that's supportive, that's collegial, that's mutually respectful. That isn't something that just happens and so I would just encourage anyone who's in a place where that culture doesn't exist to keep acting in that way and get some colleagues to act in that way. And then if everyone acts in that way after a while you build a culture; it takes 10, 20 years for that to happen I think. [1]

DISCUSSION

Aristotle reportedly emphasised that courageous action required: (1) a morally worthy goal or ideal, (2) a dangerous situation and (3) consideration of potential value and threats of any action.[11] This study builds on Aristotle's courageous action when describing the lived experience of doctors who chose to work outside their usual scope of practice to deliver care to their patients in remote and rural contexts. These features of clinical courage arose from the voices of the rural doctor participants of this study.

Standing up to serve anybody and everybody in the community

Participant narratives demonstrate a deep commitment to providing healthcare to rural communities. Participants describe a deliberated altruistic decision to put themselves into positions where they will feel out of their depth clinically and risk distress, professional isolation and potentially psychological trauma. This altruistic decision is often based on their sense of belonging to a community, and their drive for fair treatment for people they identify with, and for whom they are prepared to tolerate the risk associated with their actions. This study positions motivation to serve one's own rural community as a morally worthy goal which doctors committed to both when initially joining a community and recurrently when returning following difficult days.[12] Responsibility for their patient care was more emotionally intense and complex due to entwined relationships with patients who were also friends or colleagues.[13]

Accepting uncertainty and persistently seeking to prepare

Uncertainty is an accepted component of medicine; however, this is usually described within the context of a diagnostic dilemma and the clinical reasoning processes used to manage this.[14] Participant narratives in this study point to uncertainty relating to how often and to what extent their own clinical skills will be stretched. Clinical courage has been linked previously with motivation to acquire acute care skills where GP registrars in Australia *"took initiative and pushed boundaries to extend their clinical*

skills".[15] From this study's narratives, skills acquisition included not only acute resuscitation skills but niche skills required to appropriately manage patients with complex, less acute, problems in their home communities, such as mental health, chemotherapy and renal failure. It also identified the on-the-spot adaptive expertise of transferring skills used in different situations to a new situation as well as figuring out what to do in real time with in a critical situation.[16 17]

Deliberately understanding and marshalling resources in the context

The narratives identified a clear sense of not having the personnel and equipment which might be available in better resourced areas when managing patients. Familiarity with the context of practice and relationships with local team members and distance support and retrieval systems enabled rural doctors to maximise the available local resources for the benefit of their patients. There was some discussion about the concerns doctors have when working in an unfamiliar clinical context such as when doing locum jobs or when new to an area. Unfamiliarity with the context created increased anxiety as doctors were less aware of the resources they could call on in challenging clinical circumstances.

Humbly seeking to know one's own limits

The self-assessment literature cautions that overconfident self-judgements are not uncommon, and that experience can increase confidence thereby increasing the risk of overestimating one's own skills.[18] The study narratives consistently describe conscientious 'intellectual humility' where doctors seek to understand the boundaries of their knowledge and skills despite the cognitive and emotional effort this requires. Humility is not a passive process.[18] These doctors, working in low resource settings at a distance from tertiary care and, often, secondary care centres, do not conflate confidence with competence. In the routine testing of their limits as part of their everyday practice, they describe learning how to test their limits. Limits are sought through deliberate practice and testing, self-reflection and critical discourse with experts and peers, patients and community members.[19]

Clearing the cognitive hurdle when something needs to be done for your patient

Courageous action requires a difficult, painful or dangerous situation.[11] Previously, in the context of caring for suicidal patients, courage has been described as a clinician doing "*the very thing we feel least inclined to do*" to make a difference for the patient.[20] In this study, participants describe the point of action following their assessment of the benefits and risks associated with this action. At this point, when they are clear that there is no one else better able to provide that care, they must switch from a state of risk assessment and self-critique and focus on the task at hand with confidence.

Collegial support to stand up again

Participants described a persistent willingness to work at the edge of one's limits and perform beyond one's comfort zone. The benefits of supportive colleagues in facilitating and maintaining clinical courage was emphasised. Participants consistently described the value of just-in-time discourse with colleagues in exploring the risks and benefits of proposed management plans, especially when colleagues had a strong familiarity with the context of their remote/rural community. In addition, peer reflection added to their own self-reflections following significant events. The importance of peer assessment being context specific is critical to enabling understanding and better supporting rural doctors to continue to choose to step up again to be clinically courageous.

Limitations

This study has some potential limitations. All participants in the study attended the same international rural health conference, which may have resulted in a sample with strong engagement in rural health issues. It is interesting to note the large number of female participants in this study in a field that is historically male dominated. Snowball sampling, contingent of female researchers and two female medical student interviewers, may have influenced the diversity of participants. There is a possibility that this limited the diversity of participants who might have viewed their clinical work differently. The conference setting provided quiet but not completely private contexts for interviews and may have limited sharing of sensitive information with the interviewers. This study begins to explore the phenomenon of clinical courage as it occurs in rural doctors; however, further studies will be required to develop a more comprehensive understanding of this important clinical phenomenon.

CONCLUSION

This study is the first phenomenological study to describe clinical courage. Six features of clinical courage arose from conversations with rural doctors. These characteristics highlight the importance of family doctors' relationships with community and colleagues who are familiar with their contexts. Humility, preparation and the capacity to act when required enable family doctors to increase access to care for their patients. These attributes need to be developed and sustained in rural doctors.

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Contributors JK developed the study design and the interview questions, analysed and interpreted the data, and drafted the initial version of the manuscript. LG undertook the interviews, analysed the data, contributed to data interpretation and critical revision of the manuscript. EC undertook the interviews, analysed the data, contributed to data interpretation and critical revision of the manuscript. IC contributed to initial project design, data analysis and interpretation, and critical revision of the manuscript. RAS contributed to initial project design, data analysis and interpretation, and critical revision of the manuscript. DC contributed to initial project design, data analysis and interpretation, and critical revision of the manuscript. LW developed the study design, managed ethics application, developed the interview questions, analysed and interpreted the data, and drafted the manuscript. All approved the final manuscript.

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ORIGINAL RESEARCH

The impact of interpersonal relationships on rural doctors' clinical courage

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ABSTRACT:

Introduction: Clinical courage occurs when rural doctors push themselves to the limits of their scope of practice to provide the medical care needed by patients in their community. This mental strength to venture, persevere and act out of concern for one's patient, despite a lack of formally recognised expertise, becomes necessary for doctors who work in relative professional isolation. Previous research by the authors suggested that the clinical courage of rural doctors relies on the relationships around them. This article explores in more depth how relationships with others can impact on clinical courage.

Methods: At an international rural medicine conference in 2017, doctors who practised rural/remote medicine were invited to participate in the study. Twenty-seven semistructured interviews were conducted exploring experiences of clinical courage. Initial analysis of the material, using a hermeneutic phenomenological frame, sought to understand the meaning of clinical courage. In the original analysis, an emic question arose: 'How do interpersonal relationships impact on clinical courage'. The material was re-analysed to explore this question, using Wenger's community of practice as a theoretical framework.

Results: This study found that clinical courage was affected by the relationships rural doctors had with their communities and patients, with each other, with the local members of their healthcare team and with other colleagues and health leaders outside their immediate community of practice.

Conclusion: As a collective, rural doctors can learn, use and strengthen clinical courage and support its development in new members of the discipline. Relationships with rural communities, rural patients and urban colleagues can support the clinical courage of rural doctors. When detractors challenge the value of clinical courage, it requires individual rural doctors and their community of practice to champion rural doctors' way of working.

Keywords:

communities of practice, courage, relationships, rural physicians.

FULL ARTICLE:

Introduction

Rural medicine has long been recognised as different from urban medicine, some distinctions being broader scope of clinical practice, relative professional isolation, and essential integration in the local community. The associated perception of a less sophisticated clinical approach to patient care compared with tertiary hospital settings fails to recognise the contrast between rural and urban clinical approaches and devalues rural wisdom[1]. Rural doctors describe times when they push themselves to the limits of their scope of practice in order to provide the medical care required by their community. This phenomenon is called clinical courage[2]. This mental strength to venture out of one's comfort zone and persevere while weighing the relative risk of alternative actions for the benefit of patients is a necessary feature of rural medicine.

Clinical courage has been described previously as including six features. First, rural doctors have a strong sense of belonging to their community, consequently choosing to stand up to serve anybody and everybody in their community. Second, rural doctors accept clinical uncertainty, recognising that they may be called on to undertake a wide range of clinical duties and, consequently, they persistently seek to prepare for clinical challenges. Third, they humbly seek to know the limits of their own clinical practice. Fourth, they work deliberately to understand and marshal resources in their context (including other clinicians and the available infrastructure) to meet the clinical demands they will face. The fifth feature relates to rural doctors needing to set aside their emotions to clear a cognitive hurdle when something needs to be done for their patient. Sixth, rural doctors described how collegial support enables rural doctors to continue to face the challenges of rural practice[2].

Several of these features of clinical courage relate to rural doctors' relationships with their community and colleagues. To further explore the role of relationships in the development of clinical courage, the authors have used Wenger's community of practice theory as a theoretical framework. In this theory, a community of practice (rural doctors) is bound together by understandings associated with a common endeavour (providing medical care to rural patients)[3]. This community is sustained over time through mutual engagement (relationships), a shared repertoire (case presentations and shared stories) and communal resources the community has developed (protocols, professional development activities, ways of working)[4]. Communities of practice exist only when individuals come together to learn and to produce a shared praxis. Members develop an identity (as rural doctors) through participation and are drawn in from the periphery of the community (newcomer) to more engaged roles in the community (experienced members)[5]. Communities of practice evolve either by the development of new understandings at their core or through interactions at their boundaries[4]. In this article, the authors propose that clinical courage is a common lived experience for rural doctors. By using Wenger's theory, clinical courage could be made meaningful and perpetuated through relationships within and around rural doctors' communities of practice. After completing the initial article, the authors returned to all the interviews from the initial study and re-analysed them, looking to answer the question 'How do interpersonal relationships impact on clinical courage?'

Methods

Participant recruitment occurred at the WONCA Rural Conference, 14th World Rural Health Conference in Cairns, Queensland, Australia. Rural doctors were invited to participate through fliers placed on seats in the conference venue. Cohort diversity was sought across a range of demographics, including gender, self-

reported stage of career, and remoteness of clinical practice. Semistructured face-to-face interviews were undertaken following consent. Interviews were 30–60 minutes duration. Recordings were de-identified; they were then anonymised, transcribed, and returned to participants to review and approve prior to analysis. Further details of the methods can be found in the initial study publication[2].

The authors of this article constituted a subset of the original team, all of whom are experienced rural doctors who bring their informed insider stance to this study. In this secondary analysis, the researcher team revisited all the original transcripts to consider the emic question of the impact of relationships on clinical courage. Six phases of thematic analysis were undertaken: familiarisation, coding, searching for themes, theme review, theme definition and contextualisation[6]. Key parts of each interview were shared with the group to identify initial codes and develop an initial coding index[7]. LW and RS then reviewed all the transcripts and used NVivo v12 (QSR International; https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home) to develop themes by constantly comparing transcripts, recognising patterns and finding associations until coherent descriptions emerged[7]. Research team members then reflected back on the original transcripts to check that participant accounts were accurately represented in the final themes.

Ethics approval

Ethics approval was granted by the Flinders University Social and Behavioural Research Ethics Committee (project number 7612).

Results

The demographics of participants from the 27 interviews is described in a previous article and consists of early career, mid-career and experienced rural doctors from Australia, Canada, New Zealand, Papua New Guinea, Scotland, South Africa and USA[2]. Themes that emerged from the analysis included underlying relationships with community, patient circumstances, local team relationships, discourse with other rural doctors, supporting less experienced rural doctors, facilitation of clinical courage by other medical colleagues, and challenges to rural doctors' ways of working.

Underlying relationships with community create the foundation for clinical courage

The responsibility to provide medical care for a community was described as grounded in relationships with community members, valuing their world view, and seeking to reciprocate.

> *I think in our nature we constantly have a strong appreciation of the community's world view on health. (25)*

> *The other times when I've felt that I was outside my comfort zone was when I've had patients insist that I manage their care, when I would usually hand over to a specialist. (9)*

Rural communities were often very appreciative of rural doctors.

> *I think that sense of altruism and knowing how what we do will positively impact on the communities or our patients as a whole, that's something that is a really powerful tool for us because we can feed off the gratitude, you can feed off the fact that you are making differences in rural communities. (20)*

This sense of privileged belonging in the community could extend beyond the doctor to spouses and other family members. Collective community trust in the doctor develops over time, and enables doctors to feel trusted to broaden their scope of practice, trusting the community members will support them in return. This was particularly important in more remote locations.

> *We live in the hospital, the house is in the hospital so it's all the time, there's no hours … in reality night times I'm usually working, weekends I'm usually working as well. I think that's actually pretty common in very remote medical practice, the distinction between work and life gets a lot more blurry … The community is surrounding me, they're looking after me and so it's okay, I can do the things that I think I'm competent to do. (22)*

This close integration with the community could create messy personal boundaries. Occasionally, these blended relationships could cause significant distress; for example, one doctor talked about when another member of the clinical team was gravely ill.

> *I think definitely, in the moment, you don't think it's traumatising for you, but definitely having a friend, who is also a colleague, but then became quickly a patient, was incredibly distressing. I think in other settings you would morally and ethically probably not treat her; it wouldn't be your responsibility, because you would have people around you that you could share … the management with and you would never be asked to treat those people. (25)*

On other occasions the relationships with community caused more insidious risks to doctors.

> *With competence, comes more and more responsibilities, more and more ownership of the community and integration into the community. And that's not always a sustainable approach. (25)*

Patient circumstances influence clinical decisions

All participants frequently described drawing on clinical courage to manage patients with time-dependent emergency presentations, particularly when required to undertake unfamiliar or more complex clinical procedures. Importantly, participants also described non-acute patient presentations, when patients were unable or unwilling to travel away from their community to access care, which created circumstances where the doctor felt a responsibility to provide medical care. Examples given included oncology follow-up after initial chemotherapy, and managing chronic renal disease, complex dermatological conditions and complex mental illness. Part of managing these patient relationships involved explicit discussions and exploration with the patient about expectations of care, management alternatives and

their risks, and the level of risk an individual patient was prepared to take on.

> *I had had a good discussion with the patient about where the limits of my practice would usually be, and that I would usually ask for some assistance from a specialist colleague. But they insisted that this was how they wanted their care managed, and you feel that it's better that the patient is engaged, rather than not engaged with any health professionals. (9)*

> *Letting them be aware [of the risks]. If they feel uncomfortable about that, then that will affect my decision making. You can assume a lot about what risk that other people are prepared to take, but I think you're much better to have an open discussion about it. (11)*

Local team relationships underpin clinical courage

In the interviews, there was frequent reference to working as part of a team and the value of having other experienced clinicians (doctors and nurses) around when called on to manage a case outside one's usual experience, because these people offered clinical expertise, moral support or just safety in numbers.

> *I had a skilled emergency nurse with me who was really good support. And we had enough equipment just to do an intubation. (12)*

> *So the first thing that happened was that because we have a lot of really good collaborative team players, was that suddenly everybody started appearing in that emergency department. So, one of the docs who's very good at emergency procedures showed up, and two nurses came in who are the experienced nurses, and suddenly there was a whole team of us, and then that was before the guy [trauma case] even got there. And then the guy comes in and everything's like it's a whole different ball game, when you have four or five or six of you to work on somebody, than if you just have yourself. (21)*

Skill mix was considered not only in terms of senior medical staff but also in terms of nursing and paramedical team members. Sometimes, the human resources were ad hoc, such as visitors to town.

> *I had trainees who were there with me, two of whom had just done their neonatal intensive care rotation at the university so they were there to help the two paediatricians who happened to be in town that weekend, stabilised the two infants while I and another resident delivered the babies. Our obstetrician came in from home and he ran the ultrasound as we delivered the twins, to monitor the second twin and also to be there should we have to go to caesarean for the benefit of the second twin. And so it was in that moment that I was struck with how excellent the care was, not because any one of our individual expertise but because of our collective expertise and our relationships. I had practised with this obstetrician for more than a decade so we knew each other's skills, he trusted me I trusted him; the nurses pitched in. Yep that woman got outstanding care. But it was at the limits of my competence. (1)*

Cohesive and functional teams enabled doctors to undertake procedures at the edge of their scope. However, clinical courage was also needed at times when there were differences in opinions between local team members.

> *Probably where you need most courage is to say, 'This patient doesn't need to be moved at this stage'. So when the nurses are going, 'No, no, we're not used to looking after patients like this' to actually say, 'This is not in the patient's best interests to move them. It's a stable patient, we've got the skills, they want to be close to their family, it's going to cost us a whole heap of money, none of those things need to happen, let's keep them'. That takes some courage and the system from on high doesn't always lend itself to that. (22)*

Discourse with other rural doctors

Trusted colleagues enabled self-reflection. Rural doctors described relying on their own network of like-minded colleagues to get timely advice to support patient care, to debrief, to benchmark and to learn new skills. Participants reported that this network did not have to be co-located. Here is an example of an online network built around a rural physician listserv.

> *So say through the Society of Rural Physicians of Canada, I'm pretty involved with them … Some of the courses that they've offered are opportunities for you to debrief and reinforce for yourself and validate for yourself some of these things that you need to do. It's a source of ideas when you're in some of these situations, but also a source of support … People will post about a situation that they had and then all of a sudden you see five other people that are writing … So it helps to bridge some of those gaps. (18)*

Close colleagues of many years were seen as a good sounding board and helped rural doctors to maintain clinical courage. Colleagues were especially important when rural doctors had acted at the edge of their comfort zone and patients had poor outcomes.

> *… to discuss and debrief and reflect and not hold it in. Because I think we are always our own worst critics in terms of a situation like that [poor patient outcome]. So it's nice to have a general sense of how things went and get feedback. I have a really close colleague I've been practising with for 25 years and so he's a really a good sounding board. We're always asking each other clinical questions. We discuss difficult cases too. So I think that's been very helpful. (23)*

Supporting less experienced rural doctors

Participants described examples of being supported by senior colleagues. Others described deliberately supporting less experienced rural doctors with specific procedures.

> *The chest tube was difficult because he had so much surgical emphysema, and he was a big guy anyway … When it came to*

the intubation, what actually happened was that I ended up doing it because [junior colleague] had got herself into a bit of a fluster. And I could see that we were running out of time, as far as the drugs were concerned for intubation, and I took over … We have had a good discussion about that, since, because I felt, afterwards, 'Did I do the right thing, taking over?' As far as the patient was concerned, probably yes, but … for [junior colleague]'s confidence – that's one of the things we had to talk about. About how we might get set up next time, to try and improve her chances of success. (9)

One participant described how relationships with colleagues resulted in significant expectation and pressure to push the boundaries when commencing a new role.

I started in my rural practice [many years ago] … the seniors for the practice called me, and said they had an appendectomy and could I come and do the anaesthetic … And I said to them, 'I have no problem coming to help you' … 'I haven't done anaesthesia for two years, I'm happy to assist or whatever.' But they said, 'No, no you have the papers, you come and do the anaesthetic'. And I just had to walk in there in a brand new operating room, brand new anaesthetic machine, and sort things out. It was a little kiddie of twelve years old and I was scared shitless, but in the end it worked fine. So sometimes people push you into the situation. (7)

Within a supported rural environment, clinical courage developed over time.

What I saw with the residents who came to our program was that many of them came without a strong sense of that [clinical courage], but by seeing it modelled by those of us who were already there and then by having the opportunity to venture and succeed built courage over time. So to me it's all about the opportunity to risk and succeed. It's safe because you're doing it with others and you're doing it with others who are more senior. (1)

Facilitation of clinical courage by other medical colleagues

Other medical colleagues familiar with, and respectful of, the context of rural practice could facilitate rural doctors' clinical courage.

I spoke to a specialist anaesthetist who is based in [community], which is another remote area, and he was really useful because he basically called the situation as it was. He said, 'Look, you're probably going to kill him. This is really hard. These are the drugs I'd use. You've got to give it your best shot'. And that was a really steadying influence. If I hadn't had him, I think I really would have struggled, because … [he] just brought back my focus to what I had to do. (12)

Even from a distance, timely discourse with trusted colleagues supported doctors in exploring the risks and benefits of proposed management plans. One island doctor described being involved in rescuing a young man from a car partway down a cliff in a storm, and then managing his head injury in a small rural hospital with little support because the storm was too ferocious for a retrieval. He felt comfortable managing the acute injury, but he needed clinical courage later, when the young man returned following months of rehabilitation on the mainland. At this point, he assessed the risk of personally providing cognitive behavioural therapy, a technique he was not previously familiar with.

The system didn't support going outside the box [to deliver cognitive behavioural therapy locally], hence why it required the courage. It would have been nice to say to someone 'look, I'd like to do this, would this be the right thing?' I used my friend actually who was a senior [psychiatry] trainee at that point. So I obviously trusted that advice professionally as well as knowing her as a friend. (13)

In recent years, telehealth systems have made it easier to share responsibility for decisions and to be supported to learn.

I've got a patient just recently diagnosed with thyrotoxicosis … She's had a recent shoulder replacement, she's got a bad knee, she's recently been diagnosed with Parkinson's disease … For her to travel to see an endocrinologist would be quite challenging … Being able to access that service, through telehealth, has made her life much easier, and given me a little bit of hand-holding from the specialist colleague. (9)

Challenges to rural doctors' ways of working

Rural doctors described working differently from, perhaps more innovatively than, their city peers. Criticism from specialists or other sources could constrain rural doctors' clinical courage.

I think rural doctors, we're always challenging norms, we're always looking for innovations, better ways to improve patient care, and there are always going to be people that are resistant to that. Maybe not in the sense that you have significant workplace problems, but to the sense where people may discredit some of the work that you do. (20)

Discordant relationships with health system hierarchy were seen as another threat to the way rural doctors work, particularly when outsiders were seen to have the power to enable or prevent doctors from undertaking clinical activities.

… limiting scope of practice and specialists saying 'well you shouldn't do that as a GP'. We're actually limiting what people do and at the end of the day it's the patients that suffers. (10)

If then you have to fight that battle as well as your own internal battle, to say 'do I think I can do this?' Then it's too easy to give up. (27)

On the other hand, medical colleagues with a poor understanding of the clinical context could jeopardise rural practice by expecting too much of rural doctors. One participant recalled a story about a baby with bronchiolitis who she was trying to transfer. The initial response from the paediatrician in the city was that they could do little more for the patient and were loath to accept a patient transfer from the rural hospital. This clinical decision did not recognise how stretched the rural hospital staff were, or the risk of

transporting the baby should he deteriorate.

> *You [the rural physician] have the right to say no [to the urban specialist] if it just feels wrong to you or too dangerous to you or the patient. Some stuff is cowboy stuff and you shouldn't be doing it. (7)*

Discussion

This study found that clinical courage was impacted on by the relationships rural doctors had with their communities and patients, with each other, with the local members of their healthcare team and with other colleagues and health leaders outside their immediate community of practice (Fig1). These groups act at what Wenger calls the 'nexus of multiple membership'[8].

Lave and Wenger describe a community of practice as a formal or informal group that engages in learning to perpetuate a way of being that they value within a specific discipline or field[3]. This study positions rural doctors as sharing a community of practice committed to the enterprise of providing medical care to the community of rural people they choose to serve.

Individual relationships with a rural community can be understood as social capital that has two distinct components: trust and association[9]. Trust relates to reliable symbiotic engagement, whereas association refers to the neighbourly behaviours that produce familiarity, such as informal socialising or assistance to complete a day-to-day task[10]. Social capital is embedded within the individual (rural doctor) and the group (local community)[9]. This relationship with and commitment to rural people has been previously demonstrated as a common purpose shared by members of the community of practice. The authors refer to this feature as 'standing up to serve anybody and everybody in the community'[2]; they argue that this sets rural doctors apart from other similar medical communities of practice where there is a general desire to serve people well, without this being socially or geographically bound to a collective of people[11].

These findings suggest that rural doctors' community of practice facilitates clinical courage to be conceived and judged by members as a meaningful characteristic of their way of working[8]. Members of the community of practice described valuing clinical courage as a means to broaden their scope of practice while pragmatically managing the risks to patients associated with infrequent use of some clinical skills. Relationships between members enable individuals to adopt the culture and language used by the community of practice regarding clinical courage to share stories of clinical encounters for the purposes of debriefing, benchmarking with trusted peers, maintaining expertise and learning additional skills from each other. Bandura, in his social cognition theory of self-efficacy (1997), suggests the possibility of 'vicarious mastery'[12]. When people see or hear of how other people similar to themselves successfully performed a task, this extends their beliefs in their own potential abilities. Perhaps more importantly, within the context of a community of practice, clinical courage can be considered a collective efficacy, which is defined as 'a group's shared belief in its conjoint capability to organise and execute the courses of action required to produce given levels of attainment'[12].

Rural doctors described their relationships with less experienced members of the community of practice, which focused on engaging them to observe, seek out and adopt similar responsibility for a rural community, clinical epistemology, and scope of practice. The community of practice members sought to perpetuate clinical courage by intentionally encouraging trainees to use their skills, stepping back to enable them to undertake procedures and engaging when necessary to maintain patient safety, then debriefing to prepare trainees better for the next clinical courage occasion. Facilitating legitimate participation in rural patient care is consistent with Wenger's description of how 'newcomers' are embraced by and enter into membership of a community of practice[4]. Members are constantly evolving the norms of the community of practice and while clinical courage was highly valued in this study, there were alternative (less prominent) discourses seeking to push back when communities expect too much from their rural doctors, risking unsafe patient care or unsustainable work conditions for individual doctors. The authors hope this article will precipitate further discourse among rural doctors regarding clinical courage and its place in the community of practice.

The context of rural medicine challenges rural doctors and their local health team members to value place (including cultural meaning of travel, dislocation and returning home for individual rural patients); and to value community (how patients understand themselves, solidarity, reciprocity and not wanting to be a burden)[13].

Relationships with local health personnel and knowledge of the resources available in their community enabled participants to tap into the skills of the team, a feature the authors describe as 'deliberately understanding and marshalling resources in the context'. The rural doctor community of practice valued local clinical teams highly, with stories recognising the collective contribution of other doctors, nursing staff and paramedics within the rural health service. These relationships, while still bound by the traditional medical culture of clinical hierarchy, suggest clinical courage is practised where healthcare teams know and trust the skills of each member as more equal partners in the enterprise of rural medical care. The evidence demonstrates that these relationships take time to develop. This has significant implications for medical care in the context of rural hospitals dominated by locums or doctors undertaking compulsory community/government service, where transient doctors will not have established relationships with other team members.

Bridging social capital is what Paxton (1999) refers to as cross-cutting ties[10]. Bridging social capital occurs when members of one group connect with members of other groups to seek access or support or to gain information. Relationships with doctors who know and respect the rural clinical context as well as with colleagues who demonstrate trust in and respect for an individual rural doctor enabled rural doctors to practise clinical courage, by providing 'collegial support to stand up again'. Learning was

facilitated when rural doctors obtained sympathetic opinions about specific patient conditions and the clinical challenges they faced. As well as supporting individual doctors, these sympathetic colleagues can strengthen external recognition of clinical courage as a way of being for rural doctor members of the community of practice.

Other doctors and health leaders outside the community of practice, not committed to the enterprise of rural medical practice, can undermine rural doctors' clinical courage, when they pass judgement or place obstacles in the way of rural doctors seeking to care for their patients. The unique element of the rural doctor community of practice is the innate relationship with the community. It is this relationship that is at the core of rural doctors' experience of clinical courage. This is perhaps poorly understood by urban colleagues, whose experience of their own community of practice does not include such a strong commitment to and immersion in a distinct population. Clinical discomfort tends to trigger clinicians, particularly less experienced clinicians, to lean on others to manage uncertain situations[14]. Limit setting and critique by outsiders may indicate less experience with rural health care, or an attitude of geographical narcissism[1], or an appropriate concern for quality and safety. Whichever it may be, these sentiments provide an opportunity for individual doctors and importantly the community of practice to engage in critical self-reflection. This can lead to an integration of new knowledge into the praxis of rural medicine, or challenge restrictions placed on the community of practice.

With the rapid pace of change in medicine, the nexus between the community of practice of rural medicine and medicine more generally provides an opportunity for ongoing discourse to define and refine clinical courage as a way of being for rural doctors.

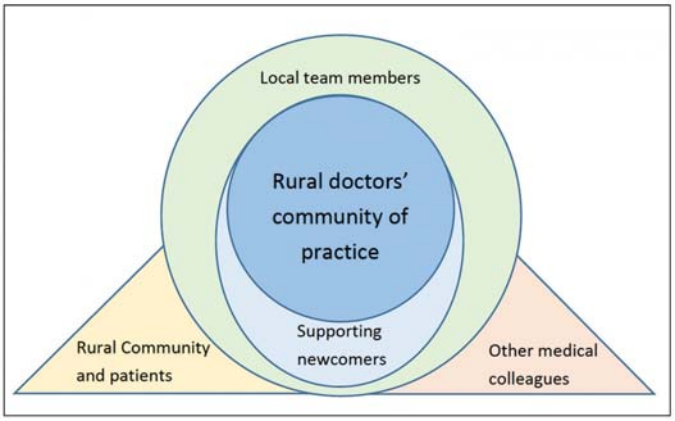

Figure 1: Rural doctors' community of practice and relationships with other significant groups that influence clinical courage.

Conclusion

Using communities of practice as a conceptual framework, this study demonstrates that rural doctors collectively learn and use clinical courage based on the relationships that are central to practice in the rural context. Relationships with rural communities, rural patients and urban colleagues can foster the clinical courage of rural doctors. Importantly, experienced rural doctors can support the development of clinical courage in new members of the discipline. While the discourse of detractors can challenge clinical courage, this discourse at the boundaries of the community of practice requires individual rural doctors and their community of practice to champion clinical courage and be intentional about rural doctors' way of working.

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