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Fostering the growth and development of the female rural generalist workforce: a mixed methods study

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Abstract

Background Over the last thirty years the demographics in medicine have changed with more female doctors graduating from medical schools. At the same time we are experiencing a rural health workforce shortage and a key issue is encouraging female doctors to take up rural careers. This study explores the training and work experiences of female doctors emerging from a general practice (GP) training pathway which promoted developing both primary care and additional skills to serve rural communities (Rural Generalist– RG). It further seeks to contrast perspectives of the barriers and enablers to RG training and careers between emerging and mature cohorts of RG self-identifying females.

Methods A sequential mixed method framework was undertaken. Firstly, a survey was sent to all females who had completed their GP fellowship training with a regional training provider focused on promoting RG training and career development between 2016 and 2022 (cohort one). This was followed by semi-structured interviews with this cohort and females self-identifying as RGs who were in mature careers (cohort two).

Results Results showed that the majority of females were working less than full time. 71% of females who recently completed training (cohort one) were working in large population centres and 39% were working in rural and remote areas with the majority intending to stay in their current role. Most indicated that they were happy with the salaried parts of their role. For those working rurally (beyond large population centres) the hours of work were unpredictable. In interviews, cohort one reflected experiences of a more female-friendly work environment than those in cohort two (mature careers). However, both faced similar issues around children, family, partners and workload related to RG work and both sought mentors for practical and emotional support.

Conclusions This study shows the need to consider the whole person within recruitment processes and provide both personal and professional support. In addition, flexibility for part time training and less than full time work needs to be offered and become more accepted within the medical community.

Keywords Rural generalists, General practitioners, Female doctors

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Background

Small rural and remote communities with limited access to health workers rely on qualified General Practitioners (GPs) capable of working at a broad scope to provide equitable access to high-quality healthcare services across a range of community needs. GPs working in this context often need to develop broader skills to work across multiple community facilities inclusive of on-call and emergency care requirements (McGrail and Russell 2017). Such doctors are increasingly being referred to as Rural Generalists (RGs). Australia is one country making major investments into developing the RG workforce through a National Rural Generalist Pathway (Department of Health and Aged Care "National Rural Generalist Pathway,"). This initiative hopes to increase the attractiveness of rural medical careers and reverse trends towards sub-specialisation. However, demographics in medicine are changing and there is growth in the proportion of females graduating from medicine over the last 30 years in many countries. In Australia pre-2000 to post 2000 female graduates constituted from 35% to now 53% of all emerging doctors (O'Sullivan and McGrail 2020). Hence the overall capacity of RGs and the success of the national RG training pathway relies on attracting sufficient females to this career including doctors who are willing to work across procedural (surgical psychomotor skills) and non-procedural areas to extend services to smaller rural communities (Joyce 2013). However, attracting female graduates to rural work is challenging. A national Australian study identified they are more likely to undertake rural training opportunities but less likely to take up rural work after they graduate (O'Sullivan and McGrail 2020). Furthermore female doctors remain underrepresented in both rural/regional and RG medical roles (Doescher et al. 2000; Morita et al. 2018). Failing to design the RG career path to attract female doctors is a significant issue. Ensuring gender equity in medicine is essential, as it impacts not only the profession but also equitable access to female-specific services, such as GP obstetrics.

At the time of this research almost 20 years had passed since the Australian College for Rural and Remote Medicine (ACRRM) (a college training doctors for fellowships in general practice focused on RGs) adopted into policy the affirmation and promotion of female doctors in the RG workforce (Australian Medical Workforce Advisory Committee 1996; Mohsin and Syed 2020; The Australian College of Rural and Remote Medicine 2003). To promote the female workforce the Rural Doctors Association of Australia (a membership-based advocacy and support group) formed a Female Doctor's Group and the Royal Australian College of General Practitioners (a separate college for GP training and pursuing RG fellowship) formed a Doctors for Women in Rural Medicine Group (Royal College of General Royal Australian College of General Practitioners 2024). Both are trying to promote policy development for females to be attracted to and succeed in rural general practice and RG roles.

Key challenges for attracting females to rural medical careers have been explored in the global literature. They include meeting the needs of partner's work, job and childcare requirements, allowances of part time training and less than fulltime work options, within the context of communities that are short on doctors and have limited other infrastructure (Rural Doctors Workforce O'Sullivan et al. 2021; "Road to Rural General Practice (R2RGP)," 2011; Stutzman et al. 2020). However, there is no specific research about women's attraction to RG roles as a subset of all types of craft groups involved in rural medicine. RG roles involve working at a broader scope with more on-call and procedural requirements, resulting in longer hours of clinical services across hospital and general practice (Russell & McGrail 2017). The current global recommendations for increasing the rural workforce continue to lack gender nuance (O'Sullivan et al. 2021). Yet rural recruitment, employment, and training systems may need adjustment to accommodate the requirements of women doctors (Cosgrave et al. 2019; McGrail et al. 2017a; O'Sullivan et al. 2021). McGrail et al. using national data from Australia identified that female GPs tend to relocate to larger towns as soon as they have children or they have a partner needing work, potentially for more support around balancing their work and family needs (McGrail et al. 2017). This pattern was not followed by male doctors, who move towards larger towns when their children reach secondary school and are not more likely to move to larger centres when their partner is seeking work. If smaller towns are to attract and retain RG women therefore, then there needs to be a radical shift in thinking supported by evidence-based policy.

Previous research suggests that many female rural doctors enjoy an extended scope of work and the loyalty within rural communities, leadership, and working within rural teams (O'Sullivan et al. 2021). Those with a rural background also tend to connect with rural areas, finding a sense of belonging and fulfillment in making a difference through building relationships with rural patients and families (Paladine et al. 2020). However, limited evidence exists regarding the nature of rural employment which has been successful in encouraging female participation in rural medicine, particularly related to RG roles. Salaried hospital roles with structured, predictable hours and suitable childcare options have been considered to facilitate female doctors' ability to manage family responsibilities, making full-time work as feasible for females as for their male counterparts (O'Sullivan et al. 2021). Further, positions and teams that provide relief from on-call demands and minimize job-related travel may be more likely to attract females with children

(Cheng et al. 2018; Gjerberg 2003), but these would be rare in smaller rural towns with a smaller workforce pool, where RGs typically work. Finally, there may be different perspectives of factors that are enabling of female RG careers in the current policy and program environment compared with what enabled female RGs in the past.

With this background in mind, the aim of this study was to profile the training and work experiences of female doctors emerging from an RG-focused GP training pathway. It further seeks to contrast perspectives of the barriers and enablers to RG training and careers between emerging and mature cohorts of RG self-identifying females, to inform solutions.

Methodology

Context

An overview of RG in Australia training is provided in Box 1, including various policy and program reforms that have occurred to promote RG careers.

Box 1: RG pathways in Australia

Doctors in Australia once they complete medical school, normally complete a year of hospital-based internship, whereby they can enrol in GP training via one of two GP colleges: Australian College for Rural and Remote Medicine (ACRRM) (wholly RG focused) or the Royal Australian College of General Practice (RG and GP focused).

Both Colleges deliver RG training, which atop of the regular GP training of one year of hospital-based training and two years of practice-based training, includes undertaking an additional 6-12 months of advanced skills training (in a hospital or practice) in accredited facilities. This allows doctors to qualify to practise with a wider scope of skills.

The National Rural Generalist Pathway commenced in 2020 and led to funding for Coordination Units to case manage and plan RG training pathways for interested doctors in each state and territory of Australia to help make RG careers easier to navigate.

Since 2022 both Colleges have further developed their RG curriculum nuanced to the needs of rural areas. The qualification as an RG is via RACGP-FARGP (advanced rural general practice) or ACRRM.

There is policy development underway to ensure that RG careers are recognised as a specialty field within the specialty of general practice across Australia. This may lead to different payment structures for RG doctors via employment awards.

The Department of Health and Aged Care has also expanded the number of RG training places in a program called the RG Training Scheme (RGTS) which is fully funded and managed by ACRRM.

Before 2022 Regional Training Organisations led the operational delivery of GP and RG training in Australia, including through organisations like James Cook University GP Training, who mostly encouraged training in rural and remote and RG career pathways to build a workforce which meets the needs of the community. Since 2022, the Colleges have led the operational delivery of the training.

https://www.health.gov.au/our-work/national-rural-generalist-pathway#about-the-initiative

Study design

This research utilised a sequential mixed method framework incorporating both quantitative surveys and qualitative interviews (Liamputtong 2021). Initially, early career female doctors (emerging cohort) were surveyed and subsequently interviewed. This was followed by interviews with later career doctors (mature cohort). The results from both sets of interviews were then compared.

Ethical approval was obtained from James Cook University (JCU) Human Research Ethics Committee (H8657) and ratified by The University of Queensland Research Ethics Committee (No.2022/HE000114). All methods were performed in accordance with the relevant guidelines and regulations with consent to participate provided by all individuals.

Data collection quantitative

A customised survey tool was developed by the research team, which drew upon key factors identified in a global perspective about factors enabling female doctors to work rurally (the O'Sullivan et al. framework), as well as broader literature around the RG workforce (McGrail et al. 2011; O'Sullivan et al. 2021). Survey questions included demographics, current work status and job/role characteristics, household status (children, partner), practice settings, additional qualification/s, and usage of skills, as well as a self-reflection on training experiences. This was pilot tested and refined by a female RG within the research team with minor modifications made.

Between April and June 2022 email invitations were sent to all females who had completed their GP fellowship training during 2016–2022 (referred to as Cohort one– emerging RG career within six years of completion). Invitations were circulated via a training provider called James Cook University GP training, who were chosen because they promote RG training and career development. Invitations included a direct link to the information sheet and the electronic survey (completed via Qualtrics). The survey was open for 6 weeks and included two reminders to participate. Consent was a indicated by answering a question at the start of the online survey. To recognise participation, those who responded were invited to enter a draw to win one of three $150 gift vouchers.

On completion of the survey, cohort one was then asked if they considered themselves as a doctor working at a RG scope (self-identification), which is a conservative marker of RG-scope of work (O'Sullivan et al. 2023). All GPs from cohort one who self-identified as an RG via this question, were then invited and consented for interview.

Data collection qualitative

Apart from cohort one, a second cohort (mature RG career over 15 years since qualifying) was identified through knowledge of and networks of the RG-focused research team from around Australia. This cohort consisted of females in mid to late career stages who were clinically active in a wider scope of practice in rural

communities across Australia, inclusive of general practice and wider procedural or other advanced skills. Their details were known to the research team through professional links, and they were invited via email, mobile text messages and in person. They were used to gather retrospective insights about issues across the RG career journey and to be able to contrast with the emerging career female RGs in cohort one. The target cohorts for interviews were limited to around 15 for each cohort due to the resources available to the research team within the bounds of a one-year project. Based on previous research this sample size should allow most themes to be identified. (Ahmed 2025; Hennink and Kaiser 2022).

During all interviews participants were invited to pass the study details on to their known associates who met the selection criteria. Those who consented were contacted by a researcher who arranged an interview at a time of their choosing. Consent was gained by email and retaken verbally prior to interview. Written consent was recorded for in-person interviews.

A qualitative descriptive methodology for both cohorts was applied based on constructionist epistemology which allowed for the exploration of female RG experiences, from the perspective of their own lived experience, to inform of the relevant supports across their career span (Liamputtong 2021). An interview guide for both cohorts (Appendix 1) was designed closely against the key factors emerging from the preliminary survey results and aligned with the global perspective including three primary sections of RG reflections about (1) early career support and training, (2) professional networks and peer support, and (3) childcare and partner's work in line with the global perspective already mentioned (O'Sullivan et al. 2021).

Table 1 Characteristics of participants in cohort one who completed training 2015–2021

Characteristics	*N* (%)
Age	Range 28–54 years (Median 35)
Dual income household	50 (69%)
At least one dependent	51 (68%)
Hold the main childcare responsibility in my household	28 (55%)
Less than fulltime working	38 (51%)
Salaried position	35 (48%)
Main work private GP consulting rooms	53 (73%)
Credentialled to provide hospital services	31 (45%)
On-call roster	24 (34%)
Provision of advanced skills	23 (32%)
RG qualifications (either FACRRM or RACGP-FARGP)	31 (43%)
Working at the scope of an RG	21 (30%)
Intending on staying in my current role	65 (94%)
Working in large population centre (MMM1 - MMM2)	44 (60%)
Working rural or remotely (MMM3– MMM7)	25 (39%)

Cohort one and two interviews were undertaken by two PhD-qualitative researchers using a semi-structured interview guide and lasted between 30 and 60 min. Both interviewers were not involved in GP training or general practice to maintain confidentiality. The interview included questions related specifically to elements of the participants' training and employment, as well as intersections with family needs. Interviews took place in person, via Zoom or by phone depending on each participant's preference. Each interview was then transcribed verbatim, and any identifiers were removed. Participants received a $50 gift card for their time.

By the end of October 2022, 20 interviews were completed (11 from cohort one and 8 from cohort two). Recruitment ended as the research team, after discussion, considered that the sample provided sufficient data with recurring themes being discussed by participants. Data collected was extensive rich in detail, diverse in nature and complex so it is hoped conceptual depth was sufficient to allow the researchers to construct the main themes. (Braun & and Clarke, 2021; Morriss 2024)

Data analysis

Quantitative data analyses used Stata SE 15.1 for Windows (Stata Corp, College Station, Texas). Descriptive statistics of counts and proportions were used to explore patterns amongst survey respondents. For statistical testing, the 5-level agreement scale was collapsed into two categories by combining 'strongly agree' and 'agree' into 'agree' and the other 3 categories as 'not agree'. Using the Modified Monash Model classification (Department of Health and Aged "The Modified Monash Model ", 2023), work location was categorised as either 'urban' (MMM 1–2) or 'rural' (MMM 3–7) (Table 1). Fisher's exact test was used to calculate associations between cohort one statements relating to their current role and their work location, with statistical significance set as $p < 0.05$.

Qualitative data analysis was undertaken by three members of the team (two qualitative researchers who had undertaken the interviews and a rural health academic) independently coding three interviews inductively, using interpretative thematic analysis. Themes were then identified by the research team with consensus reached before coding continued (Saldana 2021). Researchers who undertook this analysis were not RGs but were female, mothers and employed which meant they could empathise with barriers faced by women in both training and the workplace. Whilst not intentional this may have given the research a female focus and allowed for comfort in sharing information during the interviews. De-identified transcripts were shared with the research team for broader discussion at monthly research meetings in which notes were taken. This supported collective sense-making and invited varied

perspectives into the interpretation of meaning, inclusive of insights of RG male and female doctors on the research team. This also assisted to triangulate the data and provide rich description. Inductive analysis, describing the experiences of each cohort was then layered deductively onto the O'Sullivan et al. framework and wider evidence upon which the survey had been based (Fig. 1). Cohorts one and two were contrasted in the analysis process, to explore issues and perspectives pertinent to levels of experience as an RG and experience in life.

Results

Survey

A total of 79 females recently qualified fellows (cohort one who completed GP training in the last 6 years) participated in the survey (response rate 20%), however, four did not complete any of the survey and a further six completed approximately half of the survey. Although a low response rate, this is comparable to the Medicine in Australia: Balancing Employment and Life (MABEL) survey response rates for surveys of the medical workforce (University of The University of Melbourne). Their characteristics are described in Table 1.

Overall 43% had RG specific qualifications and 30% were working at the RG scope (answering yes to qualification and then working as per scope of qualification). Geographically, a majority were in larger population centres of MMM-1 ($n=22$, 30%) or MMM-2 ($n=22$, 30%), but many were also working in MMM-3 to MMM-7 ($n=25$, 39%) which were considered the rural and remote categories MMM3 ($n=4$, 5%) MMM4 ($n=7$, 12%) MMM5 ($n=5$, 8%) MMM6 ($n=6$, 10%), MMM7 ($n=2$, 4%) respectively.

Table 2 summarises the level of agreement with statements relating to training and work.

Less than 50% of respondents felt that training was flexible around their lifestyle and 40–45% were able to train part time but most (76–78%) reporting that they could not work less than full-time. Overall 82–93%% believed that their role made a difference, and 89 = 100% that the workplace is collegial.

There were some significant differences between participants by MMM areas, with fewer of those working rurally agreeing their hours were predictable whilst more agreeing they were paid well for their role and enjoyed being responsive to emergency situations.

Interview results

The interview participants in cohorts one and two are described in Tables 3 and 4.

Cohort one of early career RGs mirrored the characteristics of the survey respondents with a mean age of

Table 2 Characteristics of training and work cohort one

GP training experience– Cohort one	All participants [*N* = 69] (*n*, % agree)	MMM-1/MMM-2 [*N* = 44] (*n*, % agree)	MMM-3 to MMM-7 [*N* = 25] (*n*, % agree)	*p*-values **
I was able to train less than full-time	30 (42%)	17 (40%)	13 (45%)	0.81
I was able to opt-out of the on-call roster	8 (11%)	6 (14%)	2 (7%)	0.46
I was able to fit training around my lifestyle	32 (44%)	18 (42%)	14 (48%)	0.64
I could see the need for Australia to develop a structured rural generalist pathway	40 (56%)	17 (40%)	23 (79%)	0.001
Current Role				
I find my role easy to fit in around the rest of my life	39 (53%)	26 (59%)	13 (45%)	0.34
My role is easy enough to do now but might get harder in the future	40 (55%)	21 (48%)	19 (66%)	0.16
My hours are predictable	38 (53%)	29 (67%)	9 (31%)	0.004
The team I work with are collegial	68 (93%)	39 (89%)	29 (100%)	0.15
I have female mentors at work	44 (60%)	28 (64%)	16 (55%)	0.63
I have female mentors outside work	34 (47%)	16 (36%)	18 (62%)	0.054
I can make a big difference in my current role	63 (86%)	36 (82%)	27 (93%)	0.30
The leadership aspect of my role can be overwhelming at times	31 (42%)	15 (34%)	16 (55%)	0.09
I can work part-time if I want to	57 (78%)	35 (80%)	22 (76%)	0.78
I have good team back up	57 (78%)	31 (70%)	26 (90%)	0.08
I get paid well for what I do	40 (55%)	18 (41%)	22 (76%)	0.004
I enjoy being responsive to emergency situations in the community	33 (45%)	15 (34%)	18 (62%)	0.030
I am not worried about the medico-legal risk	10 (14%)	4 (9%)	6 (21%)	0.18
I am satisfied with my role	56 (77%)	31 (70%)	25 (86%)	0.16
I can see career progression in my current role	44 (60%)	23 (52%)	21 (72%)	0.10

* % Agree is an aggregate of those responding either 'strongly agree' or 'agree' on the 5-level scale ** p-values based on Fisher's exact test for detecting the difference between rural (MMM3-7) and urban groups (MMM 1–2)

Table 3 Cohort one work and relationship characteristics

Less than full time /Fulltime	Salaried Component in Position	On-call*	Relationship status
Full time	No	1 in 6	Partnered with no dependents
Full time	Yes	1 in 4	Partnered with no dependents
Full time	Yes	1 in 5	Partnered with no dependents
Less than full time	Yes	1 in 3	Partnered with dependent child/ children
Full-time	Yes	1 in 3–4	Partnered with dependent child/ children
Full-time	Yes	1 in 3–4	Single with no dependents
Less than full time	Yes	1 in 2	Partnered with dependent child/ children
Less than full time	Yes	1 in 4	Partnered with no dependents
Less than full time	Yes	1 in 3–4	Partnered with no dependents
Less than full time	Yes	1 in 4	Partnered with no dependents
Full-time	Yes	No	Partnered with dependent child/ children

* On-call" - standby duty, ready and available on short notice to handle medical emergencies or provide urgent medical care outside of regular work hours, like weekends, overnight and holidays

Table 4 Cohort two work and relationship characteristics

Current Role	Relationship status
Academic/GP	Partnered with dependent child/ children
Training Role	Partnered with dependent child/ children
Training Role	Partnered with dependent child/ children
GP/Hospital	Partnered with dependent child/ children
Working in remote community	Partnered with dependent child/ children
GP in remote community	Partnered with independent child/ children
GP/Hospital	Partnered with dependent child/ children
GP Remote community	Partnered with independent children

33 years and qualification years 2018–2020. The majority were partnered, although they had less dependants than the main survey. For those that had dependants, their children attended pre-school or primary school. Procedural skills they used included practising emergency medicine, obstetrics, and anaesthetics. Overall, 9 out 11 were fellowed through ACRRM. All respondents intended to keep working in their current role.

The majority had a part-salaried position with Queensland Health with just under half working less than full time. Of those working full-time, two responded that less than full time was not an option available to them. Although the majority agreed that their role currently fitted around their life, 9 of 11 could see their role getting harder in the future, with 7 of 11 reporting that they worked unpredictable hours. All agreed that they enjoyed their role, could make a big difference in their current role, and were paid well.

Of the mature career female RGs interviewed (this group did not complete the survey) (Table four), 100% were partnered and had children, but some of their children had grown and were independent. Overall, 7 out of 8 were participating in an on-call rota.

Overview of themes

The major themes identified in both cohorts were drawn from the original framework but expanded on this when iterative deductive and inductive coding was done. They were early career flexibility, professional networks and peer support and managing gender bias, partner's work, educational availability and coping with the emotional aspects of the rural work environment. These are discussed below reflecting on the perspectives of cohort one and two, with quotes identified as C1 (cohort one) or C2 (cohort 2).

Theme one: early career training and flexibility

Cohort one and two had very different experiences of early career training and flexibility with cohort one identifying that their training supported and streamlined their capacity to qualify as an RG, although they would have liked more opportunities to train at less than full-time.

"I think it's still, it's a really great career, and I think it gives still a lot of option and a lot of flexibility…very supportive…part time and you know longer, a bit longer training, and that sort of thing" (C1Int05).

"…probably a little bit inflexible… it felt like at the time, because my husband and I were trying to train in the same locations, it wasn't much of a consideration." (C1Int04).

In contrast the cohort two had trained prior to any recognised RG training programs had limited structured support.

"You just did whatever you did, and I did my training in City A and then I went to Town B, which at the time really was quite rural and then I went to an outer suburb of Town B…There was no online, no real training, you just learned it out of a book at that time." (C2Int06).

Theme two: professional networks and peer support and gender bias

All cohort one agreed that their work environment was collegial with 9 of 11 having female mentors at work and 8 of 11 having female mentors out-with the work environment. Cohort two identified limited access to mentors but identified inspirational role models had guided their career.

"I had a couple of amazing mentors and colleagues that were female rural generalists that were totally incredible, so, um, they– there's a good representation up there" (C1Int04).

Very few [mentors]. Um, and– but they stood out. So– so women who bucked the trend, and there was a female obstetrician in [rural town] who was an intimidating mighty lady, but what an inspiration…she'd become a specialist at a time…really impressive." (C2Int01).

Both cohorts felt that having female mentors was important for both practical support and emotional support.

"… often it is not necessarily the clinical stuff, it's the life balance stuff. It is how do I fit the rest of my life into what I want to do, so that is the thing I think that women need support with and how to deal with the imposter syndrome and how to stay on top of all the barriers that get put in place" (C2Int06).

"it's good to I guess, see the people that have, maybe, trodden that path or, kind of, at least shown that path of, you know, coming back to work after maternity leave and other things like that" (C1Int11).

Cohort two had experienced gender bias in training and the workplace this was not identified as an issue for cohort one.

"I think I've been very lucky in the places that I've trained and certainly in– in rural hospitals obviously that's not everyone's experience. But I tend to feel that there's a bit less in terms of, um, you know, sexism and discrimination" (C1Int03).

"…I think even I still have it better than a lot of other people, but still very much a toxic, ah, misogynistic medical culture, so I was told on two separate occasions by two completely different people that I was a complete waste of the Commonwealth's money because I was female being trained as a doctor, um, because I wasn't going to work full time, and therefore I wasn't as worthy as the male people who would work full time " (C2Int03).

Theme three: family partner and work

Partners in the medical profession were a feature of both cohorts, with around 40% being married to other doctors which in some cases impacted training and work experience regardless of cohort.

"Um, so the plan, at the moment, is to stay here for now until my husband gets his — he may be moved on. So, we went from me being moved to, now, he's being moved. So, I'm the follower now" (C1Int02).

"So, my husband's a doctor and it was his, rural, intent that I followed." (C2Int01).

Partner employment opportunities were a unique factor impacting career choices and strains related to on-call commitments.

"…because I do obstetrics and anaesthetics, um, so we do a lot of second on call. So, um, generally two to three nights a week on call… I think it would be very difficult if you didn't have a spouse or someone else at home if you had children… a lot of the unpredictable stuff happens in the night-time" (C2Int04).

"That's the hardest thing in terms of retention for female GPs, is really if they have a partner, if their partner's not here or, um, if their partner doesn't have a job that can be, um, done locally. Like, I've just seen that strain." (C1Int08).

"I always loved [remote town], just couldn't really imagine how I'd convince someone to come and live here with me, sort of ended up not having to worry about that, marrying local instead. He's now my husband and he is the stay-at-home dad for our four children, which is probably the most intensive job of all" (C2Int07).

Theme four: Children– Maternity leave and schooling

The provision of maternity leave in general practice was a discussion point with cohort one depending on the salaried employment model with Queensland Health to access this leave. The lack of maternity leave was discussed by cohort two as was similar decisions to stay in salaried employment longer to access it and return to work earlier.

"But I think because I also work for Queensland Health, it's less of an issue because I'm going to get at least a part-time maternity leave, um, which is good" (C1Int03).

"it would really be difficult financially to go on maternity leave without getting paid, um, and Queensland Health really, you know, provides that opportunity" (C1Int11).

"Ah, not paid. So I was in private general practice at that point, so not paid leave, so I definitely– it's a good point, I went back earlier than I would have as the only, as the breadwinner and the only financial person, um, earning any money to do that, so I went back part time, yeah, definitely sooner than I would have otherwise." (C2Int03).

In addition, living and working rurally often meant that family was not available with respondents in both cohorts lacking local family support for childcare.

"We're up here by ourselves… So, they can come up but, you know, it's not like, oh, I'm running late and can you pick the kids up from school kind of thing. But with enough notice, yes, we can organise weekends and stuff like that in advance" (C1Int05).

I've got both [husband's] parents are here, so that's, um, that's been good as the kids have got older. There wasn't a lot of support when they were little" (C2Int07).

Both cohorts also agreed that rural working provided suitable options for primary school education (age 5–11 years) however this changed when considering secondary education (age 12–18 years). Boarding school was viewed

more favourably by cohort two who had rural backgrounds and previous experience of boarding, with over half sending their children to boarding school, however cohort 1 were more reticent about its use.

"however, high school is definitely where things fall down a little bit… most sort of academically inclined kids, um, will actually go down to [larger town]" (C1Int01).

"I don't know if I could send my children to boarding school. But that's — that's something again, that I'll just need to think about and see what the child is like" (C1Int08).

"I wouldn't send them to boarding school" (C1Int09).

Theme five: emotional aspects of rural work

Both cohorts were impacted by the shortages in the health workforce causing an emotional toll in the workplace.

"We just need more doctors….so I think we were four doctors down for sick leave and we have no one to replace. So, you just have to work harder… the more that we have to work harder, the more fatigued we get and the more likely we are to get sick" (C1Int06).

"we're struggling to get permanent staff and locums, um, it's really awful" (C1Int03).

"we lost seven permanent doctors over a 12-month period of time that collectively had been here for over 35 years I think" (C2Int07).

Becoming embedded in the community and being visible in the community, as a doctor, wife, mother and friend was mostly an issue for cohort 2 and not mentioned by cohort 1. This embeddedness was seen as both a positive and a negative.

"… when I had young children, you could tell, like, you go to the supermarket and if they had a tantrum you'd feel like the whole community, like, everyone was just looking at you, so how's the doctor going to manage the tantrums… I had to live to a certain standard and be this, you know, if someone's going to come to me for professional advice, and I have to– feel like I have it in control" (C2Int03).

"…a friend ah, came in, ah, with their child having, um, a seizure…it I couldn't get a line in, and, you know, like, once you don't get the first one and then you're shaking and things…she's a mum, I'm a mum, you know, I'm doing a job right there but I'm not some faceless person" (C2Int05).

Discussion

This research identified a range of issues for attracting and retaining female doctors in RG careers. Embracing policy and practice to support women in RG careers is critical for all countries to be able to attract and sustain enough workforce (from burgeoning female medical course graduates) to provide services which meet the needs of rural communities. There is much to be gained by creating positive training and workplace environments for RG women since our research suggests that around 2 in 5 females graduating from GP pathways have RG-specific career focus and qualifications, which is similar to other surveys of graduates emerging from RG focused internships (O'Sullivan et al. 2023). Further, the conditions for satisfaction and retention are critical because most of the surveyed group noted that fitting the RG role into their life may become harder over time.

There were several major barriers and enablers found to be common for emerging and maturing RG women doctors, including partners, children and need for mentorship, concurring with the wider literature. Equally, there were several issues which are specific to the contemporary RG cohort including the appreciation of opportunities for part-time training and less than full time work, structured training, working in salaried roles and lowering gender bias within the workplace culture (O'Sullivan et al. 2021). These could be used to shape a female nuance for rural workforce policies and global guidelines with specific issues discussed below (World Health Organisation 2010).

Just over half of surveyed emerging career RGs were working at less than fulltime, suggesting a major need to offer greater roles which are less than full time along with job share arrangements, to allow for more flexibility. Employers may need to remove the stigma around working less than full time and pay strong attention to recognising the value of part time contributions, to incentivise more women taking up rural positions (Phillips et al. 2016; Spenny and Ellsbury 2000). Much has been written about the power of stigma in shaping professional identity, and explicit stigma in contracted work, along with the legitimate identity of less than full time work needs to be embedded as a career norm within RG medicine if we are to appropriately embrace women RGs (Robson 2022). Further, the range of themes for emerging and mature career RG cohorts provide for reflection when considering how to design training and employment to suit the needs of female RG doctors to maintain current female RG supervisors and support new female RGs to enter, train and stay the course of an RG career (Kitchener et al. 2021).

Consistent with the emerging policy agenda within Australia (Box 1) there is work to promote better recognition of RG careers and more structure to RG pathways and the supports within them, along with changing attitudes of training providers and employers, showing reduced gender bias. These were noted as essential to the interviewed cohorts. Additionally, there have been advances with the availability of maternity leave and childcare supports over time as part of broader public policy. However, partner factors and aligning female

RG roles around partners (many of whom are also doctors) remains a contemporary issue. This suggests that workplaces should routinely consider partner employment options and potential embrace hybrid and remote employment arrangements which have emerged since the COVID-19 pandemic. Doing so could avoid situations where female RGs can't take up or sustain RG roles around partner's employment needs. Of equal concern is the need to build family employment models where partnerships can share childcare responsibilities. This requires flexibility around on-call demands, which is typical in female RG work (McGrail et al. 2017). Where childcare is limited, more predictable working hours involving less travel may be important (Kalb et al. 2018).

Interestingly, the study highlighted that regardless of career maturity, there are emotional aspects of RG work which impact emerging and more mature RG female careers. There was appreciation of the broad scope of practice when working rurally, however living rurally often means that female RGs need skills to be able to put boundaries around their work and personal lives in rural communities. They could benefit from self-care education and mentorship via other female RGs to manage this throughout their career (O'Sullivan et al. 2023; Spenny and Ellsbury 2000). Additionally, both early career and mature RG cohorts found it challenging to have to manage overwhelming workforce shortages. Employers need to develop critical mass teams and ongoing training pathways to attract the next generation to ensure female RGs can access time away from the community and take breaks. Some of the work in this area in Australia has included the development of the single employer models (salaried employment for working across hospital and the community general practice, retaining maternity leave and other conditions), which could be expanded in all rural and remote areas relying on attracting women RGs (Department of Health and Aged Care 2024).

While the global rural health workforce guidelines recommend professional support to retain the rural workforce, our study identified that mentorship and peer support specifically between women as rural doctors is critical (World Health World Health Organisation 2010). This is consistent with other professional support frameworks identifying it is important for rural doctors to be able to talk with other doctors/supervisors and families like themselves to feel safe when discussing undifferentiated issues, debriefing and being able to express concerns about both work and family (O'Sullivan et al. 2024). Further rural doctors need options to network with others like themselves (Hustedde et al. 2018). For this reason, the programs by rural doctor organisations and colleges for female centred policies may need to be scaled up to encourage all female RGs to attend conferences and events for women in rural medicine, participate in social events and female mentorship programs.

Schooling remains an issue for the children of female rural generalists with decisions about boarding school, local school or moving to a bigger town having to be made. Mentoring from experienced female RGs around their own experience with this decision making would be useful, as well as local community connections from a practice perspective and links with local schools and childcare being able to assist with retention (McGrail 2017). Further, hybrid part time boarding or online school options should be extended to female RGs in towns where there are few schools and boarding full time is not a preferred option.

By applying the findings of this and other research, it is possible to explore aspects of existing rural workforce policies which could be made more female friendly and RG friendly. The most significant issue for female RGs is around personal and professional support. This is in line with the World Health Organisation's recommendations around gender equity in the workforce (World Health World Health Organisation 2024). This supports the need to build jobs which complement the caring role of female RGs, and support the conditions (wage, participation, working conditions) for female RGs to enjoy their careers.

Conclusion

This study found that the predominant factor when building RG training and employment pathways for female doctors, it is critical to focus on whole of person recruitment strategies, specifically targeting personal and professional support issues specific to each woman. The evidence identifies that less than full time careers may require normalisation with jobs planned around consideration of on-call burden across rural generalists and their partners. Training and employment could also be improved through continuity of access to supportive female networks where the scope of female roles at work and in society more broadly can be openly shared and debriefed. RG work may present specific emotional demands for females which could be better understood and accommodated in structuring and rewarding female RG work.

Limitations

One of the main limitations of this study was that a survey was not undertaken with cohort two, this was done as we had more access to cohort one and cohort two needed to be individually identified and direct comparisons could not be made with the survey cohort. Although both cohorts faced similar issues their training experiences differed and there may have been other cultural factors that influenced their opinions.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12939-025-02558-4.

Supplementary Material 1

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Data availability
The interview protocol and datasets produced during the study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate
Ethical approval was obtained from James Cook University Human Research Ethics Committee 2022 (H) and then ratified by the University of Queensland Research Ethics Committee 2022. All methods were performed in accordance with the relevant guidelines and regulations including consent from participants.

Consent for publication
All named authors have given consent for publication.

Competing interests
EA, LM, KB and AH are/were employed by James Cook University or James Cook University General Practice Training during this project.

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