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Building a sustainable rural physician workforce

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How and where physicians learn their craft are central to determining where their medical careers unfold

Remo Ostini 

Many rural and regional Australian communities have ageing populations with complex medical issues that require physician-supported care. Others have burgeoning populations of families with children who need paediatricians. However, rural Australia has far fewer specialists per 100 000 population than major cities.¹ So what do rural Australians do if they need specialist care? For many, this requires travelling out of region to a metropolitan area to see a doctor who is unfamiliar with the patient's health context, often receiving subspecialist services that fail to effectively address the generalist range of services needed by people outside of metropolitan areas. The result is dislocated care that is very expensive, particularly for patients with ongoing specialist care needs.

Access barriers to specialist care are a key factor in poor rural health outcomes. It has been estimated that 20 000 non-metropolitan deaths could have been avoided over a 3-year period if the residents had lived in a major city.² Many factors contribute to excess rural mortality and morbidity, but the lack of specialists compounds the health effects of these factors. A stronger rural specialist medical workforce could be a strong ameliorating influence.

Traditional solutions to this problem have been outreach or telehealth — urban-based services extended to rural populations. Investing in sustained, high quality training for specialist physicians in the regions would provide contextualised, connected and effective care that is sustainable. Anecdotally, based on regional caseload and complexity observations, high quality rural physician training is likely to be feasible in a range of fields. But systematic evidence to inform how to embed rural and regional training for a sustainable rural physician workforce has been lacking. This supplement seeks to address that.

The Building a Rural Physician Workforce (BRPW) project enabled a comprehensive investigation of the challenges and solutions to growing a sustainable rural physician workforce in Australia. Steering committee oversight included national and Queensland members of the Royal Australasian College of Physicians (RACP); the Australian Government Department of Health; Queensland Country Practice (Queensland Health); and invited guests with particular knowledge of the challenges of rural physician training.

The BRPW project provides original research informing five key themes:

- characteristics of the existing workforce;
- its professional identity;
- salient features of the rural training context for trainees;
- the contexts, experiences and intentions of supervisors; and
- principles to guide future efforts.

The first theme sets the scene of the existing Australian junior and consultant physician workforce in rural and metropolitan areas. This work (Chapter 1) found that relatively more rural

physicians had a rural background; identified concerns about access to consultant support and supervision among rural junior physicians and a poorer professional support network among rural consultants; and found equivalent professional satisfaction across career stages among rural and metropolitan physicians.

Theme 2 investigated the professional context of the rural workforce, exploring how general physicians and paediatricians working in non-metropolitan areas constructed a professional identity. It found a relatively diverse rural identity for general physicians and paediatricians, one which values generalism and deep engagement with the economic and social dynamics of rural communities (Chapter 2).

Theme 3 investigated the current training context and experiences of general physician trainees, particularly rural training experiences. Theme 4 investigated the contexts, experiences and intentions of RACP supervisors, with a particular focus on the requirements for high quality training in rural and regional settings. Results across these two themes (Chapter 3) highlighted the importance of leadership at all levels to support supervisor and trainee availability, site accreditation and viability, particularly in the face of a culture of undermining of rural medical practice, while recognising the potential fragility of rural training sites.

The final theme draws together common explanations and implications from the findings of the first four themes to distil a set of eight principles to underpin future workforce development efforts (Chapter 4). It also describes key stakeholders with responsibility to work together to apply the principles in their overlapping operational settings.

Rural settings differ from the metropolitan setting in which most specialist, including physician, training currently occurs. This results in a mismatch between current specialist training and rural specialist care needs that contributes to an insufficient rural medical workforce and the associated poor health outcomes. The BRPW study shows the importance of recognising the distinctiveness of rural contexts, and the need for positive action towards these settings, in designing training programs that better equip specialist physicians for a rural medical career, identifying the opportunities and the risks, and showing a way forward.

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- 1 Australian Institute of Health and Welfare. Medical practitioners workforce 2015 (web report). Canberra: AIHW, 2016. <https://www.aihw.gov.au/reports/workforce/medical-practitioners-workforce-2015/data> (viewed May 2021).
- 2 Australian Institute of Health and Welfare. Mortality inequalities in Australia 2009–2011 (Bulletin 124, August 2014). Canberra: AIHW, 2014. <https://www.aihw.gov.au/getmedia/5683dc4b-796f-49bd-87eb-5a1135956f5/16934.pdf.aspx?inline=true> (viewed May 2021). ■

Chapter 1

Characterising Australia's rural specialist physician workforce: the professional profile and professional satisfaction of junior doctors and consultants

Matthew R McGrail¹, Odewumi Adegboja¹, Srinivas Kondalsamy-Chennakesavan²

Over the past decade, the chronic problem of unequal distribution of specialists (all doctors outside of general practice) persists, with rural residents continually being disadvantaged.^{1,2} Maldistribution of specialists impacts rural patients, who are needing to either wait longer before seeing a specialist or travel to major cities, and the current rural specialist workforce, who tend to work longer hours.³ In response, a key recent target of Australia's Integrated Rural Training Pipeline initiative is to expand training of specialists in regional and rural areas (simplified to "rural specialists").⁴ This strategy builds on the growing evidence linking increased rural training duration in medical school and greater likelihood of practising rurally among junior doctors.^{5,6} It is also supported by national evidence from general practice demonstrating a link between post-medical school training in rural areas and future rural practice uptake.⁷

Evidence remains limited about the nature of the work, characteristics and professional satisfaction of rural specialists.⁸ Encouragingly, however, it suggests that work location does not affect their professional satisfaction. A 2013 Queensland report provides further positive evidence of the professional satisfaction of rural specialist physicians.⁹ Professional satisfaction, the extent to which a workplace matches a worker's aspirations or expectations, is associated with individual and organisational outcomes and has important implications for medical workforce planning.^{10,11} The decision for doctors to take up and stay in a career, and to live in a particular location, reflects both the preconceived and realised satisfaction.^{12,13}

Physicians, including all specialists under adult and paediatric internal medicine, make up a large proportion of the specialty workforce. Commonwealth data suggest there are around 10 400 physicians in 2018 with 14% working rurally.¹⁴ Moreover, many of the physician specialties are critical components of the rural workforce, especially in larger regional centres. Factors relating to working and environmental conditions, as well as employee characteristics have been identified to influence job retention of rural clinicians.¹⁵ Like most specialties, the pathway to becoming a physician is long, through pre-registrar and registrar training. However, to date there is only limited evidence on professional satisfaction of these junior doctors and whether it relates to work location.¹⁶

Understanding the professional experience of both the rural physician workforce and junior physician trainees and the impact of their training or working location is vital. Given the lack of empirical evidence on the experience of rural physicians across all career stages, the aim of our study was to assess differences in the demographic characteristics, professional profile and professional satisfaction of rural and metropolitan junior physicians and physician consultants in Australia.

Abstract

Objective: To assess differences in the demographic characteristics, professional profile and professional satisfaction of rural and metropolitan junior physicians and physician consultants in Australia.

Design, setting and participants: Cross-sectional, population level national survey of the Medicine in Australia: Balancing Employment and Life longitudinal cohort study (collected 2008–2016). Participants were specialist physicians from four career stage groups: pre-registrars (physician intent); registrars; new consultants (< 5 years since Fellowship); and consultants.

Main outcome measures: Level of professional satisfaction across various job aspects, such as hours worked, working conditions, support networks and educational opportunities, comparing rural and metropolitan based physicians.

Results: Participants included 1587 pre-registrars (15% rural), 1745 physician registrars (9% rural), 421 new consultants (20% rural) and 1143 consultants (13% rural). Rural physicians of all career stages demonstrated equivalent professional satisfaction across most job aspects, compared with metropolitan physician counterparts. Some examples of differences in satisfaction included rural pre-registrars being less likely to agree they had good access to support and supervision from qualified consultants (odds ratio [OR], 0.6; 95% CI, 0.3–0.9) and rural consultants being more likely to agree they had a poorer professional support network (OR, 1.9; 95% CI, 1.2–2.9). In terms of demographics, relatively more rural physicians had a rural background or were trained overseas. Although most junior physicians were women, female consultants were less likely to be working in a rural location (OR, 0.6; 95% CI, 0.4–0.8).

Conclusion: Junior physicians in metropolitan or rural settings have a similar professional experience, which is important in attracting future trainees. Increased opportunities for rural training should be prioritised, along with addressing concerns about the professional isolation and poorer support network of those in rural areas, not only among junior doctors but also consultants. Finally, making rural practice more attractive to female junior physicians could greatly improve the consultant physician distribution.

Methods

Our study used data from the Medicine in Australia: Balancing Employment and Life (MABEL) study, a large longitudinal (annual cohort) survey of the Australian medical workforce. Specialty was self-identified, with only "physicians" included, using the Royal Australasian College of Physicians (RACP) definition (adult internal medicine, paediatric and child health) (Box 1). For junior doctors, due to small annual counts in MABEL, cross-sectional data were pooled between wave 1 (2008) and wave 9 (2016); however, only the first record (at each career stage) over the 9 years was included for analysis. In contrast, cross-sectional

1 Australian physician list included in the study

Adult		Paediatric
Cardiology	Nuclear medicine	General paediatric
Clinical genetics	Nephrology/renal	Adolescent medicine
Clinical pharmacology	Rheumatology	Community child health
Endocrinology	Respiratory sleep/thoracic	Neonatal medicine
Gastroenterology	Addiction medicine	Paediatric emergency
General medicine	Dermatology	
Geriatric medicine	Occupational environmental medicine	
Haematology	Palliative medicine	
Immunology and allergy	Public health medicine	
Infectious diseases	Rehabilitation medicine	
Medical oncology	Sexual health medicine	
Neurology	Sports physician	

data from only the 2016 survey were used for specialist consultants. MABEL was approved by the University of Melbourne Faculty of Economics and Commerce Human Ethics Advisory Committee (Ref. 0709559) and the Monash University Human Research Ethics in Research Involving Humans (Ref. CF07/1102-2007000291). Further details of the representativeness of MABEL respondents and survey methods are available elsewhere, with only minor participation bias observed.^{17,18}

Study participants

Eligible clinically active physicians were stratified into four career stage groups:

- Group 1: 1587 pre-registrar doctors (hospital doctors who had either been accepted by, or were seeking enrolment with, RACP training);
- Group 2: 1745 trainees (registrars enrolled in and completing their training program with the RACP);
- Group 3: 421 new consultants (physicians who have completed their RACP Fellowship within the past 5 years and who have worked as a consultant for at least one subsequent year); and
- Group 4: 1143 physician consultants (completed RACP Fellowship).

Study measures and definitions

Geographic location of work was coded and categorised using the Modified Monash Model (MMM) as metropolitan (MMM1) and rural (MMM2–7). Rural physician counts were further grouped into MMM2 (regional areas with population greater than 50 000), MMM3 (15 000–50 000 populations) and MMM4–7 (all other rural towns and remote communities).

Predictive variables were selected to explore factors thought to be associated with physician practice locations. Overseas-trained specialists obtained their medical degree outside of Australia and New Zealand. On-call was defined by a “Yes” or “No” response to “do you do on-call yourself?”. Practice type, based on average weekly hours worked, was grouped into: public only (all

hours in public hospital); private only (all hours in private hospitals/consulting rooms); and mixed practice (both public and private). Rural background was defined as having resided for at least 6 years in a rural area before the age of 18 years, consistent with evidence.¹⁹

Professional satisfaction survey questions included satisfaction with work hours, variety of work, amount of responsibility, colleagues and fellow workers, opportunities to use abilities, remuneration, and overall satisfaction (“taking everything into consideration, how do you feel about your work?”). These responses were coded on a scale of 1 to 5 (very dissatisfied to very satisfied) using a MABEL-validated version²⁰ of the short form Warr–Cook–Wall job satisfaction questionnaire.²¹

A second set of professional satisfaction items related to aspects of participants’ jobs, using a five-point agreement scale. These included: balance between personal and professional commitments is about right; work hours unpredictable; difficult to take time off; and research publication important to training or career. These were rated from 1 to 5 (strongly disagree to strongly agree).

For both satisfaction and agreement scales, the two positive responses (satisfied or moderately satisfied, and strongly agree or agree) were grouped and compared with two negative responses (moderately or very dissatisfied, and disagree or strongly disagree, respectively), consistent with previous definitions.²² Responses of “not sure” for satisfaction and “neutral” for agree or disagree were categorised as non-responses.

Statistical analysis

Descriptive summary statistics were used for the main variables and the comparison between means of continuous variables were tested using *t* test, non-parametric equivalent for remuneration, leave and work hours or univariate logistic regression for categorical variables. Multiple logistic regression was performed to test associations between location and physician characteristics, and between work location and career satisfaction, reporting odds ratios (OR) and 95% confidence intervals (CI). Adjustments were made for demographic variables: gender, age, weekly hours worked, on-call and overseas-trained. All the tests were two-tailed with statistical significance set at ≤ 0.05 . All statistical analyses were performed using software package Stata SE version 15.1 (StataCorp).

Results

Selected characteristics of physicians working in non-metropolitan (ie, rural) and metropolitan locations, by four career stages, are shown in Box 2. In the rural consultant cohort, 80 (53%) worked in MMM2, 60 (40%) in MMM3, and 10 (7%) in MMM4–7 communities, whereas among rural pre-registrar and registrar physicians, only 31–38% were training in MMM3–7 locations. There was a strong gender difference, with women significantly less likely to be working rurally (or to be physicians) at the consultant stage (OR, 0.6; 95% CI, 0.4–0.8), while for the other three career stages, women were the majority group but there were no location differences. Overseas-trained and rural background physicians were more likely to work rurally at all career stages. Rural consultants had more hours in direct patient care, but this was not the case for trainees. Rural consultants were also more likely to be involved in teaching. Remuneration was significantly higher for rural physicians across most career stages.

2 Demographic and employment characteristics of physicians by geographic location of work

Variable	Pre-registrar (intent: physician) (n = 1587)			Trainee (registrar, physician) (n = 1745)			< 5 years since physician Fellowship (n = 421)			Physician consultant (n = 1143)		
	Non-metro	Metro	P	Non-metro	Metro	P	Non-metro	Metro	P	Non-metro	Metro	P
Number of physicians	236 (15%)	1351 (85%)		163 (9%)	1582 (91%)		86 (20%)	335 (80%)		150 (13%)	993 (87%)	
Rurality*												
MMM2	146 (62%)			113 (69%)			47 (55%)			80 (53%)		
MMM3	66 (28%)			40 (24%)			27 (31%)			60 (40%)		
MMM4-7	24 (10%)			10 (6%)			12 (14%)			10 (7%)		
Gender												
Male	79 (33%)	463 (34%)	Ref	68 (42%)	681 (43%)	Ref	39 (45%)	129 (39%)	Ref	98 (65%)	522 (53%)	Ref
Female	157 (67%)	883 (66%)	1.0 (0.8-1.4)	95 (58%)	901 (57%)	1.1 (0.8-1.5)	47 (55%)	206 (61%)	0.8 (0.5-1.2)	52 (35%)	470 (47%)	0.6 (0.4-0.8) [†]
Overseas-trained												
No	199 (85%)	1275 (95%)	Ref	119 (73%)	1321 (84%)	Ref	66 (77%)	285 (85%)	Ref	108 (72%)	834 (84%)	Ref
Yes	34 (15%)	61 (5%)	3.6 (2.3-5.6) [†]	43 (27%)	255 (16%)	1.9 (1.3-2.7) [†]	20 (23%)	50 (15%)	1.7 (1.0-3.1)	41 (28%)	155 (16%)	2.0 (1.4-3.0) [†]
Practice type												
Mixed	6 (3%)	22 (2%)	Ref	8 (5%)	44 (3%)	Ref	22 (27%)	92 (29%)	Ref	69 (48%)	381 (40%)	Ref
Public only	217 (94%)	1276 (96%)	0.6 (0.2-1.6)	142 (89%)	1467 (95%)	0.5 (0.2-1.2)	52 (63%)	185 (58%)	1.2 (0.7-2.1)	56 (39%)	423 (44%)	0.7 (0.5-1.1)
Private only	7 (3%)	26 (2%)	1.0 (0.3-3.4)	10 (6%)	32 (2%)	1.7 (0.6-4.8)	9 (11%)	44 (14%)	0.9 (0.4-2.0)	19 (13%)	147 (15%)	0.7 (0.4-1.2)
Do you do on-call yourself?												
No	96 (42%)	552 (42%)	Ref	65 (41%)	509 (33%)	Ref	19 (23%)	124 (38%)	Ref	37 (25%)	266 (27%)	Ref
Yes	134 (58%)	754 (58%)	1.0 (0.8-1.4)	95 (59%)	1038 (67%)	0.7 (0.5-1.0)	63 (77%)	201 (62%)	2.0 (1.2-3.6) [†]	109 (75%)	724 (73%)	1.1 (0.7-1.6)
Rural background												
No	134 (59%)	1067 (83%)	Ref	100 (67%)	1234 (82%)	Ref	67 (79%)	251 (82%)		94 (66%)	802 (86%)	
Yes	92 (41%)	213 (17%)	3.4 (2.5-4.7) [†]	49 (33%)	266 (18%)	2.3 (1.6-3.3) [†]	18 (21%)	56 (18%)	1.2 (0.7-2.2)	49 (34%)	133 (14%)	3.1 (2.1-4.6) [†]
Teaching												
Medical students			na			na	65 (83%)	218 (69%)	2.2 (1.2-4.2) [†]	129 (89%)	747 (81%)	1.8 (1.1-3.2) [†]
Interns			na			na	59 (81%)	185 (61%)	2.7 (1.4-5.0) [†]	103 (79%)	613 (71%)	1.5 (1.0-2.3)
Registrars			na			na	58 (75%)	237 (75%)	1.0 (0.6-1.8)	115 (82%)	812 (85%)	0.8 (0.5-1.3)

Continues

2 Continued

Variable	Pre-registrar (intent: physician) (n = 1587)			Trainee (registrar, physician) (n = 1745)			< 5 years since physician Fellowship (n = 421)			Physician consultant (n = 1143)		
	Non-metro	Metro	P	Non-metro	Metro	P	Non-metro	Metro	P	Non-metro	Metro	P
Age, years, mean (SD)	29 (5)	28 (5)	0.047 [‡]	32 (6)	31 (6)	0.066	38 (7)	37 (5)	0.124	53 (10)	50 (11)	0.003 [‡]
Total weekly hours, median (IQR)	45 (40–50)	48 (40–55)	0.006 [‡]	45 (40–50)	47 (40–54)	0.032 [‡]	40 (36–48)	40 (24–45)	0.022 [‡]	42 (34–50)	40 (32–50)	0.710
Hours of direct patient care, median (IQR)	20 (15–30)	20 (15–30)	0.626	25 (20–33)	25 (18–34)	0.103	25 (16–32)	20 (10–27)	<0.001 [‡]	25 (19–35)	20 (14–30)	<0.001 [‡]
Hours of indirect patient care, median (IQR)	20 (12–27)	20 (15–30)	0.008 [‡]	14 (10–20)	15 (10–25)	0.156	7 (4–12)	5 (3–10)	0.002 [‡]	6 (4–10)	5 (4–10)	0.762
Hours of education activities, median (IQR)	3 (2–5)	2 (2–4)	0.082	4 (2–5)	3 (2–5)	0.196	3 (2–5)	4 (2–12)	0.003 [‡]	3 (2–5)	4 (2–8)	0.036 [‡]
Hours of management and administration, median (IQR)	2 (1–6)	4 (2–8)	0.123	2 (1–6)	3 (2–5)	0.300	4 (2–5)	3 (2–5)	0.593	4 (2–8)	4 (2–10)	0.464
Income: gross remuneration per annum, median (IQR) (\$1000)	79 (68–94)	76 (67–90)	0.057	100 (78–127)	96 (75–117)	0.017 [‡]	218 (141–288)	142 (104–207)	<0.001 [‡]	300 (205–390)	264 (180–350)	0.042 [‡]
Leave: weeks holiday past year, median (IQR)	4 (2–5)	3 (2–5)	0.009 [‡]	4 (2–5)	4 (2–5)	0.112	4 (3–5)	4 (3–5)	0.049 [‡]	5 (4–6)	4 (3–5)	0.005 [‡]

CI = confidence interval; IQR = interquartile range; Metro = metropolitan; na = not applicable; OR = odds ratio; Ref = reference; SD = standard deviation. * Modified Monash Model (MMM): MMM2 (regional areas with population greater than 50 000); MMM3 (15 000–50 000 population); and MMM4–7 (all other rural towns and remote communities). [‡] Statistically significant (95% CI does not include 1.0). [‡] Statistically significant (*P* < 0.05). ♦

CI = confidence interval; IQR = interquartile range; Metro = metropolitan; na = not applicable; OR = odds ratio; Ref = reference; SD = standard deviation. * Modified Monash Model (MMM): MMM2 (regional areas with population greater than 50 000); MMM3 (15 000–50 000 population); and MMM4–7 (all other rural towns and remote communities). † Statistically significant (95% CI does not include 1.0). ‡ Statistically significant ($P \leq 0.05$). ◆

3 Multivariable logistic regression model of physician's satisfaction and geographic location of work*

Variable	Pre-registrar (intent: physician) (n = 1587)				Trainee (registrar, physician) (n = 1745)				< 5 years since physician Fellowship (n = 421)				Physician consultant (n = 1143)			
	Non-metro	Metro	OR (95% CI)		Non-metro	Metro	OR (95% CI)		Non-metro	Metro	OR (95% CI)		Non-metro	Metro	OR (95% CI)	
Number of physicians	236	1351			163	1582			86	335			150	993		
Work hours	154 (65%)	871 (65%)	1.1 (0.8–1.6)		107 (66%)	984 (62%)	1.0 (0.7–1.6)		73 (85%)	248 (74%)	2.1 (0.9–4.9)		117 (78%)	743 (75%)	1.0 (0.6–1.7)	
Variety of work	206 (87%)	1158 (86%)	1.3 (0.7–2.3)		150 (92%)	1396 (88%)	1.9 (0.8–4.3)		81 (94%)	315 (94%)	1.0 (0.2–5.1)		140 (93%)	924 (93%)	1.0 (0.4–2.4)	
Amount of responsibility given	195 (83%)	1105 (82%)	1.4 (0.7–2.7)		134 (82%)	1331 (84%)	0.9 (0.5–1.8)		78 (91%)	302 (90%)	1.2 (0.2–5.9)		141 (94%)	914 (92%)	0.8 (0.3–1.9)	
Opportunities to use abilities	190 (81%)	1081 (80%)	1.2 (0.7–2.0)		143 (88%)	1332 (84%)	1.3 (0.7–2.5)		77 (90%)	290 (87%)	1.5 (0.5–4.2)		128 (85%)	886 (89%)	1.0 (0.5–2.0)	
Remuneration	142 (60%)	765 (57%)	1.1 (0.7–1.5)		87 (53%)	844 (53%)	0.9 (0.6–1.4)		74 (86%)	234 (70%)	3.3 (1.4–7.7) [†]		130 (87%)	801 (81%)	1.3 (0.7–2.4)	
Colleagues and fellow workers	221 (94%)	1244 (92%)	1.3 (0.5–3.2)		147 (90%)	1446 (91%)	0.7 (0.3–1.5)		74 (86%)	311 (93%)	0.7 (0.2–2.4)		129 (86%)	890 (90%)	0.5 (0.3–0.98) [†]	
Physical working conditions	184 (78%)	1013 (75%)	1.0 (0.7–1.6)		124 (76%)	1162 (73%)	1.1 (0.7–1.8)		77 (90%)	288 (86%)	1.2 (0.5–3.0)		133 (89%)	855 (86%)	1.1 (0.6–2.2)	
Recognition for good work	147 (62%)	906 (67%)	0.7 (0.5–1.1)		114 (70%)	1083 (68%)	0.9 (0.6–1.4)		63 (73%)	253 (76%)	0.8 (0.3–1.7)		110 (73%)	741 (75%)	0.9 (0.5–1.5)	
Overall satisfaction	201 (85%)	1173 (87%)	0.8 (0.5–1.4)		143 (88%)	1361 (86%)	1.1 (0.6–2.3)		79 (92%)	298 (89%)	1.0 (0.3–3.4)		139 (93%)	885 (89%)	0.9 (0.4–2.1)	
Very satisfied	65 (28%)	291 (22%)			52 (32%)	367 (23%)			35 (41%)	107 (32%)			64 (43%)	406 (41%)		
Moderately satisfied	136 (58%)	882 (65%)			91 (56%)	994 (63%)			44 (51%)	191 (57%)			75 (50%)	479 (48%)		

CI = confidence interval; Metro = metropolitan; OR = odds ratio. * Adjusted for gender, age, weekly hours worked, on-call, overseas trained. † Statistically significant (95% CI does not include 1.0). ◆

4 Multivariable logistic regression model of physician's agreement to aspects of their jobs and geographic location of work*

Variable	Pre-registrar (intent: physician) (n = 1587)				Trainee (registrar, physician) (n = 1745)				< 5 years since physician Fellowship (n = 421)				Physician consultant (n = 1143)			
	Non-metro	Metro	OR (95% CI)		Non-metro	Metro	OR (95% CI)		Non-metro	Metro	OR (95% CI)		Non-metro	Metro	OR (95% CI)	
Number of physicians	236	1351			163	1582			86	335			150	993		
Right balance of personal and professional commitments	120 (51%)	603 (45%)	1.2 (0.8–1.8)		82 (50%)	603 (38%)	1.8 (1.2–2.7) [†]		54 (63%)	191 (57%)	1.5 (0.7–2.9)		86 (57%)	572 (58%)	0.8 (0.5–1.2)	
Difficult to take time off	141 (60%)	941 (70%)	0.6 (0.4–0.9) [†]		84 (52%)	1,071 (68%)	0.5 (0.3–0.7) [†]		28 (33%)	122 (36%)	0.6 (0.3–1.2)		47 (31%)	328 (33%)	1.0 (0.7–1.5)	
Work hours unpredictable	101 (43%)	719 (53%)	0.8 (0.5–1.1)		68 (42%)	742 (47%)	0.9 (0.6–1.3)		21 (24%)	99 (30%)	0.6 (0.3–1.1)		31 (21%)	257 (26%)	0.7 (0.4–1.1)	
Research publication important to career	149 (63%)	936 (69%)	0.8 (0.5–1.4)		116 (71%)	1,127 (71%)	0.9 (0.5–1.7)		47 (55%)	232 (69%)	0.5 (0.3–0.9)*		39 (26%)	466 (47%)	0.3 (0.2–0.5) [†]	
Poor support network of other doctors like me	49 (21%)	192 (14%)	1.3 (0.9–2.0)		37 (23%)	291 (18%)	1.2 (0.8–1.9)		24 (28%)	55 (16%)	1.7 (0.8–3.3)		40 (27%)	176 (18%)	1.9 (1.2–2.9) [†]	
Good support and supervision from qualified specialists	178 (75%)	1066 (79%)	0.6 (0.3–0.9) [†]		134 (82%)	1,290 (82%)	0.7 (0.4–1.2)									
Enough time for personal study	67 (28%)	314 (23%)	1.2 (0.8–1.7)		53 (33%)	394 (25%)	1.4 (0.9–2.1)									

CI = confidence interval; Metro = metropolitan. * Adjusted for gender, age, weekly hours worked, on-call, overseas trained. [†] Statistically significant (95% CI does not include 1.0). ◆

Box 3 shows that professional satisfaction of physicians, on the whole, is generally high and unrelated to geographic location of training or practice. Across the nine measured aspects and the four career stages, the only significant differences related to the increased satisfaction with remuneration for rural physicians within 5 years of completion of their Fellowship (OR, 3.3; 95% CI, 1.4–7.7) and the decreased satisfaction of rural consultants with their colleagues and fellow workers (OR, 0.5; 95% CI, 0.3–0.98). Notably, there were no differences of satisfaction with working hours, variety of work, work conditions and opportunities to use their abilities or the overall satisfaction.

Box 4 shows a number of differences of agreement regarding various aspects of physician training and work. Rural trainees (both pre-registrars and registrars) were less likely to agree they have difficulty taking time off work. Rural registrars were more likely to agree they had a good balance of professional and personal commitments (OR, 1.8; 95% CI, 1.2–2.7). Of some concern to supporting a rural physician workforce, rural pre-registrars were less likely to agree they had good support and supervision (OR, 0.6; 95% CI, 0.3–0.9), rural consultants were more likely to agree they had a poor support network of other similar doctors (OR, 1.9; 95% CI, 1.2–2.9), and rural physician consultants were less likely to agree that publishing research was an important part of their career (OR, 0.3; 95% CI, 0.2–0.5).

Discussion

Our research corroborates recent studies showing few professional satisfaction differences between doctors working and training in metropolitan or rural locations.^{8,16,22} At least 85% of each career stage group, irrespective of location, expressed an overall satisfaction. Uptake of a rural physician specialist role is largely by choice, thus it may not be surprising that rural physicians mostly have a positive professional experience, having already factored in aspects of the job in setting their expectations.⁸ Other research suggests the decision to remain in a rural location relates primarily to non-financial factors, such as dependents' schooling needs and other family-based decisions.²³ Additionally, strengthened rural (training) pathways are suggested to be critical to increasing the rural specialist workforce, including physicians.²³ Our data confirm that junior trainees in either metropolitan or rural settings have a similar professional experience, which is an important message in attracting more trainees to rural areas to improve physician workforce distribution.

Pre-registrar doctors in rural areas, with an intention to specialise as a physician, were most concerned with their level of support and supervision received from consultants. A potential implication of this is that it is a deterrent for pre-registrar physicians in pursuing their physician training and career in a rural area. Supervision, support, effective feedback and decent working conditions are training components every junior doctor should expect and experience while they are in the training process.²⁴ However, insufficient supervision constitutes considerable risks to patient care and the wellbeing of junior doctors.²⁵

In contrast, our study found other job aspects experienced by rural junior physicians were positive. Most notably, both pre-registrars and registrars training rurally were more likely than those training in metropolitan areas to agree that they had a good balance of personal and professional commitments, and less likely to have difficulty getting time off when necessary. In addition, fewer pre-registrars and registrars training rurally indicated their work hours were unpredictable and more indicated

they had sufficient personal study time. It is broadly recognised that navigating the demands of clinical placements and endeavouring to succeed in their medical studies and career progression are difficult for most junior doctors.^{26–28} Our results suggest that increased rural training pathways may improve the wellbeing for some of this cohort.

Women comprised 55–67% of the physician workforce up to 5 years after Fellowship, and among these cohorts, there was a gender balance by location. However, female physicians were a minority among consultants and, importantly, there was a significant underrepresentation of female consultants in rural areas. Although there are higher numbers of female junior physicians, it is unclear if they will continue to work rurally at similar rates to their male peers. Other broader studies have demonstrated the lower uptake of rural practice among women, which is highly concerning for workforce distribution, given the increased proportion of female graduating doctors.²⁹ Reasons may include: women's role in family responsibilities, particularly as they get older (balancing professional and family responsibilities); spouse issues (women tend to follow their spouses or partners); and the need for flexible practice opportunities which include part time and job sharing.^{30,31} Addressing issues relating to these factors could potentially improve take-up rates of female physician specialists in rural areas.

Our study also confirms the increased likelihood of rural practice among physicians who either had a rural childhood background or were trained overseas, consistent with other studies.^{8,9} However, increasing evidence suggests the importance of rural training immersion experiences to improving geographic distribution of the post-Fellowship workforce.^{32,33} Our data suggest that current rural experiences of physician trainees is, on the whole, positive, but it remains small with only 9% of observed physician registrars being in a rural area. Given that 30% of the Australian population lives in a rural area, and our finding that only 13% of physician consultants work in rural areas, a substantial expansion of this workforce and rural training opportunities is a natural goal where this is deemed feasible and appropriate to meet accreditation requirements, possibly requiring a more flexible approach than currently exists.

A significant strength of our study is the use of a national dataset (MABEL) which provides unique insights into the study of physicians across all career stages and geographic contexts. However, a number of limitations are noted, including that the MABEL survey's poorer between-wave retention rates of junior doctors meant that our analysis was cross-sectional, thus preventing evaluation of causality; it is possible that the professional satisfaction scale and items selected for our study might have missed some more relevant aspects of professional satisfaction; response bias in our study is possible but it has been previously considered for MABEL and been reported as being minor;¹⁷ and results were generated by pooling surveys conducted over 9 years, but this may not have been ideal, chiefly due to the different time points of respondents. Finally, use of the MMM scale (which is largely defined by town size) may have limited the study's sensitivity to other place-driven differences potentially of importance to the nature of work and experience of rural physicians. Such factors might include hospital size, local workforce size and regional density; however, this information was not available for our study.

Conclusion

Overall, our study indicates that the professional satisfaction of physicians largely does not differ between those training and

working in rural and metropolitan locations. More pre-registrar and registrar physicians training rurally agreed they had a balanced life of professional and non-professional commitments, which could be attractive to many junior doctors. Our evidence supports policies that target stronger rural training pathways, along with addressing concerns about the professional isolation and poorer support network for physicians working in rural areas, to improve the attraction and retention of rural practice for the physician workforce. Furthermore, ensuring that rural practice is professionally satisfying for more female physicians, who will be the majority of the next generation of the workforce, is critical to increasing the workforce distribution of physician consultants.

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Chapter 2

General physicians and paediatricians in rural Australia: the social construction of professional identity

Peter Hill¹, Megan Jennaway², Belinda O'Sullivan³

While Australia's medical workforce is comparable per capita with most high income economies, making projections regarding the specialist workforce for non-metropolitan areas remain a challenge.¹ In 2018, the Royal Australasian College of Physicians (RACP) profile of its 12 898 active Fellows (including all specialty groups) showed that 11 729 Fellows resided in major cities and only 12% were practising in rural centres — 1104 in inner regional centres, 407 in outer regional centres and 65 in remote communities (RACP member statistics and insights report, 2019 [unpublished]). In rural Queensland, more than one-third of these regional, rural and remote specialist physicians are general physicians and paediatricians, and the breadth of their training and expertise is essential to supporting clinical services in rural communities.² General physicians are internal medicine specialists who manage complex conditions across a wide spectrum of single and multiple organ diseases in inpatient and outpatient contexts, in metropolitan, rural and regional hospitals. They are seen as complementary to, rather than competitive with, subspecialists³ and reflect a broader valuing of "generalism" — focusing on holistic treatment of patients, in contrast to subspecialisation. This generalism has acted as a key to enhancing rural access across all specialties, with broad training enabling general physicians, paediatricians, surgeons, anaesthetists and psychiatrists, for example, to establish viable practices for rural populations of fewer than 50 000.²

In this chapter, our discussion straddles two discourses in international publications. The first of these is the documentation of increasing subspecialisation in medical specialties (not only internal medicine) and the consequent differentiation of generalism from that trend.³⁻⁶ The second is the systematic development of the rural generalist — a rural general practitioner specifically trained in emergency care and additional specialist skills to a level that enables them to practise unsupervised in hospital and community contexts.^{7,8} A framework has been developed for understanding rural and remote health as local spatial and social relations between professionals and rural residents interface with broader social and health system structures; it identifies six key concepts: geographic isolation, the rural locale, local health responses, broader health systems, social structures, and power.⁹

The priority for the Australian Government's rural health workforce strategy — supported by state governments, the Australian College of Rural and Remote Medicine and the Royal Australian College of General Practitioners — has been the development of the rural generalist. Articulation of the rural generalist professional identity arose on the back of industrial action, with GPs in rural hospitals seeking greater recognition and proportionate remuneration for their complex responsibilities.⁷ This has resulted in enhanced roles and remuneration, defined training pathways, qualifications and professional support models,

Abstract

Objective: To explore the construction of professional identity among general physicians and paediatricians working in non-metropolitan areas.

Design, setting and participants: In-depth qualitative interviews were conducted with general physicians and paediatricians, plus informants from specialist colleges, government agencies and academia who were involved in policy and programs for the training and recruitment of specialists in rural locations across three states and two territories. This research is part of the Training Pathways and Professional Support for Building a Rural Physician Workforce Study, 2018–19.

Main outcome measures: Individual and collective descriptors of professional identity.

Results: We interviewed 36 key informants. Professional identity for general physicians and paediatricians working in regional, rural and remote Australia is grounded in the breadth of their training, but qualified by location — geographic location, population served or specific location, where social and cultural context specifically shapes practice. General physicians and paediatricians were deeply engaged with their local community and its economic vulnerability, and they described the population size and dynamics of local economies as determinants of viable practice. They often complemented their practice with formal or informal training in areas of special interest, but balanced their practice against subspecialist availability, also dependent on demographics. While valuing their professional roles, they showed limited inclination for industrial organisation.

Conclusion: Despite limited consensus on identity descriptors, rural general physicians and paediatricians highly value generalism and their rural engagement. The structural and geographic bias that preferences urban areas will need to be addressed to further develop coordinated strategies for advanced training in rural contexts, for which collective identity is integral.

reversal of earlier prejudice against rural general practice, and increased numbers of trainees leading to reduced reliance on international medical graduates.^{7,8,10} The rural generalist is now central to Australia's Stronger Rural Health Strategy.¹¹

The focus of rural medical workforce policy is now increasingly shifting to regional specialist distribution. The Australian Government supported an expanded Integrated Rural Training Pipeline in 2015, increasing the rural residency requirements of the earlier Specialist Training Program, and introduced Regional Training Hubs in 2017 to grow rural specialist posts.¹⁰ However, progress has been slow. Correcting the current maldistribution of the medical specialist workforce is predicated on determinants that are both personal and professional. The development of social, educational and health services in regional centres makes them increasingly attractive as lifestyle choices, but issues of professional training, identity, influence and recognition by professional colleagues continue to affect decisions

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Regional, rural and remote experience of study participants, by profession

Profession	Metropolitan	Regional	Rural	Remote	Total
Physician	2	6	2	6	16
Paediatrician	2	3	0	2	7
Rural generalist	0	1	2	2	5
Specialist	1	1	0	0	2
Other health professional	0	0	1	0	1
Other	4	1	0	0	5
Total	9	12	5	10	36

about generalism and rural employment for general physicians and paediatricians.^{2,3}

With this background in mind, we aimed to explore how identity is constructed for general physicians and paediatricians working in regional, rural and remote Australia. It has clear implications for informing strategies for training, recruitment and professional support in rural Australia.

Methods

This study is a component of the Training Pathways and Professional Support for Building a Rural Physician Workforce Study,¹² led by the University of Queensland in partnership with the RACP and Queensland Rural Medical Service in 2018 and 2019. The Human Research Ethics Committee of the University of Queensland granted ethics approval for the study (2018001837).

Qualitative interviews were undertaken with study participants at sites across Queensland, South Australia, Victoria, the Australian Capital Territory and the Northern Territory, stratified to ensure regional, rural and remote representation of general physicians and paediatricians in particular. Other participants were purposively selected for their direct involvement in policy, practice and programs for the training and recruitment of specialists in rural locations, and added their own rural experience in some cases.

For physicians, paediatricians and rural generalists with regional, rural and remote experience, the interviews were semi-structured to enable organic elaboration of identity without specific prompting. Interviews commenced by inviting participants to reflect on how they introduce themselves professionally and why, exploring the responses that they encountered after introducing themselves professionally, and looking at the implications for training, professional trajectories and professional interactions. Similarly, interviews with RACP staff and officials and policy advisors were conducted using a structured question guide to inform this component and other components of the study (Supporting Information, Appendix 2.1), although results presented in this chapter rely primarily on the questions about identity.

With the exception of two online interviews, all interviews were conducted by one of us (PH) face to face at the participant's location. Interviews were audio-recorded and transcribed. An iterative thematic approach was applied to analyses.^{13,14} On completion of the interviews, one of us (PH) drafted a reflective overview of the comments made (Supporting Information, Appendix 2.2) to provide an initial narrative structure. One of us (MJ) then used the reflective overview and the interview questions to construct the initial themes and codes, and then analysed the interviews and coded segments of transcribed data for

meaning. We then grouped related codes into clusters and identified emergent themes, generating an expanded thematic structure, which we then refined to develop a coherent narrative (Supporting Information, Appendix 2.3).

One of us (PH) reviewed the expanded thematic analysis for consistency with the original overview, and one of us (BO'S) corroborated rural training and rural generalist references. Descriptors on quotes provide each participant's role, medical specialty and the location of their relevant professional experience. Potentially identifying details in quotes reported in this chapter have been edited for confidentiality.

Results

In total, we interviewed 36 study participants, of whom 12 were female. Nine, two and eight participants represented regional, rural and remote general physicians and paediatricians, respectively. The 17 other participants were purposively selected to represent institutions, and eight of them added their own rural experience. The professional roles and the current or previous rural experience of study participants are shown in the Box. Institutional representation included RACP Fellows (23 participants) and officials (four), staff from federal government agencies (five), staff from state government agencies (five), relevant academics (six), and other health professionals (three). The early career participants were rural and remote physicians and paediatricians (seven in total), while the 19 mid-career and 10 late career participants were mainly based in metropolitan and regional locations.

Defining general physician and paediatric practice

Participants acknowledged the importance of defining professional identity, but the descriptors offered were diverse and the constructions varied. Those directly responsible for developing the rural medical workforce recognised the strategic imperative for a defined nomenclature:

Everybody keeps talking about it. They're talking about general physicians, general surgeons, specialists, general GPs, nobody has got any definition to those types of practice ... How are we going to train people who we haven't defined? (Policy/Specialist/Regional)

General physicians and paediatricians in current rural practice described the benefits of greater professional diversity as being integral to their identity. All accepted the centrality of generalism, and the breadth it brought to specialist training, regardless of location. While they argued that general physicians were particularly relevant to rural places — where they managed complex cases that would be seen by multiple subspecialists in metropolitan centres — their breadth of training meant that general physicians remained “fit for purpose” across a range of health services and locations, particularly with rising multimorbidity in an ageing population:

[Generalism is a] concept that is being debated and discussed at many levels around the world at the moment in terms of [whether] our system [should] actually be encouraging more generalists rather than specialists and subspecialists. And how does that fit in industrial arrangements, how does that fit within professional bodies? ... The history over the last 50 years in our profession of medicine is one of increasing fragmentation

into smaller and smaller specialties and subspecialties. In a way, generalism is counter-cultural to that and saying for the sake of our society and our health system, we actually need people who can span silos rather than create them. (Policy/Rural Generalist/Metropolitan)

Importance of place

For general physicians and paediatricians practising in rural areas, the generalism that defined their professional orientation was usually compounded with a descriptor linked to location. Three patterns were evident:

- the rural classification of their practice (eg, rural general physician, remote paediatrician, regional physician working in [name of town]);
- the population they served (eg, remote Indigenous physician); and
- the specific location, implying that this social and cultural context shapes practice (eg, general paediatrician working in [name of town]).

This identification with place was an important qualifier for professional identification; for some (but not all) respondents, it was the most important qualifier. The diversity of individual expression of identity, bound by multiple dimensions, did not always allow easy categorisation:

I think of myself as a rural physician, but realistically, I'm a regional physician ... I'm a general physician in a regional hospital with a rural bent. (Physician/Regional)

Place encompassed lifestyle issues that enriched professional life — engagement with community, access to the bush, absence of the daily commute and urban demands, and richness of rural living: “I’m a general physician in [remote community] and I love my job and I have the best life” (Physician/Remote).

Economic ties to community

Their local engagement also reflected an awareness of the vulnerability of those communities to the fluctuations of agricultural or mining economies, and the consequent threats to financially viable specialist services:

Smaller population size means smaller service and smaller workforce. Inherently, smaller service, smaller workforce is more fragile ... Therefore, we put in place appropriate risk management strategies that ensure that it is fragile but flourishing. I think we need to do the same in regional physician and paediatric practices as well. (Policy/Regional)

Their professional futures were intimately tied to local demographics and economies. Committing to live in rural locations was considered to be aligned with driving local social and economic growth, and a sustainable professional workforce:

... that actually lives and works in the rural location. Because that's about more than just health. That's about economic development as well. And every time we have a fly-in fly-out, what we're basically doing is taking wealth out of the rural community and putting it in the city ... the other [non-general medicine] specialties have made an art form of pillaging rural communities for eastern suburbs' mortgages. And providing a great service to the individual patients but not providing a great service to the town in terms of its economic development ... the local shops and all of those things are

far less viable. And if you have a social determinants view of health, then you're actually harming. You're doing harm. (Physician/Rural).

But positive population growth can also have perverse outcomes. Growing demographics may now provide sufficient demand for subspecialist positions to be established in a regional centre, with the result that the general physician's or paediatrician's role may contract as the subspecialist presence increases. Population dynamics — and professional and public-private interactions — similarly determine the balance between increasing professional support (for on-call rosters and professional and recreational leave) and an income stream now vulnerable to competition.

Privileges of generalism and rural practice

Interviews with general physicians and paediatricians also pointed to the dynamic nature of their role, and the impact of its interface with other specialists, and GPs who work as rural generalists. Solutions to providing rural services comprise a patchwork of options. Telemedicine plays a limited but important role in extending subspecialist services, although the distant consultant “can't smell the ketones on the breath of a diabetic child” (Paediatrician/Regional). Fly-in fly-out services provide targeted expertise for specific cases, but it was noted that they leave gaps in acute care, do not relieve on-call demands, and may not allow sufficient time for collegial exchanges. Some interviewees responded to gaps in local services by developing complementary subspecialist expertise, either with the support of their employers or at their own cost. This could be formal dual training as in New South Wales' Dual Pathways Physician Training Program, providing “predominantly general physicians, but [also] dual trained specialist physicians who have a skillset, an interest, and a passion to work in regional hospitals” (Physician/Regional), or through self-directed learning or structured training:

So here, I've taken autism and diabetes ... whereas one of the other consultants has taken fetal alcohol spectrum disorder [and] one of the other consultants gets all the lung disease, and so while not being specialists in that area, you have general paediatricians with an interest in that area. (Paediatrician/Remote)

Overall, there was consensus that allowed clear differentiation of participants' roles from those of their metropolitan counterparts, celebrating both the strength of generalism and the richness of rural practice. Also, despite no commitment to a single descriptor, participants expressed confidence that the advantages were self-evident, and a bonus to trainees:

... the pathology that they see here, the kinds of medical conditions, they see real medicine. They thoroughly enjoy the Indigenous experience, and they may love being independent and having to take responsibility. (Physician/Remote)

Prejudice against generalism and rural practice

Within the interviews, there was an underlying defensiveness against the antipathy of subspecialist colleagues towards generalism, and rural practice in particular. In Queensland this was pejoratively referred to as going beyond “the bogan line” (anywhere north of Noosa), with the “latte line” defining the outer limits for desirable practice locations in Victoria.

The biggest issue though, I think, still is an unstated prejudice against the quality of people who choose to work in rural regions

... [What is needed is] change at that fundamental level of recognising that a person who chooses to be a generalist is just as bright, just as clever, and just as valuable as a person who is a subspecialist. (Physician/Rural)

Cautious collective identification

While professional identification carried with it an intensity of expression, there was little inclination towards a standardised nomenclature with greater “brand recognition”, no desire for a new professional grouping — “I’m not a splitter” (Physician/Remote) — and little appetite for industrial organisation beyond the “courage to go to the Medicare Benefits Schedule and make it clear that the remuneration for generalists needs to be equivalent to subspecialists” (Physician/Rural).

Rural general physicians are part of the Adult Medicine Division of the RACP, and the Internal Medicine Society of Australia and New Zealand acts as the specialist society for all general physicians, but without a formal rural structure. Rural general paediatricians similarly are part of the inclusive Paediatrics and Child Health Division, but may join the Australian Paediatric Society — “the voice of rural child health”.¹⁵ Participants reported that there are no committees within the RACP whose specific mandate is rural specialists, and that they had limited representation across the committee structures, but conceded that excessive travel time and difficulties securing professional cover constrained their potential participation. Early career participants observed that the accreditation of rural training positions is undertaken by committees dominated by metropolitan-based Fellows, with accreditation standards for training posts reflecting the values of tertiary subspecialist environments, and the potential richness of training in the rural context not readily recognised. For several participants, the lack of representation and agency in professional contexts was strongly expressed, but despite this, for many, there was a reluctance to identify in ways that could be perceived as divisive and counterproductive:

We still more strongly consider ourselves just physicians, and I don't think ... you ... want to too strongly differentiate it from the core groups, as ... [although] there are things which make us a little bit different, I think the things which are similar are actually greater. (Physician/Regional)

Discussion

We found a consensus among all participants that there is an imperative to enhance the training, recruitment and retention of regional, rural and remote general physicians and paediatricians, and a clear valuing of their distinct contribution, both to rural health and life, but also to professional medical practice. From the participants’ responses, there was a clear differentiation from metropolitan subspecialisation, readily describing what they were not, but the positive definition of rural general physician and paediatrician identity was more complex, more nuanced and personal.

Linkage between geographic isolation and local social, professional and health system interfaces was confirmed — both positively and negatively — in our interviews.⁹ For our participants, engagement with the rural locale (expressed as a sense of place) had shaped their professional identity and personal satisfaction. Functioning local health service delivery depends on a tight patchwork of collaborative services, but requires greater availability from rural specialists, with limited tolerance of absences,

compared with the larger pool of specialists in metropolitan centres. These rural practices may offer rich clinical diversity, but have limited supportive technical capacity.²

The same isolation that creates meaning in the locale for participants also challenges their sense of engagement and agency, and representation in the governance of their own college. Rural physicians and paediatricians are a small minority of Fellows (RACP member statistics and insights report, 2019 [unpublished]), and their participation in key committees and broader interactions with colleagues are constrained by travel distances, with higher time and opportunity costs. Identity and rural workforce disparities are linked intrinsically to power; our participants value their choices for rural practice and for generalism in internal medicine, but they are aware of the professional prejudices against those choices. The interface between health systems, social structures and power is a sign of a complex of overlapping issues, compounding rural–urban tensions (essentially geographic and social in nature) with the professional generalist–subspecialist divide. This has been described as “metrocentricism”, the structural bias that preferences urban areas, which privileges materialism, technical competence and authority at the expense of social interdependence and connection to place and nature.¹⁶

Despite the requirement of rural exposure for all trainees, training for general physicians and paediatricians intending to work in rural locations has many challenges: it is difficult to complete advanced training only in rural locations; limited subspecialty access through metropolitan hospitals is a bottleneck for trainee trajectories;¹⁷ and the technical constraints and workforce vulnerabilities of rural hospitals limit accreditation of much needed rural training positions.^{2,13,18}

This study has some limitations. First, the research was undertaken before the COVID-19 pandemic, which has had significant impacts on travel and communication, so our findings may not reflect current circumstances. Access to internet-based educational offerings has increased, and the RACP Congress has been web-based since 2020; RACP committees have been meeting online, which may facilitate greater rural participation. Second, the selection of participants, while targeted because of the relevance and complexity of their experience, cannot be considered representative. Third, the opinions expressed were diverse, and this diversity limits generalisability. However, a key strength of our study is that it offers insight into the complexity and flexibility of our participants’ identities.

For physicians and paediatricians, we did not identify an equivalent descriptor to the “rural generalist” that has arguably galvanised professional development for rural and remote GPs, but the participants expressed a clear consensus on the unique value of their roles, the systemic constraints under which they practise, and their limited agency in professional structures. They understand their dependence on the fortunes of their communities, and on the dynamic nature of demand. They are also acutely aware of the need to shape their own professional formation and evolution to meet the needs of rural Australia.

While there are initiatives that have the potential to make significant contributions to the rural physician workforce — such as the Specialist Training Program and Integrated Rural Training Pipeline,¹¹ state government training networks and pathways,⁸ isolated pilots,¹⁹ and dual training¹⁷ — the time is right for a coordinated strategy that commits the RACP and federal and state governments to a systematic model of rural-based training for general physicians and paediatricians that recognises

the breadth and scope of practice and its application to regional, rural and remote Australia. This may require greater resolution of their collective identity, and stronger professional organisation, if the general physician and paediatrician are to be central to the changes needed to meet the growing health needs of rural Australia.

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Supporting Information

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

Chapter 3

Sustainable rural physician training: leadership in a fragile environment

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The continuing maldistribution of the health workforce in regional and rural Australia is well documented^{1,2} and extends to the supply of specialist physicians and paediatricians. Although 28% of the Australian population resides in rural areas,³ only 13% of specialists undertake training there.⁴ Building a sustainable physician workforce in rural Australia is a high priority in terms of addressing major health inequities in rural and remote areas.⁵ Workforce sustainability relies on the recruitment and retention of supervisors and trainees. Understanding the enablers, barriers and vulnerabilities is necessary to sustain the current workforce and ensure that the next generation of rural physicians is well equipped to improve the health outcomes of rural Australians. There is a need to identify where improvements can be made to encourage an increased uptake in rural training, which is vital to addressing workforce maldistribution.

The influences on physician trainee supervision, long term availability of supervisors and quality of supervision in regional, rural and remote areas have received little direct research attention. Studies have examined the needs of trainees,^{6,7} but the experiences of supervisors who deliver training and the integration of trainee and supervisor experiences have rarely been explored. While we have clear information about the power of a rural background and rural training in supporting the attraction and retention of rural trainees,⁸⁻¹⁵ the entirety of the rural training experience is more complex. Similarly, while rural physicians and their metropolitan counterparts generally report similar levels of satisfaction with most aspects of their work (see Chapter 1 of this supplement), more subtle context-specific factors also need to be understood.

Various models and frameworks have been developed to describe and explain the complex, multidimensional and inter-linked factors that underpin the structure of the rural health workforce and drive its sustainability. These generally emphasise the importance of the fit between person and place, and include individual, social and organisational factors.⁹ The Whole-of-Person Retention Improvement Framework, developed by rural health workforce academic Catherine Cosgrave, has three domains:

- workplace/organisational (working in a friendly, supportive and inclusive workplace);
- role/career (having opportunities to build skills and access career pathways); and
- community/place (feeling settled in, being socially connected and having a sense of belonging).⁸

In considering rural workforce sustainability, Onnis refers to the continual supply of competent health professionals to provide health services in a manner appropriate to the rural and remote context.¹⁶ There needs to be a person–practice fit that is supported by a strong foundation of appropriate leadership and

Abstract

Objectives: To understand Royal Australasian College of Physicians (RACP) training contexts, including supervisor and trainee perspectives, and to identify contributors to the sustainability of training sites, including training quality.

Design, setting and participants: A cross-sectional mixed-methods design was used. A national sample of RACP trainees and Fellows completed online surveys. Survey respondents who indicated willingness to participate in interviews were purposively recruited to cover perspectives from a range of geographic, demographic and training context parameters.

Main outcome measures: Fellows' and trainees' work and life satisfaction, and their experiences of supervision and training, respectively, by geographic location.

Results: Fellows and trainees reported high levels of satisfaction, with one exception — inner regional Fellows reported lower satisfaction regarding opportunities to use their abilities. Not having a good support network was associated with lower satisfaction. Our qualitative findings indicate that a culture of undermining rural practice is prevalent and that good leadership at all levels is important to reduce negative impacts on supervisor and trainee availability, site accreditation and viability. Trainees described challenges in navigating training pathways, ensuring career development, and having the flexibility to meet family needs. The small number of Fellows in some sites poses challenges for supervisors and trainees and results in a blurring of roles; accreditation is an obstacle to provision of training at rural sites; and the overlap between service and training roles can be difficult for supervisors.

Conclusion: Our qualitative findings emphasise the distinctive nature of regional specialist training, which can make it a fragile environment. Leadership at all levels is critical to sustaining accreditation and support for supervisors and trainees.

management practices at local, jurisdictional and national levels, plus wider policies that have a positive impact.¹⁶

These frameworks and models tend to have a broad focus on the rural health workforce. Building the rural physician workforce relies on the ongoing availability of high quality regional and rural training sites that can meet trainee needs. Applying the workforce perspective to the sustainability of training sites suggests several key contributors, including: physician characteristics (an adequate supply of physicians who can provide quality supervision and are satisfied with their work and lifestyle); supervisory experiences (the ability to deliver the best possible training); and training site attributes.^{8,9}

Here, we apply this overarching framework to examine specific issues relevant to attracting and retaining a sustainable physician workforce in rural and regional areas of Australia. We aimed to understand Royal Australasian College of Physicians (RACP) training contexts and experiences from the perspectives of supervisor and trainee physicians and paediatricians, and to identify

contributors to the sustainability of training sites, including the quality of training provided. Our study is part of the larger Building the Rural Physician Workforce study, which seeks to provide an account of the challenges of building a sustainable rural specialist workforce in Australia and potential solutions.¹⁷

Methods

Survey respondents were doctors registered with the RACP forming two participant groups: Fellows and trainees (including basic and advanced trainees). Fellows and trainees worked in a variety of geographic locations across Australia, coded according to the Modified Monash Model (MMM) classification of remoteness.¹⁸ This classification defines metropolitan areas as MMM1, regional centres as MMM2 (towns with over 50 000 residents and areas within 20 km), and large rural towns to very remote communities as MMM3–7. Each Fellow and trainee was given a unique study number to enable their comments to be separately recorded.

A cross-sectional mixed-methods explanatory sequential design began with the quantitative component.¹⁹ Separate online surveys based on previous research were developed for Fellows and trainees.^{10,11,20,21} Questions covered demographics, training and career background, current work situation and location, career progression, experiences as a trainee or supervisor, attitudes toward rural career intentions, and future career plans. The Fellows' survey also included open-ended questions relating to experience as a supervisor. Both surveys are available online (Supporting Information, [Appendix 3.1](#) and [3.3](#)).

The RACP disseminated the Fellow and trainee surveys through invitations in emails to all Australian RACP members (13 166 Fellows and 6648 trainees), and was advertised in newsletters and on the College website. The surveys remained open for 3 weeks (October to November 2018). Reminders were not sent to non-responders. As an incentive, participants could opt to go into a random draw to receive one of several complimentary registrations for the annual RACP Congress. Standard descriptive statistics and frequency analysis were used to describe sample characteristics. Statistical significance was set at $P < 0.05$.

The qualitative component used a phenomenological approach to gain an understanding of the lived experiences of RACP training from the perspective of Fellows and trainees. Interviewees were recruited by stratified purposive sampling of survey respondents who indicated their willingness to participate in an interview by providing their email address on the survey. The resultant interview pool represented a mix of current geographic locations and levels of training and supervisory experience.

Interviews lasted 20–40 minutes, were conducted by videoconference or phone, were digitally recorded, and were transcribed and analysed. Interview questions are available online (Supporting Information, [Appendix 3.2](#) and [3.4](#)). One of us (FMB) conducted the interviews and initial coding. The constant comparison technique²² was used, whereby issues raised at earlier interviews informed subsequent interviews, thus contributing to the validity of the process and determining when saturation was achieved. Thematic analysis was used to identify patterns and themes. These were discussed and refined by the multidisciplinary research team and reviewed by stakeholders. Exemplar quotes are presented using the respondent's unique study number, which is listed after the data source (F = Fellow interview; T = trainee interview; S = Fellow survey free text) along with relevant contextual information (current location [MMM2–MMM7], trainee rural practice intent, training level).

The Consolidated Criteria for Reporting Qualitative Research²³ checklist was used. The University of Queensland Human Research Ethics Committee approved the study (2018001837). Every participant provided consent.

Results

The nature of a mixed-methods design encourages the use of triangulation that incorporates multiple methods and sources of data to develop a comprehensive understanding of phenomena.²⁴ Triangulation was achieved through details of our participant sample gathered from the surveys, combined with the perceptions of a sample of interviewed participants who provided a rich narrative of their existing challenges and potential solutions for building a sustainable rural specialist workforce in Australia.

Survey respondent characteristics

Using data provided by the RACP regarding the number of Fellows and trainees who were sent the email, the study sampled 5.4% of Australian RACP Fellows and 5.1% of Australian RACP trainees who had diverse experience and worked in a variety of locations.

Trainees

Of 320 respondents, 282 provided information about their location. Of these, 82% (231) worked in major cities, 12% (33) in large regional centres, and 6% (18) in rural towns and remote communities. Trainee demographics by training location are shown in Box 1. Most were women (60%) and did not have a rural upbringing (77%); their median age was 32 years (range, 24–56 years). Of the 273 who provided this information, 59% were advanced trainees. Regardless of training location, trainees reported high work satisfaction (mean score, 6.6 out of 10) and life satisfaction (mean score, 6.9 out of 10) (difference between geographic locations, $P > 0.05$).

Fellows

Of 716 respondents, 577 provided sufficient data for analysis. Of these, most Fellows (70%; 405) worked in major cities, and only 14% (81) worked in small regional or rural towns. The median age of Fellows was 53 years and 59% (339) were men. Most (85%; 490) had experience supervising and 62% (358) were currently supervising RACP trainees. In large regional centres, physicians had similar specialisations to those in metropolitan areas. In contrast, a higher proportion of physicians in MMM3–7 locations worked in general medicine and paediatrics with subspecialties compared with metropolitan physicians (39% *v* 21%), and a lower proportion worked in a subspecialty only compared with metropolitan physicians (35% *v* 63%).

Similar to trainees, Fellows' current work location did not affect levels of work satisfaction. An exception was Fellows in MMM2 locations, who reported lower satisfaction with opportunities to use their abilities ($P = 0.045$). Fellows who felt they did not have a good support network reported significantly lower levels of work satisfaction ($P = 0.002$).

Interview participant characteristics

Of the survey respondents, 33% of Fellows (236 of 716) and trainees (105 of 320) expressed interest in completing a follow-up interview. Twenty Fellows outside of major metropolitan areas were selected for an interview to ensure a mix by geographic location, age and gender. Fellow interview participants

1 Demographics of Royal Australasian College of Physicians Fellowship trainees who responded to the survey, by training location*

	All (n = 320) [†]	MMM1 (n = 231) [‡]	MMM2 (n = 33) [‡]	MMM3-7 (n = 18) [‡]
Female	192 (60.0%)	144 (62.3%)	19 (57.6%)	10 (55.6%)
Age				
20–29 years	84 (26.3%)	64 (27.7%)	10 (30.3%)	2 (11.1%)
30–39 years	197 (61.8%)	148 (64.1%)	18 (54.6%)	11 (61.1%)
40–49 years	31 (9.7%)	16 (6.9%)	4 (12.1%)	4 (22.2%)
50+ years	7 (2.2%)	3 (1.3%)	1 (3.0%)	1 (5.6%)
No rural background	245 (76.8%)	180 (77.9%)	23 (69.7%)	10 (55.6%)
Advanced trainee	161/273 (59.0%)	126/219 (57.5%)	18/29 (62.1%)	12/18 (66.7%)

MMM = Modified Monash Model; MMM1 = metropolitan areas; MMM2 = regional centres (towns with over 50 000 residents and areas within 20 km); MMM3–7 = large rural towns to very remote communities. * No significant difference was found between groups across any variable (one-way analysis of variance). † All survey respondents. ‡ Respondents who provided complete data for analysis in the survey. ◆

were located in various inner regional, outer regional and remote locations, and all states and territories except Tasmania and the Australian Capital Territory were represented (Box 2). There was an even distribution by gender and age, and 17 of the 20 interviewees reported having had experience as a College supervisor.

Similarly, the 14 selected trainee interview participants were located in all states and territories except Western Australia and the ACT. Half of the trainee interviewees were training in a major city location. There was an even distribution by gender; most trainees were in the 30–39-years age group (9 of 14), were completing advanced training (11 of 14), did not have a rural background (10 of 14), and had trained in a rural area for more than 12 months (10 of 14); and half intended to work rurally (7 of 14).

Qualitative findings

Expanding on the framework of Onnis,¹⁶ our findings support a distinctive model for building a sustainable rural specialist workforce (Box 3). In this model, the culture of undermining of rural practice is a contextual feature providing a backdrop for the rural training setting. Our findings indicate that it had negative influences on both supervisor and trainee availability and on site accreditation. In contrast, strong leadership was found to be crucial. It is a modifiable factor capable of overcoming the negative context and capitalising on rural training opportunities which are fundamental to supporting the components of high quality training. It was felt that strong leadership in rural and remote settings would help sites to flourish by improving attractiveness to supervisors and trainees and by supporting accreditation. Finally, because of their small size and location, our findings indicate that rural and remote settings are often fragile environments for physician training and are vulnerable to loss of personnel and leadership changes. Compared with more robust training environments in urban areas, the loss of one supervisor or a change in leadership could jeopardise the whole training program at a site.

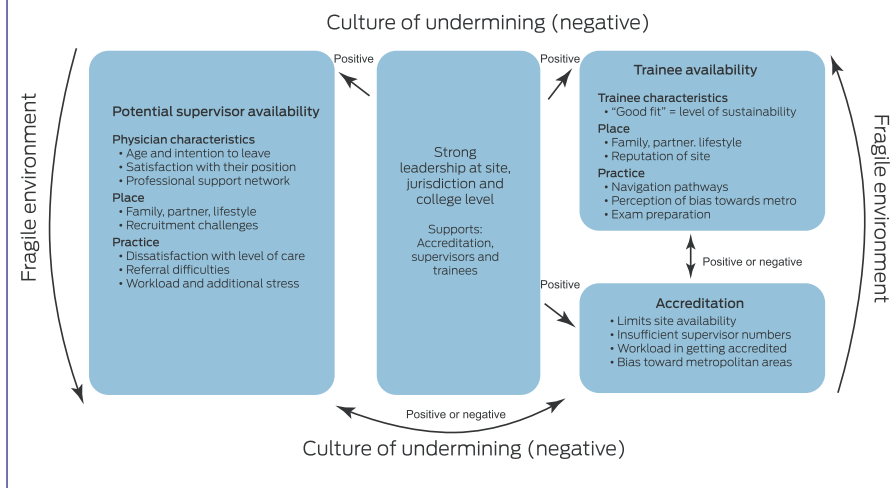
The qualitative findings that we report here are structured to reflect the components of the model in Box 3. Beginning with the predominant components of a culture of undermining and strong leadership, most of the results describe perceptions of supervision in terms of supervisor availability, willingness to supervise, and trainee availability. Insights regarding the accreditation component of the model round out our findings. We have grouped our findings under four major headings: culture of undermining; leadership is paramount; supervision is complex; and accreditation.

2 Characteristics of 20 Fellows and 14 trainees of the Royal Australasian College of Physicians who were interviewed

Characteristic	Fellows (n = 20)	Trainees (n = 14)
Current location		
Major city	0	7 (Vic, 3; NSW, 3; Qld, 1)
Inner regional	9 (NSW, 5; Vic, 3; Qld, 1)	4 (Qld, 2; Tas, 2)
Outer regional	6 (NT, 3; Qld, 1; SA, 1; WA, 1)	1 (Qld)
Remote	5 (WA, 3; NT, 2)	2 (NT)
Gender		
Male	12	8
Female	8	6
Age		
20–29 years	0	3
30–39 years	4	9
40–49 years	4	2
50–59 years	6	0
60–69 years	3	0
70+ years	3	0
Supervisor experience	17	–
No rural background	–	10
Training level		
Basic	–	3
Advanced	–	11
Rural training		
None	–	1
< 12 months	–	3
> 12 months	–	10
Intent to work rurally		
High	–	7
Medium	–	3
Low	–	4

NSW = New South Wales; NT = Northern Territory; Qld = Queensland; SA = South Australia; Tas = Tasmania; Vic = Victoria; WA = Western Australia. ◆

3 Model for sustainable specialist physician training in rural and outer regional areas, taking into account the fragility of these training environments and the culture of undermining rural practice



Culture of undermining

Interviews revealed many examples of attitudes and practices that consistently devalued the work of rural physicians, influenced trainee recruitment negatively, and applied metro-centric criteria when assessing training sites for accreditation.

When you have visiting specialists, come down once or whenever, who don't support the local services there is sort of a culture of undermining ... You don't go down there and just tell the patients, "The local surgeons are garbage, and you need to go and have all your tests done in [major city]." (F08-MMM3, female)

When I took [the Rural Bonded Scholarship in Medical School], I had people that were horrified that I'd taken that ... I can remember that you had to get the contract looked over by a lawyer [and] he said basically, don't do it, it's not worth it, and you'll never find anybody in the country that shares your, basically your intellect, or your things that you're interested in. (F04-MMM3, female)

The pull of subspecialty training and the perception that training is superior in metropolitan areas undermines both training opportunities and the ability to attract physicians to rural and regional areas.

The system works a bit against us, and it's very difficult to get that altered ... the way the training works, in effect, works against people ever coming back ... We, as I say, would have had hundreds of registrars through ... they're all positive about it, and yet not one of those returned ... I think most of the specialty training is run by people that have, you know, enormous departments, and they're looking for people to train in their specialty. (F18-MMM4, male)

Leadership is paramount

Leadership was an overarching theme that affected the sustainability of training in rural and regional areas. Strong and positive leadership enhanced trainees' experiences and the ability of physicians and supervisors to ensure quality care and an appealing training environment. Our findings recognised leadership in individuals who supervise or perhaps advocate for their trainees, as well as the higher level administration that provides the context for supervision opportunities.

Some Fellows expressed pride in rural and remote settings that had a reputation for high quality teaching and research and were highly sought after by trainees. Smaller numbers of Fellows in rural and regional settings may result in reduced opportunities for distributed leadership and leadership development. Especially in these circumstances, a strong leadership culture is paramount, and can affect the training environment as well as quality of care and job satisfaction.

Leadership sets the tone. You can say there's a certain tone that's set by the people at the head of the department. (T03-low intent-advanced, male)

The head of department role, that sort of wise head that can tap someone on the shoulder and say, "Hey listen that's not really in everyone's interests", is really hard to develop because even simply things like supervising

training ... there's no real talent development or personal development in that medical leadership stuff ... it allows some behaviour to drift a bit. (F10-MMM3, male)

Deficits in leadership can contribute to organisational cultures that are not conducive to optimal training. One Fellow described their relatively recent trainee experiences.

I loved my experience as a medical student, and I had really good examples of what regional medicine could look like, fantastic mentors. Then, when I was a registrar ... I really, we all had quite a bad time ... the supervision was poor, and the infighting between units and the poor relationships was a bad example ... if we're going to attract good trainees, it's got to be, you know, a really fantastic experience where, not only are they highly supported, but they are also given examples of ... work with good physicians ... (F04-MMM3, female)

In addition, poor leadership can lead to reputational damage and significantly reduce the attractiveness of a training location for trainees.

So the word goes around as far as people would think twice or thrice before coming to [outer regional location] if they hear that there is bullying happening ... you need only one or two people who are at the receiving end ... (F11-MMM2, male)

One trainee viewed each rural training site as "a fragile environment". This term is a reminder of the delicate balance of factors that contribute to the entirety of the training experience and the overall sustainability of a rural site. Adept leadership is critical because even small shifts can have a major impact on this balance. Fewer personnel, which is common in rural training environments, increases the vulnerability of trainees.

The number of trainees that they employ is very important too ... that can make a massive difference to the amount of after-hours work that you do and how overworked and burnt out you might become — it can be a very fragile environment. (T09-high intent-advanced, male)

Conversely, providing advanced trainees with leadership opportunities can enhance their experience and the quality of training for more junior doctors.

... and it's also about registrar leadership. It's just so fabulous to have advanced trainees there who can act as a leadership group for the basic trainees and for the [postgraduate year 3 medical officers] and the [junior medical officers], and it gives the registrars ... the residents anyway, a sense that there is a future in going to the city, finishing some training and then coming back to the country. (F10-MMM3, male)

There have been a couple [of advanced trainees] that have been excellent. They've just sort of taken on board the idea that yes, they are actually a leader in the organisation and they can give a lot of direction to the more junior staff ... (F09-MMM3, female)

Supervision is complex

Fellows' satisfaction with their position

In Chapter 1 of this supplement, McGrail and colleagues show that rural physicians have equivalent satisfaction to their metropolitan counterparts across most career aspects after accounting for differences in their demographic and practice characteristics. However, our survey found that RACP Fellows in MMM3–7 locations were less likely to agree that they have a good support network in their location than physicians located in metropolitan areas ($P = 0.014$).

Physicians highlighted numerous advantages of rural practice and the accompanying lifestyle. Collegiality, the concept of a “medical village”, the diversity and complexity of work, and a sense of making a difference by contributing directly to the community and addressing areas of high need were consistently raised as positives.

Physician interviewees spoke passionately about working in a cross-cultural and cross-disciplinary environment where the level of need for medical services was high, but also noted that the “exciting medicine” came with challenges:

The job is amazing ... [but] I think you can feel a bit frustrated by the limited resources ... working in an area of such high needs with such limited resources can be really frustrating and a recipe for burnout ... the biggest limitation is about being away from extended family. (F19-MMM2, female)

The work is so interesting, people are excited to come here because they know they'll learn new things and they'll see things that they haven't seen before, that they'll have autonomy. And the barriers are distance, expense to move, being so far away from extended family. I think they're definitely the big barriers. (F14-MMM6, female)

Recruitment challenges: family is a prime consideration

Attracting rural Fellows and trainees requires consideration of their families, including flexible work and support for accommodation and spouse employment. In comparison to their urban counterparts, Fellows from MMM3–7 locations were significantly less likely to agree that there were good employment opportunities for their partners ($P = 0.003$). They were also less likely to agree that there was an adequate choice of schools in their location ($P = 0.005$). From the perspective of Fellows, regardless of their location, isolation from colleagues was the most commonly cited challenge in recruiting both physicians and trainees in rural areas. A higher proportion of Fellows from MMM2–7 locations cited a negative perception of non-metropolitan hospital and health services as a challenge in recruiting physicians ($P < 0.001$) and trainees ($P < 0.001$) to rural areas.

The pull of metropolitan practice was considered strong in the competition for good trainees. Comments were made about how messages conveyed to trainees may dissuade “the best and the brightest” from considering rural practice:

the people who are running big, big metropolitan hospital departments want to have the best and the brightest as close as possible, and have subtle ways of communicating the idea that this is the best place for them to be ... it's subtle things. Not overt, but they certainly are very effective ... (F06-MMM2, male)

However, with the relevant supports, a rural or regional training post could be quite attractive to both trainees and physicians, as this trainee described:

I don't know that other people are aware that great training hospitals are struggling to fill their jobs ... instead of getting locums, we should actively recruit permanent staff. (T05-high intent-advanced, female)

Limited number of potential supervisors contributes to a fragile environment

Small numbers of Fellows made some sites unviable for supervision and others fragile if a Fellow were to leave. Different models of supervision would be required for these to be viable as training sites, even though some of them have valuable training opportunities.

Several Fellows pointed to missed opportunities for training. Potentially rich training opportunities may remain untapped owing to insufficient critical mass of supervisors or infrastructure:

There's no training happening at all ... in anywhere in [remote area] to my knowledge, there might be the occasional registrar that comes ... there are almighty possibilities with learning ... I think there needs to be critical positions set up, to do training, and that's not easy because of supervision capacity and logistics such as accommodation. (F05-MMM7, male)

Dissatisfaction with level of patient care available and referral difficulties

The survey showed that physicians working in MMM3–7 locations were significantly less satisfied with patient access to high level care than those working in MMM1 locations ($P < 0.001$). Free-text responses to a question about barriers to high level care in their setting identified waiting lists, financial constraints, logistics and transportation as issues in addition to distance for respondents in MMM3–7 locations. A few described challenges with getting their patients seen by specialists in tertiary centres. To get around this, one described developing a network of clinicians who he could work with to arrange care for patients, thus bypassing “obstruction from hospital administrators”. This respondent also referred to challenges in getting good communication about patients back from other clinicians. Another respondent described a perceived lack of respect for the regional and rural sector, and the importance of developing personal relationships with consultants in urban areas to facilitate access to higher level care.

It has taken 10 years and a deliberate cultivation of referral pathways that are based largely on personal relationships to expedite access to complex care in tertiary centres, and the cultural disrespect for anything west of the Sandstone curtain (the Blue Mountains) is fully entrenched even in very junior trainees. (F295, MMM3–7, survey)

Willingness to supervise

Reasons that Fellows gave for not supervising included: imminent retirement, personal time constraints, workload associated with supervision, and being in private practice. Most physician survey respondents who were not currently supervising indicated a preference to supervise as they thought that supervising trainees was likely to improve their work satisfaction. Respondents from all geographic areas agreed that recognition by their employer of their time spent supervising would make supervision easier. Those from areas outside major cities also described the importance of employer support to make supervisor training more accessible, providing sustainable trainee environments (rather than relying on individuals to create these), and providing support for training and health services. This includes a requirement for a functioning service with support for training and supervision. Formalising the relationship between metropolitan and rural areas in the form of training networks was another suggestion put forward (noting that these exist in some jurisdictions).

The service has to work before high quality training can occur ... There has to be political, administrative, infrastructure support beyond enthusiastic energetic physicians trying to go it alone and end up getting burnt out or just burnt. (F442, MMM1, survey)

Comments made by the rural physicians reflected issues that may be common to supervisors regardless of their geographic location. For example, while supervision was generally viewed as an enjoyable and important part of their work and a way of keeping up to date, it could also be difficult and even intimidating. Positive supervisor experiences were associated with appropriately targeted training, and with supervision being valued at the institution or hospital level. Interviewees cited clear benefits of well designed formal training in supervision, but most added that tailored rural-specific training was also necessary. Rural training hubs were viewed positively in this regard. As well as supporting skills development, they were seen as potentially “taking the burden off” supervisors.

The extent to which supervisors perceived their role as recognised and valued by their institutions varied. Some described hospitals that were “doing it right” and where training was flourishing, while others described settings where supervision was not prioritised and was essentially relegated to the realm of unpaid work:

Obviously resources are important, but.. it needs the willingness of the people in post, and the providers of the service, so the administrators and all that, of the hospital, to see the service being more than just about looking after patients. (F16-MMM6, male)

Supervision in smaller settings

Advantages and disadvantages of supervision in smaller settings were described. Observing trainees in smaller groups and social settings was an advantage:

You get to know how they're coping socially, and you can observe their interpersonal skills a lot better than you can in a big body of registrars. (F10-MMM3, male)

Close working relationships in relatively closed settings may enable early identification of trainees who might be having difficulty, but can also leave supervisors with added responsibility for managing difficulties when they arise. Differentiating the

roles of supervisor and boss, and maintaining the right balance between mentoring and support, were prominent challenges. As one trainee put it:

A lot of people find it really difficult to address [problems that might arise] in [the] much smaller isolated environment that we have here because the consultants who are supervising us are also the people that need to provide references for us for future jobs. (T09-high intent-advanced, male)

The size of the training unit may have important bearing on the issues experienced. One supervisor noted that trainees in rural and remote settings inevitably received input from fewer physicians compared with those in a teaching hospital, and that this could have negative consequences:

They do not have the same support in training for exams that the guys coming from the major hospitals do. They have a 3-month term. But when they go back, they'll be with 10, 20 other trainees beating each other up every day of the week and really stimulating learning and reading and performing well before an examiner, which the guys who are full-timers in [remote area] just don't pull it off. There just isn't the staffing to allow it to happen. (F01-MMM6, male)

Trainee recruitment and impact on supervision

Effectively recruiting trainees relied on finding people who wanted to live at the site and were excited by the training opportunities: a good person–place fit. Supervisors described having to manage a range of difficulties that were influenced by factors intrinsic to the trainee and extrinsic factors associated with the training environment. Intrinsic factors included being separated from family, and a view that rural placement and general medicine is a distraction from specialist training. Such factors could result in trainees being disengaged and not wanting to be there. Trainees who were not a good fit for the site produced challenges for supervisors. Several supervisors noted that their site was sometimes a last choice for those who could not find a position elsewhere. In their view, this was unlikely to be the basis for successful recruitment to rural practice.

And so I find that creates challenges, particularly here and particularly if you get a trainee that does not want to be away from the major centre. And so, you've got sort of a conflict between their sort of poor performance, for want of a better term, due to the fact that they just do not want to be here? (F09-MMM3, female)

Many trainees were used to fixable problems and were not prepared for the complex social issues that surrounded many medical problems in remote locations. Pastoral care was a large component of the role for some supervisors. A need for greater diversity of support and input, to assist both supervisors and trainees if the need arose, was also identified:

And I think that there is something in the trainee-supervisor relationship that's a bit awkward ... I think especially in the remote areas, where we're working really closely with colleagues. And so sometimes it might be harder to speak up if the trainee is struggling with anything ... because there's so few of us and we're working so close together. So I guess one thing to think about, probably more broadly, is how our trainees can get more diversity of supervision so that there's just more input. (F12-MMM6, male)

The quality of the training experience can greatly influence trainees' desires to work in rural settings. Entering a rural placement was sometimes “a lot for trainees to take on” as they faced

the challenges of addressing high levels of community need with low levels of resources.

So it was very early in my clinical training, and I got quite a lot of experience and exposure, and quite a lot of mentorship as well ... It sort of got me off on a good foot. ... This is my second year, now, in [outer regional area]. And my expectation coming here was that I would maybe get a bit more exposure, be a bit more extended, and kind of see some interesting cases. And certainly, that's definitely met my expectations, to the point where it's something I want to pursue a little bit more. (T11-high intent-basic, male)

In contrast, negative training experiences — firsthand or by reputation — can have a deep and lasting impact.

Because all of that negative experience, they would not return to work in the same area and they would tell everyone who they met and rotated with, "Avoid that hospital, it's a disaster". (T14-low intent-basic, female)

Trainees sharing knowledge across vastly different settings and considering how to apply such knowledge in locations where resources and access to services are severely limited was described as a win-win situation by one supervisor:

These registrars come with great up-to-date knowledge generated from all the teaching they've had in the tertiary units, and they can be the new blood and the new knowledge that comes to these remote areas. Not to tell the remote units that they're a bunch of stuck-in-the-dark-ages out-of-date physicians, no, but to challenge them, to bring new ideas ... (F16-MMM6, male)

Navigating training pathways

Trainees recounted some variation, including across specialties, in their experiences of finding the right training place. For some this had been challenging.

It's always nerve-racking because you don't necessarily know what you're ... you don't know what you're missing out on ... You don't necessarily know the people, you don't necessarily know the opportunities ... because that's not necessarily widely advertised. (T14-low intent-basic, female)

Several trainee interviewees indicated that more information and greater promotional efforts were beneficial, and that variation existed across different trainee pathways.

There is good information on the College website about the specialists training program if you go and look for it, but I think it would help if they were able to tell or identify trainees and be able to tell them more about the position they're in and what the program is and how it should be utilised, and what they should expect of the employers as well, being in that position. (T09-high intent-advanced, male)

Uncertainty about rotations may undermine possibilities for developing and enhancing training initiatives and this may affect sustainability. Having trainees on short rotations and the likelihood that a trainee position could be withdrawn can create instability in available workforce. In such circumstances, longer trainee rotations would be a better option for some sites:

If we had somebody all the time, it would be great. We would be able to organise something, I think essentially whatever they

wanted, but because they just come for a few months, you can't really set up too much in the way of structures for them because they're not going to be here again in a couple of months. (F09-MMM3, female)

Increasing the attractiveness of sites to trainees

Comments relating to the need for innovation that provides for greater flexibility were among the strongest made by trainees. For both male and female trainees, specific attention needed to be given to the availability of family-friendly options:

And what I found really difficult for myself was negotiating flexible training options ... when I had my son. (T08-high intent-advanced, female)

Perception of disadvantage or systematic bias

Perceptions of disadvantage associated with rural training were voiced strongly by trainees. These related to day-to-day aspects of training, supervision, and professional support as well as longer term consequences for future career opportunities. Professional isolation and "disappearing from the system" were prominent concerns:

I think there's definite advantages to working in regional places, but I guess making sure that nothing's lost in the training experience by going regional is important. And I think a lot of people who I've talked to, who are from metro centres, feel like there's the ... a worry about missing out on educational activities, and missing out on that social support. (T08-high intent-advanced, female)

Exam preparation was an issue of particular concern. Despite acknowledgement that a rural training setting offered greater opportunity to engage in hands-on procedures without "fighting other trainees for them", as may be the case in large hospitals, rural locations were often seen as placing trainees at a distinct disadvantage as they prepared for exams:

What I was assessed on, on the day, were not a sophisticated application of standard skills, but a recognition of "unicorn cases" of rare, weird, wonderful conditions that I had seen because the [major city] hospital had a list of patients with those conditions that they called and introduced us to in the months leading up to that examination ... it would be very hard to pass that exam having trained in a regional centre. (T12-low intent-basic, male)

Accreditation

Potential training sites must apply to the RACP to have their site accredited, and an inability to have a site accredited means that training at that site cannot be accredited. Fellow survey responses provided insights into experiences with the site accreditation process. Across all geographic locations, some respondents had failed to obtain accreditation for their training site. Others reported the process as clunky and time-consuming, in contrast to those who described it as straightforward. Negative comments included concerns about metro-centric approaches and a perceived lack of understanding of what rural, regional and outer metropolitan sites offered. The usefulness of a site visit by representatives of accreditation committees was raised. However, this did not always happen, particularly in more remote areas. Misunderstanding about what rural sites offered and use of a metro-centric lens by accrediting committees were also raised in interviews. In addition, some trainees expressed a similar view:

Some of the requirements can, from this side of the fence, seem perhaps a little arbitrary ... I appreciate there's a need for consistency, but I think, particularly where a rural health service is not able to meet all of those criteria, I think that it would be helpful for the College to really consider what's the greater good? Is it more important to have a site that is able to attract and retain trainees, and contribute to redistributing some of this really lopsided workforce? Or is it more important, for example, to say that you must have a paediatric surgeon available? (T01-high intent-advanced, female)

Trainee interviewees stressed the extent to which higher level policy decisions, such as training site accreditation, affected people's everyday lives. Trainees felt frustrated when policies or requirements that had major impacts on their life decisions appeared to them to be somewhat arbitrary. Many made the point that such decisions often coincided with critical life stages relating to partners or family formation:

It seems arbitrary why a place is accredited for 6 and not 12 months – the choice was to stay and have 6 months not counted, or uproot the children after 6 months. It makes a difference to people. (T13-medium intent-advanced, female)

Some Fellows noted that the main problems with accreditation arose from their workplaces, rather than from the College. These included the regional unit not always being able to guarantee a trainee, plus a lack of support for training, a lack of infrastructure for education and obstruction at a local level. This highlights the importance of leadership at a local level to support physician training. A survey respondent described the need to reduce trainees' workload to obtain accreditation.

Issues are around the health service's willingness to prioritise or honour in any way their training commitments, which is complicated by executive churn. The accreditation criteria themselves helped me drive change and create a training network. What was hard was muscling up to our admin. (F521, MMM2, survey)

Discussion

Building on the work of Cosgrave⁸ and Onnis,¹⁶ our results enabled us to create a comprehensive model for building and sustaining a rural physician workforce (Box 3). They show that rich learning opportunities exist for trainee physicians in rural health services but there is considerable variation across training sites. Rural supervisors are energised by their training opportunities but face specific challenges.

A feature of this study is that it tackles rural specialist workforce challenges from the perspective of what is required to facilitate the ongoing availability of high quality training sites. This brings into focus the detrimental effects of rigid accreditation processes and the role of a pervasive culture of undermining, and provides detailed evidence on the characteristics of rural supervision and the fundamental role of strong leadership across stakeholders.

Rural Fellows are generally very positive about their work and about supervising. Their positive views about rural work and lifestyle contrast with negative perceptions that are widely held by their non-rural counterparts, which manifest in a culture of undermining. The stigma and negative perceptions that often surround rural practice are well documented in Australia and elsewhere^{25,26} As a result, we need a shift from deficit-based language and perspectives of rural practice to recognition of the

rewards and opportunities of rural practice.²⁷ Negative stereotypes of rural communities can discourage rural careers and highlight undesirable aspects of rural practice.²⁵ Current discourse associated with rural practice has perpetuated a view of work that is less skilled and more monotonous, but our evidence suggests that it is diverse and challenging.

Our results also show that inflexible training policies and apparently arbitrary accreditation decisions affect family life with potentially major impacts on trainee career decisions. This contributes to various challenges that rural trainees face — obtaining information about career progression, accessing professional support, and maintaining connection with professional networks. Evidence suggests that rural physician trainees require improved professional and personal support, plus better links to ongoing career pathways.

While accreditation changes may require leadership at medical college or Australian Medical Council levels, adept leadership at health service levels is also required in situations where small changes in staffing can have large consequences. Health service and jurisdictional leadership may also be required to prioritise rural supervision — for example, by including additional targeted interpersonal and professional skills training for supervision in settings with relatively few peers.

An earlier report from the Rural Physicians: Training and Professional Support study made a number of recommendations to meet these challenges, including for changes to accreditation, supervision and leadership.¹⁷ In terms of accreditation, the recommendations were that rural physicians should be involved in setting accreditation policies, more secure accreditation should be provided at rural sites, and training places that match the full capacity of rural sites should be offered. In terms of supervision, recommendations included developing regionalised learning networks across regional and metropolitan sites, enabling research opportunities for supervisors and trainees in regional areas, supporting flexible training options, and basing physician training in regional areas with rotations to larger sites as needed. In terms of leadership, recommendations included recognition of the work of rural supervisors by health services, provision of support for clinical and referral networks, and recognition of rural physicians within the specialist college.

The RACP's curriculum renewal program includes a more integrated approach to training. It is likely to go some way to addressing challenges that may be associated with the existing need for trainees to find their own training pathways, which currently seems to be an ad hoc process for some trainees. A more systematic, structured and information-driven approach is likely to be welcomed by trainees.

Our study has strengths and limitations. Its strengths include the fact that it builds on previous studies to provide a detailed account of physician training experiences from the perspectives of both Fellows and trainees. Also, combining quantitative and qualitative data collection helped to provide detailed insights. In addition, our study was conducted by a multidisciplinary research team in collaboration with stakeholders, which enabled verification of findings.

The main limitation of our study is the possibility of response bias and selection bias in our sample. The response rate for the survey was low (about 5%), so those who did respond may have had a particular interest in our research question, and rural Fellows were over-represented in the survey sample. Our findings may, therefore, not reflect the views of the broader RACP Fellow and trainee communities.

Conclusion

By focusing on the rural physician specialist perspective of a sustainable workforce, our study has identified features that are important for developing sustainable training sites. These include addressing the challenges wrought by the fragility of rural training sites and the pervasive culture of undermining. It also highlights the fundamental role of strong, coordinated leadership that promotes the application of less rigid accreditation processes to facilitate rurally anchored training networks, which support trainee access and progress through rural specialist training and supervisor capacity and willingness to supervise. Such actions and leadership have the potential to address the challenges of the current, metro-centric specialist training environment and capitalise on the strengths of rural training for building a rural physician workforce.

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Supporting Information

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

Chapter 4

Principles to guide training and professional support for a sustainable rural specialist physician workforce

Remo Ostini¹ , Belinda O'Sullivan¹, Sarah Strasser²

Improving access to health care for rural communities is an enduring, international priority.¹ This is of strong interest in Australia, not only for those directly affected by poor access but also in terms of policies which can expand the range of relevant specialists living and working in Australia's regions, to address the health care needs of people living in rural Australia.² To facilitate this agenda, the Building a Rural Physician Workforce (BRPW) project was designed to improve understanding of the training and professional support factors that will help to build a sustainable rural specialist physician and paediatrician workforce.³ The project was structured around five work teams investigating different rural physician training and workforce issues. We use the term "rural" to refer to any non-metropolitan areas.

In this chapter, we describe how we examined the findings of the other components of the BRPW project to determine whether there were broad concepts or principles identified which could guide the development of practical requirements for building and maintaining the rural physician workforce.

A set of principles has the potential to bring together thinking from a range of stakeholders to inform and guide policy and program development. Principles feature prominently in publications on medical education, which show how they have been used to respond to the challenges of medical education for rural practice, how they underpin rural education, and how they have been applied in that setting, including to promote education in inter-professional care.⁴⁻⁷ Such publications also show how principles can underpin and guide successful vertical integration of medical education in rural areas.^{8,9} Principles have also been invoked to guide the delivery of rural continuing professional development.¹⁰

The Joint Principles of the Patient-Centered Medical Home have influenced primary care health reform proposals in the United States.¹¹ These principles were built on the classic conceptual modelling work of Starfield¹² and McWhinney.¹³ The utility of these principles was heightened by their underpinning academic rigour and a level of abstraction that left space for the profession to operationalise them.^{12,14} This is imperative where heterogeneity of provider context, service and place, as in rural settings, demands different applications.¹⁵

Few contemporary, evidence-based principles relate to rural specialist workforce training and development. The technical infrastructure and critical mass needed for rural specialty training and practice, and the different stakeholders involved, demand specific attention, distinct from what can be drawn from publications on primary care principles.¹⁶

Methods

We drew on the Delphi approach of cycles of systematic, interactive data collection and stimulus generation to codesign our principles.¹⁷ This enabled a wide range of expert participation,

Abstract

Objective: To draw on research conducted in the Building a Rural Physician Workforce project, the first national study on rural specialist physicians, to define a set of principles applicable to guiding training and professional support action.

Design: We used elements of the Delphi approach for systematic data collection and codesign, and applied a hybrid participatory action planning approach to achieve consensus on a set of principles.

Results: Eight interconnected foundational principles built around rural regions and rural people were identified: FP1, grow your own "connected to" place; FP2, select trainees invested in rural practice; FP3, ground training in community need; FP4, rural immersion — not exposure; FP5, optimise and invest in general medicine; FP6, include service and academic learning components; FP7, join up the steps in rural training; and FP8, plan sustainable specialist roles.

Conclusion: These eight principles can guide training and professional support to build a sustainable rural physician workforce. Application of the principles, and coordinated action by stakeholders and the responsible organisations, are needed at national, state and local levels to achieve a sustainable rural physician workforce.

without domination of any one voice, with early engagement and discussion of project research findings and implications using open discourse and inclusivity. We used a less formal process for achieving consensus, where hybrid and iterative data collection ensued via a mix of summaries, interviews and meetings, more in line with participatory action research methods.¹⁸

Participants

The entire BRPW project research team was included for their in-depth understanding of their findings and the potential implications. Other participants were purposefully selected based on their experience and knowledge of the design and implementation of rural specialist policies, programs and practices in Australia. Most also had broader specialist knowledge of rural medicine covering medical school and junior doctor pathways. Meetings and interviews were conducted at University of Queensland Faculty of Medicine premises and via teleconferencing. The process of developing principles involved three phases over the course of 3 months.

Phase 1: Idea generation and fine-tuning BRPW research to gather evidence for principles

Phase 1 involved two research team meetings and two stakeholder meetings over the course of a month whereby the BRPW research teams presented emerging results for discussion. In the discussions, concepts that addressed underlying principles of physician workforce development in a rural context were drawn out and recorded for compilation. This often occurred when

discussions turned to underlying commonalities or a comparison of results across BRPW project groups. The four BRPW research team leaders were also individually interviewed to gain their perspectives on the implications of their group's research work at its conclusion.

Phase 2: Finalising the research outputs and drafting the principles

Next, a snapshot of the BRPW research findings and their implications was developed and shared with the wider participant group in two group meetings and four additional one-on-one interviews, where participants were asked to evaluate the findings and discuss potential implications. These meetings and interviews were recorded. One participant contributed a draft framework for training and professional support, based on an interpretation of the findings. From the meetings, interviews and draft framework, a set of draft principles was developed and refined with reference to wider publications and policy documents on models of sustainable rural specialist practice.¹⁹⁻²⁷

Phase 3: Finalising the principles

Once the principles were refined, a roundtable meeting of all participants was organised, with written feedback sought from those who could not attend. At the meeting, the overall research findings were recounted to ensure clarity and depth of understanding. The refined principles were then presented, and participants provided critical feedback about the principles and their implications for implementation, either during the meeting or later by email. The feedback was integrated into a set of finalised "foundational principles" conceptualised within the broad stakeholder environment. It was agreed that these principles represented the evidence and stakeholder understanding.

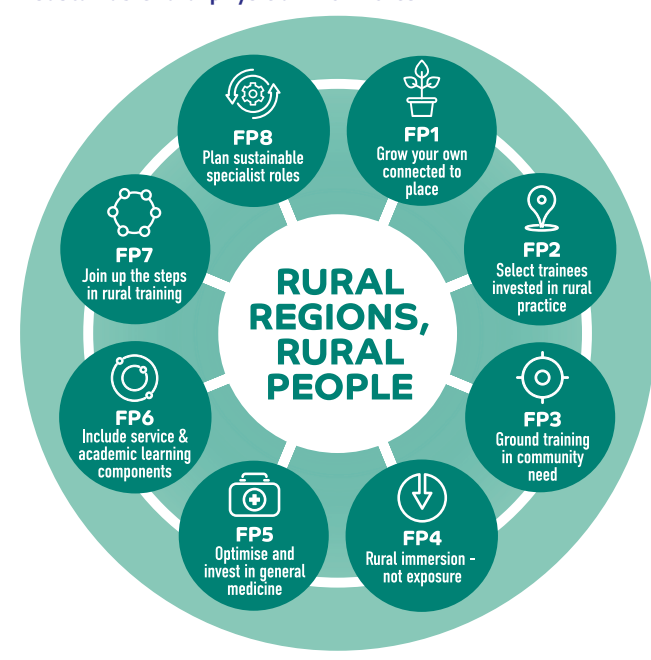
Results

In addition to 14 participants from the BRPW project research team, we included: eight medical workforce policy and program decision makers from the Australian Government Department of Health and Queensland Country Practice at Queensland Health; five national and Queensland representatives of the Royal Australasian College of Physicians; four staff from the University of Queensland Faculty of Medicine and Regional Training Hubs; and four researchers and clinicians with specific expertise in rural specialist workforce. In total, 35 participants were involved, of whom 10 were physicians.

Eight interconnected foundational principles, which revolved around the needs of rural regions and rural people, were identified (Box 1; Box 2). Participants intended for these to be aspirational, responsive to future workforce needs, and designed to underpin practical efforts specific to growing a sustainable rural physician workforce. The principles were considered interdependent and more effective when comprehensively implemented. In addition, they echo the principles of flexible training, rural training for rural practice, and general medicine that underpin the National Rural Generalist Pathway.²⁵

Many stakeholders were identified as having roles and responsibilities in rural specialist physician workforce, spanning multiple foundational principles, either directly (leading action) or indirectly (through collaborative action) (Box 3). Enacting the principles will involve stakeholders fulfilling their roles and applying the levers at their disposal. In practice, this process may vary across geographic areas as jurisdictional capacity and local needs inform and animate the implementation process.

1 Foundational principles to guide the development of a sustainable rural physician workforce



Discussion

Postgraduate specialist training is a complex process embedded in a system of antecedents and influences. What began as an ad hoc process has become more formalised in recent years, but formalisation has been driven in siloed ways that rarely take into account rural areas or the health needs of rural people. One consequence is that rural-focused training opportunities and support requirements are expected to fit with a mainstream, metropolitan hospital model. This fails to recognise the social and economic benefits of place-based approaches, which are the result of tailored policy and programs that address particular contexts.^{29,30} Place-based training, based on agreed principles, can instead provide a training experience that is meaningful due to its specific design and intent.

The foundational principles and the workforce environment that they are posited within add a means of engaging disparate stakeholders around a unified platform of action, codesigned with stakeholders, that is community centred. Many of the foundational principles are consistent with other rural medical contexts, including the centrality of general medicine in rural practice (FP5);³¹⁻³⁴ the importance of rural immersion (FP4) rather than shorter training attachments;^{4,6,8,9,35-37} the interprofessional training and practice context (FP8);^{7,34,38-40} and the dynamic complexity of rural specialist work to meet community demand (FP3).^{4,6,8,41-43} Together, these principles provide a roadmap for tailoring physician workforce development to each rural community, thereby breaking down barriers to action by stakeholders working collaboratively.

Stakeholders are accountable for operationalising the foundational principles associated with their roles, focused on working together for rural regions and rural people's health, by building a self-replenishing workforce with local expertise that improves access to health care. To achieve this, stakeholders' efforts need to focus on shared goals, centred on the needs of rural communities rather than on professional interests, internal processes and organisation-specific goals. This

2 Descriptions of eight foundational principles for building a sustainable rural physician workforce

Principle	Description
FP1: Grow your own “connected to” place	Rural specialist physicians and trainees need a professional identity which encompasses the distinctive scope of practice and learning of a medical professional working in a rural setting. This comes from practising and learning in the locations where physicians intend to practise, and making professional connections in these locations, which cannot occur under an urban-centric training model. Rural physician training also catalyses other rural connections that trainees may have built in rural childhood, during rural undergraduate training or from a rural spouse or partner. Gaining wider experience relevant to the particular rural health needs of a community may also include access to alternative training settings, including other rural or urban health services, in flexible timeframes. This could include distributed or remote supervision options.
FP2: Select trainees invested in rural practice	Trainee selection is essential to produce specialist physicians and paediatricians who are likely to take up rural practice. Rural workforce is strengthened by trainee selection practices that recognise and support doctors who have rural experience, or other demonstrated interest or commitment to practising medicine in rural settings.
FP3: Ground training in community need	Rural regions and rural people need physicians with general medicine skills as a foundation complemented by additional advanced skills that may be community specific. As such, rural physician practice needs to be recognised as dynamic in response to community need. Physicians should be able to add to or change their advanced skills if the needs of a community change, or they move to a different community. This requires training and up-skilling opportunities accessible to rural physicians coupled with credentialing for providing these services, which provides flexibility to work in a range of locations. ²¹
FP4: Rural immersion — not exposure	Rural immersion is much more than rural “exposure”. Positive training and supervision experiences involve personal and professional elements, connected to the social and cultural aspects of a community. This requires longer rural experiences, in health care settings and the community, supported by appropriate employment contracts. Positive experiences also rely on supportive training and practice environments, encompassing practice sites, professional colleges and local communities. Short-term rotations or exposures, such as 3-month rotations to rural areas, do not support connection or exploration of the scope of learning opportunities. This is exacerbated by a lack of rural location-specific curriculum and mission.
FP5: Optimise and invest in general medicine	Training in rural locations provides access to a broad range of presentations in a generalist health care team and greater responsibility due to fewer points of delegation. This is an excellent foundation not only for rural medical training but also for highly specialised training available in other locations, and it builds excellence in medical practice by encouraging trainees in formative stages to understand the spectrum of patient care. Highly specialised care is not cost-effective or comprehensive for most of the health care needs of the Australian population, including for older people with multimorbidity. In rural areas, it greatly escalates patient costs and travel requirements, and creates a risk of unsafe, dislocated care.
FP6: Include service and academic learning components	All trainees in rural areas need access to supervised training that includes health service work and academic opportunities, which inform rural service quality improvement. Rural teaching and research capabilities play a role in rural medical workforce recruitment. Support for training, service and research may require considerable flexibility in training program design, including viable rosters and time for study and research. ²¹ This flexibility requires engagement by stakeholder leadership, the development of supportive governance structures, institutional accountability, and rural research capacity.
FP7: Join up the steps in rural training	The long physician training journey involves many stakeholders operating at different times and at critical junctures. ²⁸ Owing to the number of stakeholders, their organisational interests and the amount of time that medical training requires, there is a high risk that medical career stages are not coordinated, with the greatest implications for sustaining a rural workforce. Stakeholder groups have different interests, goals and needs that must be met. Competing purposes can result in a misalignment of good faith efforts to support trainees and supervisors. Strong accountability by stakeholders, through leadership and governance, is needed to align individual organisational efforts, and thereby bridge gaps and align steps in rural training.
FP8: Plan sustainable specialist roles	A responsive rural medical career pathway requires robust, future-focused workforce policy, planning and design. This requires design focused on local health systems, community needs, and dynamic work environments. It includes training a rural workforce in local, outreach and telehealth work, and enabling rural physicians to supervise trainees. Rural medical practice requires broadly connected clinical networks across locations. These will support: training, upskilling and supervision for specialists with fewer co-located peers; working across medical specialties, including general practice; and interprofessional modes of practice.

requires a shift from organisational and institutional agendas to place-based collaborative ways of working. A place-based approach is facilitated when Australia’s rural clinical schools and regional training hubs, state government hospital and health service regions, and specialist training catchments work together.

A range of levers are at hand for stakeholders to use when applying these principles, which include:

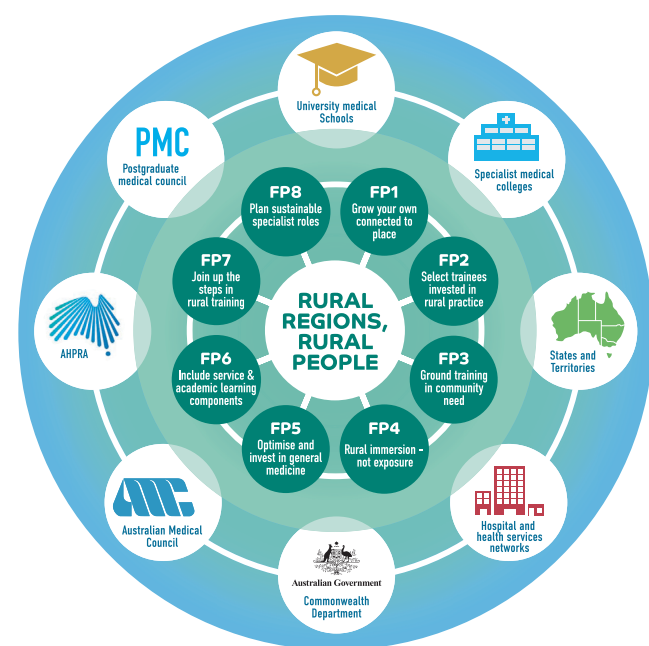
- the Rural Health Multidisciplinary Training Program;
- the Specialist Training Program;
- Australian Health Practitioner Regulation Agency and Australian Medical Council standards;
- specialist medical college selection criteria and quotas, selection panel inclusion, curriculum and assessment standards, and rural representation on specialist committees;
- revision of medical workforce policies to promote general medicine;

- state-based intern allocation systems and rural training programs, and rural training coordinator positions;
- funding and accreditation of training sites;
- regional hospital and health service network planning and models of care; and
- remuneration and recognition.

The stakeholders shown in Box 3 have these levers under their control and should agree on their application in line with the foundational principles to improve rural community health care.

The principles are based on sound research and operate at a generalised level that allows all actors to understand and interpret their actions in concert with others. In this way, the principles express explicit values (and reduce assumptions), which is an important contribution to promoting consensus regarding roles and responsibilities for coordinated action. While this work is specifically associated with rural specialist physicians, the values may also apply to other rural specialty fields.

3 Institutions involved in operationalising and implementing the eight foundational principles



AHPRA = Australian Health Practitioner Regulation Agency.

Furthermore, while identified here in a rural context, the centrality of general medicine speaks directly to the practice of medicine overall.¹³ A growing number of people with multiple comorbidities, an ageing population, and increasing patient expectations are driving the need for doctors to have broader, not narrower, skillsets.²¹ In this way, rural training and workforce development has great potential to rebalance Australia's current oversupply of subspecialists.

Our study had some limitations. First, time constraints associated with the BRPW project meant that it was not possible to

engage with rural community and advocacy groups in the development of the principles. Second, time constraints also restricted our capacity to develop a more detailed plan to enact the principles in concert with stakeholders. This will be an important next step.

Multiple barriers to rural specialist physician training currently exist, and are compounded by a lack of evidence on the distinctive features of rural physician specialist training and practice, including where those features can be training program strengths. Through a consensus-based process, we developed eight principles which can be summarised as: training and professional support drivers that focus on achieving community goals; support for the practice of general medicine; and engagement of the coordinated efforts of multiple stakeholders for effective policy, planning and practice. We believe that more focused attention from stakeholders — on the value of general and subspecialist medicine optimised in rural settings — and the application of agreed principles through coordinated action will greatly contribute to a sustainable rural physician workforce.

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