

## Solving Australia's rural medical workforce shortage

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### Introduction

A longstanding but complex health policy issue has been to ensure people in rural Australia have good access to medical care. In the context of a reported national oversupply of doctors, policies to redistribute doctors to areas of undersupply are of particular relevance. This policy brief summarises key evidence from the MABEL survey in relation to supporting the rural medical workforce. Our evidence shows that a range of factors throughout the medical training pipeline and the course of doctors' work influences the supply of doctors in rural areas.

### Why is rural medical workforce supply important?

State and Commonwealth governments and related agencies are heavily invested in ensuring good access to medical care in rural and remote Australia. Despite emerging concerns about an overall oversupply of Australian doctors (following the expansion of medical school places), undersupply in many rural areas remains a persistent and complex issue.

Rural communities in both regional centres and smaller towns remain heavily reliant on the services of international

### Key findings

The goal of policy should be to:

- Continue to select medical students with rural backgrounds and facilitate rural immersion options in undergraduate training
- Enhance the number of trainees in general practice and other relevant generalist specialties to increase their uptake of rural practice as a career
- Ensure more vocational training is undertaken in rural settings, particularly for GPs and specialties that are most needed in these locations
- Further develop workforce capacity, including accessible locum support and professional development, to stimulate the uptake of rural practice and subsequent retention
- Enhance the ability of doctors in rural communities to continue practising and undertake advanced skills training which specifically meets community and practitioner needs
- Target financial incentives more carefully according to a town's population size, geographical remoteness and local need
- Develop regional specialist service hubs, including planning and implementation of outreach services, to reinforce and boost local service delivery
- Continue, though with likely decreasing reliance, the 10-year moratorium and 457 visas as policy levers for filling vacancies in communities of workforce shortage.



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medical graduates (IMGs). Remote areas continue to experience the lowest supply and overall growth in the level of doctors.<sup>(1)</sup> However, the Department of Health recently signalled plans to remove medical occupations from the Skilled Occupation List, and provide incentives for workforce agencies to recruit domestically trained graduates rather than those from overseas. The hope is that the increased numbers of locally trained doctors will meet rural service demand, premised on the idea that sufficient numbers of these doctors will take up such jobs. Yet the increasing sub-specialisation trend among recent graduates is likely to perpetually limit their suitability for rural work. Concurrently the government is undertaking a review of medical school places, developing improved training pipelines including a national rural generalist pathway, and reviewing the effectiveness of rural workforce distribution policies.<sup>(2)</sup>

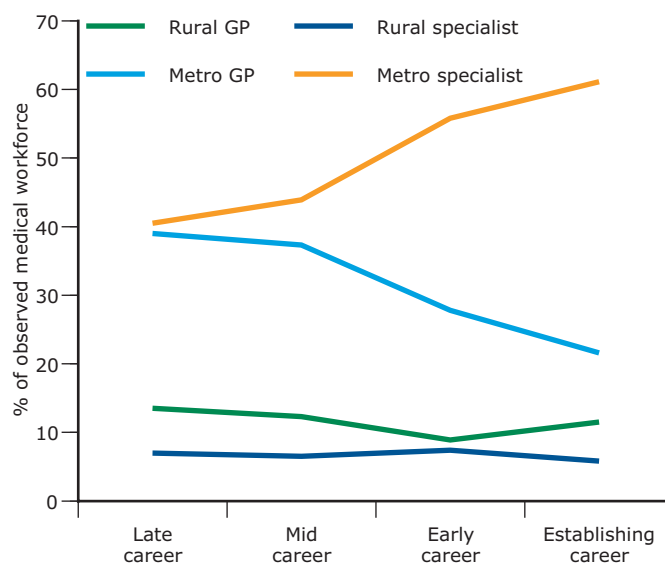
To inform this review of rural workforce supply and distribution it is timely to summarise the research that has been produced from the Centre for Research Excellence (CRE) in Medical Workforce Dynamics since 2008. The CRE receives responses from the annual MABEL survey of around 10,000 Australian doctors. The study uniquely covers doctors' prevocational and early vocational training stages as well as their middle and later career stages, with its longitudinal panel research design enabling individuals to be followed over time to provide a rigorous and consistent source of data for informing policy directions and integrated approaches.

## Key findings from MABEL

### The supply and distribution of GPs

- Selecting medical students with a rural childhood background increases the supply of rural GPs by a factor of 2.5,<sup>(3)</sup> however, most medical students have a metropolitan background. Our data confirms that the majority (63 per cent) of Australian-trained Medical Graduates (AMGs) working as rural GPs are of metropolitan origin.<sup>(4)</sup> Engaging metropolitan-origin medical students in rural training will continue to be important for building rural GP workforce capacity.
- Whilst undergraduate medical school places have more than doubled since 2001, proportionally fewer recent medical graduates are training and practising as GPs: 30–35 per cent of cohorts from the 1990s and 2000s, versus about 50 per cent of the 1970s and 1980s cohorts (Figure 1).<sup>(4)</sup> In addition, recent graduates are overall less likely to become rural GPs (odds ratios = 0.75). Ensuring

**Figure 1: Overall supply of Australia's locally-trained medical workforce by career stage cohort**



adequate rural GP supply from AMGs requires, in the first instance, that sufficient numbers of AMGs are choosing general practice.

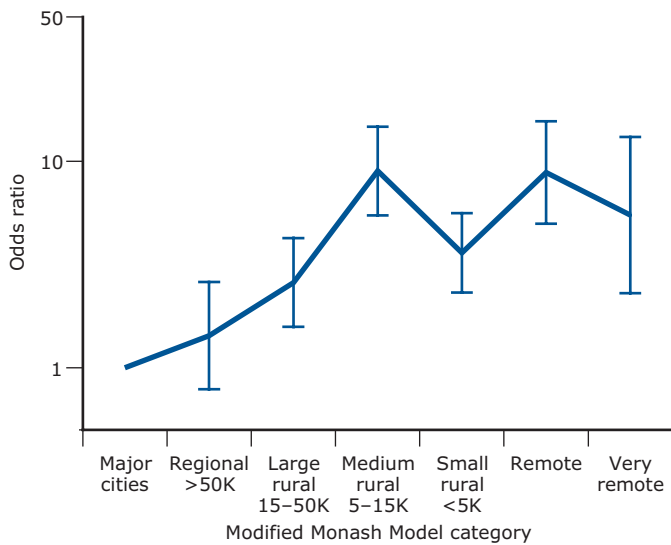
- GP vocational training of Australian-trained doctors in rural settings is associated with subsequent rural practice that is sustained for at least five years.<sup>(5)</sup> This effect is independent of, and strengthened by, doctors' rural childhood origin, demonstrating the importance of policies that support rural training pathways and medical student selection.
- Sixty-five per cent of GPs would not move location, no matter what financial incentives were offered.<sup>(6)</sup> For the 'average' GP to consider taking up the least attractive rural jobs (involving longer working hours, frequent on-call, working in small inland communities with limited social interactions and difficulty getting locums) a financial incentive equal to around 130 per cent current annual earnings is required, valued at \$237,000 per annum in 2013.<sup>(6)</sup> This is much higher than existing financial incentives. Improving supply in these locations is likely to require higher incentives than those currently available, or changes to service delivery models to improve workload, on-call and availability of locums, or a combination of these strategies.
- GP proceduralists work longer hours (by 8–18 per cent) than non-proceduralists and have higher on-call



## About the MABEL Survey

Funded by the NHMRC, the MABEL survey is unique in Australia and internationally as it has been collecting detailed information on doctors' working lives since 2008. We have received around 88,000 survey responses from almost 20,000 doctors who are followed up every year. Responses are broadly representative of the population of doctors in Australia. Each year we receive responses from around 2,000 doctors working outside major cities. Survey questions ask about work–life balance, job satisfaction, family circumstances, earnings, and work characteristics.

**Figure 2: Odds of being a GP obstetrician (vertical lines are 95% confidence intervals)**



demands, though their professional satisfaction remains high. The likelihood of working as a GP proceduralist in anaesthetics, obstetrics or emergency medicine increases with geographical remoteness and as community population size decreases, although this plateaus in medium-sized towns (with populations of 5,000–15,000) (Figure 2).<sup>(7)</sup> Policies supporting improved workloads could increase the attractiveness of procedural careers for younger rural GPs.

### The role of specialists in rural areas

- Amongst non-GP specialists, those working in general medicine or general surgery are often the mainstay of rural specialist supply, particularly in small regional centres. However, they comprise only a small proportion of all specialists. Increasing support for their training and development in rural areas is critical for ensuring adequate rural supply, particularly in the face of increasing sub-specialisation.<sup>(8, 9)</sup>
- For some specialties relevant to large regional centres, such as psychiatry, paediatrics and endocrinology, supply is significantly lower than in metropolitan centres. There needs to be more attention, in both the public and private sectors, on training and attracting these types of specialists to regional areas.<sup>(8, 9)</sup>
- Rural specialist outreach services add important capacity to resident rural specialist services.<sup>(10)</sup> Approximately 19 per cent of specialists participate in rural or remote outreach, with most travelling to a single location. Metropolitan-based specialists are more likely to provide outreach to remote Australia (probably because of their better access to commercial air travel), whereas rural private specialists are more likely to visit nearby communities.<sup>(11, 12)</sup> Subsidies, either via the national Rural Health Outreach Fund or state-based and other types of subsidy, are associated with increased specialist outreach services into remote areas.<sup>(13)</sup>

- Unlike the situation with GPs, participation in specialist outreach is not associated with a specialist having a rural childhood background. Metropolitan specialists report that they undertake such work to maintain a connection to a region, however, the nature of these connections is yet to be explored. This potentially relates to a connection the specialist developed during rural training, rural internships or locum work, or via family.<sup>(14)</sup>
- Rural outreach is relatively well sustained by specialists, but early career specialists, female and private-only specialists are less likely to provide these services long term.<sup>(15)</sup>

### Mobility and retention of rural GPs

- MABEL data were critical to the development of the Modified Monash Model, which is a classification scheme for geographical remoteness and town size founded upon four professional indicators and two non-professional indicators known to be associated with GP recruitment and retention.<sup>(16)</sup> The Modified Monash Model was adopted by the Australian government in 2015 as a tool for distributing GP recruitment and retention incentives. It has since been strongly endorsed by rural communities.
- Measurement of rural GP location changes reveals annual mobility rates of about 5 per cent for doctors in regional centres, 10 per cent for those in smaller rural towns (populations of less than 15,000) and 18 per cent for very remote areas.<sup>(17)</sup> This evidence supports retention policies which weight incentives by both geographical remoteness and town size.
- Higher GP mobility is independently associated with younger age, working in a location for less than three years, being an overseas-trained doctor, and working as a salaried or contracted employee.<sup>(17)</sup> In contrast, retention is higher amongst rural GPs who are principals or associates of a practice, undertake hospital or procedural work, and work in less remote locations.<sup>(18)</sup> This evidence supports the need for multifaceted, flexible retention policies. Policies which specifically support GPs to acquire and maintain advanced skills, including procedural and emergency skills, are also likely to support rural retention.
- Rural GPs have a preference for good locum-relief support programs over financial loadings for improving their retention. This type of incentive is likely to be especially important for retaining GPs in the 'least attractive' rural locations.<sup>(19)</sup>

### Work activity and satisfaction of rural doctors

- Australia's rural medical doctors generally work more hours and do more on-call than metropolitan doctors, but most are very satisfied with their work, in line with their metropolitan colleagues.
- Hours of work are substantially longer for GPs in smaller rural towns<sup>(20)</sup> and for procedural GPs,<sup>(7)</sup> primarily due to the need for additional work in public hospitals. The on-call burden also substantially increases with decreasing



population size, which is likely to be an issue as doctors increasingly seek a better work–life balance.

- Similar results were found for rural specialists with respect to on-call demands, although rural specialists work only marginally more hours (up to two) than their metropolitan counterparts. The research suggests that a stronger concern is the degree to which specialists in rural areas can access continuing professional development.<sup>(8)</sup>
- Rurally-mandated, overseas-trained GPs are substantially less satisfied than non-mandated GPs.<sup>(21)</sup> Improved support, especially with regard to aspects of professional autonomy, career pathways and social isolation could enhance their overall satisfaction and wellbeing and thereby reduce rural turnover.
- Improved rural recruitment could be achieved by more widely disseminating evidence showing that a career in rural medicine (whether as a GP or specialist) is rewarding and satisfying,<sup>(22)</sup> despite the challenges.

## Conclusions

With a looming oversupply of metropolitan-based doctors, effective policies to persuade more Australian medical graduates to work in rural areas can now be informed by a growing body of empirical evidence. The unique, national-level evidence from the MABEL CRE has direct relevance

to the federal government's recently announced review of medical workforce distribution. Our research provides a rationale for the government's support of rural immersion to attract students into rural generalist careers, for increasing the availability of regional vocational training, and for enhancing rural generalist training pathways. It goes further than the current main focus on training interventions, by identifying a strong need for greater support to help mitigate heavy workloads and improve professional development opportunities in rural settings, for both GPs and other specialists. Finally, it provides specific evidence which informs how best to incentivise rural practice and improve the stability of services, by demonstrating how workforce activity and mobility are affected by both geographical remoteness and population size. The findings support the need for integrated government policies, including incremental changes only to current IMG and other rural moratorium policies.

The CRE plans further integrated research that will focus on: new and emerging models of care and their relevance in rural settings; pipelines and pathways to rural practice, including specialty choice; and the distribution patterns of overseas-trained doctors and foreign graduates of Australian medical schools. Such evidence will be essential in informing development of rural medical workforce policy and for monitoring and evaluating policy effectiveness.

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