

Building a rural and remote health workforce: an overview of effective interventions

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Australia is the 13th largest economy in the world¹ and in 2021 ranked 55th in the world by population with 25.4 million people.^{2,3} Twenty-eight per cent of Australians (7 million) live in rural and remote areas.⁴ The World Health Organization (WHO) recognises 51–67% of the world's rural populations have limited access to essential health services and that “rural populations tend to be poorer and less healthy”.⁵ This is true in Australia; rural and remote populations have a higher burden of disease⁴ and generally have higher levels of socio-economic disadvantage when compared with metropolitan populations.⁶ The median age at death for Australian men in very remote areas is 14 years younger than that of their metropolitan compatriots; for women that difference is 19 years.⁴ The rate of potentially avoidable deaths for women in very remote areas is three times as high as that for women in major cities; and for men, the rate of potentially avoidable deaths is two times as high in very remote areas as that in major cities.⁴ These statistics depict rural and remote areas as poorly served by primary health care in capacity, performance and equity.⁷ For registered health professions in Australia, the number of employed full-time equivalent clinicians decreases on a per head of population basis the more remote the location is.⁸ In short, where the health need is greatest, there is the lowest supply of health professionals.

Such disparity is a worldwide phenomenon. The WHO states that a “central element limiting access is the deficiency in numbers and mix of trained motivated health workers required to provide effective health service coverage in rural and remote areas”, and that this deficiency “is a result of variability in the adoption of primary health care models in countries and the challenge in developing, attracting, recruiting and retaining health workers in rural and remote areas”.⁵ Over the past 30 years, successive Australian Governments have implemented policies to address these challenges and disparities. By iterative development, responding to evidence produced within the Rural Health Multidisciplinary Training (RHMT) program, the Australian Government policy now has a particular focus on place-based education and training with strong investment in end-to-end rural training pipelines. This *MJA* supplement focuses on policy interventions at the tertiary education phase of health professionals' training pipeline. It is at this point where interventions are proving to increase the number of rural and remote based health professionals.

The first rural clinical school (RCS) was established in 1992 at the Monash University Centre for Rural Health in Traralgon, Victoria,⁹ there are now 20 RCSs across Australia.¹⁰ There has also been significant investment to establish 17 university departments of rural health (UDRHs) since the first UDRH was established in Broken Hill in 1996.^{10,11} In 2016, the RCS and UDRH programs consolidated under the RHMT program,¹² so it is time to reflect on learnings; what works to create a rural health workforce, what is most effective, and what factors diminish the rural and remote destination of graduates. This supplement brings together lessons from the RHMT program, reflections on training pathways back to Country, an international perspective on producing a

fit-for-purpose rural and remote health workforce, and case studies of the impact on individual careers of RHMT investment.

McGrail and colleagues of the Federation of Rural Australian Medical Educators synthesise existing literature in their perspective on the creation of a pathway to more rural doctors.¹³ They highlight the impact of different initiatives to increase the rural workforce, while confirming each initiative in isolation falls short of what is needed. They propose that a comprehensive approach, underpinned by a social mission, is needed within medical education. This includes an increased profile of rural medicine in curricula, strengthened rural immersive training, and an overarching focus on developing rural identity among medical graduates.

In their narrative review, Walsh and colleagues from the Australian Rural Health Education Network find that UDRHs have significantly contributed to the body of work regarding nursing and allied health student placements in rural Australia over the past decade.¹⁴ Their research highlights the role of UDRHs, and their rural academics, in developing relevant evidence related to placements and education in rural Australia that contribute to rural health workforce recruitment.

The growth in health professional education in regional and rural Australia has been paralleled by developing research capacity, and an emerging research community is addressing rural community needs. Alston and colleagues of the Rural Health and Medical Research Network (the Spinifex Network) write there is “clear evidence that the network of UDRHs across Australia has substantially increased the focus on rural and remote health issues, and provided considerable support to rural and remote health care workers”.¹⁵ They recognise that UDRHs drive research that meets the needs of their community and support health care services to deliver evidence-based health care. However, they caution that only 2.4% of National Health and Medical Research Council funding in 2018 was given to research on the needs of Australians living in rural and remote areas.

International attention has focused on geographic inequities of health status and health professional distribution, and the role of health professional education in promoting change.⁵ Larkins and colleagues recount how the socially accountable medical schools linked in the Training for Health Equity Network (THEnet) have identified the “from, in, with and for” principle as central in producing a fit-for-practice rural and remote health workforce.¹⁶ Additionally, vision, diversity and leadership amplify the rural positive approach by mitigating the impact of a hospital-centric hidden curriculum in training that often deters students from pursuing primary care careers. Murray and Craig consider the policy changes that could build on current successes of rural training.¹⁷ They call for expansion of medical student numbers and investment in the primary care sector as a site for training where increased numbers of early career doctors could be posted and supported by integrated postgraduate training collaboratives.

The Regional Education Commissioner, the Hon Fiona Nash, reminds readers that a student's rural origin is the strongest

predictor of rural destination for the eventual graduate and contrasts this with the challenges faced by rural and remote students in accessing health professional education. Rural students are less aware of health professional career options and some find the relocation to a city to receive tertiary education an insurmountable barrier. Nash calls for programs to raise rural students' awareness of health careers and increased support for their translocation to city and transition to tertiary education.¹⁸

Nash's themes are echoed by first person narratives of training experiences in RCSs and UDRHs and the impact this has had on their career choices. Engelke takes us on the journey of a remote Aboriginal community member who became a general practitioner and educator in a remote community.¹⁹ Philibert describes his journey from an island off the coast of Africa to an Australian RCS.²⁰ For each of them, there were personal touch points that encouraged and supported their choice to enter rural practice.

There is still much to be done to create robust training pathways to rural health professional careers, but we now have a solid evidence base to guide our efforts. The Flexner report published in the United States in 1910 called for doctors to be trained to use scientific principles, and for medical faculties to engage in research and to forge strong links between universities and hospitals.²¹ The report led to the establishment of academic medical centres and large teaching hospitals. The intent was to increase the scientific basis of medical practice in North America. Medical education in the English-speaking world followed suit. Almost one hundred years later, Wennberg reflected that "Academic medicine has had only limited success in improving the scientific basis of everyday clinical practice, even within the walls of its own hospitals".²² Wennberg's observation was informed by the extensive research underpinning the Dartmouth Atlas of Health Care project. The Australian Atlas of Healthcare Variation series²³ has demonstrated similar unwarranted variation of care in Australia. It seems that a close affiliation of medical schools with large teaching hospitals has not ensured Australians receive evidence-based care. In this supplement, there is an accumulation of evidence that metropolitan-focused health professional education has not provided an equitably distributed health workforce and that we now know what can be done in health education to drive an equitable balance of workforce. It is time to acknowledge the limitations of the educational model that has focused on large institutions in big cities. If teaching in large metropolitan hospitals has not delivered on improving the scientific basis of everyday clinical practice, the argument to focus teaching and training in such institutions is losing validity. Knowing that teaching in rural and remote communities can deliver a rural workforce, we now have a mandate and the roadmap to expand the RHMT program and make health professional education socially accountable in the creation of graduates who practise evidence-based health care where they are most needed.

Acknowledgements: The Australian Government through the Office of the National Rural Health Commissioner funded this *MJA* supplement.

Open access: Open access publishing facilitated by James Cook University, as part of the Wiley - James Cook University agreement via the Council of Australian University Librarians.

Competing interests: Ruth Stewart is the National Rural Health Commissioner. This editorial records her independent views of the university training landscape and does not reflect Australian Government policy or views.

Provenance: Commissioned; not externally peer reviewed. ■

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