Medical Deans
AUSTRALIA AND NEW ZEALAND

Thriving Rural Doctors

Place-Based Solutions to Medical Workforce Challenges in Remote, Rural and Regional Australia and Aotearoa New Zealand

Acknowledgements

This document was developed by a working group under the auspices of Medical Deans Australia and New Zealand. We acknowledge and thank the group members for their contribution and commitment to this matter and to developing this document.

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We would like to express our thanks to all those who provided feedback on the draft versions of this paper.

Suggested citation:

Medical Deans Australia and New Zealand (2024) *Position Paper: Thriving Rural Doctors: Place-Based Solutions to Medical Workforce Challenges in Remote, Rural and Regional Australia and New Zealand*. Sydney, Australia

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Executive Summary

The healthcare systems in Australia and Aotearoa New Zealand are underpinned by the principle that access to healthcare must be equitable, irrespective of geography. This necessitates an appropriate medical workforce serving remote, rural and regional communities, working as part of a culturally safe multidisciplinary healthcare team and supported by metropolitan subspecialists with knowledge of and interest in the needs of remote, rural and regional communities.

Access to health services decreases as remoteness increases. In Australia in 2020, there were 309 medical practitioners per 100,000 population in major cities, compared to 273 per 100,000 population in outer regional, and 223 per 100,000 population in very remote Australia[1]. In New Zealand, where rural medicine is delivered primarily by Rural Hospital Doctors, concerns have been raised about rural access to maternity care, mental health care and urgent and emergency care[2].

Both Australia and New Zealand need a sustainable pipeline of doctors prepared for and desiring practice in rural communities. This needs to be underpinned by medical education and training in, with and for these communities. Without this, the pipeline will not be truly sustainable.

Place-based solutions value the unique needs, traits and strengths of local areas and can affect change in rural communities that is meaningful and sustainable, and come about when local stakeholders are able to engage collaboratively to address issues within a geographically defined area[3]. Place-based solutions must be a key component of addressing geographic maldistribution of the medical workforce. Remote, rural and regional communities are not homogenous; differences in community size, population demographics, economic outcomes, and myriad other elements contribute to the health workforce needs of a local community, and that community's ability to train tomorrow's medical workforce. Recognising and celebrating these nuances will allow local communities to design and implement sustainable solutions to their workforce challenges.

In both Australia and New Zealand, medical schools have been at the forefront of innovations to build the graduate workforce prepared for and desiring careers in remote, rural and regional areas. These innovations have proven successful. Among Australia's 2022 graduating cohort, just under 40% of domestic medical graduates in Australia indicated a preference for future practice outside capital cities, this increases to over 72% for students from a rural background[4]. Similarly, almost three quarters of graduates who undertook a rural placement of greater than one year indicated a preference for future careers outside capital cities[5], irrespective of rural origin. In New Zealand's 2019 graduating cohort, 32% of respondents who self-identified as from a rural background reported a preference for a career outside a major city or regional centre, compared to 6% from a non-rural background[6]. This is despite New Zealand's historic lack of investment in rural-based medical school training comparable to Australia's Rural Clinical Schools and University Departments of Rural Health.

Medical schools and programs need to be supported to continue building on their rural successes. Additionally, more needs to be done to support the transition of today's rural students into tomorrow's rural doctors. Many of the lessons learnt from rural medical education can and should be applied to prevocational and vocational medical training.

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[1] Australian Institute of Health and Welfare (2022) Health Workforce (Web Article)

[2] New Zealand Government, *Rural Health Strategy 2023* (health.govt.nz), Appendix 2: Rural Health Outcomes

[3] Canadian Government (2011), *The Evaluation of Place-Based Approaches: Questions for Further Research* accessed online: https://publications.gc.ca/collections/collection_2011/hpc-phc/PH4-80-2011-eng.pdf

[4] Medical Deans Australia and New Zealand (2023) *MSOD National Data Report 2023,* *https://medicaldeans.org.au/md/2023/08/MSOD-National-Data-Report-2023-July.pdf*

[5] *Ibid.*

[6] The New Zealand MSOD Steering Committee (2019) *National Report on Students Commencing Medical School in New Zealand in 2015-2019, https://www.otago.ac.nz/__data/assets/pdf_file/0022/330628/national-report-on-students-commencing-medical-school-in-new-zealand-in-2015-2019-718595.pdf*

Whole of system change is required to retain, realise and maintain the interest in rural practice medical schools are building. This paper outlines a vision to achieve this:

- ***Build interest*** by continuing to support medical schools to attract and support applications from local candidates, offer longitudinal training experiences and rurally rich curricula to as many students as appropriate for the local rural context.
- ***Retain interest*** by increasing the capacity to supervise and train across the continuum in the areas where the future workforce is needed, and provide meaningful supports to rurally based students, prevocational doctors and doctors in training.
- ***Realise local interest*** by helping graduates, prevocational doctors and doctors in training to find their path to a fulfilling rural career in a community in need of their services.
- ***Maintain ongoing interest*** by creating the circumstances in which rural doctors can build multifaceted careers across the full gamut of professional medical activity, in thriving local communities.

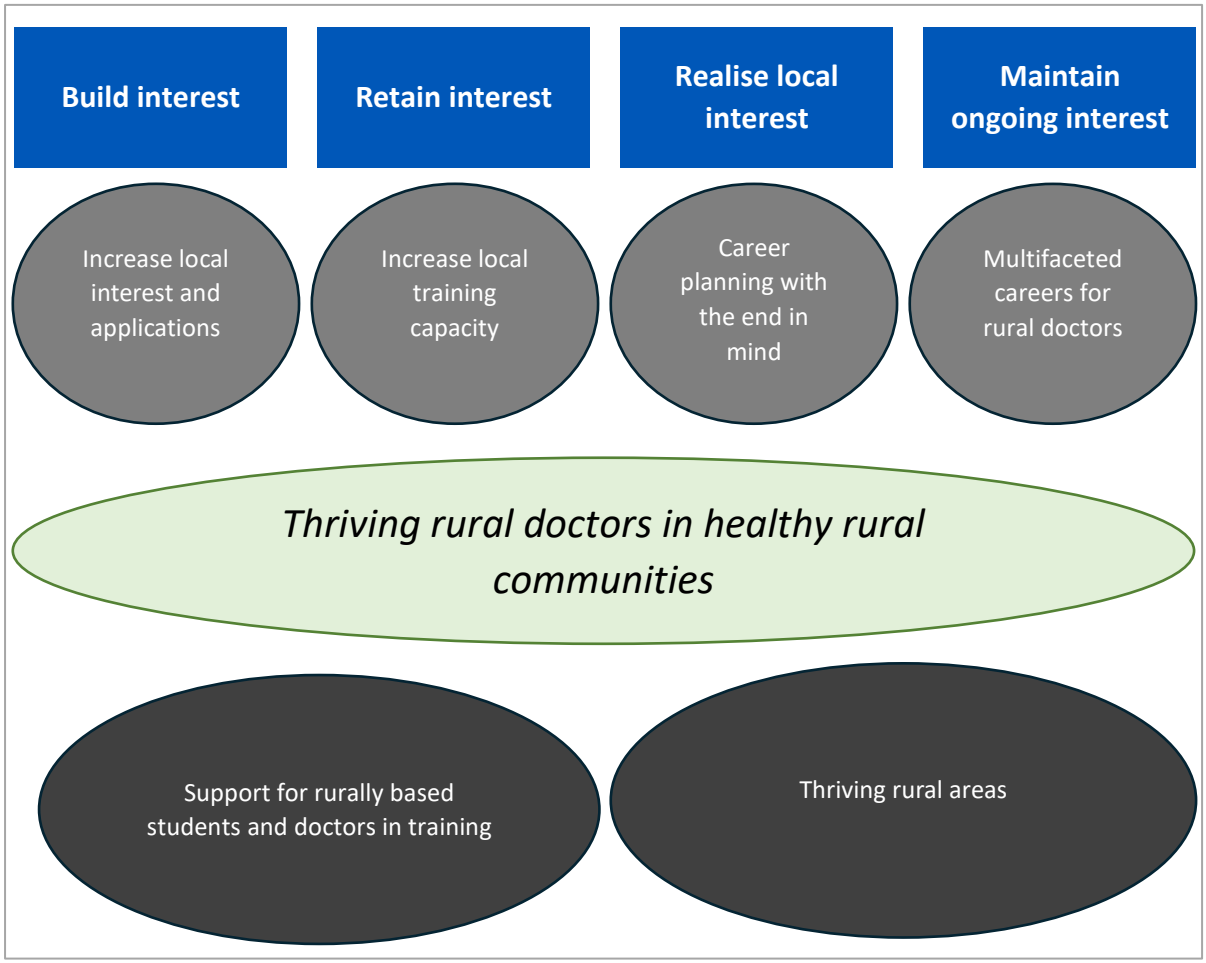

Figure 1: Medical Deans' vision for thriving rural doctors in healthy rural communities

This paper builds on work started with our 2021 release of ***Training Tomorrow's Doctors: all pulling in the right direction***[7]. This document outlined our vision for a connected medical education and training continuum with effective support at key transition stages and puts generalist skills at the forefront of being a doctor.

[7] Medical Deans Australia and New Zealand (2021) *Discussion Paper: Training Tomorrow's Doctors: all pulling in the right direction* Sydney, Australia

Key to this is a *flipped* model of training where learning takes place in and for rural communities, with rotations to metropolitan or large regional hospitals if and when required. Our 2023 position paper ***The Doctors Our Communities Need: Building, Sustaining and Supporting the General Practice Workforce in Australia and New Zealand***[8] outlined our recommendations to build and support the general practice workforce across all geographic areas in Australia and New Zealand. Arguably, general practice and primary care is nowhere more important than in rural communities, who are often served by a primary care team working to its full and extended scope of practice; however, access to secondary and tertiary care in rural and regional areas need to be addressed. This paper builds on the work started in our earlier papers and looks specifically at the medical workforce needs of rural communities across primary, secondary and tertiary care.

Students, prevocational doctors and doctors in training who are able to learn in, with and for rural communities are more likely to practise in rural communities. At the same time, students, prevocational doctors and doctors in training can and do become important components of the multidisciplinary local community of practice.

Figure 2: The rural community of practice

The workforce quantum required across each stage of the training pipeline and their location in primary, secondary and tertiary care settings will depend on the needs and demographics of the local community as well as the clinical and business models of local healthcare employers, in a place-based approach.

Today's rural trainees need to be tomorrow's rural trainers if there is to be a sustainable pipeline to meet the needs of the community. Providing ongoing support to allow rural clinicians to participate in the full gamut of professional medical activity, and a place-based approach to managing training, workforce and succession planning, will create the circumstances in which rural doctors can thrive in long term careers.

[8] Medical Deans Australia and New Zealand (2023) *Position Paper: The Doctors our Communities Need: Building, Sustaining and Supporting the General Practice Workforce in Australia and New Zealand*, Sydney, Australia

Medical Deans' Recommendations

Build Interest

Increase Local Interest and Applications to Medical School	
1	Medical schools to work with rural communities to continue to expand strategies for the recruitment of rural students with a propensity for future rural practice
2	Governments to invest in rural medical education capacity including the necessary learning infrastructure and clinical placements
3	Government to increase the number of medical school places, aligned to strategies demonstrated to increase the propensity of medical graduates progressing into rural careers
4	In Australia, Rural Clinical Schools (RCSs), and in Aotearoa New Zealand rural campuses, to work with alumni, local practitioners and other stakeholders to support the development of local clinician educators, clinician researchers and clinical leaders
5	In Australia, RHMT Program contracts be reviewed to remove barriers to RCSs providing training to international students
6	Medical schools and postgraduate training providers to review curricula, learning activities and learning outcomes to ensure that they reflect the reality of rural practice in a respectful and meaningful way

Retain Interest

Increase Local Training Capacity	
7	Colleges and postgraduate training providers to accredit and support the delivery of an increased amount of prevocational and registrar training in rural and remote areas, end-to-end where possible or with rotations back to regional or metropolitan hospitals if required
8	Local health bodies to work with prevocational and vocational training providers to align career opportunities for junior doctors and registrars in remote, rural and regional settings with appropriate, local training positions
9	Postgraduate training providers to partner with RCSs or rural campuses, and other local medical education and training services to provide coordinated support to local vertically integrated medical education networks across primary, secondary and tertiary care settings
10	All postgraduate medical training providers and accreditation bodies to allow specific local needs to inform learning experiences by respecting and valuing the place-based adaptive expertise of rural medical leaders
11	Local health services and RCSs or rural campuses to partner to ensure supervision capacity is considered in succession planning, to safeguard local placements and training
12	Medical schools and postgraduate training providers to work with rural health services and local clinicians to make data-informed decisions about the optimal quantum of rural education and training experiences in their geographic footprint in line with supervision and training capacity
13	Accreditation bodies to support diverse and alternative approaches to clinical supervision in rural areas which account for and respect local challenges and strengths
14	Medical schools, postgraduate training providers, medical colleges, and other stakeholders to accurately portray the complexity, rigour and diversity of contemporary rural medical practice, valuing rural clinicians' adaptive expertise, clinical courage and responsibility to local community

Support for Rurally Based Students and Doctors in Training	
15	Health services to enable all members of the health workforce to contribute to an inclusive and supportive work culture
16	Governments to continue to invest in the construction and ongoing maintenance of appropriate and safe accommodation for medical students and others in the health profession working rurally
17	Medical Schools, local health employers, medical colleges and other key local stakeholders to work together as a community of practice to provide pastoral and social support to medical students and doctors in training, and assist with connecting them to health, psychological and other support services if and when required
18	State health networks and training organisations create partnerships and systems to improve viability of urban in-reach training opportunities at all levels of medical training

Realise Local Interest

Pathfinding: Career Planning with the End in Mind	
19	Local health services, universities, Regional Training Hubs, Primary Health Networks and other local bodies to work together to support pathfinding for rural doctors in training, aligning their specialty and other interests to the service needs of the community
20	Health services, RCSs or rural campuses and other local bodies to proactively mentor local practitioners for appropriate local positions, including leadership roles

Maintain Ongoing Interest

Multi-faceted Careers for Rural Doctors	
21	Local health services and medical colleges support the progression and development of doctors working outside metropolitan areas by: - Allocating resources and supporting clinicians' time away from clinical work to enable clinicians to develop and maintain broad scopes of practice - Increasing flexibility of college training requirements to support doctors to work in a broader range of settings - Supporting time away from clinical practice to focus on further skill development if/when required e.g., research, teaching and leadership - Increasing focus on succession planning, to allow clinicians to effectively transition into future professional roles
22	Government, universities and research institutes to work together to grow the number of PhDs and postgraduate coursework that can be completed in rural locations
23	Research funding bodies to ensure equitable opportunities for research funding are made available to non-metropolitan researchers
24	Health services and medical colleges to provide greater opportunities for collaboration in education and training, leadership, research, and other professional activities between clinicians in rural and remote areas with their metropolitan colleagues

Thriving Rural Areas are Vital	
25	Governments to work with local communities on strategies to better promote the unique and desirable characteristics of remote, rural and regional communities, and support junior doctors to establish lives in these areas

Build Interest

1. Increase Local Interest and Applications to Medical School

Entry into medical school is the first step towards becoming a doctor. As such, it is vital that long-term strategies aimed at building a sustainable medical workforce in remote, rural and regional areas consider the students being admitted to study medicine.

1.1 Grow our own

One major Australian policy lever which has been used to address the shortfall in rural medical workforce is recruiting doctors trained overseas, who must spend 10 years working in a Distribution Priority Area (if GP) or a District of Workforce Shortage (non-GP specialist)[9]. Despite the policy's intentions to bring more doctors into regional and rural areas, in 2021 75% of all registered overseas trained doctors clinically practising were based in metropolitan areas[10]. This finding is comparable to the geographic distribution of domestically trained doctors, which suggests that strategies to address medical workforce shortfalls in geographic distribution based on recruiting overseas trained doctors are not achieving the outcomes remote, rural and regional communities need. We strongly support overseas trained doctors – indeed without them, many rural towns would have no doctor at all – however, the data indicates that the workforce outcomes resulting from this policy are at best short term in nature, and potentially adding to the 'churn' of doctors in regional areas. The Australian government's National Medical Workforce Strategy recognises this: its vision is to "ensure that the medical workforce is sustainable … and improve the domestic self-sufficiency of the medical workforce[11]." Australia recruits from overseas almost as many doctors as domestic medical students graduate each year from Australian universities, which suggests there is further investment is required to create a self-sufficient medical workforce.

New Zealand faces a similar situation. Currently, 43.2% of New Zealand's doctors were trained overseas, and, in 2023, over two thirds (67%) of their newly registered doctors were international medical graduates[12]. This reliance on international medical graduates is not leading to growth in doctors in rural settings. New Zealand's Rural Hospital Doctor workforce has only attracted 1.4% of new registrations over the 10 years between 2014 and 2023[13].

The number of medical school places in Australia and New Zealand must increase, and new places must align to medical schools that demonstrate outcomes and innovations in the delivery of medical education leading to future practice in an area or specialty discipline of need, including rural practice. Programs that support end-to-end rural training, the recruitment of students with a propensity for future rural practice, and the delivery of a rurally rich curriculum, should be allocated additional medical school places to address rural workforce shortages.

New Zealand has recently increased by approximately 10% its number of medical student places[14], as part of a broader policy aimed at relieving pressure on the health workforce. Medical programs in New Zealand should consider how these additional places could be used to support growth in the rural medical workforce in particular, through innovative approaches to student recruitment, program delivery, and student placements.

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[9] More information about the 10-year moratorium can be found on the Department of Health and Aged Care website: https://www.health.gov.au/topics/doctors-and-specialists/what-we-do/19ab/moratorium

[10] Australian Government Department of Health and Aged Care, Health Workforce Data Tool https://hwd.health.gov.au/datatool/

[11] Australian Government National Medical Workforce Strategy, Vision pg 15 National Medical Workforce Strategy 2021-2031 (health.gov.au)

[12] Medical Council of New Zealand Data Dashboard https://www.mcnz.org.nz/about-us/our-data/

[13] *Ibid.*

[14] See e.g., *Government to Increase the Number of Funded Medical Students from 2024* (Ministerial Press Release), 15 June 2023

Utilising these or further places to support growth in the rural medical workforce would require concurrent investment in the infrastructure required to deliver end-to-end rural medical education.

The Australian Commonwealth has recently added 80 Commonwealth Supported Places (CSPs) to existing medical programs to deliver end-to-end rural medical training[15]. This is a welcome start but is insufficient[16] and more medical school places are clearly needed.

1.2 Recruit locally, train locally, practise locally

Recruiting rural medical students and training them locally has been shown to be one important element in building the rural workforce. In 2022, approximately 34% of commencing domestic medical students in Australia were of rural background[17]. 28% of Australians in 2022 lived outside capital cities[18], showing an above parity representation for rural origin domestic medical students. The strategy supported by successive Australian governments to set admission targets for students from a rural background[19] has been an important contributor to growing rural career intention within the domestic medical graduate cohort. Amongst the 2022 Australian graduating cohort, just under 40% indicated a preference for working outside capital cities; however, for graduates from a rural background, this was almost three quarters[20]. In recent years new rural medical programs have developed more nuanced definitions of rural background for the purposes of recruitment into medical school when compared to the traditional government definition of five years continuous or ten years cumulative rural residency. There is scope for further innovation in taking a place-based approach to this, and proactively recruiting students who have personal, meaningful ties to their local community and are therefore more likely to want to live and practise there. These ties could include currency of residency, family ties (for example, children in local schools), high school or work history in the local community prior to enrolment in medical school, or similar connections. Importantly, coordinated evaluation of these diverse recruitment parameters is required. Investigations into traits and characteristics that correlate with subsequent rural practice should also be explored and supported. These traits and characteristics are likely to be found among rural origin or rural based students; however, the place of metropolitan students who desire or are open to future careers primarily based in non-metropolitan areas should also be recognised. All students who show an interest in future rural work should be supported to pursue this.

In New Zealand, where there are no government-set rurality admission targets, the rate of rural origin medical students is less than half the rate of metropolitan origin medical students[21]. Increasing the proportion of rural origin medical students in New Zealand medical programs, combined with rural education and training opportunities for these students, can be expected to increase the proportion of New Zealand graduates desiring careers in rural areas.

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[15] *New Medical School Programs Put Doctors where they're Most Needed in Regional Australia* (Ministerial Press Release), 4 December 2023

[16] See e.g., Medical Deans Australia and New Zealand, *80 More Rurally Trained Australian Doctors a Welcome Start* (Press Release), 30 March 2022

[17] Australian Government Department of Health, *Chapter 2: Medical Students with Rural Background Medical Education and Training, 6th Edition (2021 and 2022)* https://hwd.health.gov.au/met-primary/index.html

[18] Australian Bureau of Statistics (2023) *Regional Population by Age and Sex*, as quoted in Australian Institute of Health and Welfare (2024) *Rural and Remote Health* https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health

[19] As defined in Requirement 2c of the R*ural Health Multidisciplinary Training Program Framework 2019-2020*: https://www.health.gov.au/sites/default/files/documents/2021/10/rural-health-multidisciplinary-training-rhmt-program-framework-2019-2020-rural-health-multidisciplinary-training-rhmt-program-framework-2019-2020.pdf

[20] Medical Deans, (2023) *MSOD National Data Report 2023*, https://medicaldeans.org.au/md/2023/08/MSOD-National-Data-Report-2023-July.pdf

[21] W Bragg et. al (2023) *Socio-demographic profile of medical students in Aotearoa New Zealand (2016-2020): a nationwide cross-sectional study*, BMJ Open, 13

There is a role for local communities to play, for example local community members involved in interviews and other selection processes. Local communities' advice on the desired makeup of their future local medical workforce is also valuable, including considerations such as cultural and linguistic diversity, socio-economic status diversity, and opportunities for first in family applicants.

Return of service schemes, such as the Bonded Medical Places scheme in Australia, have also been a longstanding method to use student admissions processes to build subsequent rural workforce. Recently, concerns have been raised about the effectiveness of this approach, noting the absence of evidence linking these arrangements with best practice for improving the rural and remote health workforce[22], and calls for the scheme to be concluded[23]. There is a place for schemes based on return of service obligations to both broaden participation in medical school and provide short term workforce solutions for rural communities; however, whole of system initiatives that attract and support medical students with traits that correlate to subsequent rural practice, and that better support long-term, rurally-based medical practice, will lead to more sustained solutions to medical workforce shortages.

Training locally increases the desire to practise locally. In Australia in 2022, just under three quarters of graduates who had completed a rural placement of more than one year's duration indicated a desire to work outside capital cities. Less than a quarter of graduates who spent no time on rural placement indicated that they wanted to work outside capital cities[24]. Continued investment is needed to increase opportunities for medical students to complete long rural placements.

1.3 Learning in, with and for rural communities

A place-based, data-informed approach to planning, managing and expanding rural placement capacity is needed. Local knowledge and experience must guide place-based decision making about ongoing government support for clinical and administrative infrastructure, staff development, student orientation and support, and all other aspects of rural medical education. Those on the ground delivering rural medical education and local health governance have a deeper understanding of the clinical learning opportunities and supervisory capacity within their footprint, and are better able to keep an eye on the future to ensure that maintaining placement capacity is considered in local succession planning. Empowering them to make data-informed decisions, and holding these decisions to account, will lead to better rural learning opportunities for medical students.

This local decision-making needs to be extended to decision-making about opportunities for international students to be funded to learn in rural settings. Data shows that just under 40% of international medical students who have graduated since 2008 were working outside of capital cities in 2022, compared to just over 25% of domestic graduates[25]. While we can expect to see more domestic graduates working rurally in the future due to policy change, in the short term, we need to ensure that those who are more likely to work rurally are properly prepared for this work.

[22] KPMG for Australian Department of Health (2020) *Review of the Rural Health Workforce Support Activity – Final Report*

[23] Australian Senate Community Affairs References Committee (2022) *Provision of General Practitioner and Related Primary Health Services to Outer Metropolitan, Rural, and Regional Australians – Interim Report*

[24] Medical Deans, (2023) MSOD National Data Report 2023, https://medicaldeans.org.au/md/2023/08/MSOD-National-Data-Report-2023-July.pdf

[25] Data obtained from Medical Deans' data dashboard which links MSOD responses with Ahpra registration data: https://app.powerbi.com/view?r=eyJrIjoiMjdiNTU2NWMtMmJjYy00MTBiLTg5NTgtNzg1OTE4ZjU4NGJhIiwidCI6IjljY2Y4YjAxLWJhZTQtNDQ2ZC1hZWNhLTdkYTljMDFlZDBmOSJ9

Training medical students in, with and for rural communities can also have short-term workforce benefits to local communities and practitioners, as well as the long-term benefits of building a sustainable remote, rural and regional medical workforce. Evidence indicates that medical students undertaking Longitudinal Integrated Clerkships (LICs) – typically placements in one GP clinic for a 12-month period – can be cost neutral to GP businesses when well supported by government and rural clinical schools[26]. Just as importantly, these students quickly become a valuable extra set of hands in the clinic through the meaningful connections they form with local patients and become legitimate members of the local community of practice[27]. It is imperative that arrangements to support learning in primary care and rural locations reflect and support LICs and similar long-term placement models. Primary care placements have traditionally taken the form of shorter rotations rather than these longer placements, and as such it is necessary to ensure that funding arrangements support both short rotations and long-term placements in primary care settings.

1.4 Rural medical educators

Today's rural trainees need to be supported and nurtured to become tomorrow's rural trainers. Active development of the clinical educator workforce in rural areas is vital to ensuring the long-term viability of rural medical education. Rural clinical schools and university departments of rural health provide a solid foundation on which to build the rural medical educator workforce. Investing in the development of a New Zealand rural clinical school will make a substantial contribution to developing this vital workforce in New Zealand.

Rural clinical schools must proactively engage their alumni to find appropriate opportunities for them to become involved in teaching, training and supervision as appropriate to their professional interests and experiences. Universities need to be supported to offer tailored postgraduate qualifications (for example, in medical education and research) in rural locations and with a rural focus. Rural clinical schools, rural university campuses delivering health and medicine programs, and other bodies involved in the delivery of rural medical education also need to look to local candidates for senior and leadership positions within their schools as far as possible. This should include pro-actively mentoring multidisciplinary staff who demonstrate an interest in and aptitude for academic and clinical leadership. This will safeguard rural health and medical education into the future, and further diversify the range of non-clinical professional activities rural clinicians can participate in – making rural medical practice a more appealing long-term career.

1.5 All doctors learning about rural health

All medical students, irrespective of their intentions for future practice, need to leave medical school with an accurate, realistic and well-rounded understanding and appreciation of contemporary medical practice in remote, rural and regional areas. Metropolitan specialists will receive referrals from non-metropolitan GPs, and see and treat rural patients; as such, these doctors need to know how rural medical practice differs from metropolitan medical practice, and understand the context of rural patients they treat. Curricula and assessment therefore need to present the diverse nature of rural practice, where testing, diagnostic and clinical equipment is often not available in the same way as it is in urban centres. Likewise, the makeup of the health workforce in rural areas may result in delays to assessment by a doctor and treatment commencing. All medical practitioners need to be aware of these factors in their practice.

[26] JN Hudson, KM Weston, EA Farmer (2012) *Medical Students on Long-Term Regional and Rural Placements: What is the Financial Cost to Supervisors?,* 'Rural and Remote Health', 12:1951
[27] *Ibid.*

1.6 Collegial Respect

Hidden curricula that present rural medicine as less than urban medicine need to be called out as having no place in contemporary medical practice, education and training. Professional respect between all medical specialists needs to be actively demonstrated in learning environments[28]. Any narrative or perspective which views rural practice as 'less than' metropolitan practice needs to be corrected.

Australian medical schools through their investment and engagement in RCSs and UDRHs have made great advancement in the perception of the opportunities available through rural practice being equivalent to those available in a metropolitan setting. Continued focus on making sure experiences in and of rural practice are gained by as many students as possible while maintaining standards, and that curricula, assessment and learning activities respect rural practice for its strengths and unique challenges, is needed. There is no space for deficit-based comparisons.

Recommendations to increase local interest and applications to medical school

1. Medical schools to work with rural communities to continue to expand strategies for the recruitment of rural students with a propensity for future rural practice.
2. Governments to invest in rural medical education capacity including the necessary learning infrastructure and clinical placements.
3. Government to increase the number of medical school places, aligned to strategies demonstrated to increase the propensity of medical graduates progressing into rural careers.
4. Rural Clinical Schools (RCSs), and in Aotearoa New Zealand rural campuses, to work with alumni, local practitioners and other stakeholders to support the development of local clinician educators, clinician researchers and clinical leaders.
5. In Australia, RHMT Program contracts be reviewed to remove barriers to RCSs providing training to international students.
6. Medical schools and postgraduate training providers to review curricula, learning activities and learning outcomes to ensure that they reflect the reality of rural practice in a respectful and meaningful way.

[28] A La Forgia et. al., (2021) *Are Australian rural clinical school students' career choices influenced by perceived opinions of primary care? Evidence from the national FRAME survey.* Australian Journal of Rural Health

Retain Interest

2. Increase local training capacity

Postgraduate medical training remains highly city-centric and dominated by tertiary teaching hospitals. To realise the investment made in rural medical education and the not insubstantial level of interest from graduates in rural practice, innovations in postgraduate and vocational training are needed.

Data shows that rural background combined with rural placement experience has a significant impact on graduates' preference for future careers outside of capital cities. Recent Australian research demonstrates that factors such as rural background, rural training experiences in medical school, and General Practice career aspirations are significantly associated with completing a higher proportion of postgraduate medical training in a rural location, and that by far the strongest factor correlated with future rural practice is a higher proportion of postgraduate training time in a rural location[29]. Some sources show that 69% of junior doctors of rural origin who completed a rural medical school experience and rural postgraduate training subsequently practise rurally[30].

This establishes a clear case for continuing and expanding efforts to increase rural medical student recruitment and medical school training experiences in rural locations, whilst also removing the barriers for prevocational training to be completed in rural locations.

2.1 Develop integrated prevocational and vocational training models

To increase the quantity of rural postgraduate training positions, clinical training needs to be expanded in both rural hospital and rural primary care settings. This would not only include general practice but would need to feature rural generalism and its expanded scope of practice. Integrated exposure across a broader range of care settings would better reflect the reality of contemporary rural practice and increase the capacity for clinical training in smaller communities where hospital or general practice alone does not provide enough activity to support a doctor-in-training. There are models of such internship and prevocational training already in existence in Australia (Box 1). This model has been adopted in rural generalist vocational training where trainees learn in general practice while undertaking the final component of their procedural advanced skills in their local rural hospital. Growth in the quantum of medical education delivered rurally has been a catalyst for the development of some non-GP specialist rural training models that recognise the potential of rural clinical settings to provide excellent training opportunities[31], such as the Rural Psychiatry Training Pathway[32].

Rural Psychiatry Training Pathway:

The Rural Psychiatry Training Pathway developed by RANZCP recognises and values the generalist psychiatry learning potential of training delivered in, with and for rural communities. This pathway allows rural trainees to have a rural 'home base' from where they complete as much as their training as possible, ideally all, with rotations to urban centres when required.

[29] M McGrail et al. (2023) *Rural Medical Workforce Pathways: Exploring the Importance of Postgraduation Rural Training Time*, Human Resources for Health, 21:31

[30] M McGrail (2023, May 4) *Supporting PGY 1-3 Rural Intention JMOs to Pursue Rural Medicine* [Conference Presentation] FRAME 2023 Conference, Hervey Bay, Qld, Australia

[31] The Royal Australian & New Zealand College of Psychiatrists (2022) *Position Statement: Rural Psychiatry*, online, accessed 16 May 2024

[32] The Royal Australian & New Zealand College of Psychiatrists (2021) *Rural Psychiatry Roadmap 2021-31*, online, accessed 16 May 2024

2.2 Build supervision capacity

Part of building the supervision capacity also needs to consider the clinical skills being learnt on a rotation, more so than the location of that rotation. Rural Generalists in Australia and Rural Hospital Doctors in New Zealand are well placed to supervise learners across the continuum and in a range of medical disciplines. Rural Generalists and Rural Hospital Doctors need to be supported to work to their full scope of practice in the supervision of students, prevocational doctors and doctors in training, including in primary and secondary care settings.

This needs to include a fairer distribution of teaching and training funding to rural hospitals. Rural hospitals are excellent learning sites across a broad range of disciplines; however, the training that occurs in these locations is often underfunded by a training system concentrated in metropolitan teaching hospitals. A more equitable distribution of teaching and training funding pools to regional and rural hospitals to support the delivery of high-quality learning experiences in these settings and underpin the development of sustainable future rural health workforce is urgently needed[33]

Box 1: Examples of rural internships which include rural general practice or rural generalism:

At South East Regional Hospital in Bega NSW, interns spend a year training in general medicine, general surgery and a six-month term which combines general practice and emergency medicine. Eight junior medical officers who had completed this six-month longitudinal rotation were interviewed in 2021; of these, six had decided on a career path as either a rural generalist or a GP, one was currently working as a GP registrar in Bega, and one who had previously discounted GP as a career path was now more open to GP as a future career path[34].

This is similar to a model rolled out in Portland Victoria in 2021, in which interns spend one day a week in the emergency department of Portland District Health, three days in general surgery or general medicine (swapping after six months) and one day per week parallel consulting in general practice. This model gives a well-rounded intern experience in a rural setting to a junior medical workforce, and demonstrates how rural health services can met the accreditation, supervisory and learning requirements of internship, with a particular focus on preparing future rural generalists[35].

A greater role for the broader multidisciplinary healthcare team in the supervision of PGY1 and PGY2 doctors needs to be part of building the supervisory capacity in rural and regional areas. This should include, for example, an expanded role for nursing supervision of PGY1 doctors in line with their scopes of practice and under the broad supervision of senior medical officers. Expanding more prevocational training to primary and community-based care locations will provide further opportunities for consideration of how supervision of PGY1 and PGY2 doctors can fit into the scope of practice of multidisciplinary healthcare providers. These opportunities must be assessed in line with the learning outcomes they will provide.

[33] See e.g., R Huxtable (2023) *Mid-Term Review of the National Health Reform Agreement Addendum 2020-2025: Final Report*

[34] K Anderson and MA Reid (2023) *An Innovative Longitudinal Rural Internship in Bega. An Evaluation of the Program from 2018-2021* ACT Health Directorate, Academic Unit of General Practice.

[35] J Beattie, DJ Hobjin and L Fuller (2023) *A Case Study of a Novel Longitudinal Rural Internship Program* Rural and Remote Health [accepted for publication]

2.3 Flexible models of supervision

A "flipped" training model, which extends the principle of end-to-end rural training beyond medical school and allows doctors in training to remain in a rural location throughout their training to full fellowship, needs to be implemented. Such a model requires codesign and co-ownership between prevocational training providers, medical schools, colleges and local health services in regional, rural and remote areas, in order for the pathway from medical school to internship, then to fellowship, to be mapped out clearly for students and trainees[36]. This alignment and coordination will allow doctors in training intending to work rurally to plan the next stage of their lives with the same level of confidence as their metropolitan colleagues.

Technology makes it easier for remote supervision of prevocational doctors and doctors in training to be rolled out, in certain circumstances and with appropriate safeguards in place. For example, real-time video feeds of basic procedural work can allow a supervisor based in a larger centre to supervise a doctor in training in a rural or remote setting. Video technology can also be used to facilitate asynchronous review of procedural work, consultations and other clinical activity by supervisors working from a different location. Such approaches should be explored further with patient safety and quality of learning experiences the main focuses of exploration.

The complex, interconnected relationships that are found in smaller communities require innovative models of educational governance. The ability in metropolitan settings to separate supervision, academic support, assessment, and other medical education and training functions, is not practicable in many regional settings, and in rural and remote settings, is not possible. Expanding the quantum of rural medical education and training requires moving away from the 'ethics of segregation' and instead utilising what has been termed the 'ethics of being useful' or 'potato ethics'[37] in which one doctor serves as a junior doctor's supervisor, assessor, mentor, and even friend and family doctor. The ethics and governance of these unavoidable overlapping relationships need to be established so that all parties can exist in a context which recognises the reality, protects all parties and allows learning, professional and personal development to occur in these settings.

Rural challenges are overcome by local strengths. This truism needs to inform approaches to accreditation of training locations, where local innovations should be encouraged to overcome challenges presented by workforce shortage. For example, for non-GP specialist training the loss of a consultant supervisor from a regional or rural hospital should not automatically result in the loss of that hospital's training accreditation. Innovative approaches to rotations and supervision which utilise the full scope of practice of the local Rural Generalist workforce, respects and values interprofessional supervision such as by a nurse practitioner where appropriate, combined with virtual supervision and education, should be supported if these arrangements demonstrate training integrity and patient safety being met.

2.4 Build the necessary infrastructure

To ensure that prevocational doctors and registrars in new training locations have the clinical experience necessary for their learning, there needs to be sufficient infrastructure to meet their needs. Planning for infrastructure also needs to consider spaces reserved for medical student use to ensure that the important exposures to rural practice in medical school are not lost to junior doctors who may potentially be of more value to the workforce.

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[36] For further discussion of this concept, see Medical Deans Australia and New Zealand (2021) *Discussion Paper: Training Tomorrow's Doctors – All Pulling in the Right Direction*. Sydney, Australia

[37] M Fors (2023) *Potato Ethics: What Rural Communities Can Teach Us about Healthcare*, Journal of Bioethical Inquiry, 20:2

In Australia, significant investment has been made in supporting and building the rural and primary care workforce. However, it has been 10 years since funding for teaching and training infrastructure in rural general practice has been made available[38]. Teaching and training students, prevocational doctors and registrars takes space, and few GP practices are able to put aside space for teaching purposes (such as parallel consulting rooms), so there is a clear role for government to invest in funding this essential resource in building the rural workforce.

2.5 Sharing resources across the pipeline

Universities, prevocational training networks, and medical colleges often rely on the same clinical supervisors across general practice, hospital and other settings within a region. Successful rural training requires vertical integration of educational leadership, administration and coordination, and needs a place-based, data informed, whole of continuum approach to its management. Coordinated management of medical student, intern and registrar placements through an appropriate local entity would simplify the work of supervisors in smaller hospitals and general practices, and would provide a level of oversight to ensure training capacity continues to meet the needs of medical students, prevocational doctors and registrars, supervisors, and the community. The specifics of how this would work locally would need to account for local healthcare needs, the local workforce, and local training capacity, and could include the appointment of Directors of Clinical Training and Medical Education Officers with blended responsibilities and activities across Rural Clinical Schools and rural campuses, prevocational training and fellowship training. These roles would need to be funded, and to ensure the long-term sustainability of this funding, these collaborations should be formalised.

This approach would also provide opportunities for near-peer support and mentoring among students, prevocational doctors and registrars in the local area. Vertical integration between the different stages of the training continuum benefits both learning and career planning, through opportunities to learn from those at the next stage of training and see the direction their careers are taking. These networks would also provide a learning culture where prevocational doctors and registrars benefit from mentoring and role-modelling from supervisors familiar with their context, and will help medical students and doctors in training to learn context-relevant clinical care.

2.6 Increase rural training places

University training and preparation for future rural practice needs to be followed by prevocational training in, with and for rural communities. As medical schools continue to expand their rural recruitment, education, placement and immersion activities with a view to building the rural medical workforce, a corresponding investment in rural prevocational training places is needed to realise the investment made in these medical graduates. There needs to be a greater number of opportunities to train and work rurally to match larger cohorts of medical graduates desiring, and prepared for, future rural practice.

Pre-vocational training will likely correspond for many doctors with the stage of life where they are looking to put down roots and establish their life. This will include a range of commitments and changes outside of their professional life, such as starting families, buying property and establishing significant links to their local community. It is unrealistic to expect these doctors to either delay these commitments until after their training is completed, or to put down these roots only to uproot at the end of their training so to reestablish lives in rural areas. Building careers and lives in rural areas needs to be as seamless and straightforward a process for junior doctors as possible if we are to realise the interest in rural practice medical schools are fostering in our future doctors.

[38] $52.5 million was made available to funding GP teaching infrastructure in rural and regional Australian locations in the 2014-15 Budget (Rural and Regional General Practice Teaching Infrastructure Grants.

The data shows that current rural vacancy rates do not align with graduate intentions. Medical Deans' data demonstrates that a sizeable proportion of medical graduates who want to work rurally do not complete postgraduate training in a rural location. Looking at the 2021 Australian graduating cohort, almost 40% of graduates indicated a preference for future careers outside capital cities; however, of those from a rural background who also undertook a rural placement, 75% indicated a preference for future careers based outside capital cities[39].

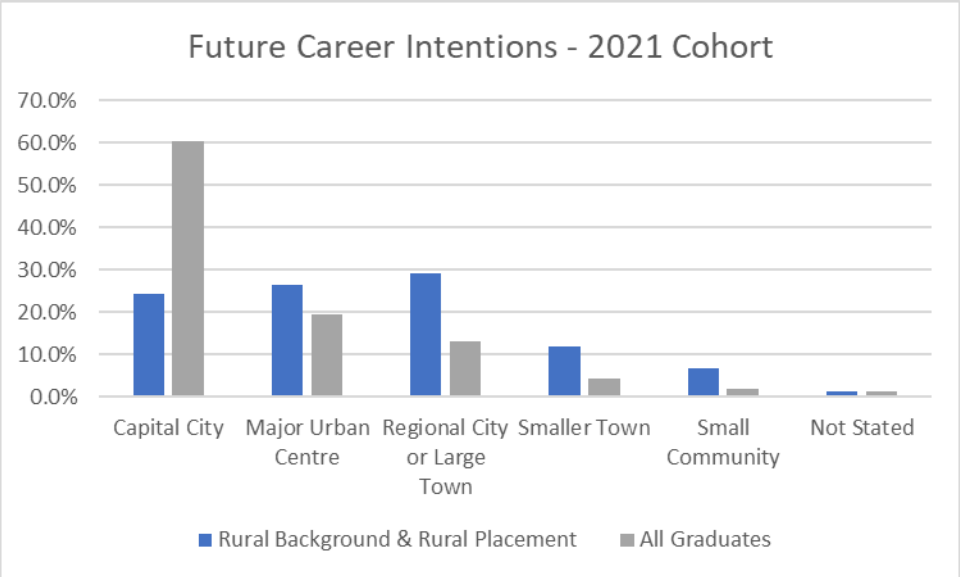

Figure 3. Preferred location for future career - 2021 cohort

However, looking at the same cohort, only 40% of these graduates completed PGY1 outside of a metropolitan location[40].

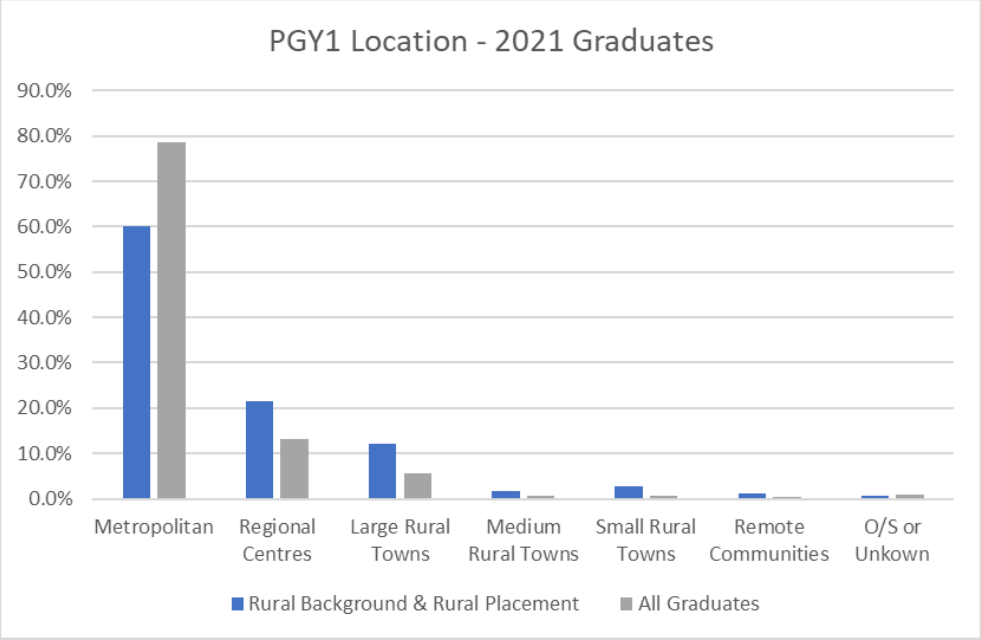

Figure 4. Actual PGY1 location - 2021 graduating cohort

[39] Data obtained from Medical Deans' data dashboard which links MSOD responses with Ahpra registration data: https://app.powerbi.com/view?r=eyJrIjoiMjdiNTU2NWMtMmJjYy00MTBiLTg5NTgtNzg1OTE4ZjU4NGJhIiwidCI6IjljY2Y4YjAxLWJhZTQtNDQ2ZC1hZWNhLTdkYTljMDFlZDBmOSJ9

[40] Data obtained from Medical Deans' linked MSOD data and Ahpra registration data

This is despite rural and regional health districts retaining vacancies after all recruitment pathways have been exhausted. For example, in 2022 in NSW, at the exhaustion of all intern allocation processes, 32 positions remained vacant (out of 1120 total NSW Ministry of Health funded positions), and of these, 15 were Rural Preferential Recruitment positions – meaning almost half of all NSW intern vacancies in 2023 were in non-metropolitan locations[41].

This indicates that there is greater desire among medical graduates to practise outside of metropolitan areas than there are PGY1 doctors working in these locations, despite internship positions being available. Reasons for this may include:

- Perceptions that opportunities in rural areas are limited
- Lack of a clear path from internship to fellowship programs in their preferred specialty
- Scarcity of ongoing, stable opportunities post-fellowship
- Lack of opportunities for partners or family.

Data available from New Zealand indicates a different situation. For students who commenced study between 2013 and 2015, graduated between 2013 and 2017, and completed PGY1 between 2012 and 2016, interest in working in a regional city or large town grew between entry, exit and PGY1, whereas interest in working in major cities, towns and small towns decreased[42].

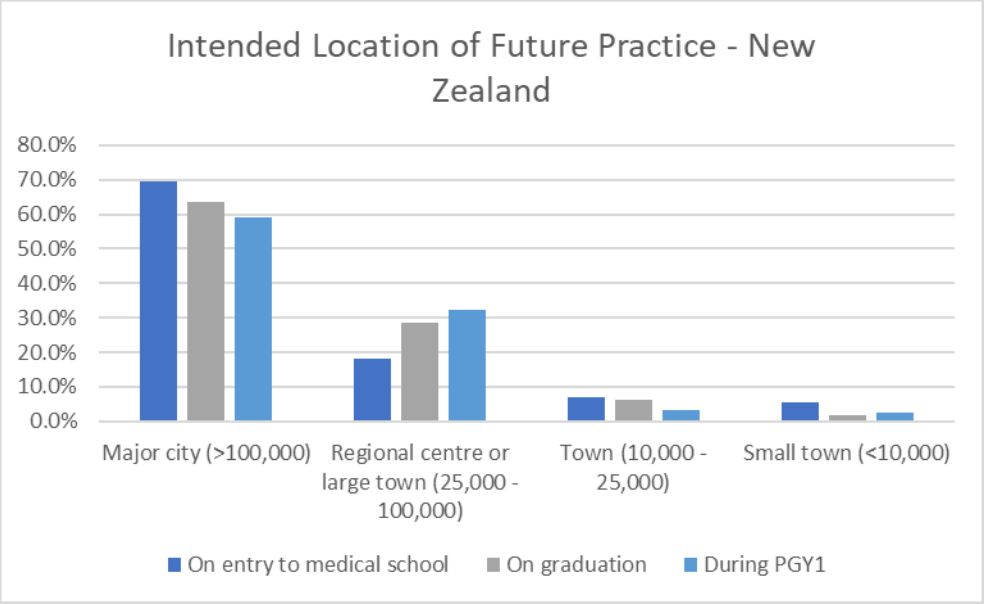

Figure 5: Intention of future practice for New Zealand commencing medical students, medical graduates and PGY1 doctors, 2012-2016

Both Australia and New Zealand need to continue to innovate to make it more achievable for prevocational doctors to establish their lives in the areas they wish to practise while completing training. Matching training locations to areas of workforce need, both geographically and in terms of speciality, will go some way to doing this. Expanding the visibility of rural doctors working multifaceted careers engaging with the full gamut of medical professional activity, strengthening connections across the training continuum to ease the transition across the various stages, and continuing to invest

[41] Health Education and Training Institute (2023), *Annual Report: Medical Intern Recruitment to NSW Prevocational Training Positions for the 2023 Clinical Year*, St Leonards, Australia.
[42] P Poole et. al, (2019) *Developing New Zealand's medical workforce: realising the potential of longitudinal career tracking*. NZ Med J, 132(1495)

in and build remote, rural and regional areas will also go a long way to doing this. A wide range of initiatives and activities need to be implemented to achieve success.

Recommendations to increase local training capacity

7. Colleges and postgraduate training providers to accredit and support the delivery of an increased amount of prevocational and registrar training in rural and remote areas, end-to-end where possible or with rotations back to regional or metropolitan hospitals if required.
8. Local health bodies to work with prevocational and vocational training providers to align career opportunities for junior doctors and registrars in remote, rural and regional settings with appropriate, local training positions.
9. Postgraduate training providers to partner with RCSs and other local medical education and training services to provide coordinated support to local vertically integrated medical education networks across primary, secondary and tertiary care settings.
10. All postgraduate medical training providers and accreditation bodies to allow specific local needs to inform learning experiences by respecting and valuing the place-based adaptive expertise of rural medical leaders.
11. Local health services and RCSs to partner to ensure supervision capacity is considered in succession planning, to safeguard local placements and training.
12. Medical schools and postgraduate training providers to work with rural health services and local clinicians to make data-informed decisions about the optimal quantum of rural education and training experiences in their geographic footprint in line with supervision and training capacity.
13. Accreditation bodies to support diverse and alternative approaches to clinical supervision in rural areas which account for and respect local challenges and strengths.
14. Medical schools, postgraduate training providers, medical colleges, and other stakeholders to accurately portray the complexity, rigour and diversity of contemporary rural medical practice, valuing rural clinicians' adaptive expertise, clinical courage and responsibility to local community.

3. Support for rurally based students and doctors in training

Learning and working in rural areas provides medical students and doctors in training with a wealth of experiences and opportunities not available to their metropolitan colleagues. These students and doctors will encounter unique presentations, for example from farmers and farm workers; they will have the opportunity to practise in a broader, more generalist scope; and they will be an important part of the local community. Rural immersion will provide them with many learning opportunities and professional and personal development experiences.

Corresponding with these diverse experiences and opportunities is the need for these students and doctors to be properly prepared for and supported in their rural work. A place-based approach to orientation, support and mentoring which champions the unique characteristics of rural practice is needed.

3.1 Accommodation and infrastructure

Access to safe and secure accommodation is essential to a successful rural clinical experience. Accommodation infrastructure needs to be considered during the planning of expanded rural training, including funding for construction and ongoing maintenance.

Benefits from economies of scale should be realised by housing medical students with other health discipline students, locums, prevocational doctors on short-term rural placements and other healthcare professionals in need of reliable, safe, local accommodation for a defined period. This would optimise usage and also reinforce students' learning about being part of a multidisciplinary health team. Students and doctors in training would also benefit from the near-peer networking and learning opportunities this arrangement would present. The networks formed through these accommodation facilities may well prove to be a major factor in supporting and enabling more healthcare workers to stay rural.

For prevocational doctors and doctors in training, long-term accommodation needs to be sourced. Support should be provided to these doctors to find a home in which they can establish their future life. What support is required will differ from community to community, but may include financing the building of additional housing infrastructure where this might be lacking in the local community, or subsidising loans for capital works on existing housing stock that is no longer fit for purpose.

Any other infrastructure that is missing and/or causing a barrier to medical graduates and junior doctors establishing their professional and personal lives in a rural community must also be addressed. Appropriate provisions for childcare that supports the hours and rosters worked in medicine is one area in which further investment and support might be required.

Students and doctors in training based in rural areas should have appropriate access to training opportunities in the city to enable them to build the skills their rural communities need. Currently medical students are able to access financial resources for overseas electives more easily than they are able to access resources to undertake essential clinical placements in the city. Rural based doctors in training at all levels need to be able to access affordable accommodation while training.

3.2 Pastoral support

All patients, health care providers and doctors in training have the right to expect rural health services to be culturally safe and inclusive. In rural areas in Australia and New Zealand this includes recognition of the impact of colonisation on First Nations people. Pastoral support starts with feeling welcome and safe in one's work environment. Everyone has a responsibility to invest in an inclusive workplace culture, particularly in times where rural health services are under pressure such as with workforce shortages affecting departments, and when natural disaster or a pandemic increases the demands placed on health services.

The capacity and capability of UDRHs and RCSs to provide pastoral care and support to students has long been recognised[43]. Successful pastoral support goes beyond addressing issues when they arise. It is proactive in connecting students with the social and human resources they need to thrive on rural placement. This includes orientation experiences, social connectivity (such as social sports or hobby groups), wellbeing initiatives, and appropriate downtime.

There is also a need for a broad range of supports for students and doctors during their training experiences. This would include the provision of pastoral support to assist with managing the transition from medical school to the medical workforce. Given that many junior doctors working in rural locations will have relocated to start their career, these tensions may well be exacerbated by feelings of isolation and the stress of relocation. Doctors in training may also need practical support in establishing their rural life, such as support to find appropriate accommodation and access to medical and psychological support services.

Taking the lessons and successes from UDRHs and RCSs and applying these to prevocational training would provide doctors at the beginning of their careers with support, connections and a community. This will ease their transition and help them to visualise a career in rural practice. Rural communities have the parts needed to deliver successful pastoral support, and in many instances do a fantastic job of this for junior doctors. Further innovation to increase this, and make the delivery of pastoral support for prevocational doctors a standard part of rural practice and community, will improve the training experience of rural trainees which will lead to more meaningful and connected rural practice.

3.3 Mentoring

You cannot be what you cannot see. Medical students, prevocational doctors, registrars and junior doctors need active role models who are working rurally to their full scope of practice and engaging in a variety of non-clinical, professional medical activity, such as teaching, supervision, research and clinical leadership.

In addition to seeing doctors doing the work they want to do themselves, doctors in training need access to professional mentors who will help them find their path to rewarding, rigorous and sustainable future practice. Rural professionals innately provide these services to the junior doctors and students they work with. What is needed is a policy framework that supports this, and provides appropriate recognition of the workload involved.

Mentoring includes having tertiary hospital pro-rural medical services which value rural trainees and enable them to access specialist training or upskilling and build rural capability by providing ongoing mentorship and networked approaches to healthcare for rural communities.

3.4 Doctors in difficulty

At times prevocational doctors and trainees may experience academic difficulties with their training program (for example, difficulties with knowledge, skills and performance, and safety and quality concerns), professional difficulties (for example, difficulties maintaining patient trust, difficulties communicating with patients, difficulties working with colleagues and supervisors) as well as health and wellbeing difficulties. Burnout is common in rural doctors in training where clinical service commitments and training and assessment pressures can become unmanageable leading to disengagement with patients. Training providers therefore need to provide appropriate supports to all trainees to mitigate these difficulties if and when they arise.

[43] See e.g., KBC Australia (2020) *Independent Evaluation of the Rural Health Multidisciplinary Training Program: Summary of Final Report to the Commonwealth Department of Health*, Recommendation 28

Experience from the UK Foundation Programme[44] shows that the actual number of medical graduates who formally cause concern or are identified as 'doctors in difficulty' is relatively small. Doctors supported under foundation schools' doctor in difficulty policies and procedures between 2012 and 2016 accounted for between 2.6% and 3.7% of the Foundation Year 1 cohort, and between 2.4% and 3.1% of the Foundation Year 2 cohort[45].

Taking a place-based approach across the training pipeline in the provision of these supports will provide greater benefits to doctors in difficulty than a more siloed approach. There may be some reluctance on the part of prevocational doctors and trainees experiencing difficulty to seek the support they need from their current supervisor, or in their current workplace or training environment. A place-based, whole of pipeline approach to providing support to these prevocational doctors and trainees might be more appropriate, and lead to more doctors getting the support they need.

Occasionally doctors in distress need to move to metropolitan locations to enable additional levels of supervision or the opportunity for a fresh approach to remediation and training. Currently, in some states, rural health networks take on the financial burden of these moves, continuing to fund the cost of employment and remediation and additional supervision costs. In circumstances where training funds are disproportionately allocated to urban tertiary hospital facilities, system change is required to enable appropriate supports for doctors in distress without reducing services in rural locations.

Recommendations to support rurally based students and doctors in training

15. Health services to enable all members of the health workforce to contribute to an inclusive and supportive work culture.
16. Governments to continue to invest in the construction and ongoing maintenance of appropriate and safe accommodation for medical students and others in the health profession working rurally.
17. Medical Schools, local health employers, medical colleges and other key local stakeholders to work together as a community of practice to provide pastoral and social support to medical students and doctors in training, and assist with connecting them to health, psychological and other support services if and when required.
18. State health networks and training organisations create partnerships and systems to improve viability of urban in-reach training opportunities at all levels of medical training.

[44] The Foundation Programme is a two-year, work-based training programme that aims to bridge the gap between medical school and specialty training in the UK. Further information about the program can be found on their website: https://foundationprogramme.nhs.uk/programmes/2-year-foundation-programme/ukfp/

[45] UK Foundation Programme Office (2017) *Foundation Programme Annual Report 2016 UK Summary*, Cardiff. Available at https://foundationprogramme.nhs.uk/resources/reports/

Realise Local Interest

4. Pathfinding: Career planning with the end in mind

4.1 Networks to get a job

Given the city hospital dominance of postgraduate medical training, medical graduates' career planning and pathfinding often excludes primary care and generalist specialties in non-metropolitan locations. The complexity of training pathways and limited information readily available to medical graduates, mean that pursuing a training path in a metropolitan hospital is the most straightforward path. Data previously discussed shows the disconnect between graduates who want to work rurally, and the uptake of rural training places. The complexity and lack of knowledge of options for rural work likely contributes to this.

A more coordinated and considered approach to career planning is needed for graduates interested in and prepared for rural practice. This needs to start at medical school, to enable these students to participate as peripheral members of the rural medical community of practice which will support their preparation for future practice[46]. Coordination across the training continuum is needed to enable plans to be brought to fruition. This should be individualised to the aspirations of the student or junior doctor and include links to a rural mentor[47]. Without all stages of medical training coming together with local health employers to collaborate on training and workforce need, medical graduates will remain on their own in planning their career paths.

Investing in the development of professional networks will yield dividends, as these networks will play a significant role in retaining the future workforce. Medical schools, through their orientation and pastoral support activities, can contribute to establishing these networks, but this work needs to be supported further along the pipeline by medical employers in rural areas.

Retention of the workforce must also form part of career planning and rural vocation strategies. For the rural medical workforce to be sustainable, today's rural trainees need to become tomorrow's rural trainers. Career planning support to allow doctors in training to map out a long-term rural vocation is crucial to creating the circumstances in which the rural medical workforce can be sustainable.

These networks need to also retain a view to succession planning and expansion of local health service opportunities for key people in the local community of practice. To continue the delivery of patient care, training capacity and clinical leadership in a local community, succession plans for key individuals need to be developed that intersect with the training of the local medical workforce.

4.2 Secure and ongoing employment

Local training places need to lead to local employment opportunities. Siloes around medical education, training, and workforce need to be interconnected to support the planning of long-term careers with greater certainty. Collaborative, can-do work cultures have less workforce turnover and enable individuals to grow in their confidence and expertise. Rural facilities with effective leadership have a strong learning culture that support the growth and development of their workforce. Effective cooperation between health services and education entities can nurture and sustain this culture.

[46] L Walters, D Prideaux, et al. (2011) *Demonstrating the value of longitudinal integrated placements for general practice preceptors.* Medical Education; 45: 455-63

[47] See e.g., KBC Australia (2020) *Independent Evaluation of the Rural Health Multidisciplinary Training Program: Summary of Final Report to the Commonwealth Department of Health*, Recommendation 17

Innovative and novel employment arrangements need to be considered in non-metropolitan areas. The rural workforce is skilled at creating opportunities by combining part roles into one full-time position which contains components of private practice, hospital employment, supervision, teaching, and other professional medical activities. These arrangements not only are useful ways to create full-time employment opportunities where these may be lacking, they are also a great way to create robust and multifaceted roles for junior doctors and demonstrate the adaptability and capacity to play to local strengths that is a hallmark of rural medical practice. However, such arrangements are often by their very nature tentative and reliant on the ongoing good will of stakeholders. Place-based approaches to employment that continue to reap the benefits of local adaptability and problem-solving, and which formalise these arrangements to be less reliant on the goodwill of ongoing stakeholders need to be explored and supported.

Employment conditions also need to account for doctors interested and experienced in rural practice who primarily work out of metropolitan areas. Analysis of Rural Clinical School of Western Australia's graduates found that over 51% of their alumni had completed multiple stints of rural practice across PGY3-12[48]. Such doctors need to be included in workforce planning, and provision for such work considered in employment planning, capacity building and training allocations.

4.3 Entry and exit points

Data shows that the median length of rural service by doctors is 3 years, and 2 years for doctors in remote areas[49]. It is important that work is undertaken to make it easier and more attractive for a greater proportion of the rural workforce to work more – or all – of their careers in rural areas. However, there need to be visible exit points for those doctors who wish to work rural for part of their career and then relocate to metropolitan practice. Positive rural experiences by these doctors will leave them more knowledgeable of the realities of rural practice, and may make returning to rural practice an attractive option, whether for short stints or longer term.

Likewise, doctors who train in metropolitan areas who have seen and heard positive things about rural practice may wish to relocate to a rural location later in their career. It is important that a focus on building the rural workforce through better alignment of education, training and junior doctor workforce is not at the detriment of clinicians who choose an entry point to rural practice later in their career.

Recommendations for career planning with the end in mind

23. Local health services, universities, Regional Training Hubs, Primary Health Networks and other local bodies to work together to support pathfinding for rural doctors in training, aligning their specialty and other interests to the service needs of the community.
24. Health services, RCSs and other local bodies to proactively mentor local practitioners for appropriate local positions, including leadership roles.

[48] S Gupta et al. (2019) *Survival analysis of Rural Clinical School of Western Australia graduates: the long-term work of building a long-term rural medical workforce* BMC Health Services Research, 19:998
[49] DJ Russell, J Wakerman and JS Humphreys (2013) *What is a reasonable length of employment for health workers in Australian rural and remote primary healthcare services?* Australian Health Review, 37(2)

Maintain Ongoing Interest

5. Multifaceted careers for rural doctors

To maintain their interest in rural work over the long term, rural doctors need to be given comparable opportunities to participate in the full gamut of professional medical activity as all other doctors. This includes opportunities to participate in and lead research, the ability to maintain continuing professional development requirements relevant to their discipline and the unique nature of their clinical work locally as much as possible, and opportunities to participate in leadership roles and activities.

Initiatives and innovations to make these opportunities available to a greater number of doctors in remote, rural and regional areas will increase the ability of these doctors to work long and rewarding medical careers in their local communities. It will also develop the academic discipline of rural health, which in turn will increase opportunities for rural, end-to-end medical education and training, provide still further opportunities for rural clinicians to engage locally in academic medicine, and increase the prominence of rural role models for medical students, prevocational doctors and doctors in training.

5.1 Research opportunities and the rural clinician researcher workforce

In order to meet the health needs of rural communities, greater research about the health of rural communities, their health outcomes and the health workforce serving these communities needs to be undertaken. Furthermore, rural communities need to be included in a greater range of clinical, public health, health systems and medical education research. Rural environments in many ways represent research environments of largely untapped potential.

In Australia, only 2.4% of National Health and Medical Research Council funding in 2014 supported rural health research[50]. Significant progress has been made into increasing the quantity of rural research projects since then; however, much of the rural health research output in rural and remote areas of Australia remains dependent on individual approaches, and key people conducting research in certain areas[51]. This individualised approach has yielded many important contributions to rural health literature, and its achievements are not to be understated; however, to achieve the scale and quality of research output necessary to have a meaningful impact on improving health outcomes in remote, rural and regional areas, a better coordinated, strategic approach is required. This would require partnerships between different levels of government, health services, colleges, universities and research funding bodies. It also needs substantial involvement with local communities to ensure research is driven by and meets local need. This would necessitate the involvement of local clinical workforces in research projects. Local involvement is also essential to ensure that research funding opportunities are communicated to those actively completing rural research. Implementing these changes would result in a rural-proof research policy and rural research enabled system.

It is also essential that such policies are aimed at developing a skilled clinician researcher workforce in remote, rural and regional locations, and that this workforce is appropriately resourced to remain actively involved in a broad range of health research projects. Interest in research as part of future medical practice remains popular among both Australian and New Zealand cohorts. In Australia, between 55% and 65% of graduates indicate an interest in research forming part of their medical

[50] L Barclay, A Phillips and D Lyle (2018) *Rural and Remote Health Research: Does the Investment Match the Need?*, Australian Journal of Rural Health, 26:2

[51] L Alston et al (2023) *Creating a Sustainable and Supportive Health Research Environment Across Rural and Remote Australia: A Call to Action* Medical Journal of Australia, 219:3

career[52], while in New Zealand, between 52% and 57% of graduates indicate interest in research as part of their medical career[53]. As Australian and New Zealand medical schools continue to transition to research focused MDs, the proportion of medical students with interest in research forming part of their future career is likely to increase. A research-enabled rural healthcare system, therefore, is essential, as without this, the rural-metropolitan workforce gap is likely to widen.

Following completion of advanced research training, rural clinicians wishing to undertake research face additional challenges such as limited time availability; lack of a research culture, mentoring and leadership; unclear progression pathways for rural clinician researchers; and fewer rewards for undertaking research compared to metropolitan clinician researchers[54]. What is needed is a visible and active community of clinician researchers working in remote, rural and regional areas as part of a research-rich rural medical culture. Sustained investment by government, universities and research funding bodies, as well as continued and meaningful showcasing of the quality, utility and significance of health research completed by rural clinician researchers, is key to building and sustaining a research-rich culture in the rural medical workforce.

Growing the rural clinician researcher workforce can be expected to increase the research output focused on addressing rural specific questions. However, not all rural clinician researchers will want to focus on research that addresses rural specific questions, and nor should they be expected to. Increasing the rural clinician researcher workforce should be seen as an end in itself, to increase the opportunities available to rural clinicians to engage in the full gamut of medical professional activity and to increase the overall research evidence base produced in Australia and New Zealand.

5.2 Ongoing professional development

There also needs to be further investment in professional development and opportunities for career enhancement and diversification post-fellowship for doctors practising rurally. This development should include a combination of formal and 'on the job' training, mentoring, and connection with rural and metropolitan peers undertaking similar development. Technology assisted delivery of professional development programs and greater emphasis on delivery of programs in a broader range of locations would improve the accessibility of professional development activities for doctors working outside of metropolitan areas. It is also important to ensure that professional development curricula reflect the reality of contemporary rural practice, and that these programs remain relevant for rural clinicians. Investment of time and resources into professional development needs to lead to real world opportunities for these doctors to apply their skills. Rural vocation planning needs to match clinician interest with community need, and this needs to feed into the ongoing professional development opportunities made available to rural clinicians.

5.3 Leadership

Rural practitioners are leaders in their community. Their knowledge, experience and connections position them well for this. The leadership role of rural doctors needs to be better showcased to prospective rural doctors, as for many it is an attractive aspect of rural practice.

The medical profession would benefit by better leveraging the leadership expertise of rural clinicians. More opportunities for rural clinicians to take on a diverse range of medical and clinical leadership

[52] Medical Deans, (2023) MSOD National Data Report 2023, https://medicaldeans.org.au/md/2023/08/MSOD-National-Data-Report-2023-July.pdf

[53] The New Zealand MSOD Steering Group (2021), National Report on Students Graduating Medical School in New Zealand 2016-2020, https://www.otago.ac.nz/oms/otago831361.pdf

[54] L Alston et al (2023) *Creating a Sustainable and Supportive Health Research Environment Across Rural and Remote Australia: A Call to Action* Medical Journal of Australia, 219:3

opportunities should be promoted. Technology means that distance is not a barrier to participation – rural clinicians have the same ability to contribute in a leadership capacity to Colleges, professional organisations, projects and other initiatives. The unique perspectives these doctors bring will enrich the work of the organisations and projects they lead. Having rural doctors in leadership roles within metropolitan based health and education institutions will lift the prestige of rural medicine within the sector, increasing visibility and future recruitment to rural medicine.

Recommendations for multifaceted careers for rural doctors

19. Local health services and medical colleges support the progression and development of doctors working outside metropolitan areas by:
    - Allocating resources and supporting clinicians' time away from clinical work to enable clinicians to develop and maintain broad scopes of practice
    - Increasing flexibility of College training requirements to support doctors to work in a broader range of settings
    - Supporting time away from clinical practice to focus on further skill development if/when required e.g., research, teaching and leadership
    - Increasing focus on succession planning, to allow clinicians to effectively transition into future professional roles
20. Government, universities and research institutes to work together to grow the number of PhDs and postgraduate coursework that can be completed in rural locations.
21. Research funding bodies to ensure equitable opportunities for research funding are made available to non-metropolitan researchers.
22. Health services and medical colleges to provide greater opportunities for collaboration in education and training, leadership, research, and other professional activities between clinicians in rural and remote areas with their metropolitan colleagues.

6. Thriving rural areas are vital

Life in remote, rural and regional areas offers a unique range of opportunities, benefits, challenges and attractions, with significant variability between locations. Life in a small community in North Queensland, for example, would look very different to life in a similar sized community on New Zealand's South Island. These differences are a major part of the appeal of rural life.

The meaningful work of rural doctors needs to be manageable for individuals while providing their families with safe, connected and similarly enriched lives. Medical students, doctors in training and their families need to be supported to see and value the place-based community opportunities and lifestyle benefits available in a local community, including: education opportunities and employment prospects for family; physical activity, including local community sporting clubs; arts, culture and entertainment; and community social organisations and opportunities. Appropriate place-based orientation will allow future medical workforce to make informed decisions about where and how to base their rural careers.

Ongoing government investment in local infrastructure is needed to ensure that rural community services and attractions continue to develop. Government support to further decentralise key services and businesses into regional areas to continue to grow their economies will enhance opportunities available throughout rural communities. This would further enhance the already valuable proposition that life in remote, rural and regional areas is for many doctors.

It is important that this investment is aimed at infrastructure, amenities and opportunities local communities identify as needed. Part of the attraction of a remote, rural or regional career for a medical clinician is the unique culture of the area where they choose to base their practice. It is essential that investment in the local community is conducted in a manner which enhances the unique culture of the local community.

Recommendations for thriving rural areas

25. Governments to work with local communities on strategies to better promote the unique and desirable characteristics of remote, rural and regional communities, and support junior doctors to establish lives in these areas.

Conclusion

Building the medical workforce in remote, rural and regional communities must start with consideration of local need. The way to build long-term solutions to medical workforce shortages is through training in, with and for communities. Determining training capacity must be place-based and must start with the end in mind. Local communities need to determine the clinical services and discipline specialties they need and use this knowledge to inform the quantum and type of training they provide locally.

It is crucial that a holistic approach to addressing these challenges is taken. Workforce shortage in remote, rural and regional areas is a complex issue, and as such it requires a multi-faceted solution. Meaningful long-term change can only occur if change is implemented across the training continuum.

Medical schools, as the conduits to future medical practice, are the first step in the training pathway and so this place-based approach to training and workforce planning must include medical schools with a local footprint. Ongoing government investment in innovative models of education delivery has yielded good results, with a substantial number of graduates preferencing future careers based outside of capital cities. These successes show that continued and increased investment in rural delivery of medical education, innovative approaches to recruiting students from rural communities, and increasing immersion in rural medical practice, builds interest in rural medical careers.

Data also shows that the current postgraduate training model with disconnect between medical school, prevocational and vocational training means not enough of these graduates realise their interest in and preparation for rural practice. The postgraduate and vocational training systems in both Australia and New Zealand need to be rethought to allow more doctors in training to complete postgraduate and vocational training in a diverse range of rural settings. This must include primary care settings. Significant investment, resources and energy is needed to create the supervisory capacity, build the necessary infrastructure, particularly in general practice, and ensure that accreditation standards can be met efficiently and without overburdening the already stretched rural medical workforce.

These doctors, once their training is complete, need to be supported to build diverse careers aligned to their interests and skills. Opportunities to participate in the full gamut of professional medical activity, including clinical expertise development, teaching and research, supervision, leadership and involvement in policy and strategy development, need to be as available to clinicians in rural areas as they are to metropolitan clinicians. Many rural doctors have built such careers. However, for many junior doctors, finding and taking advantage of the opportunities which lead to these diverse careers is a challenge. An increased focus on career planning for the rural medical workforce that starts with the end in mind, and increased opportunities (and increased publicisation of these opportunities) for rural clinicians to participate in the full gamut of professional medical activity, will lead to higher retention of the rural medical workforce.

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