

Assessment of the Distribution of Medical School Places in Australia

Joint Submission

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Group of Eight Deans of Medical Faculties Group

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Introduction

This is a joint submission from Medical Deans Australia and New Zealand and the Group of Eight Deans of Medical Faculties Group in response to the request for views on the assessment of the distribution of medical school places in Australia being undertaken by the Departments of Health and Education.

The lack of access to health services and the related poorer health outcomes for people who live in rural¹ Australia is unacceptable. The medical workforce is a national resource in which Government along with individuals have made substantial investments. As has been previously expressed, by Medical Deans, at this point in time, the establishment of yet more new medical schools is not the solution to the maldistribution of the medical workforce. The most immediate challenge in meeting the workforce needs of rural Australia is to ensure that the increase in medical graduates translates into doctors in the specialties and locations most needed.

Medical schools are committed to continuing to work with Government to address rural health challenges as we have done in the past. It was advocacy and advice from Medical Deans along with other stakeholders that informed the shape of the Integrated Rural Training Pipeline package of initiatives. Medical schools have also invested substantial resources, time and energy in establishing rural clinical schools, which have been successful in both providing medical students with exposure to rural practice and improving the clinical infrastructure in rural communities.

There is now a substantial body of evidence about the impact of rural origin and/or a quality rural training placement on the likelihood of working rurally. The World Health Organisation global policy - "Increasing Access to Health Workers in Remote and Rural Areas Through Improved Retention" makes recommendations relating to Education, Regulation, Financial Incentives, and Personal and Professional Support (see Appendix 1). An important point made in that report is that effective public policy on rural workforce involves a tailored package of interventions that must cut across education, health and other policy areas; and that "long-term vision, effective and sustained political commitment and political will are important for successful implementation of the chosen package...". Further evidence is outlined in the response to Question 9.

However this evidence must be viewed in the context of the medical education training pipeline. The period of training for a medical practitioner is long, including entry-level training, prevocational training and specialty training. *What happens all along this training pipeline will influence the geographical location in which a doctor ultimately lives and serves.* Medical school places are in play for part of this journey and can therefore make a useful but necessarily limited contribution to addressing workforce need in isolation.

Many junior doctors interested in working in rural Australia are currently obliged to move back to the city for specialist training. The most important current solution is not another new medical school nor a redistribution of medical school places. *Medical Deans have long advocated that what is needed to achieve a better distribution of doctors in rural Australia is a "flipped" model of regionally based specialist training with rotations back into metropolitan hospitals if needed.* There are some good examples of this already happening such as the West Victorian General Surgery Training Program and the Northern Clinical Training Network involving James Cook University and four of the regional Queensland Health and Hospital Services.

¹ This submission uses the term "rural" to cover rural, regional and remote

The assessment of the distribution of medical school places, provides the opportunity to focus on this issue and Medical Deans welcomes the commitment from the Assistant Minister for Rural Health Dr David Gillespie, outlined in his press release that the Government “must ensure access to high quality postgraduate training for the existing numbers of medical students and recent graduates in regional, rural and remote Australia.”²

Further work needs to be done to better understand the factors that influence the decisions of doctors to work in rural areas. The Medical Schools Outcomes Database (MSOD) Linkage Project (funded by the Department of Health) aims to link the MSOD with the National Health Workforce Dataset to provide longitudinal data and analyse the predictive factors that are influential in doctor’s career choices.

This submission sets out in more detail responses to the questions put by the Department of Health in their discussion paper. Medical schools see this submission as only the beginning of our involvement in this assessment and look forward to further discussion with both Government and the Departments of Health and Education on this important issue.

Department of Health –Discussion Questions

Q1. What are the current trends in medical education and training, across all stages of medical training, and the implication of these trends for the training of doctors?

1. Trend: Shortage of people with expertise in medical education

An increasingly multidisciplinary evidence base informing best educational practice, rigorous medical education accreditation standards and a propensity for students/trainees to challenge unfavourable progression decisions demands a critical mass of medical education specialists in medical schools. These factors combine to make “Medical Education Units” or their equivalent essential in the organisational structures of medical schools. But lack of people with the requisite expertise and the daily demands placed on these units make them difficult to maintain.

Implication

The more medical schools there are trying to establish a Medical Education Unit, the greater the risk the current medical educator workforce will be diluted and that a critical mass of experts within any one education and training provider is not able to be established or maintained.

2. Trend: More sophisticated approaches to assessment

Assessment both drives learning and measures achievement of learning outcomes. Programmatic assessment against defined learning outcomes is accepted as the “best practice” approach to assessment. There is an increasingly well developed “tool box” of commonly used assessment methods appropriate for the assessment of knowledge and skills with less well developed but growing assessment resources for aspects of professional attitudes and behaviour. Newer developments include ‘entrustable professional activities’ (EPAs) and ‘milestones’.

Implication

Assessment is resource intensive and requires significant ongoing faculty development to ensure it is appropriately implemented.

² Media Release, The Hon Dr David Gillespie, Assistant Minister for Rural Health, 14 December 2016

3. Trend: Clinical training of student in community settings and areas of workforce need

Recognition of the importance of a significant proportion of education and training occurring in clinical settings where community need is greatest (rural and remote, outer metropolitan, other areas of need, community settings) to maximise the likelihood graduates are both work-ready in a variety of settings/contexts and more likely to choose to work in areas of undersupply. This is reflected internationally including a move “away from health systems organized around clinical professional specialities and treatment in hospitals towards systems designed for prevention and primary care that can help meet these challenges and address inefficiencies.”³

Implication

The development of quality supervised clinical training opportunities outside of traditional teaching hospitals is a continuing challenge. Increasing demand and competition for clinical placements across the vertical continuum of medical education on health services (public and private), many of which are not used to contributing to education and training and historically not resourced to do so. The result is that human, financial and facility resources are strained with the associated risk that best educational practice is subordinated to the demands of delivering health services.

4. Trend: Greater use of simulation

Increasing utilisation of simulation but with challenges as to how best to provide high-fidelity simulation to geographically distributed learners.

Implication

High-fidelity simulation centres are expensive to set up and to maintain and the technology has built in obsolescence. This creates challenges to ensure resources are efficiently used including how many high-fidelity simulation centres should there be, how they should be accessed by different education and training providers, and on what stage of the training continuum should these centres focus.

5. Trend: New approaches to selection

Uncertainty regarding the best approaches for the selection of students/junior doctors/vocational trainees. This is due in part to a lack of prospective data across the training continuum to inform selection policies and to the many confounders at play across time and the continuum. These make attributing admission of a particular student to a specific workforce outcome up to 14 years later very challenging. Medical Deans have developed a guideline statement on selection policy which reflects the importance of encouraging student diversity.⁴

Implication

Admission and selection decisions are largely based on historic practice with some innovative approaches. The relationship between factors used to determine admission decisions and subsequent career choice is not straightforward/linear and should be considered as part of a larger approach.

³ World Health Organization. (2016). Global strategy on human resources for health: workforce 2030.

⁴ Medical Deans Australia and New Zealand. (2016). Selection Policy Statement. Retrieved from http://www.medicaldeans.org.au/wp-content/uploads/20160301_-Selection-policy-statement_FINAL.pdf

6. Trend: Socially accountable medical education

There is a growing international recognition of the role of medical schools in achieving better health outcomes for populations. Socially accountable medical education has been defined by the World Health Organisation as “activities addressing the priority health concerns of the community, region and/or nation they have a mandate to serve. The priority health concerns are to be identified jointly by governments, health care organisations, health professionals and the public.”

Implication

The further development of the 'social mission' of medical schools represents an opportunity to promote an orientation to community service and professional values, to produce the kind of doctors required by evolving health systems, and to respond to the critical health concerns of society. Medical Deans has established a Social Accountability Coalition as a working group to take this agenda forward.

7. Trend: Outcomes based approaches to learning, teaching and assessment

Consolidation of a dominant role for outcomes based approaches including Competency Based Medical Education and Entrustable Professional Activities with the development of explicit “milestones” to indicate progression expectations at different points in training pathways.

Implication

Increasingly sophisticated blueprinting of curricula making intended outcomes of a program more explicit at any stage of that program (a good thing for students and teachers), but with a downside risk that program outcomes and sub-outcomes become unnecessarily complex.

8. Trend: Movement towards qualifications at Master’s Degree (Extended)

An increasing proportion of Australian medical schools have moved from Bachelor level qualifications to Masters Extended (AQF Level 9) programs. This is not the case in New Zealand and a number of Australian Bachelor courses remain.

Implication

With increasing medical school output, graduates seeking to distinguish themselves in an increasingly competitive post-medical school “market” may look to acquiring other academic qualifications through their university – for example an MD/MPH with the MPH completed by the time internship finishes. This competition for metropolitan specialist training places is not currently aligned with redistributive workforce priorities and may indeed be working against them.

Commonwealth supported places (CSPs) and controls on medical places

Q2. How effectively does the current distribution of medical schools with CSPs address workforce need, particularly in regional, rural and remote areas?

The poorer health outcomes and lack of access to health services for people in rural Australia has been well documented. As the Department of Health Discussion paper highlights “*Australians need a health workforce that is well distributed and has an appropriate mix of health professionals who can work in a range of service settings.*” Despite investment and

program reform over many years, the maldistribution of the medical workforce remains a major policy issue. Rural communities are still too reliant on international medical graduates, fly-in-fly out and locum doctors and rural patients travelling to cities for treatment.⁵

There has been significant growth in the medical workforce in recent years but it has not been even across geography or among types of doctors. According to “Australia’s Future Health Workforce – Doctors” the number of doctors per head of population has increased across all geographic areas however the gap between inner metropolitan areas and the rest of Australia has widened further. Within the overall growth of medical consultants, the growth of consultant specialists (other than general practitioners) at 67% has outstripped the growth of general practitioners at 33%.⁶

Improving access to medical services for people who live in rural Australia is a significant workforce challenge, particularly given the length of the medical training pipeline and the complexity of Australia’s medical workforce arrangements. The involvement of many players including the Commonwealth, states and territories, public and private sector employers, universities and specialist colleges means co-ordinated change is essential. *Focusing on the distribution of medical school places in isolation will not address the workforce needs of rural and regional Australia.*

The Department of Health discussion paper references the increase in medical school graduates, with Australia more than doubling its medical graduates over the last two decades and this question seeks to explore whether the distribution of medical school places addresses rural workforce needs. The expansion in medical school capacity was a result of concerns about the shortage of doctors in the late 1990’s and early 2000’s. Domestic medical student commencements have increased from 1,871 in 2005 to 3,215 in 2016. Domestic student commencement numbers have plateaued over the last few years. The growth in capacity was achieved through both new medical schools and the expansion of existing schools. This was accompanied by the establishment of rural clinical schools, funded through the Commonwealth Governments RCTS and/or the University Department of Rural Health programmes.

The following table sets out Australian Universities with RCS and the year of establishment:

University	Year
Monash University	1992
Flinders University	1997
University of Sydney	2001
University of Melbourne	2002
University of Tasmania	2002
University of Queensland	2002
University of Western Australia – RCSWA	2002
University of New South Wales	2002
University of Adelaide	2003
James Cook University	2005
Australian National University	2006
University of Newcastle	2006
Flinders University Northern Territory – NTRCS	2006
The University of Notre Dame (Fremantle) – RCSWA	2007
Deakin University	2008
University of Wollongong	2009
University Western Sydney	2009
University of Notre Dame – Sydney	2011

⁵ Greenhill, J. A., Walker, J., Playford, D., & Walker, J. G. J. (2015). Outcomes of Australian rural clinical schools: a decade of success building the rural medical workforce through the education and training continuum. *Rural and Remote Health*, 15(3), 2991.

⁶ Health Workforce Australia (2014). Australia’s Future Health Workforce – Doctors. Retrieved from <http://www.health.gov.au/internet/main/publishing.nsf/Content/australias-future-health-workforce-doctors>

The distribution of medical school places should be seen in the context of the establishment of the rural clinical schools. *It is not the distribution of CSPs per se, but rather what a provider does with those CSPs in terms of rural placements and whether those places connect vertically with the specialist training that is needed to create a practicing rural doctor.* Evidence shows that Universities that receive CSPs ensure a substantial proportion of medical students spend time in regional, rural and remote settings.

With Australian government support, universities have made significant staffing and financial investments in rural clinical schools with most schools offering longitudinal integrated rural placements or block rotations providing students with multiple opportunities to practice skills and experience rural life. There are now significant numbers of medical students and interns based in rural and regional sites. For example 27.8% of Victorian medical students are based in rural and regional sites during the clinical years of their course; there are more medical students per capita undertaking clinical training in regional and rural Victoria than in Melbourne. The situation is similar in other states and territories.

The positive impact of rural clinical schools on rural communities has been documented⁷ and is further set out in response to question 9. Rural clinical schools have brought new health infrastructure and expanded the rural clinical workforce. There has been growth in the number of students from a rural background and increased opportunities for students to experience a rural placement as part of their medical education.

According to the Department of Health discussion paper, in 2014, 2,457 medical students completed a four week rural training placement and in 2015 nearly 900 of 2,710 graduating medical students completed a year-long placement in a rural area. These figures are likely to understate the number of students in a rural or regional placement because of definitional issues. (RHMT data do not differentiate Geelong, Wollongong, Newcastle and the Gold Coast from Capital cities except Hobart.) In 2003, 20% of domestic students had a rural background and in 2016, the proportion of commencing rural students had risen to 28% of total domestic students.

However CSPs are only in play at the early stage of medical education. After graduation and internship, medical practitioners typically spend between three to ten years training to obtain a medical specialty fellowship. The expansion in CSPs has not been matched by a corresponding increase in regionally based specialist training opportunities. Outside of general practice, specialist training remains centred on major metropolitan teaching hospitals. This means that many medical graduates who are interested in working in rural Australia are forced back to metropolitan areas to complete their specialist training. This often co-incides with the time they are settling down and starting a family, making it difficult for future relocation to a rural area, as acknowledged in the Department of Health Discussion Paper (P3).

The increase in CSPs and the investment in rural clinical schools has contributed to creating a strong foundation for a sustainable future rural medical workforce. Students who have positive experiences in rural clinical placement settings, independent of their rural origin, will disproportionately choose to work in these settings. *However, the continuum of education and training must promote ongoing longitudinal, specialist training experiences in the same regional, rural and remote settings.* Unless this occurs the impact of those positive CSP related rural experiences will be diluted in terms of meeting rural medical workforce need.

⁷ - Greenhill et al. (2015)

Q3. How would expansion, reduction or redistribution of medical schools/medical places, to target regional/rural/remote health care needs, impact on the number of doctors practicing in these locations?

The level of domestic production of medical graduates is appropriate and the current number of CSP's should be maintained. A redistribution of medical school places in and of itself is not an effective way to increase the number of doctors in rural Australia. Two factors are relevant here.

Firstly, the significant time frames involved. If medical school places were redistributed, the first graduates would not enter the intern workforce for 4 to 7 years and would not be able to serve as an independent practitioner for at least 10 years.

Secondly, as previously stated, it is not CSPs *per se* that are important but what a medical school does with those places.

If a medical school ensures that a proportion of students have longer-term positive experiences in rural settings and if the continuum of medical education and training reinforces those positive experiences, this, in addition to rural origin, specific selection policies and other incentives will contribute to meeting these workforce needs. The current lack of specialist training capacity in rural settings is the major problem that needs to be addressed so that graduates with sincere regional/rural/remote intent can continue their training in these settings and increase the likelihood they will remain for the longer term in that workforce.

The Department of Health Discussion Paper presents data showing that only 13% of (non general practitioner) accredited specialist training positions are outside the major metropolitan areas. In 2016, 28% of commencing domestic students had a rural background and according to the Medical Schools Outcomes Database an increasing number of medical graduates are indicating they want to work outside our capital cities. However many young doctors are still moving back to the city for specialist training, often never to return to rural areas. This competition for specialist training places and an increasingly sub-specialised workforce profile (driven in part by health financing arrangements) are drivers for city-based training in narrow speciality areas, particularly those perceived to offer lucrative employment.

The solution to getting more doctors in rural areas is not the creation of further medical schools or the redistribution of medical school places, but rather to establish viable regional post graduate training programs that allow medical graduates to complete specialist training in regional locations. This should have a particular focus on generalist specialties (General Practice, but also General Internal Medicine, General Surgery etc).⁸ In effect this is a “flipped” model of specialist training of joined-up, regionally-based training, with a city ‘rotation’ if required.

This is supported by a study of the outcomes of Australian Rural Clinical Schools by Greenhill et al. (2015), which found that despite similar numbers of medical students per capita in rural and regional settings and in capital cities, government investment in regional training has not yet produced its intended outcome, an end to the regional and rural medical shortage. The study identified that there are very limited opportunities for medical graduates to continue their training in regional and rural Australia and concluded “the rural workforce shortage cannot be solved without regional post graduate training programmes, key recommendations of the Health Workforce Australia’s Health Workforce 2015 and the Australian Government Review of health workforce programmes” (p. 9).

⁸ UN High Commission on Health Workforce and Economic Development points to the importance of enabling public policy, stewardship and regulation to allow generalists to practice to their full scope.

Further evidence is outlined in question 9 including; Runge et al. (2016) in a study of Queensland physicians who found that physicians who had spent time as an intern or a registrar in a rural location were four times more likely to practice in rural locations; Shires, Allen, Cheek and Wilson (2015) in a study of Tasmanian medical graduates found doctors in their early years of training are choosing to work in rural locations but drift back to urban areas after PGY3 consistent with the lack of specialty training places.

The Integrated Rural Pipeline Initiatives are a welcome move but more needs to be done, including increasing the rural targets for the Commonwealth Government Specialist Training Program (STP), alignment of State and Territory Government workforce and training policy and a central role for Regional Training Hubs in brokering local joined-up solutions. To be effective, this will require a whole-of-government approach and coordinated action through the Council of Australian Governments will be necessary.

Q4. What key factors should be considered to achieve a sustainable, well distributed medical workforce that provides access to quality medical services in all remoteness areas, and which factors are most relevant to future allocation of medical Commonwealth supported places/schools?

A well-trained medical workforce is critical for the provision of safe and effective health care. There is a substantial cost to the taxpayer in supporting medical training, so it is important medical training across the continuum is delivered in a cost effective way and meets community needs.

“Australia’s Future Health Workforce – Doctors” identifies three key factors important in national workforce planning for doctors; the increase in domestic medical students that has occurred over the last 10 years; the large number of doctors that will retire from 2025; and the need for co-ordination across the medical training pipeline. As referenced in the press release from the Assistant Minister for Rural Health, Dr David Gillespie announcing the assessment of medical school places, the report suggests that national supply is no longer the issue but rather the distribution of doctors. The report also makes the point that adjusting the medical student numbers is not an effective means to deal with short-term imbalances between supply and demand for doctors (p.10)⁹

From the perspective of entry-level medical training, there are a number of factors that may be relevant to achieving a well-distributed medical workforce. These include selection/admission criteria, location of clinical placements, the impact of clinical mentors/clinical supervisors on students/trainees, specific incentives, social and community supports and access to specialist training pathways in rural areas.

It is difficult to envisage that distribution of CSPs alone would have any significant impact independent of these other factors. However the growing gap between the number of graduates and the number of specialist training positions does provide the opportunity to deliver training that meets the community’s needs, both in terms of geographic distribution and specialties through the “flipped” model of specialist training referred to above. Medical schools report that rural graduates are telling them they want to remain in rural areas but are being forced back to capital cities to get into training programs. For example Orange Base Hospital in NSW received 100 applications in 2016 for 16 available intern jobs.

The Regional Training Hubs are a good start but have not yet commenced. The most effective way to translate the benefit of the Regional Training Hubs will be to vertically align these with

⁹ Health Workforce Australia (2014)

the already established clinical expertise in the rural clinical schools. From an evidence point of view, it makes little sense to change another variable (i.e. the distribution of medical school places), before there has been the opportunity to implement and evaluate the effectiveness of the Integrated Rural Pipeline and related initiatives.

While not the focus of this submission, it is also important to recognise that there are a number of other important factors in ensuring rural communities access the health services they need.

These include:

- Co-ordinated planning that outlines what health services can be safely provided in communities and ensures the resources and facilities to deliver those services.
- A realignment of the Australian General Practice Training Programme so that it articulates a clear focus on actual workforce outcomes in meeting the needs of rural and regional communities rather than merely training more GPs.
- Appropriate incentives that recognise the challenges of delivering medical services in rural Australia including doctors working longer hours.¹⁰
- The presence of a critical mass of practitioners within a community to ensure a reasonable work life balance.
- Opportunities for GPs to undertake generalist training in rural hospitals, reflecting the wider scope of practice rural GPs are required to provide.
- Changes in the delivery of health services requiring a greater focus on multidisciplinary care.
- The impact of an ageing population, increasing prevalence of chronic disease and increasing consumer expectations. The World Health Organisation Global Strategy on Human Resources for Health: Workforce 2030 recommends reforms in service delivery to meet a growing demand for integrated, people-centred community-based health services and personalised long-term care.¹¹

Q5. What role can/should full fee paying places (international and/or domestic) play in addressing medical workforce need?

As previously stated, it is the opportunities a university provides for its students to experience rural training and access to specialist training places that are important. There are some Commonwealth supported intern places in rural settings available to international fee-paying students who meet the relevant criteria, but the significance of these places in isolation from down-stream specialist training pathways in meeting medical workforce need would be very limited.

The financial burden for a full fee-paying student may mean they are more attracted to better-remunerated city based roles. Fee-paying pathways for international students to address workforce shortage are complex because of the interactions between visa requirements,

¹⁰ Australian Medical Association. (2016). A Plan For Better Health Care for Regional, Rural, and Remote Australia. Retrieved from <https://ama.com.au/position-statement/plan-better-health-care-regional-rural-and-remote-australia> – GPs in major cities work 38 hours per week on average while those in remote/very remote worked 46 hours.

¹¹ World Health Organisation (2016)

internship availability and the cost of training with changing exchange rates. It is hard to imagine such pathways could be established to meet the need in the short to medium term. It should also be noted that any redistribution of medical school places which resulted in some schools losing CSPs would have a financial impact on those schools/universities. Schools/Universities would have to address this loss of revenue either through staff reductions or increased income, potentially from increasing full fee paying international students.

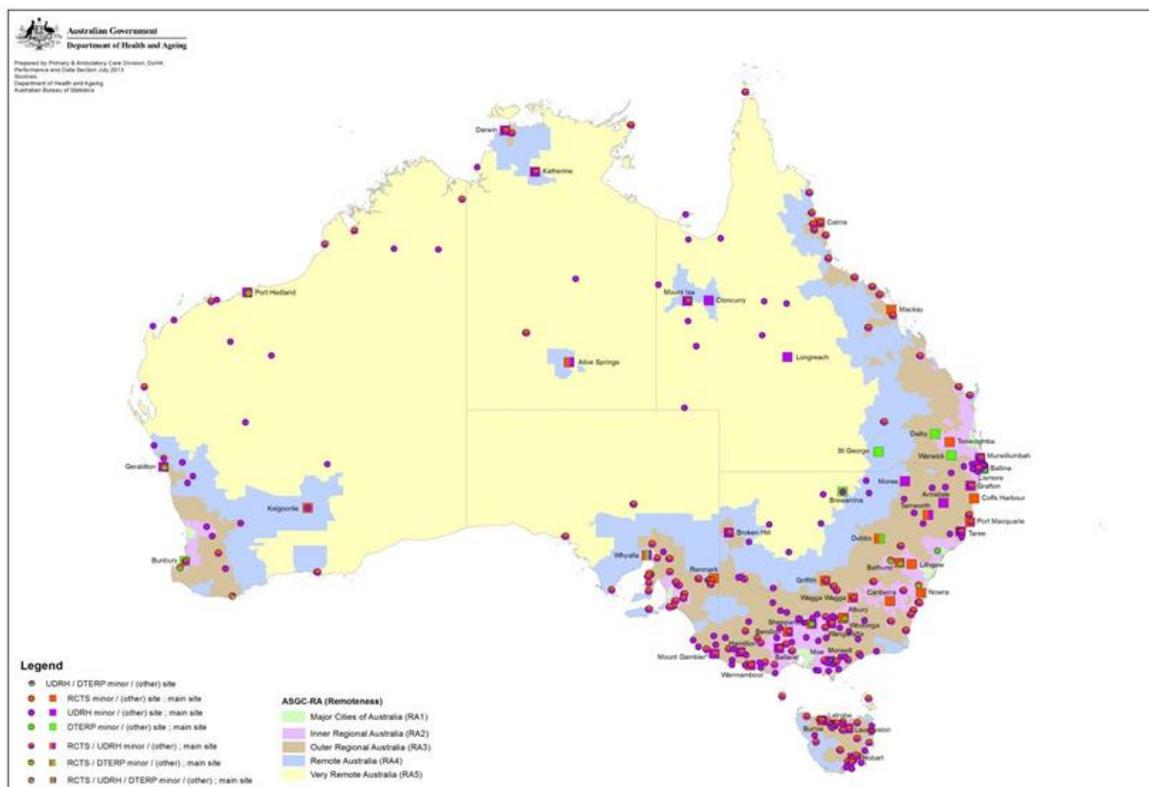
Clinical training

Q6. Is clinical training for medical students geographically well distributed, or are changes needed?

Quality clinical training placements are essential to produce competent graduates who can practice safely under supervision. Clinical placements expose students to a range of health issues and experiences, contribute to the development of work ready interns and can play a role in workforce distribution.

The Rural Clinical Schools and University Departments of Rural Health have addressed the issue of well distributed rural medical student training. There has been a significant increase in the number of medical students both from a rural background and/or undertaking training in a rural area.¹²

Medical schools have established multiple rural and remote sites, with 18 Rural Clinical Schools (RCS) across Australia providing the opportunity for students to undertake both short and long term clinical placements. The following map (Greenhill et al., 2015) shows Rural Clinical Training and Support, University Department of Rural Health and Dental Training Expanding Rural Placements programs: major and minor sites.



¹² In 2016, 28.2 percent of commencing domestic students had a rural background (Source: Medical Deans Student Statistics 2016)

Table 3 in the Department of Health discussion paper creates a medical clinical placement hour rate per 100 people for metropolitan and regional areas. The data are based on activities arising from 2014 clinical placements for medical students collected as part of the Clinical Training Fund program. Medical Deans notes that the data are incomplete and should be interpreted with caution since not all schools had access to the Clinical Training Fund and because the information was provided for a different purpose. Student clinical placement hours to population ratios across broad geographic classifications is not a particularly useful metric for understanding how to meet the health care needs of rural Australia, nor to draw conclusions on the adequacy or otherwise of training capacity.

Q7. What are the key factors to providing, and improving, high quality clinical training experiences, in particular in remote and very remote Australia?

There are several key factors including:

- adequate clinical workforce in the areas with the capacity and protected time to participate in education training activities;
- organisational commitment of the employers of those clinicians to ensure that the commitment to education and training is genuine and delivers;
- strong support from senior clinician leaders in rural regions combined with strong support from the centre for locums, CPD etc.
- adequate infrastructure such as spare consulting rooms, tutorial space and high-speed internet to facilitate distance learning and supervision;
- resources available to support students in particular to travel to and live in remote and very remote locations for sufficient time to have meaningful educational experiences that may influence their subsequent career choices;
- adequate resources on the part of the education and training provider to manage the additional overheads that arise from managing geographically distributed educational and training networks;
- sound inter-organisational agreements that outline agreed roles and responsibilities to underpin the way education and training institutions and remote and very remote health services deliver education and training.

Q8. What is the availability, including constraints, on clinical supervision, and/or pressures on clinical supervisors (across the stages of medical training, from medical school through to postgraduate training and/or across different remoteness areas)?

The delivery of clinical training is under significant pressure and ongoing effort is needed to ensure adequate clinical training across the medical training continuum. The Review of Medical Intern Training made recommendations about medical graduates meeting agreed and defined expectations of work readiness and access to appropriate clinical training is critical to achieving this. However there is a lack of clarity about funding and responsibility for clinical training and an increasing propensity for state and territory health services to levy charges for clinical training placements. The clinical educator workforce is ageing, there is a shortage of supervisors, and these issues are compounded by the increasing demands on clinical services

that tend to trump educational activities and a need to broaden the clinical training placement settings.

The loss of the Clinical Training Fund (CTF) has also been keenly felt by many medical schools. This funding was used in a range of ways including offsetting practicum costs, placement support staff to coordinate complex placements, simulation equipment, clinical staff to provide supervision and the development of clinical schools eg Mackay, Townsville, Cairns. The loss of this funding has particularly impacted on training outside of traditional public hospital settings (for instance, private hospitals and aged care facilities).

The last seven to nine years have seen increased demand for regional, rural and remote clinical placements to meet the needs of increased numbers of medical students. It is not just medicine that is doing this – the same is true for nursing and allied health professions to an extent. The consequence is that the previously under-utilised clinical training capacity (including accommodation and teaching infrastructure) is now stretched in many locations. New clinical training infrastructure is no longer supported through Commonwealth/HWA programs, impacting on the resourcing of rural training. While the investment in the IRTP initiatives is welcome, the reality is that a substantial amount of CTF was returned for “budget repair” as well as being re-directed to IRTP. As the complexity of medical school curricula and assessment processes increase, so does the complexity of delivering appropriate faculty development programs to the more rural and remote clinical educators.

Rural training during medical school years

Q9. What is the best available evidence on medical school programs, extent of their rural focus, and influence on doctors ultimately working in areas/locations of workforce need?

Question 2 provides information on the rural focus of medical schools through the establishment of Rural Clinical Schools. The following section details and provides peer-reviewed evidence surrounding the importance of rural background and training on future rural practice in Australia.

Runge et al. (2016) carried out a study that administered an online survey to Fellows of the Royal Australasian College of Physicians (RACP) to determine characteristics of physicians and the influence of rural factors on practice location. From the results of the survey it was found that physicians who had spent any time as an intern (odds ratio (OR) 4.07) or a registrar (OR 4.00) in a rural location were approximately four times more likely to practice in rural locations than those who did not train in rural areas. In addition to this, those with a metropolitan childhood and a rural internship were approximately five times more likely to be working in a rural practice than those with no rural exposure (OR 5.33). Whilst rural childhood was also found to influence future rural practice (OR 1.89), this association was not as strong a predictor of rural practice when compared to that of rural training. The authors suggested that these significant findings “gives support to the recommendation to increase rural vocational training” (p. 984) as well as an emphasis for “specialist colleges to consider mandatory rural rotations” (p. 982) to increase the future supply of rural doctors.

According to a paper by Herd, Bulsara, Jones and Mak (2016) rural background, exposure and rural clinical school participation is strongly associated with the increased likelihood of working rurally. The authors found that self-reported preference for rural practice location at the commencement of medical school was the most consistent independent predictor of whether a graduate would work rurally during PGY1 (OR 1.38) and PGY3 (OR 1.86).

This was consistent with findings in a survey carried out by Harding, Seal, McGirr and Caton (2016), where 90% of those with rural backgrounds intended to practice in rural areas compared to 54% of participants with metropolitan backgrounds. It was also found that those with non-rural backgrounds who had attended a rural clinical school had significantly higher rural practice intentions. Whilst these findings reinforce that rural childhood and rural practice location preference are positively associated with rural practice, rural training (i.e. rural internship/registrar) predictors found in the Runge et al. (2016) paper are stronger influencers for future rural practice.

Kondalsamy-Chennakesavan (2015) carried out a retrospective study on University of Queensland medical graduates to determine influencing rural factors on rural clinical practice. Similarly to previous findings, graduates who had a rural background and had attended a rural clinical school were far more likely to practice rurally.

According to a study on the outcomes of rural clinical schools by Greenhill et al. (2015), their establishment has been an important policy initiative in Australian rural health. The findings of the study show that in addition to providing positive experience for medical students, rural clinical schools have had significant positive impacts on regional and rural communities with teaching facilities bringing new infrastructure and an expanded clinical workforce. Rural clinical schools also provide new opportunities for education and research for rural clinicians, which reduces professional isolation, improves the quality of care and may assist in retaining rural clinicians. "The study shows the RCS initiative sets the stage for a sustainable future Australian workforce now requiring the development of a seamless rural clinical training pipeline linking undergraduate and post graduate medical education" (p. 2).

In addition to the existing literature, the Medical Deans Student Statistics annual data collection has found that 2016 has the highest proportion of commencing domestic students with a rural background since 2003 (the earliest year of rural data collection), with 28.6% of commencing domestic students last year coming from a rural background.

Q10. In some rural locations multiple universities are providing rural training for their medical students. Are these arrangements effective and/or how are universities working together (and with health services)?

AMC Standard 8.4 **Clinical Supervision** is relevant.

- 8.4.1 *The medical education provider ensures that there is an effective system of clinical supervision to ensure safe involvement of students in clinical practice.*
- 8.4.2 *The medical education provider supports clinical supervisors through orientation and training, and monitors their performance.*
- 8.4.3 *The medical education provider works with health care facilities to ensure staff have time allocated for teaching within clinical service requirements.*
- 8.4.4 *The medical education provider has defined the responsibilities of hospital and community practitioners who contribute to the delivery of the medical program and the responsibilities of the medical education provider to these practitioners.*

Where more than one medical school is placing medical students in a health facility of geographic location, it is incumbent on that medical school to demonstrate that the arrangements in place are agreed among all the medical schools and the health service in

order to meet the standard. Individual schools report that communication and co-operation between schools is the key to success.

Q11. What are your views on running a full medical program in one specific geographic location, compared with more dispersed models of delivery, for achieving a sustainable well distributed medical workforce across all remoteness areas?

AMC Standard 3.6 **Opportunities for choice to promote breadth and diversity** is relevant. This standard requires

“There are opportunities for students to pursue studies of choice that promote breadth and diversity of experience.”

Dispersed medical training sites within a medical school programme allow students to experience different approaches to the delivery of health care, understand the impact of economic and geographic factors on health care and increase student awareness of future career options.

Running a full medical programme from one location can limit the opportunities for multiple location learning in both rural and metropolitan environments. There are also costs and challenges in recruiting staff required such as basic scientists, epidemiologists, public health practitioners etc. for the pre-clinical phase. The extent to which such breadth and diversity of training will be available in one specific geographic location will depend on where that location is and what services are available.

While the key focus of this assessment relates to medical places/schools, achieving a sustainable and well distributed medical workforce requires rural training and rural practice opportunities at all stages of medical education and training.

Appendix 1

World Health Organisation. Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention: Global Policy Recommendations. WHO Geneva 2010

Specific recommendations:

A. EDUCATION RECOMMENDATIONS

1. Use targeted admission policies to enrol students with a rural background in education programmes for various health disciplines, in order to increase the likelihood of graduates choosing to practise in rural areas.
2. Locate health professional schools, campuses and family medicine residency programmes outside of capitals and other major cities as graduates of these schools and programmes are more likely to work in rural areas.
3. Expose undergraduate students of various health disciplines to rural community experiences and clinical rotations as these can have a positive influence on attracting and recruiting health workers to rural areas.
4. Revise undergraduate and postgraduate curricula to include rural health topics so as to enhance the competencies of health professionals working in rural areas, and thereby increase their job satisfaction and retention.
5. Design continuing education and professional development programmes that meet the needs of rural health workers and that are accessible from where they live and work, so as to support their retention.

B. REGULATORY RECOMMENDATIONS

1. Introduce and regulate enhanced scopes of practice in rural and remote areas to increase the potential for job satisfaction, thereby assisting recruitment and retention.
2. Introduce different types of health workers with appropriate training and regulation for rural practice in order to increase the number of health workers practising in rural and remote areas.
3. Ensure compulsory service requirements in rural and remote areas are accompanied with appropriate support and incentives so as to increase recruitment and subsequent retention of health professionals in these areas.
4. Provide scholarships, bursaries or other education subsidies with enforceable agreements of return of service in rural or remote areas to increase recruitment of health workers in these areas.

C. FINANCIAL INCENTIVES RECOMMENDATION

1. Use a combination of fiscally sustainable financial incentives, such as hardship allowances, grants for housing, free transportation, paid vacations, etc., sufficient enough to outweigh the opportunity costs associated with working in rural areas, as perceived by health workers, to improve rural retention.

D. PERSONAL AND PROFESSIONAL SUPPORT RECOMMENDATIONS

1. Improve living conditions for health workers and their families and invest in infrastructure and services (sanitation, electricity, telecommunications, schools, etc.), as these factors have a significant influence on a health worker's decision to locate to and remain in rural areas.
2. Provide a good and safe working environment, including appropriate equipment and supplies, supportive supervision and mentoring, in order to make these posts professionally attractive and thereby increase the recruitment and retention of health workers in remote and rural areas.
3. Identify and implement appropriate outreach activities to facilitate cooperation between health workers from better served areas and those in underserved areas, and, where feasible, use telehealth to provide additional support to health workers in remote and rural areas.
4. Develop and support career development programmes and provide senior posts in rural areas so that health workers can move up the career path as a result of experience, education and training, without necessarily leaving rural areas.
5. Support the development of professional networks, rural health professional associations, rural health journals, etc., in order to improve the morale and status of rural providers and reduce feelings of professional isolation.
6. Adopt public recognition measures such as rural health days, awards and titles at local, national and international levels to lift the profile of working in rural areas as these create the conditions to improve intrinsic motivation and thereby contribute to the retention of rural health workers.

References

- Australian Medical Association. (2016). *A Plan For Better Health Care for Regional, Rural, and Remote Australia*. Retrieved from <https://ama.com.au/position-statement/plan-better-health-care-regional-rural-and-remote-australia>
- Gillespie, D. D. A. M. for R. H. (2016). Tackling Australia's new health workforce challenge. Australian Government Department of Health. Retrieved from <http://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2016-gillespie024.htm>
- Greenhill, J. A., Walker, J., Playford, D., & Walker, J. G. J. (2015). Outcomes of Australian rural clinical schools: a decade of success building the rural medical workforce through the education and training continuum. *Rural and Remote Health, 15*(3), 2991.
- Harding, C., Seal, A., McGirr, J., & Caton, T. (2016). General practice registrars' intentions for future practice: implications for rural medical workforce planning. *Australian journal of primary health, 22*(5), 440-444.
- Health Workforce Australia (2014). *Australia's Future Health Workforce – Doctors*. Retrieved from <http://www.health.gov.au/internet/main/publishing.nsf/Content/australias-future-health-workforce-doctors>
- Herd, M. S., Bulsara, M. K., Jones, M. P., & Mak, D. B. (2016). Preferred practice location at medical school commencement strongly determines graduates' rural preferences and work locations. *Australian Journal of Rural Health*.
- Kondalsamy-Chennakesavan, S., Eley, D. S., Ranmuthugala, G., Chater, A. B., Toombs, M. R., Darshan, D., & Nicholson, G. C. (2015). Determinants of rural practice: positive interaction between rural background and rural undergraduate training. *Med J Aust, 202*(1), 41-45.
- Medical Deans Australia and New Zealand. (2016). *Selection Policy Statement*. Retrieved from http://www.medicaldeans.org.au/wp-content/uploads/20160301_-_Selection-policy-statement_FINAL.pdf
- Runge, C. E., MacKenzie, A., Loos, C., Waller, M., Gabbett, M., Mills, R., & Eley, D. (2016). Characteristics of Queensland physicians and the influence of rural exposure on practice location. *Internal Medicine Journal, 46*(8), 981-985.
- Shires, L., Allen, P., Cheek, C., & Wilson, D. (2015). Regional universities and rural clinical schools contribute to rural medical workforce, a cohort study of 2002 to 2013 graduates. *Rural and remote health, 15*(3219).
- World Health Organization. (2016). Global strategy on human resources for health: workforce 2030. In *Global strategy on human resources for health: workforce 2030*.