



Australian Government
Department of Health

National Medical Workforce Strategy

Scoping Framework
July 2019

Acronyms

Australian Bureau of Statistics (ABS)

Australian College of Rural and Remote Medicine (ACRRM)

Australian Indigenous Doctors' Association (AIDA)

Australian Health Practitioner Regulation Authority (AHPRA)

Australian Medical Council (AMC)

Bonded Medical Places (BMP)

Council of Australian Governments (COAG)

Council of Australian Governments' Health Council (CHC)

General practitioner (GP)

Integrated Rural Training Pipeline (IRTP)

International medical graduates (IMGs)

Medicare Benefits Schedule (MBS)

Medical Workforce Reform Advisory Committee (MWRAC)

Modified Monash Model (MMM)

National Medical Training Advisory Network (NMTAN)

Organisation of Economic Co-operation and Development (OECD)

Royal Australian College of General Practitioners (RACGP)

Royal Australian College of Physicians (RACP)

Royal Australian College of Surgeons (RACS)

Rural Health Multidisciplinary Training (RHMT)

Letter from the Chief Medical Officer, Professor Brendan Murphy

The National Medical Workforce Strategy Steering Committee is pleased to present the scoping framework for the National Medical Workforce Strategy.

The National Medical Workforce Strategy will be a collaborative vision for how the investment of individuals, doctors and organisations are best coordinated for Australia's health system. The current lack of national planning and coordination risks waste and sub-optimal outcomes in the future.

Australians invest significantly in their health system as individuals and through taxation. In return they receive world-class care. However, the principle of universal access is variably achieved, because the medical workforce is not equitably distributed across the country. Australians in regional, rural and remote areas have less access than their city counterparts.

The success of prevention, such as immunisations, an increased standard of living and improved diagnosis and treatments, means Australians are living longer. The system they invest in was designed to manage acute illness and seems less able to care for their multiple, long term conditions as they age. Access to an expert in a single condition is welcome, but may not meet their needs if that expert cannot advise on how the recommended interventions affect their other conditions.

Entrants to medical school commit to hard work and study, with the goal of worthwhile professional careers. For some the pathway is smooth but, for many, the pathway to qualification as a specialist is difficult, unclear and increasingly competitive or is never achieved. The increase in medical student numbers designed to ensure Australia's self-sufficiency in medical graduates, and to improve geographical distribution has not been matched with postgraduate training planned to meet longer term community needs. Years are spent trying to gain the right skills and credentials just to get on to a training program. The health system must optimise the investment that medical students, junior and senior doctors make and facilitate their well-being.

Likewise, states and territories invest in medical workforce to run their public hospitals as does the private sector for private hospitals and clinics. More junior and middle grade doctors are needed to run acute services than will be needed as consultants to oversee and direct these services; this reality is not explicit. Meaningful, supported professional middle grade roles must be created to provide attractive career options.

Universities, specialist medical colleges, training organisations and regulators focus their investment on ensuring graduates and fellows meet expected professional standards. As

their work affects workforce over or under supply and distribution, they too must respond to changes and needs in the wider system.

No one can solve medical workforce in isolation. It requires acknowledgement of the inter-dependence of the individuals and organisations involved. The need for mutual commitment to work together was recognised by the Council of Australian Governments Health Council's decision to commission this scoping framework. The scoping framework highlights the need for improved coordination and collaboration to shift how doctors are trained, recruited and supported to meet Australia's emerging health needs.

I would like to thank the Medical Workforce Reform Advisory Committee and, in particular, members who have agreed to contribute their expertise to the Strategy Steering Committee. Through their leadership, we have successfully engaged the medical profession and identified the key priority issues affecting the medical workforce. The Strategy is an opportunity to co-create practical and achievable responses to these issues, as part of a sustained, collaborative effort to plan and develop Australia's future medical workforce.



Professor Brendan Murphy
Australian Government Chief Medical Officer

Table of contents

1	Executive summary	7
2	About the National Medical Workforce Strategy.....	13
2.1	Background to the National Medical Workforce Strategy and the Medical Workforce Reform Advisory Committee.....	13
2.2	Approach taken to develop the National Medical Workforce Strategy	13
2.3	Scope and further context	15
3	Australia's medical workforce and workforce planning.....	17
3.1	Overview of the medical workforce.....	17
3.2	Overview of medical workforce planning	18
4	Why a National Medical Workforce Strategy?.....	20
4.1	Why now?	20
4.2	Why a national strategy?	21
5	The vision and strategic objectives for the National Medical Workforce Strategy	23
6	Guiding principles for the National Medical Workforce Strategy	24
7	Priority workforce issues and contributing factors	25
7.1	Geographic maldistribution and inequality in healthcare access	26
7.2	Over- and undersupply in certain specialties.....	31
7.3	Balance of generalist versus subspecialist skills	37
7.4	Growing the number of Aboriginal and Torres Strait Islander doctors and having a culturally safe medical workforce	41
7.5	Doctor work-readiness.....	43
7.6	Service delivery and changing models of care	45
7.7	Coordination between medical workforce planning stakeholders.....	46
7.8	Management of the training and career pathway.....	49
7.9	Reliance on registrars to meet health service needs.....	52
8	Conclusion and path forward	54
9	Bibliography.....	55
	Appendix A: Potential opportunities to explore further	58
	A.1 Which opportunities should the Strategy explore?	58
	Appendix B: Methodology.....	62

List of figures

Figure 1: Medical workforce issues and contributing factors	9
Figure 2: Number of doctors per thousand people, Australia versus OECD countries, 2000 – 17	18
Figure 3: Overview of medical workforce planning	19
Figure 4: Medical workforce issues and contributing factors	25
Figure 5: Location of specialists by Modified Monash Model.....	28
Figure 6: Rural health outcomes and access	28
Figure 7: Sample over- and undersupply in specialties	33
Figure 8: Projected undersupply of ophthalmologists	34
Figure 9: Projected undersupply of dermatologists	34
Figure 10: Projected undersupply in psychiatrists	35
Figure 11: Projected oversupply in emergency medicine	35
Figure 12: Compound annual growth rates of subspecialists compared to other specialists, 013–17.....	39
Figure 13: Rates of colonoscopy per 100,000 people by SA3 area, 2016–17	39
Figure 14: Number of Aboriginal and Torres Strait Islander medical graduates, 2008–17.....	42
Figure 15: Changing models of care and the impact of technology on the workforce	45
Figure 16: Problems along the training and career pathway	51
Figure 17: Specialty training numbers by compound annual growth rate, 2007–18.....	51
Figure 18: Doctors intending to train versus those currently in training, as per the National Health Workforce Data Training Survey, 2013–17.....	53
Figure B-1: Prioritisation methodology for workforce issues.....	62
Figure B-2: Prioritisation of workforce issues based on stakeholder input and strength of evidence regarding impact.....	65

1 Executive summary

Australia can be proud of its medical workforce, which, through individual and collective action, plays a critical role in providing universal access to high-quality healthcare for almost 25 million Australians. But is this health system and its medical workforce sustainably meeting the current and future needs of the whole population?

The Commonwealth, states and territories, health services, specialist medical colleges, universities and other local planning bodies all play vital roles within Australia's health system, influencing the medical workforce as they perform their core functions. The intention of this scoping framework and the National Medical Workforce Strategy (the Strategy) is to clarify how the influence and work of each organisation can be harnessed to deliver the optimal medical workforce for Australia, and to determine which aspects of their roles are interdependent. Organisations' roles are not being reshaped as part of this process; colleges must still govern specialty standards, states must still be responsible for public hospital services and Aboriginal Medical Services must still serve their patient populations.

The medical workforce has evolved dramatically since the last National Health Workforce Strategic Framework was released in 2004, creating an imperative for a new collective strategy and action plan. Australia has increased its number of domestic medical graduates by 86 per cent since 2007, yet it continues to rely on large numbers of international medical graduates (IMGs), especially in regional and rural areas. The number of doctors working in Australia has grown by 64 per cent since 2005. Medical workforce challenges have changed as a result, moving from predominantly issues of undersupply (especially in rural areas) to a more complex situation of both over- and undersupply, along with an imbalance between generalist and subspecialist skills. In addition, there are ongoing issues related to doctor work-readiness, and a need to grow the number of Aboriginal and Torres Strait Islander doctors.

Several demand-related trends are also challenging the medical workforce's ability to provide sustainable access to high-quality medical care. Since 2005, the population has grown by 23 per cent and healthcare expenditure has almost doubled. As the Australian population continues to grow and age, and as an increasing number of people live with multiple chronic conditions, demand for medical services will continue to increase and evolve. Making general practice an attractive career choice is an important response to these trends. Health systems that provide strong primary care are more cost-effective and are associated with a more equitable distribution of healthcare across populations, as has been documented in both national and international studies. The continuity of care provided by general practitioners (GPs) is also associated with reduced hospital admissions and increased life expectancy.

These workforce changes and dynamic healthcare trends require immediate action. For example, Australia currently has a shortage of psychiatrists (forecast to increase to a shortage of approximately 350 by 2030) and a projected oversupply of emergency medicine specialists (forecast to increase to over 2,000 by 2030). There is also an opportunity to capitalise on current stakeholder support for a nationally coordinated approach to medical workforce planning, which will be critical to ensure the success of this effort.

It is within this context that the Medical Workforce Reform Advisory Committee (MWRAC; formerly the National Medical Training Advisory Network) identified the need for a strategy. The Strategy is being developed under the oversight of the Strategy Steering Committee (see Section 2.2.2 for a list of members) and will seek endorsement from the Council of Australian Governments' Health Council (CHC) in late 2020. In the interim, work that is planned or underway will be guided by the priorities and principles outlined in this report, where possible.

Development of the Strategy has commenced with the creation of this scoping framework. The framework identifies the vision and guiding principles that will underpin the Strategy, explores priority workforce issues and their contributing factors, and discusses opportunities to develop solutions. These opportunities can be explored further during the development phase of the Strategy. Practical actions will then be identified as part of a 10-year vision and five-year implementation plan.

The Strategy's vision is to work together, using data and evidence, to ensure that the medical workforce sustainably meets the changing health needs of Australian communities. The vision, strategic objectives and guiding principles are detailed in Sections 5 and 6 of this report.

Among stakeholders and the Steering Committee, there was broad agreement that the Strategy should focus on a core set of priorities in order to develop detailed solutions that can rapidly improve the medical workforce in the short term. To assist the Steering Committee and the broader community in structuring its work, priorities have been divided into two categories: workforce issues (which directly affect patients) and contributing factors (which are drivers of workforce issues). These priorities are outlined in Figure 1.

FIGURE 1: MEDICAL WORKFORCE ISSUES AND CONTRIBUTING FACTORS

■ Top priority during stakeholder consultation

Workforce issue	Contributing factor					
	Lack of coordination in medical workforce planning	Training and career pathway managed in siloes	Reliance on registrars to meet health service needs	Changing expectations of workforce (e.g., work-life balance)	Fee-for-service funding model	Suboptimal employment models to support doctors
Geographic maldistribution	✓	✓	✓	✓		✓
Specialty over- and undersupply	✓	✓	✓	✓	✓	
Balance of generalists versus subspecialists	✓	✓	✓		✓	
Indigenous and culturally safe workforce	✓	✓				
Doctor work-readiness	✓	✓	✓			
Changing models of care	✓	✓	✓			

SOURCE: Stakeholder consultation

An overview of the priority medical workforce issues and contributing factors is provided below. These are explored further in Section 7 of this report.

1. **Geographic maldistribution and inequality in healthcare access.** Despite efforts to increase the medical workforce in rural and remote Australia, there is a continued shortage of both GPs and non-GP specialists¹ in rural and remote Australia, with less than 5 per cent of most non-GP specialists based in these areas. In addition, geographic disparities in patient access and outcomes persist. For example, the potentially avoidable death rates for inner regional and remote areas are approximately 20 per cent and 65 per cent higher than in metro areas, respectively. While factors influencing outcomes are inherently multifactorial and not solely due to workforce shortages, the Strategy will explore opportunities to address disparities in access and outcomes across all Australian communities.
2. **Over- and undersupply in certain specialties.** The Department of Health's latest modelling suggests that there are shortages in specialties such as psychiatry, dermatology and ophthalmology, with undersupply forecast by 2030 based on current

¹ Some stakeholders disagree with the term "non-GP specialist". As such, the Steering Committee will develop agreed terminology as part of the Strategy.

training numbers. This may cause access challenges for patients and require the recruitment of IMGs to supplement the local workforce. Other specialties, such as emergency medicine, intensive care medicine and anaesthesia, appear to be in growing oversupply and are producing more fellows² than there are future potential jobs as specialists. This is partly because trainee numbers are being determined by health services' acute care workforce requirements.

3. **Balance of generalist versus subspecialist skills.**³ Given the size of our country, GPs and other generalist non-GP specialists are vital to enabling the local delivery of high-quality care to Australian communities. Specialists with a generalist skill set who can operate across their full scope of practice are better equipped to manage patients with multiple comorbidities and are more flexible in the role they play in the workforce, increasing its adaptability in the face of changing demand. However, since 2013 the number of registered subspecialists has grown at three times the annual rate of general physicians and surgeons.⁴
4. **Growing the number of Aboriginal and Torres Strait Islander doctors and having a culturally safe medical workforce.** The number of Aboriginal and Torres Strait Islander medical graduates is growing but they are still underrepresented in the workforce. The Australian Indigenous Doctors' Association (AIDA) is advocating for ongoing cultural safety training to be provided to all medical practitioners as part of medical training and continuous professional development. The AIDA's Specialist Trainees in the Medical Workforce project will also enhance the ability of specialist medical colleges to train people from an Aboriginal and Torres Strait Islander background.
5. **Doctor work-readiness.** Despite high standards of vocational training in Australia, systemic issues can make doctors feel underprepared to practise at crucial stages in their career. This can have implications for patient safety and can adversely affect doctors' well-being. While conclusive data on this issue is lacking, the stakeholder consultation process identified six potential areas where it manifests: the transition from medical school to internship; outpatient ambulatory care, due in part to the focus on acute care service provision by trainees; the transition from prevocational training to general practice; the transition to rural practice; the transition to specialist practice; and clinical experience.
6. **Service delivery and changing models of care.** Changing models of care are an inevitable part of Australia's future healthcare system and will have a profound impact on

² A doctor who has completed advanced training in an area of medicine or surgery to become a specialist in that field.

³ See p 38 for definitions of how these terms are defined in this report.

⁴ It is worth noting, however, that some subspecialists spend part of their time working in generalist practice.

workforce dynamics. For example, the models of care required to support an increasingly dispersed and ageing population will make GPs' central role in the health system even more important. The impact of technology on the medical workforce is also likely to be considerable, if unpredictable. For example, stronger connectivity will enable doctors to remotely and proactively monitor patients and their physiological parameters, which could reduce the need for costly reactive treatment in hospital.

7. **Coordination between medical workforce planning stakeholders**, specifically regarding governance and accountability, as well as data and modelling. Stakeholders identified numerous ways in which the coordination of workforce planning and management could be improved across the Commonwealth, states and territories, specialist medical colleges, and others. There is no single consolidated source of medical workforce data, and different data sets and methodologies are used to perform supply-and-demand forecasting for workforce planning. Similarly, differing accountabilities lead to conflicting workforce decisions that do not mutually advance a common strategic goal.
8. **Management of the training and career pathway**. The medical training and career pathway is complex and involves multiple decision-making entities that are not always aligned or coordinated. The silos that exist in medical workforce planning can mean that initiatives designed to fix problems along the training and career pathway lead to unintended consequences in other areas. For example, the increase in the number of medical graduates was not accompanied by commensurate reforms across the pathway, such as reforms to the vocational training programs that these doctors must undertake to become specialists. Specialist medical colleges also have different entry points and requirements, leading to varied bottlenecks and training stresses. In addition, there is a lack of available workplace demand data to help junior doctors make informed career decisions, and a lack of consistent employment makes it difficult to plan and complete the requirements both for entry into training and for the training programs themselves. Providing secure and streamlined training and career pathways also plays a crucial role in the professional fulfilment and well-being of Australian doctors.
9. **Reliance on registrars to meet health service needs**. The role of health service providers has become increasingly challenging in the face of growing demand for services. At the same time, community expectations of 24/7 clinical services and a need to ensure safe working hours for staff has meant that more doctors are needed to provide acute services. This important work is often conducted by registrars.⁵ In some cases, trainee positions have been created to fulfil service workforce requirements without taking into consideration the availability of supervisors to provide high-quality training, or the number of specialist positions that will be available once these doctors complete their

⁵ A registrar is a doctor with at least three years of experience working in a public hospital who is training to become a specialist (an accredited or training registrar) or is performing a similar role outside the training program (an unaccredited or service registrar).

training. The number of service registrars has grown in recent years as hospitals become increasingly reliant on this part of the workforce to deliver essential services (particularly out-of-hours services), at times to the detriment of the well-being of these doctors.

The imperatives for a strategy are clear and urgent. The medical workforce can only fulfil its social contract with the Australian community to continue delivering high-quality medical care if harmonised and adaptive national action is taken within our federal system.

2 About the National Medical Workforce Strategy

2.1 Background to the National Medical Workforce Strategy and the Medical Workforce Reform Advisory Committee

Australia's medical workforce helps to deliver leading health outcomes compared to similar countries, including high life expectancy at birth and cancer survival rates that are well above average. However, Australia does not currently have a national medical workforce strategy, and various stakeholders have cited issues with medical workforce planning. Stakeholders have noted that the workforce has grown organically in response to local demand for services, and that problems such as geographic maldistribution persist despite the efforts of medical workforce planners.

Within this context, the MWRAC has identified the need for a strategy. MWRAC members include Australia's states and territories, specialist medical colleges, and medical professional associations, including the AIDA. The Department of Health is developing the Strategy in collaboration with the MWRAC, and with support from state and territory health ministers through the CHC.

A 10-year strategy is needed to guide joint medical workforce planning and to inform the systemic reforms required to support medical education, specialist training, and an appropriately sized medical workforce that is appropriately distributed across Australia and responsive to emerging needs. Through the work of the MWRAC, the Strategy will provide an agreed national perspective on the requirements for a future medical workforce and will ensure that continued investment in education and training delivers the services Australians need.

2.2 Approach taken to develop the National Medical Workforce Strategy

2.2.1 Purpose of this scoping framework

The scoping framework builds a common understanding among stakeholders regarding:

- △ The vision, objectives and guiding principles that will underpin the Strategy.
- △ Priority workforce issues to be addressed by the Strategy.
- △ The contributing factors of these workforce issues.

2.2.2 The National Medical Workforce Strategy Steering Committee

A sub-committee of the MWRAC was formed to oversee the project and guide the development and implementation of the Strategy. This Steering Committee has 13 members and is chaired by Professor Brendan Murphy, Australian Government Chief Medical Officer. A full list of members is provided in Table 1.

Table 1: National Medical Workforce Strategy Steering Committee⁶

Name	Organisation
Associate Professor Wilma Beswick	St Vincent's Public Hospital, Melbourne
Dr Daniel Heredia	Australian Private Hospitals Association
Dr Tessa Kennedy	Australian Medical Association, Council of Doctors in Training
Professor Anthony Lawler	Department of Health, Tasmania
Dr Linda MacPherson	Ministry of Health, New South Wales
Professor Brendan Murphy	Department of Health (Chair of Steering Committee)
Professor Richard Murray	Medical Deans Australia and New Zealand
Dr Paul Myhill	Western Australia Health
Dr Kristopher Rallah-Baker	Australian Indigenous Doctors' Association
Dr Philip Truskett	Council of Presidents of Medical Colleges
Professor Anne Tonkin	Medical Board of Australia
Professor Lucie Walters	Rural Doctors' Association of Australia
Dr Christopher Zappala	Australian Medical Association

2.2.3 Timeline and important dates

The Strategy will be developed over an 18-month period, with this scoping framework and the subsequent strategy document seeking endorsement from the CHC ahead of finalisation. Stakeholders will be actively engaged in a number of ways throughout the process, including targeted consultation to seek further input on recommendations to address priority issues, consultation on the draft strategy document, and joint implementation of initiatives once the Strategy is in place. Some important dates for the Strategy are outlined on the following page.

- △ **April–July 2019:** Develop the scoping framework and complete targeted consultation via in-depth interviews and stakeholder forums.
- △ **Mid–late 2019:** The scoping framework to be considered by CHC.
- △ **Mid–late 2019 and 2020:** Commence development of the Strategy, including undertaking wider consultation to inform strategic recommendations, development of

⁶ Steering Committee members, as at June 2019.

solutions, alignment on actionable recommendations and development of a joint implementation plan.

- △ **Mid–late 2020:** Finalise the Strategy, including securing CHC endorsement.

2.2.4 Stakeholder consultation

Consultation will be completed in two phases:

- △ **Phase 1 (completed July 2019).** The initial phase of targeted consultations drew on one-on-one interviews and stakeholder forums to inform the scoping framework, identify core principles and build an understanding of the priorities that need to be addressed. Initial stakeholder perspectives on potential solutions to explore further have also been collated in Appendix A.
- △ **Phase 2 (completed by late 2020).** The second phase will involve a wider consultation process to inform development of the solutions for implementation and the Strategy, including identifying strategic recommendations and commencing implementation.

2.3 Scope and further context

2.3.1 Scope

The scope of the Strategy includes the following:

- △ Documenting current Commonwealth, state and territory workforce planning initiatives and incentives.
- △ Identifying the regulatory settings that influence medical workforce planning.
- △ Identifying gaps in data and opportunities for integrating data sets and defining common methodologies.
- △ Consulting with all major stakeholders in the medical workforce ecosystem, from seeking early input on priority issues to co-creating and refining solutions.
- △ Developing recommendations on workforce planning, development and management activities for medical health professionals.
- △ Securing commitment from key funders, policymakers and other bodies across the Commonwealth, states and territories, and other stakeholders regarding major recommendations (for example, developing memoranda of understanding).
- △ Creating a five-year implementation plan for priority issues, including key milestones, success metrics, risks and mitigation strategies, and accountabilities.

Areas that are out of scope for the Strategy include workforce planning activities and recommendations for non-medical health professions (including nursing, midwifery and allied health). There was broad agreement that the medical workforce has gone through

significant change, and that focusing on a core set of manageable improvements to the medical workforce should be prioritised for this strategy.

2.3.2 Further context to consider

The Strategy also emphasises the need for better integration of medical workforce planning, including with:

- △ State and territory health and medical workforce strategies.
- △ Other Commonwealth-led health and workforce strategies, such as:
 - The National Mental Health Workforce Strategy.
 - The National Aboriginal and Torres Strait Islander Health and Medical Workforce Plan.
 - The Stronger Rural Health Strategy.
 - The National Nursing Strategy 2030.
 - The National Rural Generalist Pathway.
 - The Ten Year Primary Health Care Plan.

3 Australia's medical workforce and workforce planning

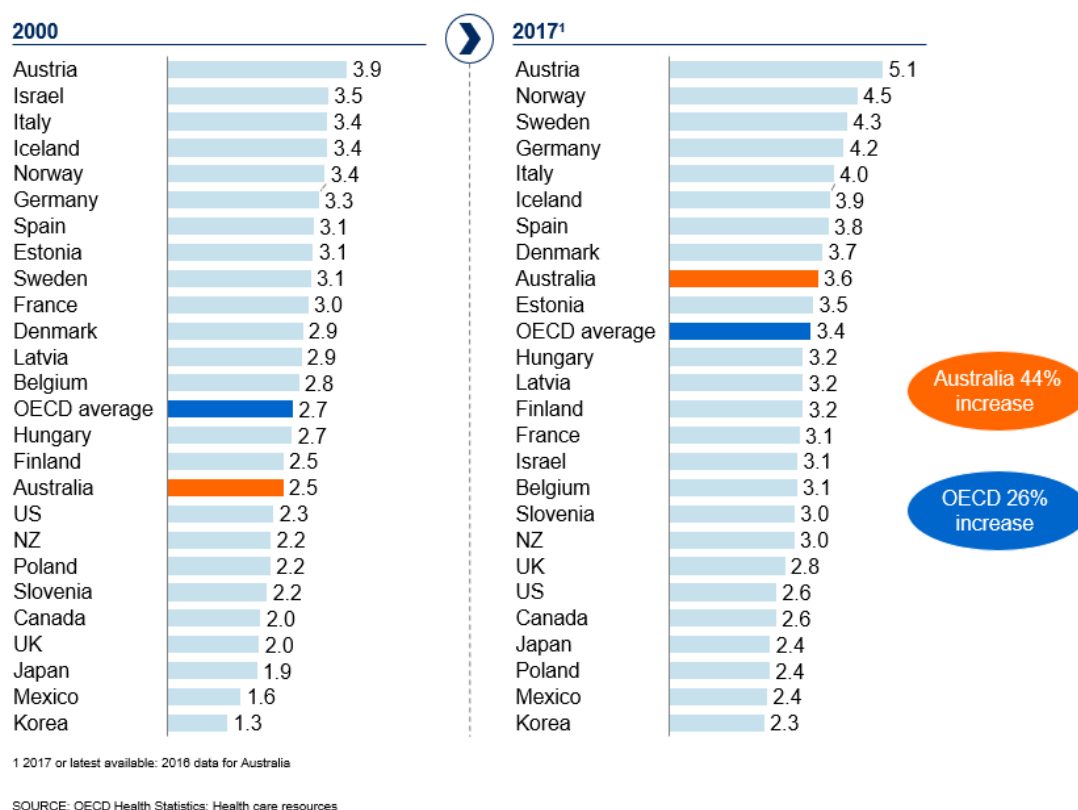
3.1 Overview of the medical workforce

The number of doctors in Australia has been growing at roughly twice the rate of the general population since 2005 (3.9 per cent, compared to 1.7 per cent), the largest proportion of whom are non-GP specialists (36 per cent). The supply of doctors in Australia is explored later in this report, but the statistics below provide an overview of the workforce.

- △ The number of doctors per thousand people in Australia has increased from 2.5 in 2000 to 3.6 in 2016, slightly higher than the Organisation for Economic Co-operation and Development (OECD) average of 3.4 (Figure 2).
- △ Approximately 79 per cent of doctors are located in major cities or areas classified as category 1 in the Modified Monash Model (MM 1).⁷ A further 9 per cent are located in areas classified as MM 2, 6 per cent are located in areas classified as MM 3 and a total of 6 per cent are located in areas classified as MM 4–7.
- △ The largest proportion of doctors are non-GP specialists (36 per cent), followed by GPs (31 per cent), doctors in training (21 per cent) and hospital non-specialists (9 per cent).
- △ Australia's universities produced 3,475 new medical graduates in 2017. Of these, 87 per cent were domestic graduates. The gender balance is slightly in favour of women, who account for 52 per cent of all medical graduates.
- △ In 2017, GP and non-GP specialist medical colleges accredited 3,883 new fellows—more than double the number accredited a decade previously—and had over 21,300 doctors participating in training programs.
- △ In 2017, approximately 60 per cent of doctors are over the age of 40, and 41 per cent of all doctors are women (although the proportion of female doctors is growing).

⁷ The Modified Monash Model (MMM) is a geographical classification system developed in 2015 to better address the maldistribution of medical services across Australia (<http://www.health.gov.au/internet/main/publishing.nsf/Content/modified-monash-model>).

FIGURE 2: NUMBER OF DOCTORS PER THOUSAND PEOPLE, AUSTRALIA VERSUS OECD COUNTRIES, 2000–17



3.2 Overview of medical workforce planning

The medical workforce planning system in Australia is complex and multifaceted, with accountabilities split between various workforce planning stakeholders. There is no national workforce strategy and no single consolidated source of medical workforce data (for example, there is no national data on hospital-employed doctors). Outside of the work done by the MWRAC, there has been minimal coordinated workforce planning across jurisdictions.

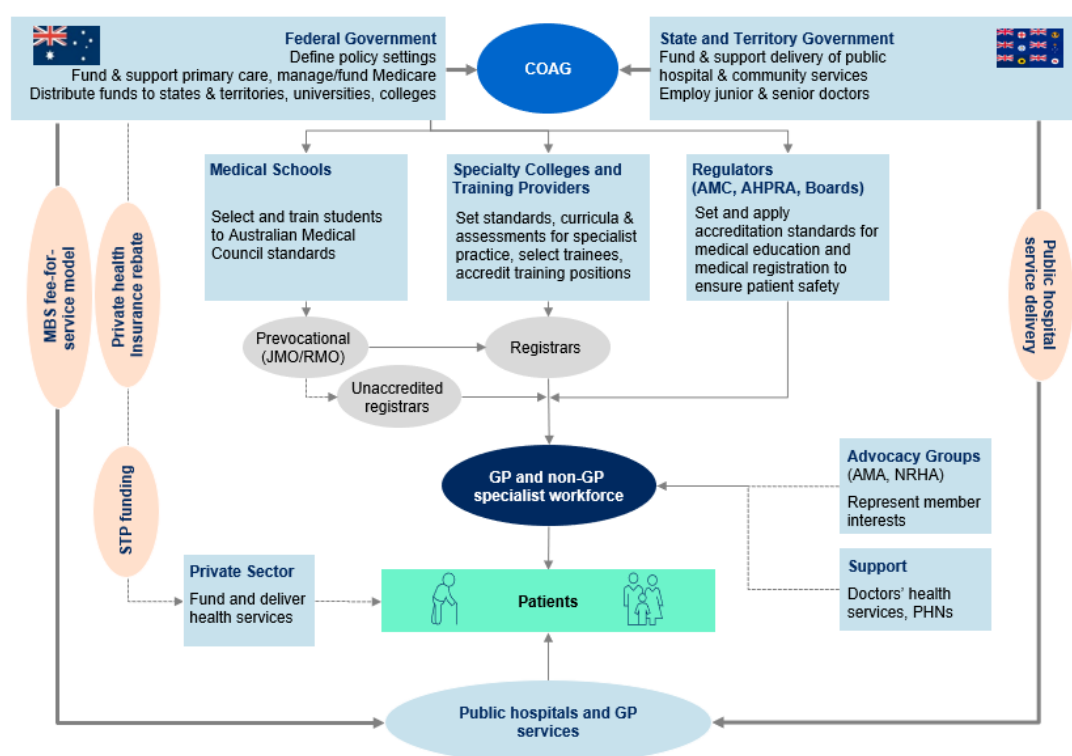
The roles of the major stakeholder groups involved in medical workforce planning are summarised below and in Figure 3. This work is funded by the Australian population through taxation, private fees and health insurance premiums. (The underlying accountabilities and intricacies in these relationships are explored in Section 7.7 of this report.)

- △ **The Commonwealth government** defines policy settings for healthcare delivery and funds several components of the health system. For instance, the government funds Medicare and the Pharmaceutical Benefits Scheme (\$23 and \$12 billion in 2017–18, respectively), funds GP training and some non-GP specialist training, provides private health insurance rebates (\$6 billion in 2016–17), distributes funding to states and territories through the National Health Reform Agreement (\$20 billion in 2017–18), funds and manages the Rural Health Multidisciplinary Training Program (\$200 million per

annum from 2018–19), and informs policy setting for distributing university places through the Commonwealth Grant Scheme.

- △ **State and territory governments** fund and support delivery of public hospitals (approximately \$27 billion in 2017–18) and community services, and employ prevocational doctors, doctors in training and specialists.
- △ **Medical schools** select and train medical students to Australian Medical Council (AMC) standards and coordinate and deliver research.
- △ **Specialist medical colleges** set standards, curricula and assessments for specialist practice to Australian Medical Council standards, select trainees, determine the number of training positions and accredit them, and represent members' interests.
- △ **Medical regulators** set and apply standards for medical education and medical registration to ensure patient safety, and credential IMGs.
- △ **Doctor advocacy groups** promote and protect the professional interests of doctors.
- △ **The private sector** funds and delivers health services and provides a limited amount of specialist training through the Specialist Training Program.

FIGURE 3: OVERVIEW OF MEDICAL WORKFORCE PLANNING



COAG: Council of Australian Governments, JMO: Junior Medical Officer, RMO: Resident Medical Officer, STP: Specialist Training Pathway, MBS: Medicare Benefit Scheme, AMC: Australian Medical Council, AHPRA: Australian Health Practitioner Regulation Authority, PHN: Primary Health Network, AMA: Australian Medical Association, NRHA: National Rural Health Alliance

4 Why a National Medical Workforce Strategy?

4.1 Why now?

There is a powerful link between the medical workforce and the type and quality of the healthcare system that ensues. Despite this, the National Health Workforce Strategic Framework of 2004 was the last national strategy created for the medical workforce. Today's healthcare system is far larger and more complex than it was in 2004: Australia increased its number of doctors per capita by 44 per cent between 2000 and 2017—a more rapid increase than in any other OECD country, and substantially above the 26 per cent OECD average; and total health expenditure tripled to \$180 billion per year over the same period. The last decade has also seen an 86 per cent increase in the number of graduating medical students.

These doctors have entered into a largely unreformed specialist training system, with the majority of non-GP specialist training continuing to be located physically and culturally in large, metropolitan public hospitals.⁸ At the same time, the Commonwealth, states and territories, health services, specialist medical colleges, universities and other local planning bodies have applied different focuses, priorities and approaches to workforce planning, resulting in planning activities that are not always integrated in a way that optimises the medical workforce. This swelling supply of doctors may challenge the long-standing assumption that every Australian medical school domestic graduate has a 'right' to a career in medicine.

The demographics of the medical workforce are also changing. In 2013, women accounted for 39 per cent of the total medical workforce. This had increased to 41 per cent by 2017 (and approximately 50 per cent of medical graduates). Women also accounted for more than half of all members of the Royal Australian College of General Practitioners (RACGP) in 2016–17 (50.2 per cent), up from 47 per cent in 2012–13. The average age of specialists has increased too, from 49.2 in 2005 to 50.1 in 2015. Doctors are also recognising the need for a better work–life balance than has historically been the case. In 2004, Australian doctors worked 44.0 hours per week, on average; by 2015, this had decreased to 42.4 hours per week. Together, these changes demonstrate a growing need for inclusive employment policies and workforce planning measures.

⁸ GP training has become increasingly regionalised, with over 50 per cent of training time occurring in regional or rural areas.

Demand for services is also evolving rapidly and will continue to challenge the medical workforce's ability to provide sustainable access to high-quality medical care. The Australian population is ageing, with the over-65 population expected to more than double from four million to nine million people between 2017 and 2057. This trend is accelerating the shift from acute to chronic and comorbid conditions. For instance, 60 per cent of the over-65 population report having two or more chronic conditions, compared to just 25 per cent of the general population. The medical workforce must evolve to meet this increased pressure and changing needs for skills and specialties.

As the supply and demand of healthcare services continue to grow significantly faster than the population and economy, the cost of healthcare is becoming increasingly unsustainable. In a funding environment where community demand and expectations can be unlimited, every lever that can make healthcare expenditure more sustainable must be explored, including the cost of our medical workforce.

These issues require immediate attention and action. However, it is equally important to recognise that the results of medical workforce planning can take a long time to materialise (for example, training a doctor from medical school admission to Fellowship can take between 10 and 20 years). The realities of medical workforce planning mean that this Strategy is needed not only for the benefit of today's health system, but also for the benefit of patients and doctors in the coming decades.

4.2 Why a national strategy?

A second question to consider concerns jurisdictional scope: Why a national strategy rather than a series of jurisdictional strategies? The answer has three elements:

- △ **An integrated approach to medical workforce planning.** Australia's medical practitioners commonly move between jurisdictions, but this is not reflected in the current medical workforce planning system. For example, it is difficult to track when a doctor has moved between jurisdictions, and why. While jurisdictional strategies are necessary, some solutions need to be integrated at the national level to be effective.
- △ **Broader access to data.** More workforce data sources are available than ever before, but data integration and linkage between jurisdictions and organisations remains limited. To adopt an evidence-based approach to medical workforce planning, there must be alignment on data and modelling methodologies.
- △ **A critical mass of goodwill.** There is a critical mass of goodwill both within and between jurisdictions to engage in reform to solve medical workforce issues, as well as support from specialist medical colleges. There has also been an evolution in the structure and relationships underlying medical workforce planning in Australia, reflected in the

progression from the National Medical Training Advisory Network (NMTAN) to the MWRAC under the auspices of the Commonwealth.

The imperatives for the Strategy are clear and urgent. The medical workforce can only fulfil its social contract with the Australian community to continue delivering high-quality medical care if harmonised and adaptive national action is taken within our federal system.

5 The vision and strategic objectives for the National Medical Workforce Strategy

The vision for the Strategy is to:

Work together, using data and evidence, to ensure that the medical workforce sustainably meets the changing health needs of Australian communities.

The core elements of this vision have been translated into the following strategic objectives:

- △ **Work together.** Involve major stakeholders in key decisions, facilitated by a mechanism that supports joint decision-making and aligns accountabilities.
- △ **Use data and evidence.** Draw on integrated data sets and common methodologies to support significant workforce decisions.
- △ **Ensure that the medical workforce is sustainable.** Support doctors to deliver high-quality patient care in environments that support their well-being and allow them to be professionally fulfilled, and improve the domestic self-sufficiency of the medical workforce.
- △ **Meets the changing health needs of Australian communities.** Enable the medical workforce to provide equitable access to quality care that is responsive to the changing needs of communities. This includes closing the gap in health outcomes for Aboriginal and Torres Strait Islander people.

6 Guiding principles for the National Medical Workforce Strategy

The Steering Committee has identified the following six guiding principles to underpin the development of the Strategy, ensure that the Strategy meets its objectives, and support the decision-making that will drive the Strategy's recommendations.

1. Be brave and aspirational, developing practical solutions with significant near-term impact which build towards the long-term vision.
2. Use the current and future needs of the community as a basis for developing recommendations.
3. Ensure that solutions are created collaboratively with medical workforce stakeholders and include clear roles and accountability.
4. Apply an evidence-based approach wherever possible, drawing on data and information from all stakeholders.
5. Design solutions that enable a flexible medical workforce to continually adapt to dynamic healthcare trends.
6. Consider the changing attitudes and expectations of the new generation of doctors.

These guiding principles are informed by:

- △ Input from the MWRAC, gathered through MWRAC and Steering Committee meetings.
- △ Input from stakeholder consultation, gathered through interviews and forums.
- △ A review of the principles underpinning Australian and international medical workforce strategies and planning documents.

7 Priority workforce issues and contributing factors

This section examines the priorities that the Steering Committee intends to address through the Strategy. The priorities have been divided into two categories: workforce issues and contributing factors.

- △ **Workforce issues** are empirically measurable and have a direct impact on patients, providers and/or funders. For instance, an undersupply of doctors in some remote areas is readily measurable and directly affects access to care for some communities.
- △ **Contributing factors** are the drivers or aspects of medical workforce planning that give rise to these workforce issues. While they may have direct effects (for example, by influencing doctors' career choices), they mainly have an indirect impact upon access to care and the quality and cost of care.

The relationships between workforce issues and contributing factors are outlined in Figure 4, including those prioritised during stakeholder consultation.

Figure 4: Medical workforce issues and contributing factors

■ Top priority during stakeholder consultation

Workforce issue	Contributing factor					
	Lack of coordination in medical workforce planning	Training and career pathway managed in siloes	Reliance on registrars to meet health service needs	Changing expectations of workforce (e.g., work-life balance)	Fee-for-service funding model	Suboptimal employment models to support doctors
Geographic maldistribution	✓	✓	✓	✓		✓
Specialty over- and undersupply	✓	✓	✓	✓	✓	
Balance of generalists versus subspecialists	✓	✓	✓		✓	
Indigenous and culturally safe workforce	✓	✓				
Doctor work-readiness	✓	✓	✓			
Changing models of care	✓	✓	✓			

SOURCE: Stakeholder consultation

The following set of medical workforce priorities was identified using a prioritisation methodology,⁹ based on stakeholder input and the strength of evidence regarding impact on patients, doctors and the wider healthcare system:

1. Geographic maldistribution and inequality in healthcare access.
2. Over- and undersupply in certain specialties.
3. Balance of generalist versus subspecialist skills.
4. Growing the number of Aboriginal and Torres Strait Islander doctors and having a culturally safe medical workforce.
5. Doctor work-readiness.
6. Service delivery and changing models of care.

This section of the report discusses the evidence base for these priorities, their contributing factors, and how they have been addressed to date. Potential opportunities in the solution space (suggested by stakeholders) are included in Appendix A.

In addition, three contributing factors have been selected as warranting separate discussion:

7. Coordination between medical workforce planning stakeholders, specifically regarding:
 - a. Governance and accountability.
 - b. Data and modelling.
8. Management of the training and career pathway.
9. Reliance on registrars to meet health service needs.

7.1 Geographic maldistribution and inequality in healthcare access

One of the key principles underlying Australia's universal healthcare system is that no social, economic or cultural group should be disadvantaged when accessing healthcare services, so that Australians—regardless of demographic status—are able to achieve optimal health outcomes. Citizens in rural and remote Australia are experiencing distinct challenges in accessing healthcare services, leading to disparities in health outcomes.

7.1.1 What is the evidence for this issue?

There are persistent disparities in the number of doctors working in urban, regional and remote areas in Australia.

- △ Access to specialist services is significantly lower in rural and remote Australia: 80 to 90 per cent of many specialists now work in metro areas, with less than 5 per cent working in rural and remote Australia (Figure 5); and the overall number of non-GP specialists per

⁹ This methodology is provided in the Appendix B.

100,000 population is three times higher in major cities than in remote and very remote areas.

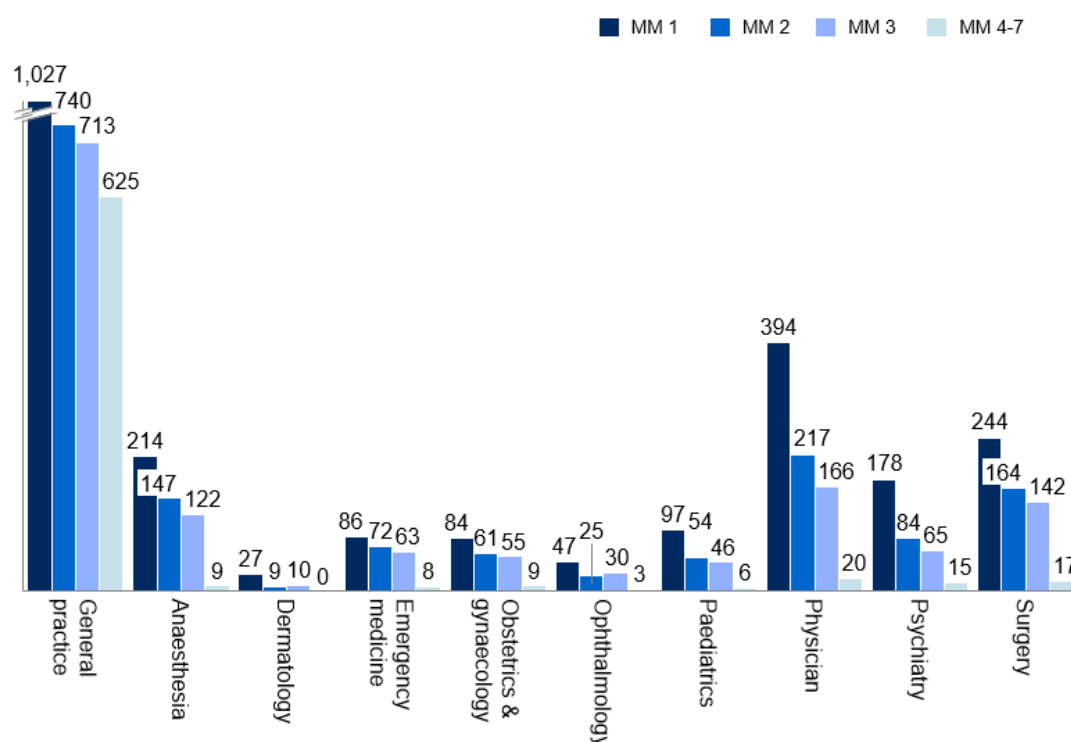
- △ The rapid growth of outer metro areas in major cities has led to shortages in some specialties, and in some cases a reliance on locums and/or IMGs to fill roles. These areas are classified as MM 1 and do not have access to some of the incentives provided to other MMM areas. This can make it challenging to attract doctors to work in communities on the edge of major cities.
- △ Rural hospitals are overly reliant on locum doctors. The relatively lucrative income from locum work means that some doctors prefer working in the locum system, rather than taking up full-time, longer term contracts. Locum doctors are transient, so it can be difficult to ensure accountability for their actions and continuity of care for their patients. Locums, meanwhile, are concerned about the duplicative and lengthy processes they need to go through to be re-credentialed for every hospital placement.
- △ Service access and outcomes in rural Australia continue to lag behind urban areas.
- △ IMGs may not be fully delivering on the aspiration to improve access to care in underserved areas. While IMGs are intended to serve in districts of workforce shortage for a 10-year moratorium period, some stakeholders expressed the view that a significant number are working in cities (for example, by repeatedly undertaking six-month locum positions in urban general practice, or by training for several years in a city hospital within a preferred specialty). This hypothesis should be explored in the next phase of work.

Service access and outcomes in rural Australia continue to lag behind urban areas.

- △ For example, the potentially avoidable death rates for inner regional and remote areas are approximately 20 per cent and 65 per cent higher than in metro areas, respectively (Figure 6). While this disparity is not due solely to workforce issues, stakeholders highlighted cases of rural patients receiving lower quality care due to difficulties in accessing specialist expertise.
- △ According to the Australian Bureau of Statistics' (ABS) patient experience survey, people living in outer regional, remote and very remote areas are more likely to visit an emergency department than a general practice (when required) than those living in major cities (28 per cent, compared to 18 per cent). This may, in part, be due to GP staffing of emergency departments in smaller towns.
- △ Australians in very remote areas face particular challenges accessing specialist services. A study conducted between 2005 and 2010, for example, showed that the majority of people in very remote areas who were suffering from end-stage renal failure moved to less remote areas within a year of diagnosis. Similarly, the rate of emergency hospital admissions involving surgery was nearly twice as high for people in very remote areas

compared to those in major cities (22 per 1,000 and 12 per 1,000 population, respectively).

FIGURE 5: LOCATION OF SPECIALISTS BY MODIFIED MONASH MODEL

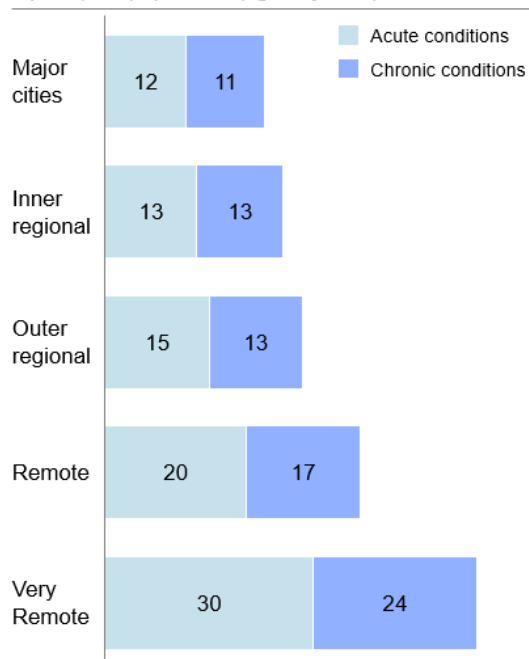


SOURCE: Commonwealth Health Workforce Data Set 2019

FIGURE 6: RURAL HEALTH OUTCOMES AND ACCESS

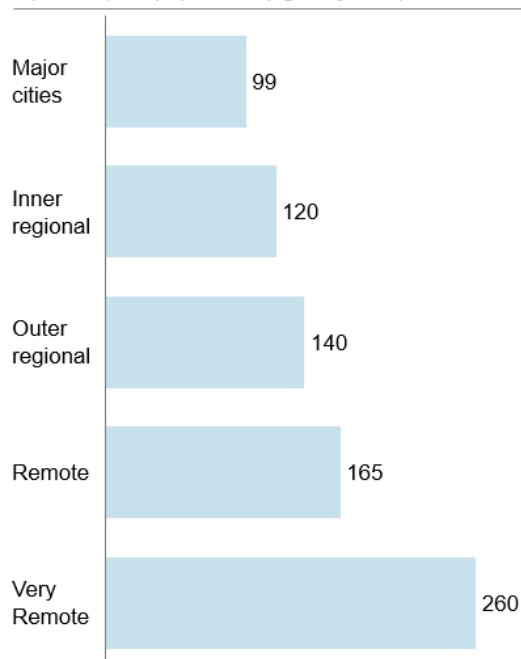
Potentially preventable hospitalisation rate by geographic area

per 1,000 population (age-adjusted)



Potentially avoidable death rate by geographic area

per 100,000 population (age-adjusted)



SOURCE: 'Australia's Health 2018' Report - Australian Institute of Health and Welfare

7.1.2 What are the issue's contributing factors?

Cross-sectional contributing factors play a decisive role in this issue, including workforce planning coordination and challenges in the training and career pathway.

- △ **The rural training and career pathway is not cohesive from beginning to end.** Instead, funding incentives are offered at different stages of the pathway, often on an ad-hoc basis. The lack of opportunity for end-to-end training—particularly a lack of accredited non-GP specialty training positions in non-metropolitan settings—prevents trainees from developing connections to the communities where their skills are needed most, and at a critical time when personal and professional networks are being built.
- △ **Training positions are predominantly located in urban areas.** Stakeholders frequently raised the issue of the 'city-centric' training model, where most accredited positions are located in urban areas, with only short-term (often compulsory) rotations to regional, rural or remote areas. They also highlighted that training programs' entry requirements sometimes favour doctors from major cities. For example, one program requires applicants to provide five references. This can be challenging for doctors working in some regional and rural hospitals, where there may be less than five specialists available. Training accreditation standards that were developed with large hospitals in mind were also identified as a barrier to increasing the number of training positions in regional and rural areas.
- △ **Changing demographics and expectations of the medical workforce.** The demographics of the medical workforce have changed. For example, doctors are now more likely to be older, with children, and part of a dual-income professional couple, all of which mean that the modern 'medical family' is no longer as mobile as it once was. Factors such as schooling and childcare opportunities for children, employment opportunities for partners and lifestyle have become increasingly important when deciding where to practise.
- △ **A lack of both clinical and non-clinical support in rural areas.** Stakeholders identified the lack of clinical support in rural areas (e.g., on-call support), the wide scope of practice and the lack of support for families as deterrents to working rurally. Specialists in rural towns are often solo practitioners, shouldering a disproportionate burden in terms of responsibility and on-call duties (often at lower remuneration rates than city doctors). Some doctors feel ill-equipped to handle the broader range of presenting patients in rural areas having been trained in an urban setting, and with limited timely access to specialised medical advice. Stakeholders also raised how this weight of expectation and lack of professional and social support can translate into poor doctor well-being, with doctors feeling clinically isolated in rural areas.
- △ **Disparities in earning capacity between rural and urban areas.** There is a perceived difference in remuneration between doctors who work rurally and those who work in

major cities. However, the evidence is mixed on this issue: GPs earn more in rural and remote areas, but specialists earn more in inner regional areas. Validation of pay disparity (whether actual or perceived) is crucial when developing solutions in the next phase.

- △ **Training and professional development.** There is a perceived disconnect between rural and remote doctors and the professional and academic nexus of medicine in capital cities. In addition, stakeholders highlighted cases where rural training and career pathways can impede desired outcomes. For example, GP registrars may wish to remain with their current practice but may be forced to move due to specialist medical college and training program ‘diversity of practice’ requirements.

7.1.3 How has this issue been addressed to date?

Balancing rural service delivery needs with the provision of quality training and supervision is increasingly challenging, prompting a multitude of initiatives launched by all levels of government (as well as non-government stakeholders). Efforts have focused on increasing the number of medical students entering the workforce (in the hope of correcting maldistribution through increased volume), in addition to both distribution- and incentive-based interventions.

During the development phase of the Strategy, exemplar initiatives that have successfully addressed geographic distribution issues will be explored in more detail to identify suitable options for scaling and replication across jurisdictions. Such exemplars may include:

- △ **Pre-medical school initiatives.** The Commonwealth government has required universities funded under the Rural Health Multidisciplinary Training (RHMT) Program to include rurality in admission criteria in order to select students who are more likely to practise rurally. Governments have also ‘bonded’ medical school places to rural return-of-service obligations through the Bonded Medical Places (BMP) Scheme and the Northern Territory Medical Program. In the next phase of work, the impact of these initiatives will be examined to inform strategic recommendations.
- △ **Medical school initiatives.** Governments and universities are seeking to establish new medical school programs (most recently, the Murray Darling Medical Schools Network, where the first cohort of students is due to commence in 2021) and clinical schools in rural areas to immerse students in non-urban environments. The rural clinical schools (funded under the RHMT Program) offer both long-term and short-term rural training experiences to medical students. In addition, there are other programs that aim to give students opportunities to learn rurally—for example, the John Flynn Placement Program and the New South Wales rural cadetships. Emerging partnerships have also demonstrated considerable potential, such as Central Queensland University potentially integrating University of Queensland students into its fully regional training stream, and

the Charles Sturt University partnership discussions with the University of Western Sydney.

- △ **Postgraduate initiatives.** Formal relationships have been built between city and rural hospitals to rotate training staff, although this has been inconsistently implemented across specialties. The Integrated Rural Training Pipeline (IRTP) was also established to set up regional training hubs to better coordinate training opportunities for medical students and trainees, and to build local training capacity. The National Rural Generalist Taskforce's recent formative work on the National Rural Generalist Pathway represents a substantial step towards formalising a new training pathway for rural and remote Australian doctors, in addition to the current policy of over 50 per cent of doctors in the Australian General Practice Training Program training in rural areas.
- △ **Distribution initiatives.** In addition to bonding arrangements at the medical school level, other direct distribution measures have been implemented at later stages of the career pathway—for example, the 19AB moratorium on IMGs and the 3GA programs. The District of Workforce Shortage system is currently being replaced by Distribution Priority Areas to create greater stability and better allocation of doctors to the areas of highest need.
- △ **Support initiatives.** The Commonwealth has implemented various reward and support programs, notably the General Practice Rural Incentives Program.
- △ **Service delivery initiatives.** There are many examples of efforts that focus on delivering care in innovative ways to address workforce challenges—for example, using telemedicine in psychiatry and medical oncology, the Newborn Emergency Transport Service in paediatrics and fly-in/fly-out initiatives.

7.2 Over- and undersupply in certain specialties

To reduce medical workforce shortages and improve geographical distribution, governments and universities have opened six new medical schools since 2007, increasing the number of graduating doctors by 86 per cent. However, this increase has had an uneven impact on the medical training and career pathway and has implications for the way in which clinical medicine is practised in Australia.

7.2.1 What is the evidence for this issue?

It is important to recognise that calculating future demand is inherently challenging in healthcare due to dynamic and unpredictable trends. This section does not provide a comprehensive discussion of demand across all the medical specialties, but instead provides illustrative examples of over- and undersupply issues in certain specialties that are currently affecting the system. These specialties have been selected for discussion because they offer the most up-to-date modelling performed by the Commonwealth Department of Health,

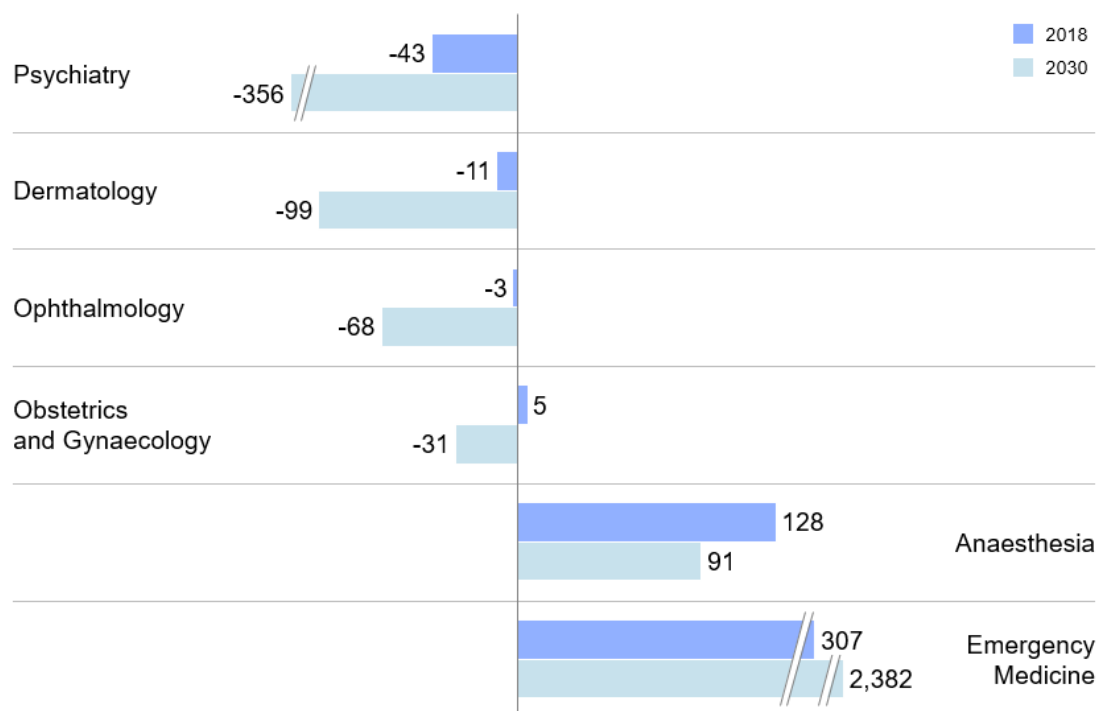
which is publicly available online. Reported trends within these specialties are also supported by state-level modelling and information from ongoing stakeholder consultation. The Steering Committee notes that alignment on data-sharing and modelling will be a vital part of the Strategy (see Section 7.7 for more on this topic).

According to the Department of Health's latest modelling, some specialties are in current over- and undersupply, and some are forecast to become so in the coming years (Figure 7).

- △ Ophthalmology in Australia has one of the lowest per-capita rates of specialists in the OECD, as well as a projected undersupply moving into 2030 (Figure 8). Addressing this complex problem will require the use of both government levers (related to funding) and accreditation-related levers via the Royal Australian and New Zealand College of Ophthalmologists. There is limited opportunity to increase training positions in this specialty in the public sector, but there may be opportunities to increase training in the private sector.
- △ There is also a projected shortage of dermatologists (Figure 9). Dermatology currently has some of the longest clinic waiting lists of any specialty in some jurisdictions in Australia.
- △ A projected shortage in psychiatry specialists also persists, despite increases in the number of training positions (Figure 10). Australia has a lower number of psychiatrists per million people than the OECD average (160 and 180, respectively), and a number of training positions remain vacant. There is ongoing reliance on IMGs, especially outside MM 1 areas: approximately 30 per cent of new fellows in psychiatry are IMGs—a higher percentage than in other specialties. This undersupply means that psychiatry is disproportionately reliant on locum doctors to fulfil service needs. While the private sector is now providing some training through the Commonwealth Specialist Training Program, an undersupply is still projected.
- △ Conversely, there is a projected oversupply of over 2,000 specialists in emergency medicine (Figure 11). The provision of high quality, emergency medicine services 24 hours per day is currently reliant on high numbers of registrars. Relatively fewer specialists are needed, so there are a larger number of registrars in training than future specialists jobs.
- △ Similar evidence-based predictions of oversupply in specific physician and surgical subspecialties are more nuanced and difficult to measure. These are discussed in Section 7.3 of this report.
- △ In general practice, there were 29,717 employed GPs in Australia in 2017 (including vocationally registered GPs and non-vocationally registered GPs). The number of GPs in Australia has been increasing at an average annual rate of 3.7 per cent for the last four years (discussed in Section 7.3). Currently, there is no consensus-based supply-and-

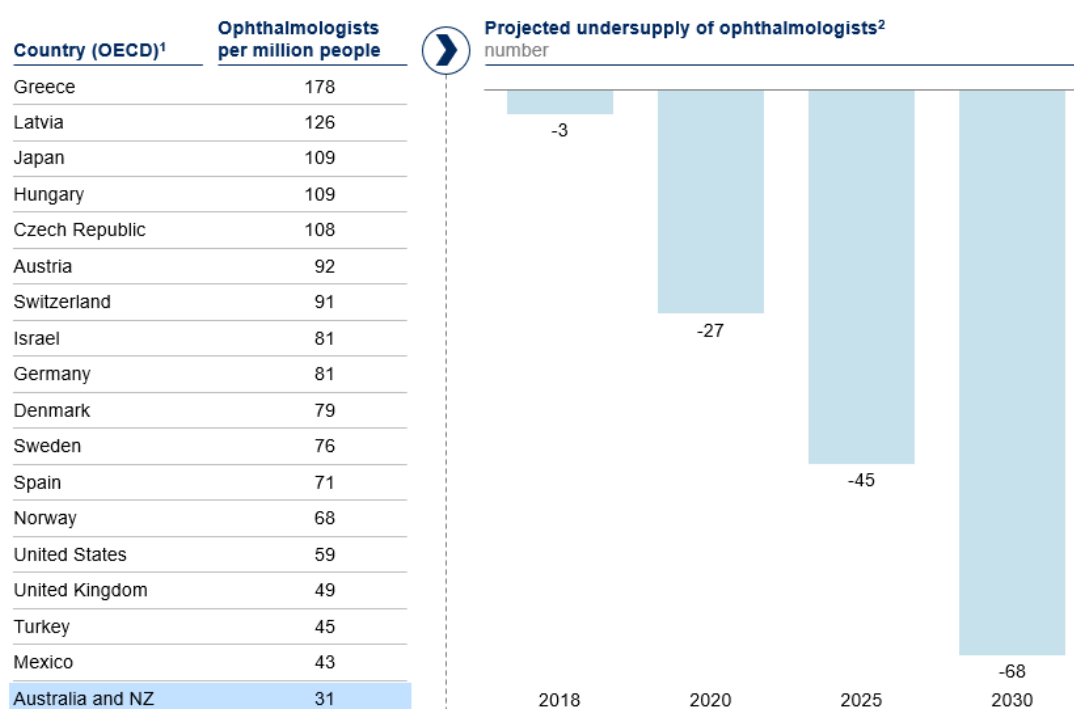
demand modelling for general practice at the national level due to a lack of consistency between data sets, differences between jurisdictions, inter-jurisdictional movement and the complicating factor of non-vocationally registered GPs. The Steering Committee acknowledges that Stronger Rural Health Strategy policies support non-vocationally registered GPs to gain Fellowship and vocational registration.

FIGURE 7: SAMPLE OVER- AND UNDERSUPPLY IN SPECIALTIES



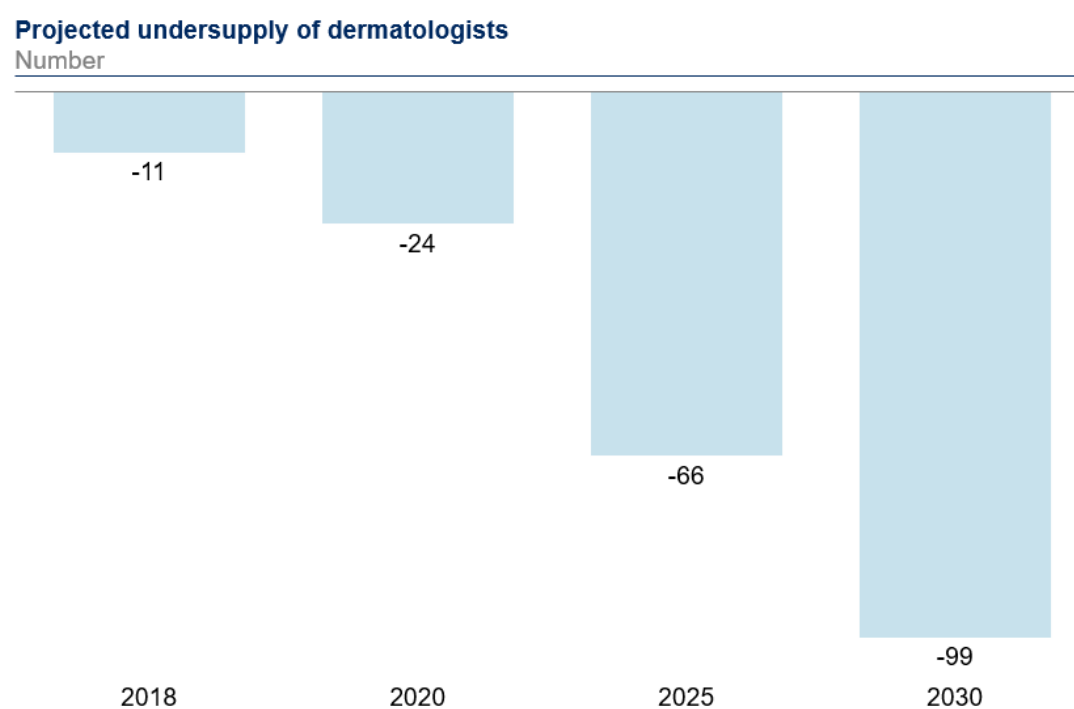
1 Various Australia Future Health Workforce Reports 2016-2018
Health Workforce Australia Report 2014

FIGURE 8: PROJECTED UNDERSUPPLY OF OPHTHALMOLOGISTS



¹ International Council of Ophthalmology, countries last updated between 2012 – 2014, Vision Atlas Global Action Plan, 2014
² DOH HWD Modelling - Australia's Future Health Workforce Report - Ophthalmology 2018

FIGURE 9: PROJECTED UNDERSUPPLY OF DERMATOLOGISTS



¹ DOH HWD Modelling - Australia's Future Health Workforce Report - Dermatology 2018

FIGURE 10: PROJECTED UNDERSUPPLY IN PSYCHIATRISTS

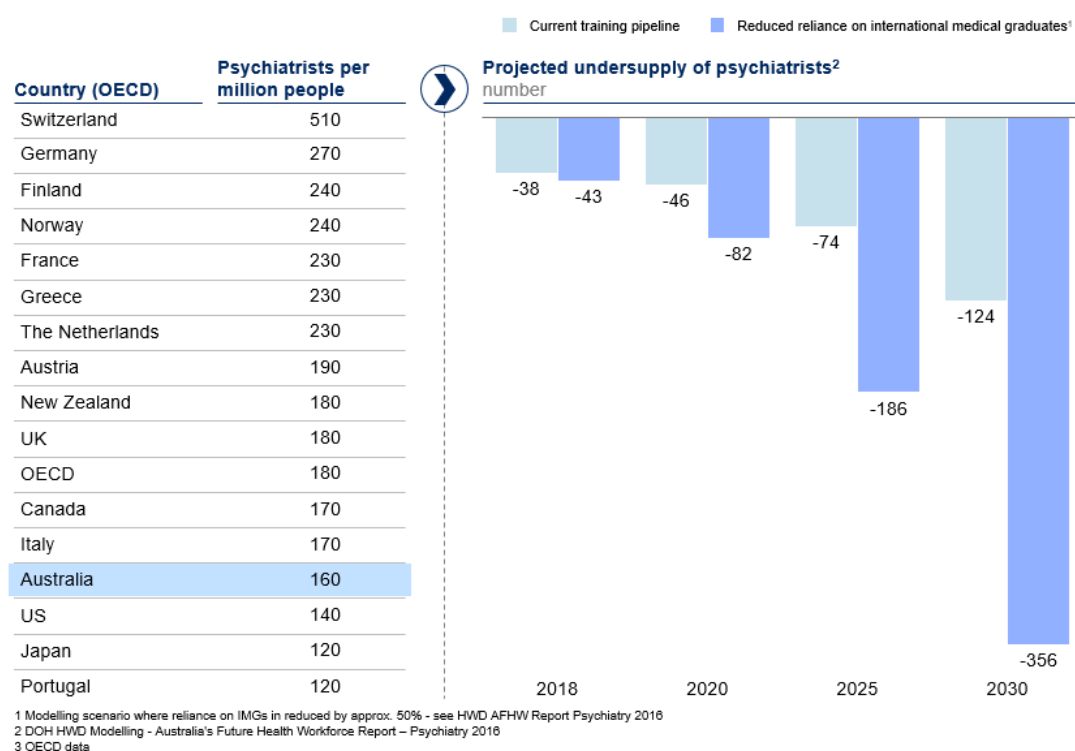
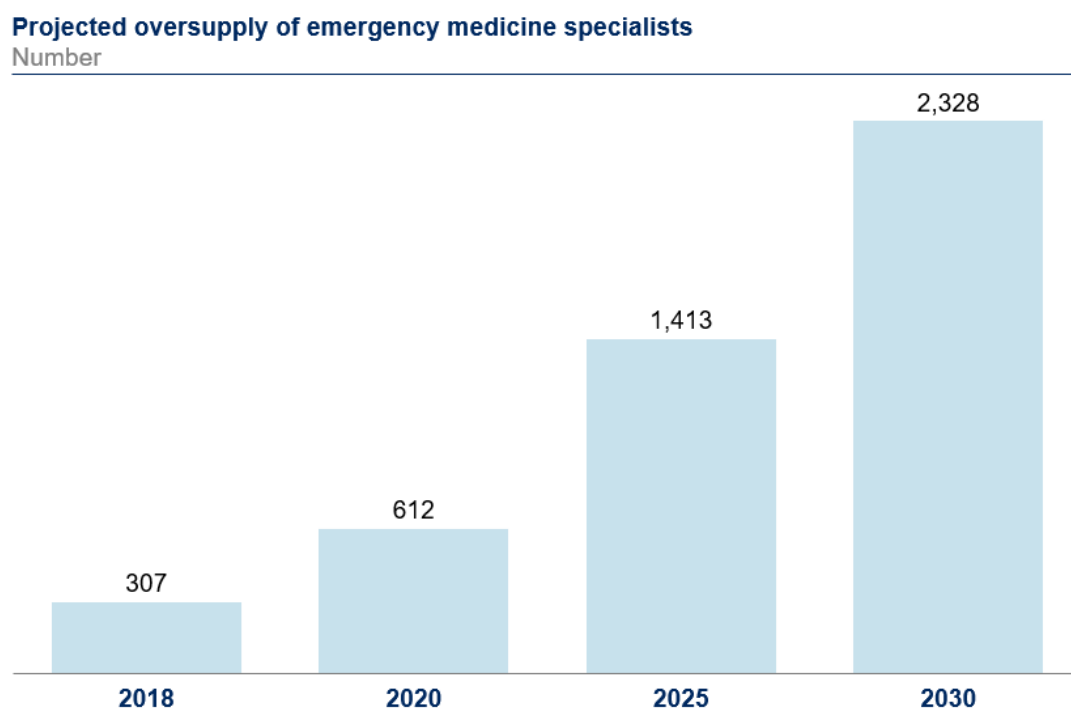


FIGURE 11: PROJECTED OVERSUPPLY IN EMERGENCY MEDICINE



SOURCE: Australia's Future Health Workforce - Emergency Medicine (2017)

7.2.2 What are the issue's contributing factors?

The contributing factors of over- and undersupply in the modelled specialties are often different and will therefore require tailored solutions.

- △ **A lack of coordination in the training and career pathway.** Initiatives aimed at increasing or decreasing trainee numbers in certain specialties to match demand are often not implemented end-to-end. Instead, they tend to be localised, differ between jurisdictions and are 'siloed' from the rest of the workforce planning system. Funding for training positions to match demand also tends to be limited to a stage or phase of training and does not 'follow' the trainee between geographical training locations. The lack of coordinated agreements and balanced training and career pathway levers is seen as an important underlying cause of this over- and undersupply issue. (Training and career pathways are explored in detail in Section 7.8 of this report.) There is no agreed process for linking national workforce planning data and the number or location of registrar training places per specialist medical college.
- △ **Insufficient training positions for competitive specialties.** There is no shortage of junior doctors who want to train in competitive specialties that are potentially in undersupply, such as dermatology and ophthalmology; the challenge is identifying a process to determine the appropriate number of accredited training positions (Figure 18). As entry into these training programs becomes increasingly competitive, doctors in training are being pushed to complete academic activities to maximise their eligibility based on the selection criteria, often at the expense of clinical experience. The stakeholders who accredit training positions and select trainees are not necessarily the same stakeholders who need to plan for and cater to long-term, community-driven demand. This can create selection systems which reward a narrow focus on higher degrees and publications rather than factors that influence future rural practice, such as rural background and rural training.
- △ **Student and junior doctor exposure and training.** For specialties that struggle to fill training positions, the challenge is creating interest among medical students and junior doctors, who are often not exposed to or trained in all of the specialties where doctors are needed. For example, in most medical school curricula, students are exposed to single terms of psychiatry and general practice (which may not represent the breadth of the specialty) but multiple terms of subspecialty medicine, surgery and critical care. Similarly, junior doctors rarely work in general practice or other community-based settings in the prevocational years, skewing perceptions of specialty scope of practice and limiting exposure to specialties that exist primarily outside acute public hospital wards. This lack of exposure also reduces opportunities to build professional relationships and identify relevant role models.

- △ **Reliance on registrars for service delivery.** The potential oversupply in certain specialties, such as emergency medicine, is primarily driven by the increasing rostering and service delivery pressures that are placed on public hospitals. Registrars are needed to meet demand in terms of day-to-day service delivery, but they are often not needed as consultants once they finish their training. Conversely, in some specialties currently in undersupply (for example, rheumatology and dermatology), the lack of inpatient service demand in public hospitals means that there are fewer training positions. This again creates a mismatch between the number of people trained by the system and the number of consultants it needs. There is concern that without considerable support, the workforce imperative overrides the focus on quality training.
- △ **Remuneration.** Various funding models—including fee-for-service models, activity-based funding, and models where procedures receive greater remuneration than consultations—create income disparities that significantly affect career decision-making. Such incentives attract some junior doctors to specialties where they may not be needed.

7.2.3 How has this issue been addressed to date?

There have been attempts to tackle over- and undersupply issues.

- △ From a **coordination** point of view, Health Workforce Australia (now disbanded) was established to align national data-sharing methodologies. There have been other steps in the right direction, such as the Council of Australian Governments' (COAG) increased role in setting the training agenda, and the formation of the NMTAN and its recent expansion as the MWRAC.
- △ In **undersupplied specialties**, locums and IMGs have often been used to fulfil immediate service needs. Some specialist medical colleges are also proactively increasing the number and attractiveness of positions to bolster the inflow of new specialists.
- △ In **oversupplied specialties** like emergency medicine, introducing selection criteria to restrict training program entry has had a small impact (although it may be too early to confirm this).

7.3 Balance of generalist versus subspecialist skills

Outside its urban centres, Australia is a geographically large and sparsely populated country. As a result, GPs and generalist non-GP specialists who can operate across the full scope of practice within their specialty are vital to enabling the local delivery of high-quality care, especially in a rural and remote context. As the workforce becomes more subspecialised, it also becomes less flexible. This may lead to patient care becoming increasingly fragmented between multiple subspecialists, reducing efficiency and increasing risk of adverse events.

7.3.1 What is the evidence for this issue?

The definition of a generalist can vary, but in this scoping phase generalism was explored in its broadest sense. This working definition includes: GPs; advanced practice GPs, predominantly those from rural and remote settings who practise an additional skill accredited by a specialist medical college (for example, GP obstetricians, GP anaesthetists); and generalist non-GP specialists.

Participants in both the interviews and the stakeholder forums emphasised the importance of this issue and highlighted three pieces of evidence. Firstly, there has been a relative change in the number of subspecialists compared to other doctors: since 2013, the number of subspecialist physicians and surgeons has increased by 3.9 per cent per year, while the number of general physicians and surgeons has increased by just 1.3 per cent (Figure 12). General physicians and surgeons were used as a proxy for generalist non-GP specialists as data was not available for the definition of generalist non-GP specialist provided in the footnote below.¹⁰

Secondly, evidence from the Australian Atlas of Healthcare Variation Series—developed by the Australian Commission on Safety and Quality in Health Care—suggests that oversupply is possibly creating a demand for services that does not correlate with patient need or epidemiological trends. For example, the SA311 area with the highest colonoscopy rate had an investigation rate that was 7.4 times higher than the lowest SA3 area (Figure 13). Analysis by the commission showed that this variation was not accounted for by disease prevalence, patient need or socio-economic status in certain areas. This trend could be due to undersupply in rural and remote areas, or an oversupply in inner urban areas, potentially leading to supplier-induced demand within the context of a fee-for-service model.

¹⁰ **Generalist non-GP specialist:** College fellows who have completed advanced training in a generalist role (e.g., the general physician subspecialty), who practise across a broad scope (i.e., in many of the subspecialties in their specialty) and/or who practise across an extended scope (i.e., practising aspects of another specialty because of community need). **Subspecialist surgeons and physicians:** Fellows of the Royal Australian College of Surgeons (RACS) and the Royal Australian College of Physicians (RACP) who have completed further subspecialist training (for example, interventional cardiology, colorectal surgery, etc). **General practitioners:** Fellows of the RACGP or the Australian College of Rural and Remote Medicine (ACRRM) who have completed training. **All other specialists:** All other specialists besides RACP, RACS, RACGP and ACRRM fellows (for example, radiologists, pathologists, obstetricians and gynaecologists, dermatologists, ophthalmologists, anaesthetists, psychiatrists, emergency physicians, etc.).

¹¹ **SA3 Area:** Statistical Areas Level 3 creates a standard framework for the analysis of ABS data at the regional level by clustering groups of smaller geographical areas with similar characteristics (e.g., population size).

FIGURE 12: COMPOUND ANNUAL GROWTH RATES OF SUBSPECIALISTS COMPARED TO OTHER SPECIALISTS, 2013–17

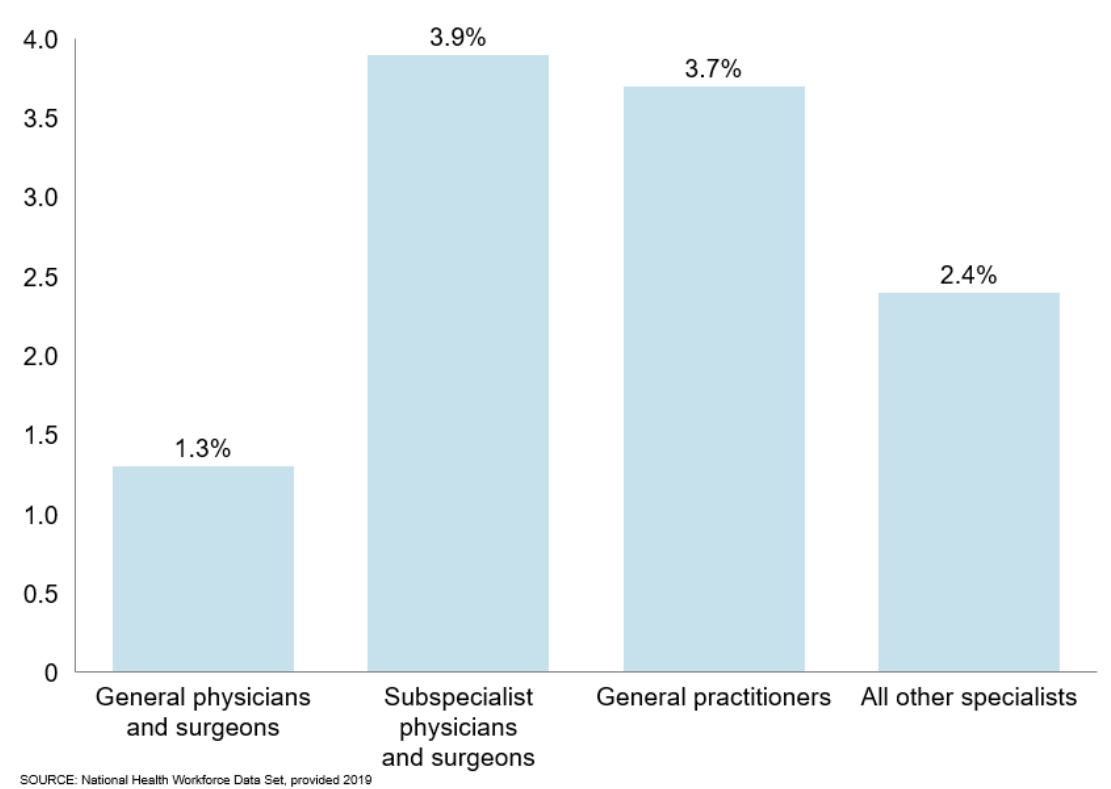
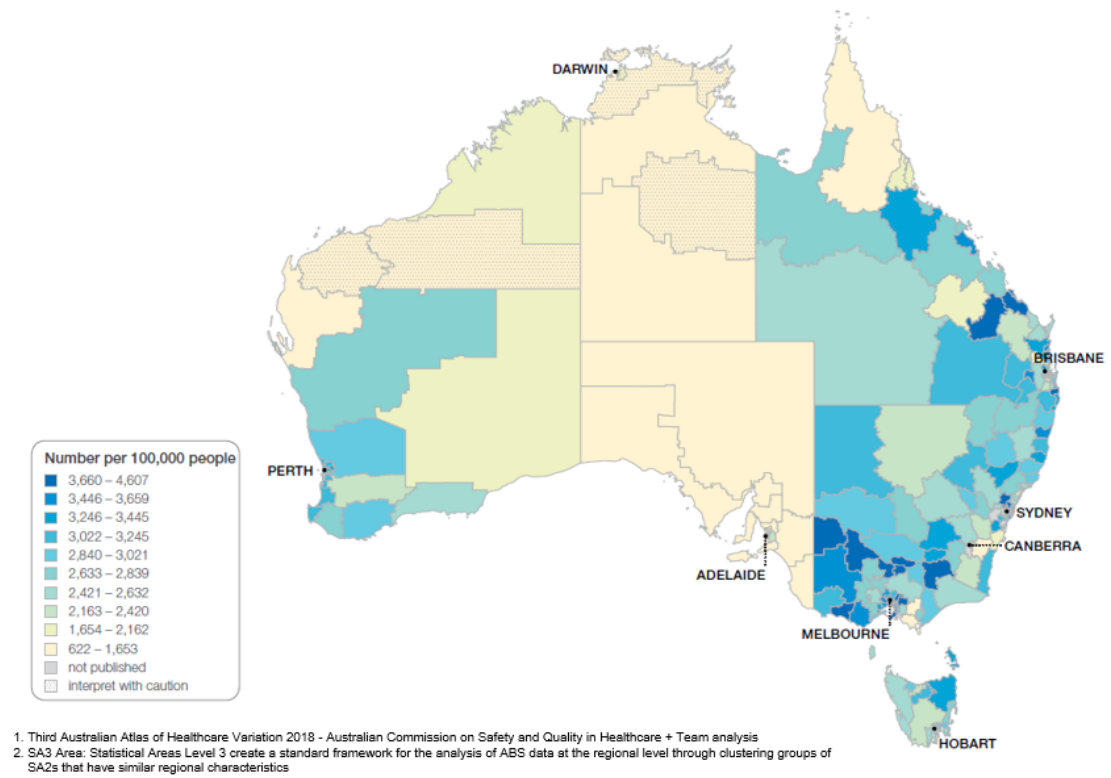


FIGURE 13: RATES OF COLONOSCOPY PER 100,000 PEOPLE BY SA3 AREA, 2016–17



Similarly, the rates of investigation in cardiology are up to 10 times higher in certain SA3 areas, compared to others. This variation does not correlate with the higher incidence of cardiovascular disease in rural and remote areas. Differences in the relative availability of private and public cardiology services in an area (including the number of cardiologists) may influence the request rates for cardiac stress tests and imaging subsidised by the Medicare Benefits Schedule (MBS).

Thirdly, stakeholders identified workforce rigidity as a consequence of increasing subspecialisation. Hospital managers cited increased cost and staffing challenges due to more subspecialists being required to cover the full range of service needs (for instance, in surgery). Workforce planners also suggested that subspecialists are less able to adjust their scope of practice to meet changing service needs, reducing the ability to redeploy doctors at a local or system level.

7.3.2 What are the issue's contributing factors?

The increasing trend towards subspecialisation can be viewed in the context of under- and oversupply dynamics.

- △ **Medical students are disproportionately exposed to subspecialist doctors during training.** Due to the proximity of most universities to large, inner-city tertiary hospitals, medical students tend to be exposed to subspecialty doctors throughout all stages of training. Placements with generalist or primary care doctors are less common, despite GPs accounting for 31 per cent of the medical workforce. Students can subsequently view subspecialties as more prestigious, particularly as successful mentors encourage them—overtly or otherwise—to pursue a career in their subspecialty.
- △ **Generalist positions can be perceived as less attractive, and with lower earning capacity.** This is partly due to the fee-for-service model, which can generate higher earnings for proceduralist and subspecialist doctors in many cases. In addition, generalist practice in hospitals can be perceived as more difficult, and with a more challenging on-call rota (more night shifts and weekends), and there is a perception amongst doctors that work as a GP can be less prestigious. Countries that have similar pay scales for GPs and non-GP specialists, such as the Netherlands, have fewer problems recruiting doctors to work in general practice.
- △ **Graduates are older, with more debt.** The increase in postgraduate medical schools and growing tuition and study costs mean that new graduates are older and have more debt. These doctors have less career time to pay off their debts, which may influence their desire to enter highly remunerated subspecialties and their choice of practice location.
- △ **There has been a net reduction in the length of training.** The welcome reduction in junior doctors' work hours has not been accompanied by a change in the years required for training. In surgical specialties, for example, there are anecdotal reports that newly

qualified surgeons lack experience in the range and volume of procedures needed for generalist practice.

△ Fellowships and subspecialist training can reduce confidence in generalist practice.

Most non-GP specialist training programs include a final stage of training. These Fellowships enable doctors to acquire and practise a subspecialist interest. They can be for one or two years and are often taken overseas to ensure exposure to high volumes of cases. On commencing as a consultant, doctors who have undertaken Fellowships have had a one- or two-year gap from generalist practice in their discipline. This can erode doctors' confidence and their willingness to assume a new level of responsibility as a consultant in an area in which they now feel out of practice.

△ Doctors are looking to differentiate themselves through the services they offer. Most Australian doctors want to practise in major cities. Facing oversupply and workforce saturation in cities, doctors are forced to differentiate themselves and 'find a niche' in which to earn a living. This often means subspecialising in a very limited area of tertiary or quaternary practice.

7.3.3 How has this issue been addressed to date?

Recent efforts include the MBS Review and the Australian Atlas of Healthcare Variation Series, both of which used evidence to discourage and potentially limit the impact of a fee-for-service model as a driving force for subspecialisation. The National Rural Generalist Pathway is another important initiative that seeks to formalise the training of rural generalists.

Specialist medical colleges' role in helping GPs expand beyond their traditional scope of practice is also important. For example, GP anaesthetists receive cross-college training via the Joint Consultative Committee on Anaesthesia.¹² Similarly, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists' Diploma enables GPs to deploy obstetrics skills in rural and remote areas.

7.4 Growing the number of Aboriginal and Torres Strait Islander doctors and having a culturally safe medical workforce

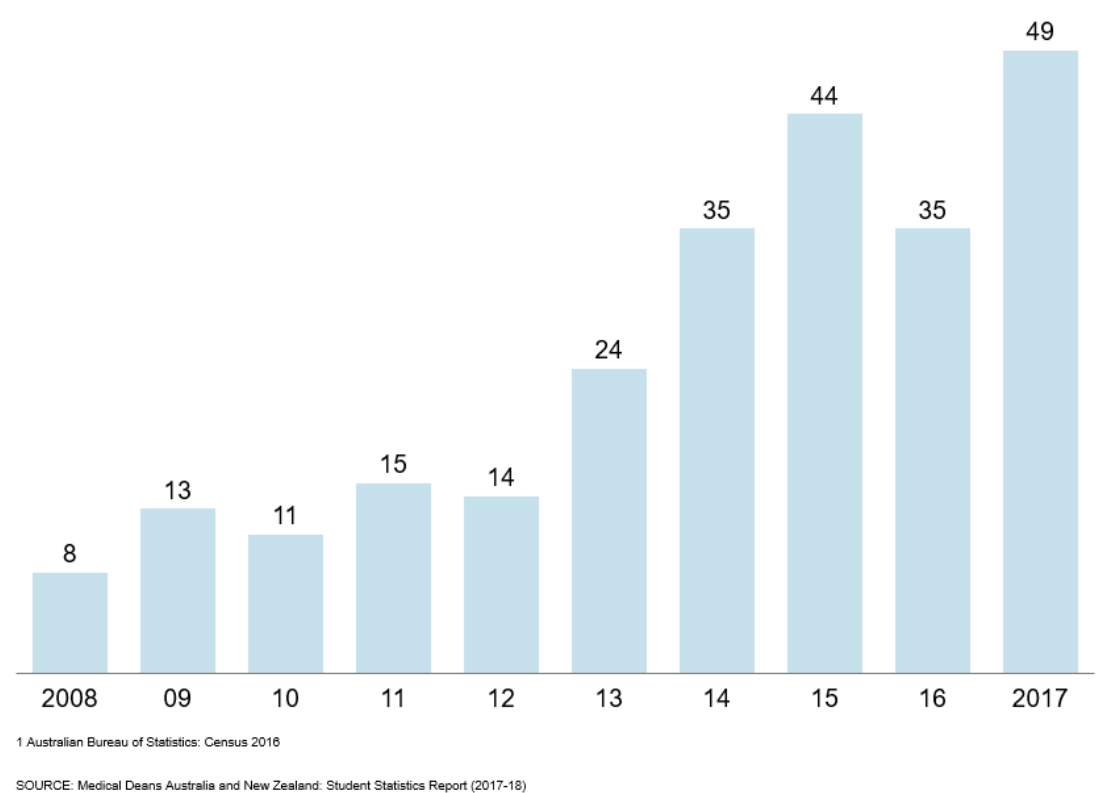
The centrality of culture to any Indigenous health service is vital in explaining why an Aboriginal and Torres Strait Islander workforce is so important, and why a well-designed workforce strategy can increase health outcomes for Aboriginal and Torres Strait Islander people. The number of Aboriginal and Torres Strait Islander medical graduates is increasing,

¹² This body includes the Australian College of Rural and Remote Medicine (ACRRM), the RACGP and the Australia and New Zealand College of Anaesthetists.

but at a slower rate than population parity. In 2017, 49 Aboriginal and Torres Strait Islander doctors graduated from medical programs in Australia (Figure 14). This accounts for 1.6 per cent of domestic medical graduates.

Culturally safe and holistic approaches to service delivery that recognise the importance of spiritual, cultural and social well-being to Indigenous physical and mental health require a strong Indigenous workforce that understands how to integrate and apply these considerations in clinical practice. The AIDA has developed cultural safety training—Aboriginal and Torres Strait Islander Health in Clinical Practice—and is advocating for this training to be embedded as part of medical training and continuous professional development. The AIDA’s Specialist Trainees in the Medical Workforce project will also enhance the ability of specialist medical colleges to train people from an Aboriginal and Torres Strait Islander background.

FIGURE 14: NUMBER OF ABORIGINAL AND TORRES STRAIT ISLANDER MEDICAL GRADUATES, 2008–17



The **National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework 2016–2023**, prepared for the Australian Health Ministers’ Advisory Council by the Aboriginal and Torres Strait Islander Health Workforce Working Group, outlines six broad strategies to address this disparity:

- △ Increase the number of Aboriginal and Torres Strait Islander students studying for qualifications in health.

- △ Improve completion/graduation and employment rates for Aboriginal and Torres Strait Islander health students.
- △ Improve recruitment and retention of Aboriginal and Torres Strait Islander health professionals in clinical and non-clinical roles across all health disciplines.
- △ Improve the skills and capacity of the Aboriginal and Torres Strait Islander health workforce in clinical and non-clinical roles across all health disciplines.
- △ Support health and related sectors to provide culturally safe and responsive workplace environments for the Aboriginal and Torres Strait Islander workforce.
- △ Improve information for health workforce planning and policy development.

Sustained collaboration and consultation with key Indigenous bodies, including the AIDA, is vital to the success of the Strategy. Efforts to remedy workforce issues and reduce disparities in health outcomes for Indigenous Australians should complement existing Australian Government initiatives that are already working to close the gap.

7.5 Doctor work-readiness

Despite high standards of vocational training in Australia, systemic issues can lead to doctors feeling underprepared to practise at crucial stages in their career. This can have implications for patient safety and can adversely affect doctor well-being.

While conclusive data on this issue is lacking, the stakeholder consultation process identified six potential areas where it manifests:

- △ **The transition from medical school to internship.** The Strategy should recognise the outcomes of the 2015 Review of Medical Intern Training, which identified the work-readiness of medical graduates as an issue. Recommendations from the review—which were endorsed by the CHC—included moving the current model of internship to an integrated, two-year, transition-to-practise model. This model would focus on capturing competencies that are relevant to specialist training, which would help to streamline training in later years. Each jurisdiction is at a different stage of progressing this recommendation. For example, New South Wales has established an Intern Work-Readiness Advisory Committee and is currently consulting on a draft list of 31 work-readiness/entry-level requirements.
- △ **Outpatient ambulatory care.** Throughout the stakeholder consultation process, it was reported that most doctors in training in Australia are exclusively exposed to acute inpatient models of care, as the junior medical workforce has traditionally been most needed for service delivery in inner-city tertiary hospitals. A lack of exposure to outpatient ambulatory models of care creates challenges for junior doctors transitioning to this type of practice. The skill sets involved in outpatient ambulatory care and acute

inpatient care are different, and the training environment needs to ensure that doctors are ready to work in the setting where they are needed.

- △ **The transition from prevocational training to general practice.** Stakeholders reported that GPs struggle to gain exposure to disciplines such as paediatrics and obstetrics in the prevocational years due to a shortage of accredited clinical terms and competition from specialist trainees. Terms in other disciplines are available but may be in subspecialist disciplines or may cover a different spectrum of illness—for example, the skills learned in an inpatient acute psychiatry unit may not easily transfer to managing depression or anxiety in the community. This lack of exposure to key GP disciplines prior to starting community work is a major barrier to GP trainee work-readiness.
- △ **The transition to rural practice.** Throughout the stakeholder consultation process, it was reported that doctors feel insufficiently prepared to practise independently in regional Australia after completing medical school, prevocational training and vocational training. The causes and components of this are wide and multifactorial and are, in part, connected to the loss of generalist skills in the modern medical workforce.
- △ **The transition to specialist practice.** Across the procedural specialties, there is broad agreement that doctors who have completed their training still do not feel sufficiently ready to operate. In part, this is because preventive treatment and the development of less-invasive treatment options have resulted in fewer procedures being carried out. For example, obstetric and gynaecological trainees are not performing enough total open hysterectomies due to new pharmacological and laparoscopic management options. The relative increase in procedural complexity also requires longer exposure time and apprenticeship to gain core competency. It was reported in the stakeholder consultation process that this often requires trainees to go overseas for procedural Fellowships after finishing their Australian training.
- △ **Clinical experience.** The nature of work performed by doctors in training may contribute to limited work-readiness. For instance, junior doctors reported increased administrative burdens; reduced autonomy due to an increased emphasis on safety, requiring consultant-led decision-making; and fewer work hours per week.

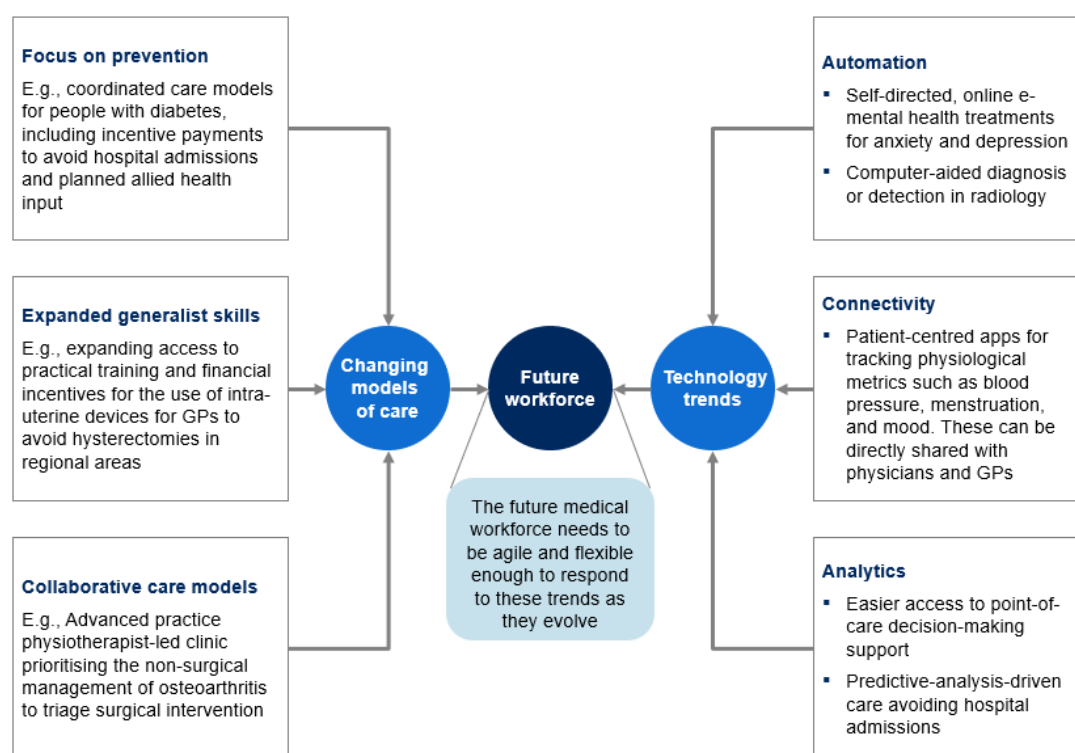
Throughout all stages of the stakeholder consultation process, there was a strong push to **move towards competency-based training** across the entire training pathway. There is a reported mismatch between the quantity and quality of skills that a trainee is exposed to and their progression through training. To address this mismatch, there would need to be a better understanding of the patient and procedure load of each training facility, in addition to more robust measurement of facility-specific patient outcomes. These metrics could then be linked to trainees acquiring key competencies throughout all stages of the training pathway, maximising the quality and consistency of training. A potential side effect of this is an increase in training length to ensure that all competencies are acquired.

Ongoing professional development and assurance of safe practice is a crucial element of future medical practice and training, and stakeholders suggested that Australia is falling behind comparable countries such as Canada, New Zealand and the United Kingdom in this regard. This has been a focus of the Medical Board of Australia's Professional Performance Framework, which aims to ensure that all registered medical practitioners practise competently and ethically throughout their working lives. The Strategy's recommendations should complement the Medical Board of Australia's framework.

7.6 Service delivery and changing models of care

It is impossible to plan for the future of the Australian medical workforce without exploring changing models of care and the impact of technology. Both model-of-care and technological changes are resulting in paradigm shifts and will have a profound effect on the structure and purpose of Australia's future workforce (Figure 15).

FIGURE 15: CHANGING MODELS OF CARE AND THE IMPACT OF TECHNOLOGY ON THE WORKFORCE



SOURCE: Team analysis and literature review

Changing models of care are an inevitable part of our future healthcare system and will have a profound impact on workforce dynamics. For example, collaborative care models that balance medical and non-medical staff to maximise clinical efficiency will become even more important as resources become increasingly stretched. The advent of personalised, biologic-based medicine is also likely to prevent many diseases from occurring in the first place, changing the type and number of specialist doctors Australia will need to treat disease.

In addition to these trends, the Strategy should focus on three aspects of service delivery and changing models of care:

- △ **The shift towards primary care** will need to be reflected in the Strategy's recommendations. GPs are playing an increasingly pivotal role in the health system as government policy¹³ focuses on delivering higher quality, collaborative healthcare in communities, rather than in large tertiary hospitals. This will likely result in an increased need for GPs who are trained to deliver more cost-effective, preventive care. Expanding and reclaiming the broader aspects of general practice and general medicine—especially in a remote and rural context—are vital steps towards achieving a more equitable geographical distribution of healthcare.
- △ **The amount of time doctors spend on value-adding work** is increasingly under scrutiny. Stakeholders have suggested that doctors are spending too much time on administrative tasks at the expense of time practising at the top of their scope to deliver the best outcomes for patients. Where possible, shifting low-value work away from doctors should be considered (perhaps using technology to achieve this).
- △ **The impact of technology on the medical workforce** is likely to be considerable, if unpredictable. Stronger connectivity will enable doctors to remotely and proactively monitor patients and their physiological parameters, reducing the need for costly reactive treatment in hospital. While these are only potential and hypothetical impacts, technological development must feature in strategic planning for the future of Australia's medical workforce.

7.7 Coordination between medical workforce planning stakeholders

7.7.1 Governance and accountability

Australia's complex medical workforce planning system has contributed to many of the challenges identified in this report. Medical workforce planners have not aligned with each other on planning objectives and goals, which makes it harder for the system to meet community demand. This, combined with a lack of formal coordination and differing accountability structures, prevents the system from adapting to changing dynamics and situations. An initial perspective on these differing accountabilities, and the potential tensions which can result, is provided in Table 2.

There are numerous instances where coordination could be improved between medical workforce planning stakeholders. For instance, public hospital staffing is organised primarily to deliver quality inpatient care, which means that more junior and middle-grade staff are

¹³ For example, the Health Minister's 10-year plan to transform primary care.

needed than senior staff, particularly in acute specialties. Consequently, not all junior and middle-grade staff working in these areas will be able to find senior specialist roles as their careers progress. Conversely, less acute specialty practice is mainly limited to outpatient or private practice. The lower inpatient load reduces the need for junior doctors, which makes it difficult to gain clinical experience in these disciplines.

One of the biggest challenges is the lack of data and modelling integration to support medical workforce planning. Currently, the Commonwealth, states and territories, specialist medical colleges and regulators use different data sets and methodologies to perform supply-and-demand forecasting for workforce planning. Wider structural challenges include regulatory frameworks, industrial agreements and institutional inertia.

Table 2: Accountabilities and potential tensions between medical workforce planners

Stakeholders	Decision makers	Accountable to	Potential tensions	Potential tensions	Potential tensions
Commonwealth government	<ul style="list-style-type: none"> Ministers/Cabinet Secretaries COAG 	<ul style="list-style-type: none"> Australian electorate Patients 	Increasing demand and costs of healthcare—both MBS and public hospitals	Funding model remunerates specialties at different levels, potentially skewing supply	Activity based funding rewards activity rather than quality of care
State/territory government	<ul style="list-style-type: none"> Ministers/Cabinet Secretaries COAG 	<ul style="list-style-type: none"> State/territory electorate Patients 	Service requirements of public hospitals dependent on registrar workforce	Ongoing vacancies in prevocational and vocational training positions, despite growth in medical graduate numbers	Increasing demand and costs of healthcare—both MBS and public hospitals
University medical schools	<ul style="list-style-type: none"> Dean Academic Board University Vice-Chancellor 	<ul style="list-style-type: none"> University Council Commonwealth and State/territory Minister for Education 	Surplus students for internships in most states (and potential new medical school programs)	Providing high quality clinical placements and internships for students	Medical schools' number of full-fee paying students may not match states' and territories' capacity to provide clinical placements or medical workforce requirements
Specialist medical colleges	<ul style="list-style-type: none"> President Censor Staff 	<ul style="list-style-type: none"> Members—fellows and trainees 	Oversupply/undersupply in certain specialties versus community need	Service requirements of public hospitals dependent on accredited registrar workforce	College accreditation standards and criteria perceived as metro centric, and may lead to excessive focus on research and advanced qualifications (e.g., Ph.Ds) by applicants
Regulators (AHPRA, AMC, Medical Board)	<ul style="list-style-type: none"> Appointed board Staff 	<ul style="list-style-type: none"> Ministers Australian public 	Balancing an individual's right to practise with community safety		

Stakeholders	Decision makers	Accountable to	Potential tensions	Potential tensions	Potential tensions
Advocacy groups	<ul style="list-style-type: none"> Elected office bearers Secretariat 	<ul style="list-style-type: none"> Members Boards 	Balancing the interests of member groups which may be diverse and/or in conflict (e.g., GP supervisors and registrars)	Balance member interests and autonomy with community need	Advocating for healthy workplaces and cultural change without alienating those reluctant to embrace such changes
Private sector	<ul style="list-style-type: none"> Board Executives 	<ul style="list-style-type: none"> Shareholders Patients Accredited specialists 	Balancing the interests of various stakeholder groups to avoid siloed decision-making	Declining rates of private health insurance driving public hospital demand	Significant capacity for teaching and training but funding remains a challenge given case-based funding
Rural workforce agencies	<ul style="list-style-type: none"> Board Executives 	<ul style="list-style-type: none"> Commonwealth Department of Health 	Conducting workforce planning and distribution in parallel with other groups in the sector		
Primary Health Networks	<ul style="list-style-type: none"> Board Executives 	<ul style="list-style-type: none"> Commonwealth Department of Health 	Balancing health workforce planning with six other Primary Health Network priorities	Integrating primary care with other providers (e.g., GPs, community care)	
Regional GP training organisations	<ul style="list-style-type: none"> Board Executives Directors of Training 	<ul style="list-style-type: none"> Commonwealth Department of Health 	Funding support for GP registrar training equal in urban and remote locations	Accountable only to meet recruitment and location distribution targets, not workforce needs	

7.7.2 Data and modelling methodologies

One of the most important components of coordination is alignment on data sets and modelling. There is currently a disparate approach to data use and supply-and-demand modelling both between and within jurisdictions. Data-sharing between the Commonwealth, states and territories, specialist medical colleges and key regulators (such as the Australian Health Practitioner Regulation Agency [AHPRA]) is also incomplete and inconsistent, and there are disparities in the quality and consistency of data used in medical workforce planning, with large data sets often incomplete. The reliance on self-reported data is also problematic, given its inherent inaccuracies and bias.

In light of these challenges, it is likely that a medical workforce data strategy will be needed to support the Strategy, providing alignment on definitions and data sets, agreement on modelling methodologies, and a roadmap (with milestones) for integrating data sets across workforce planning stakeholders.

The most important **data sources** for medical workforce planning are:

- △ AHPRA registration data.

- △ Health workforce survey data, which includes data on the number of specialists, the number of hours worked, etc.
- △ MBS data from the Commonwealth.
- △ State-based payroll and hospital-specific data.
- △ College-based trainee and fellow data, and data from the Medical Deans Australia and New Zealand on medical student numbers.

There are large gaps in data sets and key differences in the way jurisdictions use various modelling methodologies for workforce planning, including disagreement on:

- △ How to measure the **workforce supply** (for example, headcount, full-time equivalent or full-time service equivalent).
- △ How to model for the **changing demographics** of the workforce (for example, the increasing trend towards part-time training and work).
- △ How to **predictively model demand**, and the bigger question of whether it is even possible to model demand accurately. Some jurisdictions model demand based only on empirical metrics, such as retirement attrition and per-population ratios. Other jurisdictions model demand far more broadly, taking into consideration changes in disease epidemiology over time, model-of-care changes, IMG reliance and increased emphasis on primary and preventive care. Agreement on how to model demand between jurisdictions is vital moving forward.
- △ How to model the **training and career pathway**, in light of incomplete data and ambiguity surrounding progression and service-to-trainee data.
- △ How to model and capture the **inter-jurisdictional movement** of doctors.
- △ The wider issue of modelling **service optimisation** and how this relates to competency-based training for junior doctors.
- △ How to measure growth in the number of **unaccredited registrars** (where there is currently no agreed methodology).
- △ How to measure increasing **subspecialisation** (where there is currently no agreed methodology).

7.8 Management of the training and career pathway

One of the most important cross-cutting contributing factors underpinning all the priority issues discussed in this report is the lack of end-to-end management of the training and career pathway (Figure 16). Initiatives are often siloed and focus on a specific part of the

training and career pathway, potentially leading to unintended consequences in other areas. For example:

- △ The increasing emphasis on rurality when selecting medical students from rural and remote backgrounds has not commensurately increased the number of rural doctors (as discussed in Section 7.1 of this report). These students must be consistently offered rural training opportunities in the prevocational and registrar years to maximise the chance of them practising rurally as consultants. It is equally important to ensure that city-origin students feel supported during their rural placements and are encouraged to stay because of their positive learning experience.
- △ Some participants in the BMP Scheme struggle to fulfil their return-of-service requirements, partially due to a lack of rural training positions. Bonding only works within a system that facilitates the growth and development of rural training.
- △ Specialist medical colleges have different entry points and requirements, meaning that junior doctors are often not sure what they need to achieve to be selected for their chosen training program. For instance, some colleges permit entry in Postgraduate Year 4, while others require varying numbers of research publications. The Steering Committee acknowledges that some specialist medical colleges have taken steps to move away from requiring research publications for entry.
- △ The number of accredited training positions grew between 2007 and 2018, but this growth occurred at different rates across specialties (Figure 17). Specialties such as emergency medicine and paediatrics have increased trainee numbers by 10 per cent and 12 per cent per year, respectively, potentially leading to an oversupply. This is often driven by public hospital reliance on the registrar workforce to deliver services (see Section 7.9 for further discussion on this topic). Conversely, specialties like dermatology, ophthalmology and surgery have increased their advanced trainee numbers by 3–4 per cent per year, potentially leading to an undersupply.
- △ This training environment also plays a crucial role in the professional fulfilment and well-being of Australian doctors. Stakeholders suggested that the increased competition for specialist training positions is causing stress and burnout amongst junior doctors, who sometimes have to work a number of years in unaccredited registrar jobs in the hope of securing a position on their chosen training program.
- △ University intake informs several important aspects of the future medical workforce, including the number of graduates; the entry criteria, which influence the diversity of the workforce; the geographic distribution of students across the country; and the mix of students (domestic versus international, and fee-paying versus Commonwealth-supported). Closer collaboration between medical schools, Departments of Education and Health, and other stakeholders can further align these decisions with a common strategy.

FIGURE 16: PROBLEMS ALONG THE TRAINING AND CAREER PATHWAY

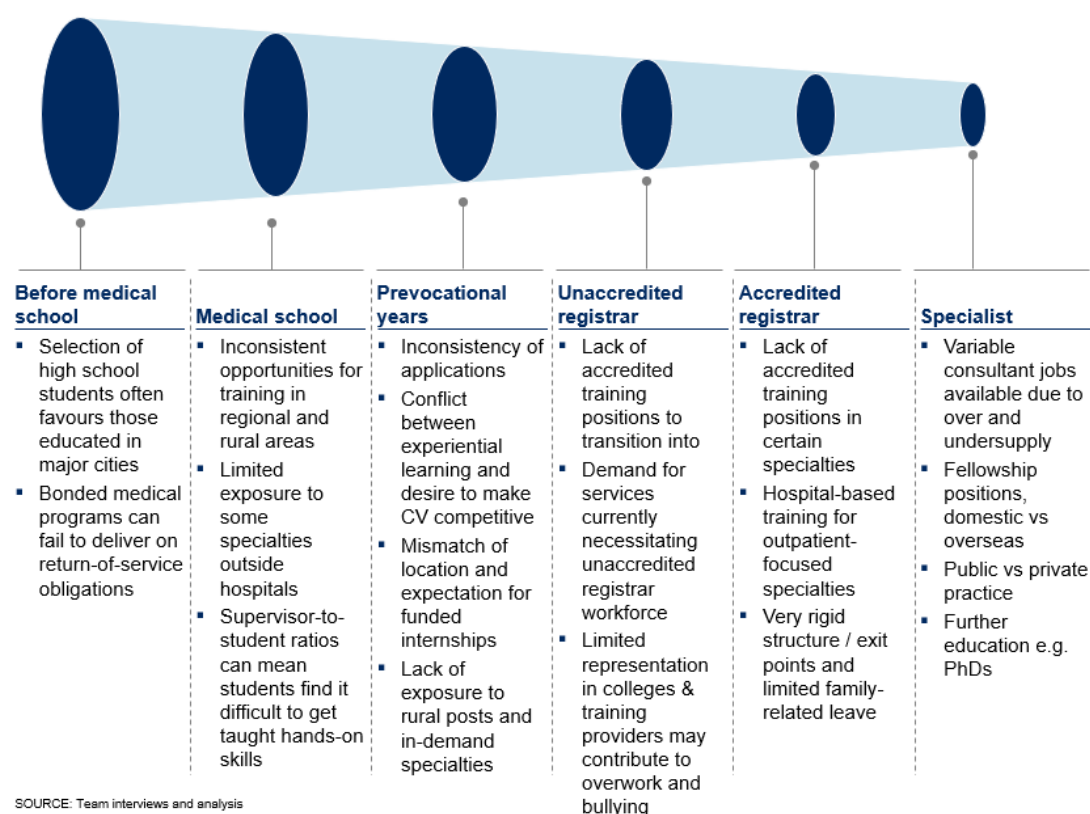
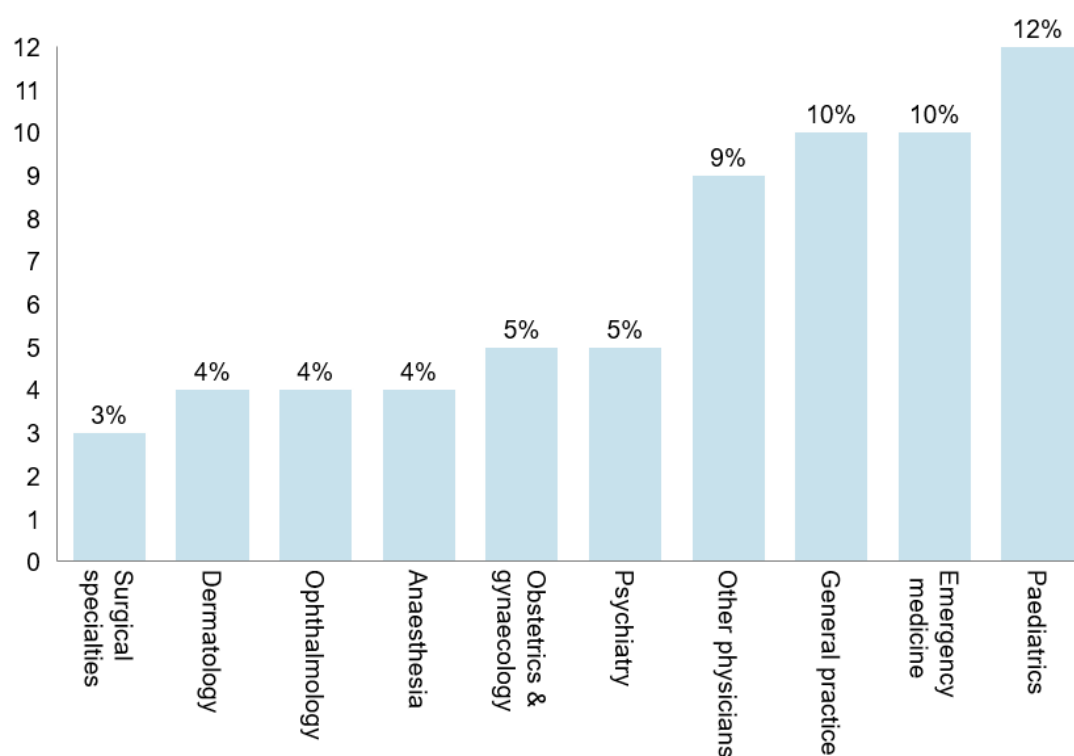


FIGURE 17: SPECIALTY TRAINING NUMBERS BY COMPOUND ANNUAL GROWTH RATE, 2007–18



7.9 Reliance on registrars to meet health service needs

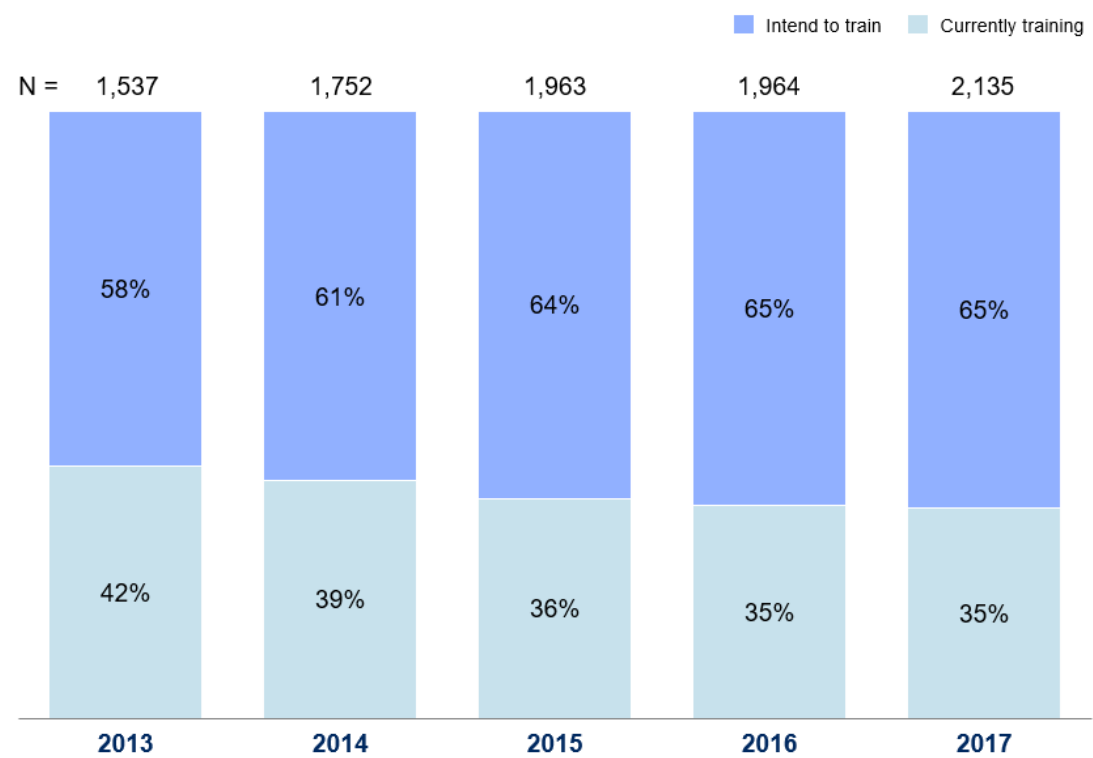
The role of health service providers has become increasingly difficult in the face of growing demand for services and changing patient expectations. At the same time, a reduction in work hours has meant that more doctors are needed to care for acutely unwell patients in hospitals. This important work is often conducted by registrars, who are increasingly perceived as the most cost-effective way of covering out-of-hours services.

In some cases, training registrar positions have been created to fulfil service requirements, such as in emergency departments and intensive care units (both requiring a 24/7 medical workforce). These positions are created without taking into consideration the number of specialist positions that are necessary once these doctors complete their training. This oversupply is discussed in more detail in Section 7.2 of this report.

The same demand for acute service provision has led to an increase in the service registrar workforce (Figure 18). Service registrars are junior doctors who have completed their internship and residency and have the necessary experience and skills to work at a similar level to registrars on vocational training programs, but whose work is not accredited by specialist medical colleges, does not count towards training, and can provide less exposure to apprenticeship or more formal learning opportunities and supervision. Many doctors do these jobs in the hope of gaining entry to the training program of their choice.

The service registrar workforce often does not have the protection or support provided to training registrars. For instance, training requirements often mean that training registrars are restricted to working a certain number of weekends or night shifts per year. This means that the remainder are split amongst the service registrar population, leading to concerns about the well-being of this cohort and, as a result, patient safety. Sixty-five per cent of junior doctors report serious concerns about making a clinical error due to fatigue, and 60 per cent report concerns about personal health or safety due to fatigue. There have been efforts to develop a uniform approach to un-rostered, unclaimed and unpaid overtime, as well as unsafe working hours and shift lengths. However, these efforts vary between jurisdictions.

FIGURE 18: DOCTORS INTENDING TO TRAIN VERSUS THOSE CURRENTLY IN TRAINING, AS PER THE NATIONAL HEALTH WORKFORCE DATA TRAINING SURVEY, 2013–17



SOURCE: NHWD Training Survey; MET Data Tool - Commonwealth DOH

8 Conclusion and path forward

This document marks the first milestone in the development of the Strategy. Over the next 18 months, the MWRAC and the Steering Committee will continue to lead an inclusive process to build on this scoping framework, culminating in a strategy report and a five-year implementation plan.

Given the cross-jurisdictional nature of the Strategy, review and endorsement at the cross-government level will be an important component of its development.

Stakeholders will be actively involved in the development of the Strategy. This involvement will be facilitated in a number of ways, including consultation to seek further input on recommendations, targeted consultation for input and alignment on the final strategy and prioritised actions, and joint implementation of initiatives once the Strategy is in place. For instance, jurisdictions will be closely involved in discussions regarding the number of medical specialists and training positions, noting that each state and territory, and each community, has diverse needs which must be considered in any strategy implementation process.

Stakeholders who wish to be involved going forward and/or would like to contribute feedback can visit the [Strategy webpage](#).

Further detail on stakeholder engagement and the Strategy's development timeline will be provided as the next phase of work commences. While much remains to be done, this scoping framework has laid the groundwork for an ambitious strategy that has the potential to significantly improve the access, quality, sustainability and experience of healthcare for patients, and the fulfilment, impact and lived experience of doctors across Australia.

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Appendix A: Potential opportunities to explore further

Throughout the consultation process, stakeholders identified numerous opportunities which could address a number of the issues outlined in Section 7. This input, which is summarised below, is neither exhaustive nor validated, and is intended to be used as a starting point for the next phase of strategic planning. A more comprehensive and analytical examination of these and other potential solutions for each priority is anticipated during the next phase of work.

A.1 Which opportunities should the Strategy explore?

A.1.1 Geographic maldistribution and inequality in healthcare access

- △ Scale up regional and rural training hubs for specialist training (with rotations to the city as needed)—for example, through the IRTP.
- △ Support rotations to regional and rural areas from metropolitan-based training programs that are beneficial for that community and do not impair the growth of regional and rural training hubs.
- △ Link funding so that it follows the trainee—regardless of location—from the beginning to the end of the training pathway.
- △ Increase funding for rural training and supervisor positions where they are most likely to significantly increase rural healthcare access and quality.
- △ Streamline accreditation procedures across specialist medical colleges for rural training positions to reduce the burden on rural hospitals to establish training positions, and potentially mandating rural specialist representation on college selection panels. An important part of this discussion is determining how to increase the flexibility of specialist medical college accreditation standards and processes without reducing the quality of training.
- △ Create a new decision-making process for accrediting training positions based on community need.
- △ Increase rural student admissions into medical school and develop mentorship programs for rural high school students.
- △ Increase the emphasis on rurality in specialty trainee selection criteria, including rewarding prior rural practice and having rural interviewers.

- △ Adjust incentives for outer metro MM 1 areas based on community need.
- △ Understand the drivers of retention and turnover in rural areas and use this to inform recommendations. For example, explore factors that may increase retention, such as funding models, having a rural background, studying in rural universities, having early exposure to rural placements as a student, or completing training in rural areas; and consider how to define and measure retention in the future.
- △ Identify rural workforce delivery models that have demonstrated success (for example, the Victorian surgical model and the South Australia complementary community paramedic team) and scale or replicate where appropriate.
- △ Consider the role of the locum workforce.
- △ Introduce rural Fellowship schemes to support new non-GP specialists to gain rural and remote experience prior to commencing consultant posts.
- △ Review s19AA and 19AB of the 1973 Health Insurance Act to ensure legislative levers address the current and predicted health need.

A.1.2 Over- and undersupply in certain specialties

- △ Engage medical students and junior doctors early to encourage them to pursue specialties facing an undersupply (for example, psychiatry), facilitating the best choice for the community based on evidence and information. Consider direct-entry program expansion as a complement to this measure.
- △ Consider growing the number of private-sector training positions for specialties where a large proportion of doctors work privately (for example, psychiatry, ophthalmology, dermatology, clinical genetics, and rheumatology). The Commonwealth-funded Specialty Training Program could provide a mechanism for doing this, with the opportunity for complementary investment by other jurisdictions.
- △ Publish the number of training positions, applicants (successful and unsuccessful) and new public specialist posts (including location) every year for every specialty (currently being done by some specialist medical colleges).
- △ Recalibrate decision-making processes. For example, focus accreditation on outcomes and novel approaches to providing clinical supervision, rather than on educational inputs that are not practical in areas with lower service volumes and workforce numbers.
- △ Develop, in collaboration with health services, alternative medical workforce service models that are not dependent on the accredited and service registrar workforce.
- △ Expand training programs to an 18- or 24-hour patient care model in selected specialties. In some cases, training programs are restricted to business hours while direct patient care is delivered 16 or 24 hours per day.

- △ Create alternative entry pathways with formal recognition of prior learning between select specialties. For instance, the oversupply in emergency medicine could be alleviated by expanding pathways to the alternative primary and emergency care workforce in rural locations.

A.1.3 Balance of generalist versus subspecialist skills

- △ Standardise the number of prevocational years nationally and increase rotations outside of acute hospitals to further develop the generalist mindset of junior doctors. The risks of such a solution should be thoroughly considered, however. For example, specialist medical colleges may not be able to choose a trainee who would have fulfilled the current entry requirements, and doctors' (already lengthy) career pathway may be further extended. Any such measure should reflect the 2015 Review of Medical Intern Training, which recommended that internship should move to a two-year transition-to-practise program. This recommendation was adopted by Health Ministers and is in the process of being implemented.
- △ Engage medical students and junior doctors early to encourage them to pursue generalist pathways, highlighting the attractiveness of those pathways (for example, the variety of clinical work and flexibility to move around). This needs to be considered in the context of remuneration, recognising the impact that pay has on an individual's choice of specialty.
- △ Establish a 'career medical officer' pathway that provides ongoing training and professional development with attractive remuneration (explored further in Section A.1.6).
- △ Grow other 'generalist specialist' training pathways (in addition to the National Rural Generalist Pathway) while maintaining the quality and supply of GPs.
- △ Review the entry requirements for training programs and how they encourage subspecialisation.
- △ Increase junior doctors' ability to 'switch tracks' during their training—for example, through the creation of a 'career medical officer' workforce, or by adding interim diplomas that certify skill sets every one to two years that would be of value in other pathways.

A.1.4 Coordination between medical workforce planning stakeholders

- △ Establish a Joint Planning Commission to e.g., coordinate workforce planning stakeholders, forecast supply and demand for services, and agree on medical school student numbers and specialist medical college training positions.
- △ Create a medical workforce data strategy, providing alignment on definitions and data sets, agreement on modelling methodologies, a roadmap (with milestones) for

integrating data sets across workforce planning stakeholders, and commitment from jurisdictions to share data within a defined timeframe.

A.1.5 Management of the training and career pathway

- △ Establishing a 'career medical officer' pathway with a defined scope of practice that provides ongoing training and professional development with attractive remuneration (explored further below in Section A.1.6).
- △ Standardising the number of prevocational years nationally to ensure training readiness for doctors (similar to the Royal Australian College of Surgeons' JDocs Framework).
- △ Collectively setting the number of medical student places based on the number of specialists Australia is forecast to need in the future. This would require agreement on a common workforce planning methodology and build in flexibility for jurisdictions, as described in section 7.7.2.

A.1.6 Reliance on registrars to meet health service needs

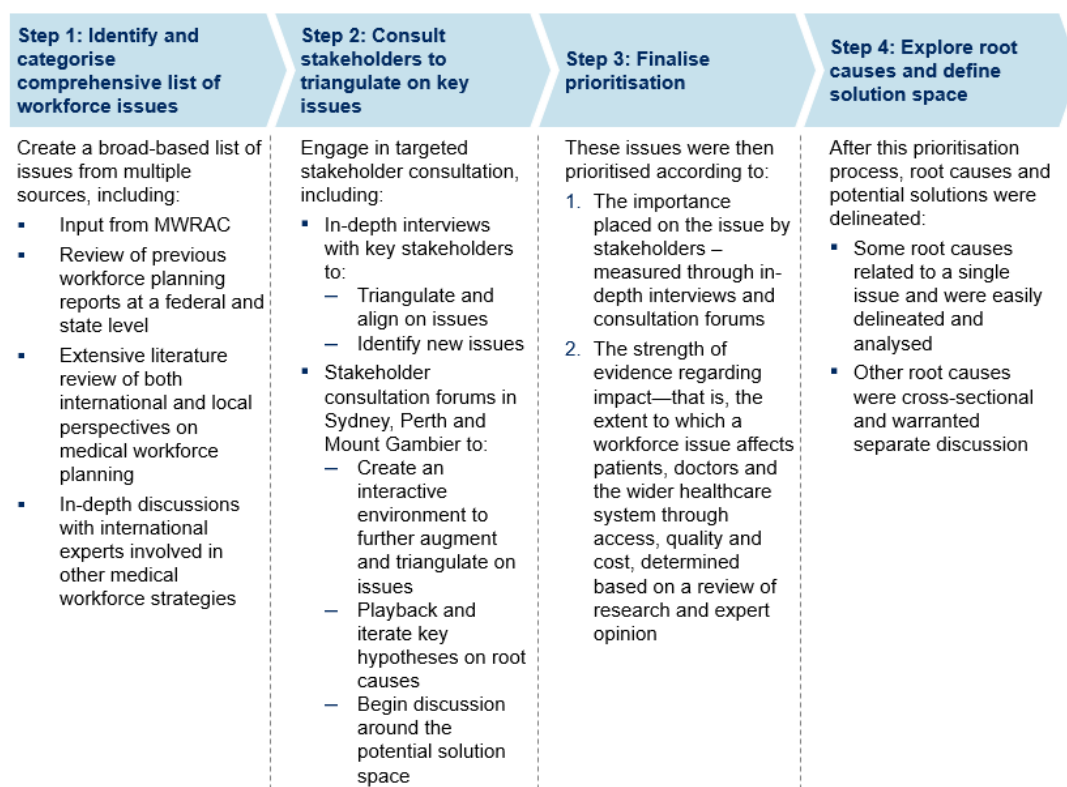
- △ Establish a 'career medical officer' pathway, expanding the pool of doctors with generalist capabilities who receive ongoing training across one or more specialties. A defined scope of practice could meet the service needs of hospitals and provide an attractive career option for doctors who wish to balance work with family commitments and personal interests. A formal qualification could be considered for the career medical officer workforce, who would play a valuable role in the health system, solving the issue of over-utilisation of registrars and ensuring quality service delivery for patients. This role could recognise the experience of doctors who prefer to work in one specialist discipline but have not achieved the higher standard needed for Fellowship (one option is for their skills to be tested to college diploma level). Given the focal role that registrars play in the health system, the Steering Committee has emphasised the importance of preserving a viable operating model and ensuring a smooth transition through any proposed changes.

Appendix B: Methodology

A methodology was developed to identify, categorise and prioritise workforce issues to be addressed by the Strategy. This methodology (Figure B-1) consisted of four steps:

- △ **Step 1.** Identify and categorise a comprehensive list of workforce issues.
- △ **Step 2.** Consult stakeholders to validate these workforce issues.
- △ **Step 3.** Finalise prioritisation of these workforce issues based on stakeholder input and strength of evidence regarding impact.
- △ **Step 4.** Explore contributing factors and define potential opportunities to develop solutions.

FIGURE B-1: PRIORITISATION METHODOLOGY FOR WORKFORCE ISSUES



- △ **Step 1. Identify and categorise a comprehensive list of workforce issues.**

A comprehensive list of workforce issues was identified to map out the key challenges facing medical workforce planning in Australia, drawing on information from four sources:

- Input from the MWRAC, gathered through Steering Committee meetings.

- A review of previous workforce planning reports at the Commonwealth and state level.
- An extensive literature review of both international and local perspectives on medical workforce planning.
- In-depth discussions with international experts involved in other medical workforce strategies.

This comprehensive list of workforce issues is summarised below.

- Geographic maldistribution and inequality in healthcare access
- Over- and undersupply in certain specialties
- Balance of generalist versus subspecialist skills
- Doctor well-being, including career uncertainty, burnout, bullying and harassment
- Doctor work-readiness
- A lack of diversity in the workforce
- A workforce that is underprepared for changes to models of care and the impact of technology

△ Step 2. Consult stakeholders to validate workforce issues.

Consultation included 42 in-depth interviews with members of the MWRAC (15) and other stakeholder groups (27), augmented by three stakeholder forums in Sydney, Perth and Mount Gambier to create an interactive environment to further triangulate on issues. Further information on stakeholder consultation can be found in the stakeholder consultation report, which is available as a separate document.

The stakeholder consultations were designed to:

- Obtain stakeholders' views on current medical workforce issues.
- Identify commonalities, overlaps and gaps in current medical workforce planning.
- Determine the policy themes to be addressed in the Strategy.
- Obtain stakeholder views on how the Strategy could facilitate collaboration between all stakeholders (government and non-government) on future medical workforce planning and policy reform.
- Draw out possible strategic actions and directions from stakeholders.
- Obtain stakeholder alignment on the above.

Stakeholders involved in Phase 1 consultations included:

- MWRAC members.

- The Department of Health and state and territory health departments.
- Specialist medical colleges.
- Medical regulators.
- Universities that offer medical degrees.
- Medical associations and peak bodies (such as the AIDA).
- Public and private hospitals.
- Rural, regional and remote clinicians and communities.
- Private Health Insurers.
- Student and junior doctor bodies.
- Doctor well-being advocates.
- Consumers health forum representatives.
- Aboriginal and Torres Strait Islander health representatives.

△ Step 3. Finalise prioritisation based on stakeholder input and strength of evidence regarding impact.

Workforce issues identified in Steps 1 and 2 were prioritised based on:

- **Stakeholder input.** This was provided through in-depth interviews and consultation forums.
- **Strength of evidence regarding impact.** This captured the extent to which a workforce issue affected patients, doctors and the wider healthcare system through access, quality and cost, determined based on a review of research and expert opinion.

Each workforce issue was given a weighting for each of the above two criteria (Figure B-2).

FIGURE B-2: PRIORITISATION OF WORKFORCE ISSUES BASED ON STAKEHOLDER INPUT AND STRENGTH OF EVIDENCE REGARDING IMPACT

		High priority	Medium priority	Low priority
	Workforce issue	Stakeholder input	Strength of evidence	
Geographic maldistribution and healthcare access inequality	Undersupply of doctors in rural Australia causing access issues and a reliance on locums and international medical graduates	High priority	High priority	
	Shortages in outer-metro areas where demand is rapidly growing	High priority	Medium priority	
Specialty over and undersupply and training pathway bottlenecks	Current and projected undersupply/undersupply in certain specialties resulting in access issues for patients	High priority	Medium priority	
	Current and projected oversupply of certain specialties that is creating demand for services	High priority	High priority	
	Growing number of prevocational doctors waiting for accredited positions	Medium priority	Low priority	
Reduced workforce flexibility and increasing subspecialisation	Fragmented care for patients as a result of an increasing proportion of subspecialists	High priority	High priority	
	Lack of doctors with a generalist skill set that can adapt to changing community need	Medium priority	Low priority	
Doctor well-being, workplace bullying and harassment	Doctor well-being problems such as burnout and exhaustion remain an issue, especially amongst junior doctors	Low priority	High priority	
	Workplace bullying and harassment are still prevalent, with doctors hesitant to report cases for fear of reprisal	Low priority	Low priority	
Lack of diversity in the workforce	Underrepresentation of Aboriginal and Torres Strait Islander people in the workforce and a lack of doctors trained to give culturally appropriate care	Medium priority	Medium priority	
	Lack of women in senior positions in certain specialties	Low priority	Medium priority	
Doctors not being “work-ready” to deliver quality care	Training programs can sometimes not provide sufficient skills or confidence to practise independently as a specialist	Medium priority	Medium priority	
	Graduates can enter the workforce without the practical skills needed to work as a junior doctor	Low priority	Low priority	
Workforce underprepared for changing models of care	The workforce has been slow to adapt to changing models and settings of care	Medium priority	Low priority	
	The workforce is not prepared for the impact of technology on how we deliver services	Medium priority	High priority	

SOURCE: Team analysis

While the Steering Committee recognises that doctor well-being is important, it felt that addressing the priorities outlined in Section 7 should have a significantly positive impact on the issue—for example, creating career certainty by solving problems along the training and career pathway, and addressing the rostering and professional development problems facing service registrars.

△ Step 4: Explore contributing factors and define the solution space

See Section 7 for details on the contributing factors and Appendix A for opportunities to explore further for the prioritised issues. Solutions will be fully developed in Phase 2.