Australian Government
Department of Health

National Medical Workforce Strategy

2021–2031

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Investing in our medical workforce to meet Australia's health needs

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Medical Workforce Reform Advisory Committee Foreword

The Medical Workforce Reform Advisory Committee (MWRAC) is pleased to present the National Medical Workforce Strategy 2021–2031 (the Strategy).

On 8 March 2019, the Council of Australian Governments (COAG) Health Council endorsed the development of the Strategy. While COVID-19 has delayed the development and finalisation of the Strategy, it has highlighted the need for all parties to continue to work together to identify and address medical workforce issues in Australia.

This Strategy has been developed under the guidance of the MWRAC and Strategy Steering Committee and is the product of extensive collaboration and consultation with the sector. The Strategy will guide our collective effort to ensure that our medical workforce meets Australia's ongoing health needs.

MWRAC members include representatives from states and territories, specialist medical colleges, and medical professional associations. MWRAC provides a range of perspectives on supporting medical practitioners and addressing workforce concerns, and each member will have a role to play in bringing forward reform. It is imperative that the strong collaboration that built the Strategy continues, as no one entity can solve the issues facing Australia's medical workforce alone.

We would like to thank each member, past and present, for their contribution to the Strategy.

Prof Jenny May AM
Co-Chair
MWRAC

Ms Penny Shakespeare
Co-Chair
MWRAC

Secretary's Foreword

Australia has an excellent health system that is underpinned by a highly trained health workforce, comprising the medical workforce, nurses, allied health professionals and the assistant and personal care workforce. The medical workforce has a profound impact on the quality, accessibility, effectiveness and sustainability of the health system. However, inequality of access to health services remains a key issue for Australian communities. To achieve maximum benefit to the community, the medical workforce must be geographically well distributed and have the appropriate mix of medical specialties in each location. Currently this optimal distribution and service mix is not consistently achieved across Australia, resulting in service gaps and inefficiencies, and potentially impacting on the quality of patient care and the working life of Australia's doctors.

This National Medical Workforce Strategy 2021–2031 seeks to address these issues through better planning for the future medical workforce. It articulates how the organisations that fund, educate, train, employ, regulate and support doctors will collaborate to produce a high-quality workforce in the locations and specialties needed.

Currently each of these organisations focuses on fulfilling their own remit to the highest standard. Yet even this high standard can fail to address community need, for example, where additional medical services are supplied in locations that already have good access to care, or where specialties provide aspects of care that could be delivered by new technologies or other health professions.

The Strategy documents the main concerns about Australia's medical workforce, namely geographic maldistribution and the imbalance between specialist disciplines; subspecialisation and generalism; junior doctors' work and wellbeing; the need for more Aboriginal and Torres Strait Islander doctors; and the need to move away from reliance on locums and international medical graduates despite our increased domestic graduate numbers. The factors that drive these issues are analysed, alongside consideration of how demographic and epidemiological changes require a medical workforce that is skilled in caring for people with multiple chronic diseases, as well as acute illness. Practical actions are recommended to address these issues.

The outcome of the Strategy will be better access to health care for all Australians. The Strategy will be achieved by collaborative national medical workforce planning that is underpinned by data contributed to by all stakeholders. A proposed planning and advisory body representative of jurisdictions and major workforce organisations will have the responsibility and authority to advise Ministers to inform allocation of training resources. This body will also advise the Department of Education, Skills and Employment regarding the number and distribution of medical school places. This work will promote self-sufficiency in the development of the medical workforce and target increased numbers of Aboriginal and Torres Strait Islander doctors.

Implementation of this Strategy will be challenging, with many stakeholders needing to make disruptive changes, in the short term, in the interests of long-term sustainability of the medical workforce. In particular, specialist trainee numbers can no longer be primarily driven by the clinical service requirements for registrars that dominate many current care models. Trainee numbers must be determined by predicted future demand for medical specialists.

Successful implementation of this Strategy will mean that medical students and junior doctors will study and work in locations and specialties they know will be valued by the community. They will have a wider range of career options with degrees of autonomy and responsibility matched to their personal and family commitments, and flexibility to switch between roles as their circumstances change. Cultural safety will be emphasised throughout medical training and throughout a doctor's medical career.

Medical colleges will have certainty regarding the numbers to train as specialists and offer modular learning to document doctors' level of skill in their specialty. Jurisdictions will continue to tailor their policies and services to local needs, confident that nationally there will be the necessary supply of trained specialists. Professional bodies, regulators and advocacy groups will continue their important roles in ensuring patient safety and supporting and promoting doctor wellbeing.

I commend this Strategy for its vision on how each organisation can work, not only to fulfil its own role, but in collaboration with others to deliver the medical workforce that Australians deserve.

Dr Brendan Murphy
Secretary
Commonwealth Department of Health

Acknowledgements

The development of the National Medical Workforce Strategy 2021–2031 has required significant collaboration between the Commonwealth, state and territory governments, specialist medical colleges and key medical stakeholders across Australia. The Commonwealth Department of Health (the Department) acknowledges the advice, time and support of the many organisations and individuals that have contributed to the development of this Strategy. These include participants in forums held across the country, those who provided feedback on online surveys or during webinars, those who participated in one-on-one consultations, and the groups of experts who provided advice on the draft versions of the Strategy.

A list of members of the Medical Workforce Reform Advisory Committee, the National Medical Workforce Strategy Steering Committee, the Jurisdictional Policy Committee and the Jurisdictional Data Committee is provided at Appendix A.

The Department thanks each member for their expert advice, enthusiasm and passion for improving Australia's medical workforce.

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Executive Summary

Australia's medical workforce plays a critical role in delivering high-quality health care services to over 25 million people. The Commonwealth, states and territories, health services, specialist medical colleges, regional training organisations, universities, regulators and advocacy groups all contribute to developing an effective workforce. However, their activities are not sufficiently coordinated to optimise the national medical workforce. Change is needed to provide patients with timely access to the medical care they need, and for doctors to have rewarding careers that do not threaten their own health, or their personal or family life.

Health care needs and the Australian medical workforce have evolved since the last *National Health Workforce Strategic Framework* was released in 2004. It is imperative that the current and future medical workforce has the support, infrastructure and skills required to meet the changing needs of Australia's diverse community.

The National Medical Workforce Strategy (the Strategy) is a collaborative vision for using data and evidence to develop and maintain a high-quality, effective, and well distributed medical workforce. Whilst doctors work with multidisciplinary teams to deliver health care, this Strategy is only focused on doctors, not the full health care team. The Strategy also acknowledges the many major health reforms underway, some within states and territories, and others at the Commonwealth level. The Strategy's implementation over the next 10 years will be the collective responsibility of all individuals and organisations that educate, train, employ, regulate and support doctors.

Development of the Strategy

This Strategy stems from three rounds of consultations with individuals and organisations across the country. The initial Scoping Framework identified the key medical workforce issues affecting patients, the health care system and doctors. The second phase delineated how and why these problems had arisen and developed solutions for testing. The third phase tested and prioritised which potential solutions to implement.

This document synthesises the prioritised solutions into five priorities for action and three important, intersecting themes, which are outlined in Figure 1. The priorities are:

1. **Collaborate on planning and design**
2. **Rebalance supply and distribution**
3. **Reform the training pathways**
4. **Build the generalist capability of the medical workforce**
5. **Build a flexible and responsive medical workforce.**

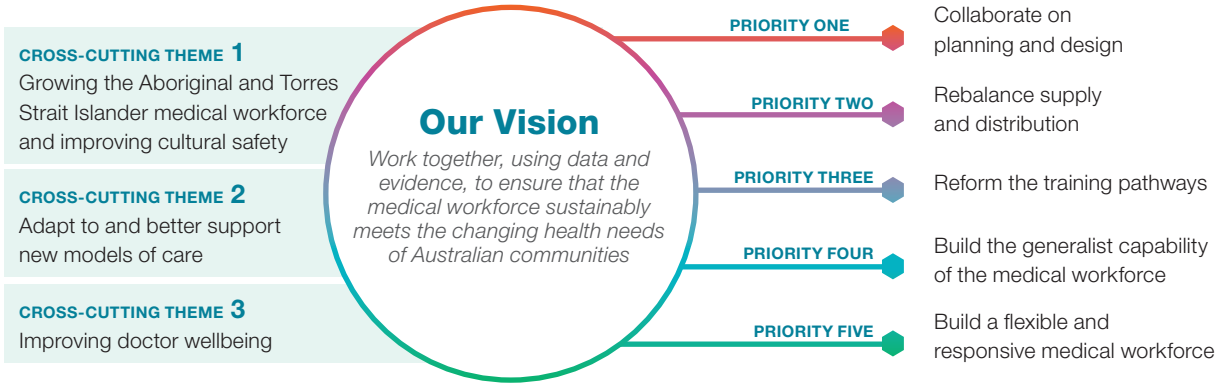
The three cross-cutting themes are:

1. **Growing the Aboriginal and Torres Strait Islander medical workforce and improving cultural safety**
2. **Adapting to and better supporting new models of care**
3. **Improving doctor wellbeing.**

Actions within each priority will target these themes and suggest structural and systemic changes to influence them.

This Strategy synthesises the discussions and consensus for the future direction of Australia's medical workforce. Issues and recommendations with clear agreement are outlined more definitively than other identified problems that require more work to determine their solutions.

Figure 1: The overall vision, themes and priorities of the Strategy



Priority One: Collaborate on planning and design

The need for improved collaboration

Multiple organisations hold data on Australia's medical workforce that could inform workforce planning and policy. However, appropriate local and organisational decisions are often made using siloed information, which can cause gaps and distortions in the overall national workforce. In order to ensure the medical workforce continues to meet the needs of the broader Australian population, stronger collaborative planning, information sharing and action is required amongst stakeholders within the medical workforce sector.

Objectives of priority actions

This Strategy aims to collate, analyse, share and use data regarding the medical workforce from all possible sources to achieve effective workforce planning. Agreed terminology and definitions across multiple sources will allow merging of information from the Commonwealth and states and territories, private hospitals, educational institutions and regulatory authorities about the number, location, specialties and activities of doctors. This common repository will become a source for national, regional and local workforce planning. It will provide the evidence for policy decisions that regulate the numbers of medical students, specialist training places and international medical graduates (IMGs), and their distribution across Australia.

A planning and advisory body with authority to inform and make recommendations to governments regarding the medical workforce will be formed to oversee this work. The planning and advisory body's ongoing role will be developed in consultations with the Medical Workforce Reform Advisory Committee (MWRAC).

Priority Two: Rebalance supply and distribution

The need to balance supply and distribution

A key principle underlying Australia's health care system is that no individual or community group should be disadvantaged when accessing health care services. However, there are imbalances in Australia's medical workforce. There are undersupplied specialties, too few Aboriginal and Torres Strait Islander doctors, and poor distribution of doctors across the country, which leads to an over-reliance on locums and IMGs to service some areas. Growth in the subspecialist workforce and oversupply of some specialties has created training bottlenecks and risks supplier-induced demand and underemployment of new consultants. Where some hospitals have increased the number of training registrars to manage service delivery, which contributes to the oversupply of some specialists, others have increased the number of service registrars, which brings associated concerns regarding their professional development, supervision, working hours and conditions.

Objectives of priority actions

The Strategy aims to correct these imbalances noting that many are inextricably linked. Training numbers must consider predicted future community need rather than focusing on the interests of trainees and service requirements of hospitals. A needs-based methodology will be developed to inform decisions about the number and distribution of training places, and policy interventions will be developed to promote specialties in undersupply. The Strategy will improve the visibility of information for students and junior doctors to make informed career decisions and choose specialties in which there is ongoing work. The Strategy will also focus on how to support and recognise the role of service registrars as a valued and valid career choice. Actions will seek to grow the Aboriginal and Torres Strait Islander medical workforce and improve cultural safety for all patients, communities and doctors.

To improve the geographic distribution of the workforce, the Strategy will build on current trials of innovative funding models and programs that provide early exposure to rural practice. The Strategy will further analyse Australia's domestic and international workforce supply to inform the settings for migration of IMGs and to examine and mitigate the impact of prolonged and inappropriate locum use to fill workforce gaps.

Priority Three: Reform the training pathways

The need to adapt training

For some trainees the training pathway is smooth, but for many, the pathway to qualification as a specialist is difficult, unclear and increasingly competitive or is never achieved. Strategy consultations and the available literature identified areas for improvement at, and between, every level of medical training. Issues such as heavy workloads, degree and regularity of feedback provided by clinical supervisors, culture that negatively impacts on wellbeing, and experiences of bullying, harassment and/or discrimination were documented in the Medical Board of Australia survey, completed by over 21,000 junior doctors in 2020.[1]

The balance between training and service is difficult. States and territories invest in the medical workforce they need to provide clinical services. This drives the number and distribution of registrar training places rather than the number of doctors needed as specialists. Coordination of training and service provision is challenged by the specialist medical colleges and the states and territories having different processes and timing for selection and employment.

Investment in metropolitan tertiary centres provides high-quality services but has created metro-centric training systems. Students who graduate from rural clinical schools lose their rural interest and connections as they move back to the city for specialty training. During consultations on the Strategy, selection of trainees was criticised for its focus on academic skills rather than the broad range of skills needed for the specific specialty. Years are spent trying to gain the right credentials just to get on to a training program.

Objectives of priority actions

Priority Three aims to reform medical training in Australia. Junior doctors will be able to compare the entry requirements, application success rates and where training is likely to occur for each specialist medical college. Colleges will be asked to select into training doctors with generalist and rural experience, and to target specific characteristics needed in their discipline rather than the acquisition of higher research degrees or other 'curriculum vitae (CV) buffing' activities.

Specialties that can operate to their full scope of practice outside metropolitan centres will be expected to provide training in rural areas. Accreditation and supervision standards will be adjusted to recognise excellence in rural training and to facilitate longer and more placements in rural areas. This may also occur through innovative supervision approaches, networked models, and relationships with tertiary hospitals in cities.

Training pathways and professional development courses will benefit from an improved focus on Aboriginal and Torres Strait Islander health and cultural safety. This will also improve training experiences for all, but most importantly for Aboriginal and Torres Strait Islander doctors.

Work-based assessments will encourage more direct observation of practice by supervisors and more focus on skills needed for specialist clinical practice. This would reduce reliance on intra- and interstate high-stakes exams.

The improved data collection and collaborative governance arrangements outlined in Priority One will recommend the number and distribution of medical school and specialist training places. Options to pool funding for training positions will be explored.

Priority Four: Build the generalist capability of the medical workforce

The need for a sustainable generalist medical workforce

An effective and efficient medical workforce requires a balance of doctors with broad and narrow scopes of practice, and across primary, secondary and tertiary care. The optimal balance between generalism and subspecialisation is unknown, and will vary depending on geography, demographics, available resources and other epidemiological and system-related factors.

Australia is a geographically large and sparsely populated country. General practitioners (GP) 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 rural and remote areas. 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 the risk of adverse events.

Objectives of priority actions

Priority Four actions seek to shift the balance between generalists and subspecialists back towards generalists, particularly for doctors who work in specialties that could be based in regional, rural and remote areas. This includes growing the number of GPs and rural generalists, as well as increasing opportunities (and recognition) for doctors to supplement their skills and broaden their scope of practice.

Specialty training and indeed specialist practice over many years can lend itself to increasing subspecialisation. The Strategy will seek to shift prestige and value perceptions of generalist practice and will encourage colleges and societies to contribute to this through their curricula and training pathways.

This priority will support broader education of trainees and promote experiences for generalist practice in rural and remote clinical practice during medical school and in prevocational and vocational training. Consolidating generalist skills for early career doctors, and providing opportunities for doctors to consider generalist and rural/remote career options, along with ongoing support for generalists in practice, will foster a more sustainable and flexible medical workforce that can provide both generalist and subspecialist care.

Priority Five: Build a flexible and responsive medical workforce

The need for more support and flexibility

Most Australians seek to achieve work-life balance, career mobility and flexibility. However, for doctors, the nature of their work makes this difficult to obtain. Many of the actions throughout the Strategy seek to reduce the pressure on the existing workforce and improve doctor wellbeing. Consultations on the Strategy heard many calls for flexibility in the workplace, examples of which ranged from operationalising portability of benefits between healthcare settings to providing support for career mobility and non-linear career pathways.

Objectives of priority actions

Priority Five will enable greater flexibility for doctors across their professional life and will build opportunities for lateral movement across sites and specialties through innovative employment models and practices, including portability and uniformity of benefits and employment arrangements. It will support an increased focus on strengthening workplace culture and assisting workplaces to create positive working environments that consistently embed gender equity practices.

Actions in Priority Three to promote programmatic or modular assessments will facilitate recognition of prior learning and provide doctors with increased flexibility in their career choices. More opportunities for lateral movement will also assist in growing the Aboriginal and Torres Strait Islander workforce. Investment in leadership and managerial skill development will strengthen workplace culture.

An unexpected consequence of the COVID-19 pandemic included an increased focus on virtual health care. This priority will seek to safely embed digital health practices across selection, education and training of trainees where it is possible and provides benefit to trainees. It will also support digital service delivery as a component of medical practice and clinical support. Priority Five will seek to make the changes made in response to COVID-19 sustainable over the long term.

Timing, implementation and evaluation

The implementation and evaluation of the Strategy will require careful planning, sustained focus and collaboration from all stakeholders. Given the long lead times needed to effect change in most policy areas, work must start now.

Following publication of the Strategy, a detailed plan for three phases of work will be developed in consultation with stakeholders. The plan will specify how the Strategy's actions will be achieved, proposed timeframes for execution and evaluation, and which stakeholders will be involved. Governance arrangements will include the establishment of time-limited working groups to advise on the implementation of specific actions.

Actions under Priority One that target data sharing, determining modelling methods and establishing a planning and advisory body will be prioritised. These activities will provide the foundation for actions across the whole Strategy.

Reports on progress will be presented following each phase, with the final report to be delivered at the conclusion of the 10-year period of the Strategy. Overarching actions for the Strategy and timeframes for implementation follow.

Table 1: Overarching actions for the National Medical Workforce Strategy and timeframes for implementation

Priority One: Collaborate on planning and design	**Timeframes**
1. Establish a joint medical workforce planning and advisory body	1–2 years
2. Develop a workforce planning framework that can be used at all levels	1–2 years
3. Develop and implement a National Medical Workforce Data Strategy	1–2 years
4. Further develop the HeaDS UPP Tool	2–5 years (ongoing)
Priority Two: Rebalance supply and distribution	**Timeframes**
5. Increase the number of trainees in undersupplied specialties and decrease the number of trainees in oversupplied specialties	1–10 years (ongoing)
6. Grow the Aboriginal and Torres Strait Islander medical workforce	1–10 years (ongoing)
7. Reduce barriers and improve incentives for doctors to work and train in rural and remote communities	1–10 years (ongoing)
8. Determine and monitor optimum use of locums	2–5 years
9. Align migration and distribution regulation	2–5 years
10. Establish a nationally structured service registrar model for service delivery	1–3 years

Priority Three: Reform the training pathways	**Timeframes**
11. Increase specialist training in regional, rural, remote and Aboriginal and Torres Strait Islander health settings to population parity	5–10 years (ongoing)
12. Collaboratively set and fund the number and distribution of education, and training places through a national pool	5–10 years (ongoing)
13. Coordinated and visible training pathways	5–10 years
14. Reform regulation of vocational training programs	2–5 years
15. Culturally safe training, training in cultural safety, and expertise in Aboriginal and Torres Strait Islander health	2–5 years (ongoing)
Priority Four: Build the generalist capability of the medical workforce	**Timeframes**
16. Support broader education and experience of generalist skills, and rural and remote clinical practice, during medical school and on training programs	5–10 years
17. Require doctors to develop and demonstrate generalist medical skills prior to entering specialty training	2–5 years
18. Support informed decision making for generalist career pathways and encourage rewarding of generalist experience in trainee selection	2–5 years
19. Fellows to be supported to exit training with a broad scope of practice	2–5 years
20. Implement and leverage innovation from the National Rural Generalist Pathway	2–5 years
21. Implement improved computerised clinical decision support systems	2–5 years
Priority Five: Build a flexible and responsive medical workforce	**Timeframes**
22. Review the impact of changes introduced during COVID-19, for longer term implementation in medical training and practice	1–3 years
23. Increase flexible working arrangements to reflect the changing needs of the medical workforce	5–10 years
24. Establish portability of entitlements for doctors across different settings	2–5 years
25. Recognising and remodelling unsustainable and potentially unsafe employment models	2–5 years (ongoing)

Part A:
Development of the National Medical Workforce Strategy

Introduction

This National Medical Workforce Strategy (the Strategy) is a collaborative vision to develop a high-quality and well-distributed medical workforce that provides the health services the Australian community needs. The Strategy clarifies the roles of the Commonwealth, states and territories, health services, specialist medical colleges, universities, regulators and professional organisations in delivering an optimal medical workforce.

This Strategy represents a mutual commitment to work together to improve planning and coordination of doctors' selection, training and work. The Strategy sets out practical and achievable responses to current issues and a way of working together to address those issues that will emerge.

Why a national strategy now?

Today's healthcare system is large and complex and has changed considerably over the last 20 years. Increased medical school places and continued migration of doctors to Australia means that there is no longer an overall shortage of doctors. Instead there is imbalance, with geographic maldistribution, and undersupply and oversupply in particular specialties. This Strategy identifies the reasons for these imbalances and how to address them.

The demand for health care services is growing faster than the population and the economy, with the cost of health care becoming increasingly unsustainable. The demand for services is driven by an ageing population, accelerating the shift from acute to multiple chronic conditions. Consumer expectations about the mode and location of medical care are changing and the delivery of digital health care has increased through the COVID-19 pandemic.

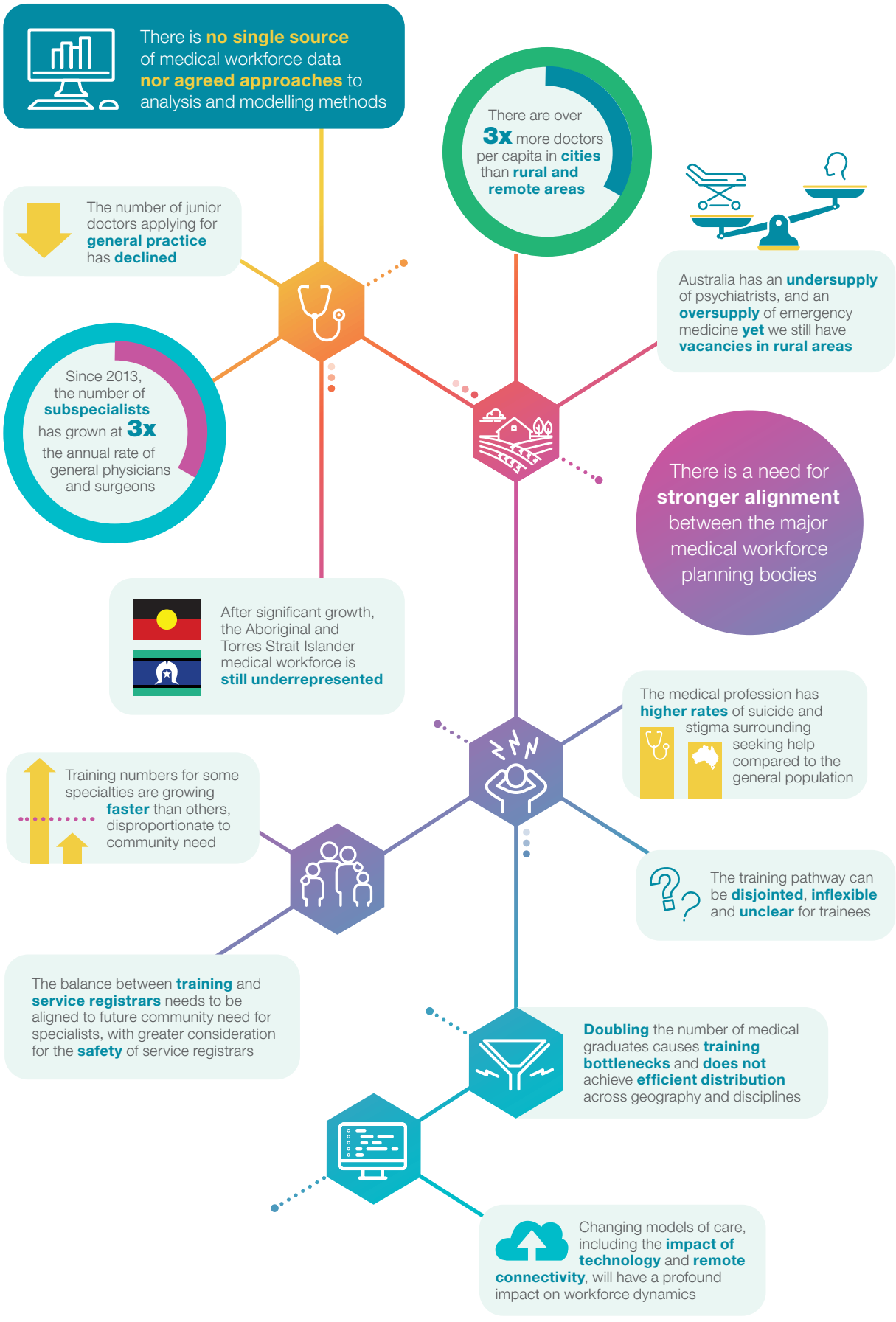
On the supply side, the demographics of our medical workforce continue to change, and doctors are calling for a better work-life balance. These changes require more inclusive employment policies and workforce planning.

Australia's doctors commonly move between jurisdictions, and between private and public sectors, and may draw their income from both state and Commonwealth funding sources and private patients. Understanding the whole picture requires national collaboration – from data sharing and evidence-based modelling to local and jurisdictional level planning.

Doctors do not work alone. While this Strategy focuses on the medical workforce, teamwork with nurses, midwives, and allied health professionals is critical to providing high-quality and efficient care to patients and communities. These professions face similar shortages, oversupply and maldistribution. Clarity about the mechanisms to better plan for the medical workforce will complement planning for other disciplines.

While short-term measures can address immediate gaps in the workforce, the nature of medical education and training means that many actions taken today will only result in system change over the next decade or two. It is therefore imperative to invest now in better coordination and collaboration to achieve a shared view of what is required and how to get there.

Figure 2: Why a national strategy now?



Australia's changing population

Driven by growth in major cities (of 1.9%), Australia's population grew by 1.6% annually between 2015 and 2019. Areas outside major cities grew relatively slowly over that period and populations in the most remote areas declined.[2]

The provision of health services, including the location and type of medical workforce required, needs to take account of demographic trends. People of different ages use different types of health services at different rates. People in cities have access to more specialised services than people in regional, rural and remote areas where such services may not be sustainable.

Between 2015 and 2019, the Australian population aged 65 years and over grew by 3.2% annually – twice the rate of those aged under 65 (1.3%).[3]

The interaction of population growth, ageing and geography adds a further layer of complexity. The population under 65 is growing at 1.8% in major cities and less than 1% in Modified Monash Model (MM) 2–MM 4, and is declining in MM 5–MM 7.* By contrast, the population over the age of 65 is growing more strongly in MM 2 and in MM 5–MM 7.[4] For more details about the Modified Monash Model, see the footnote and Appendix G – Glossary.

Australian governments and other medical education stakeholders need to work collaboratively to respond to these trends, recognising that models of care and medical workforce deployment may need to change in order to optimise the health of all Australians.

Australia's medical workforce

Size and growth

Australia's medical workforce plays a critical role in providing high-quality health care for more than 25 million Australians. The medical workforce has grown rapidly, from 93,356 fulltime-equivalent (FTE) doctors in 2015 to 104,461 in 2019. This represents an annual growth of 3.3%, compared to an increase in population of 1.6% annually. In 2015 there was an average of 3.9 FTE doctors for every 1,000 people. By 2019, this average had grown to 4.2, although this varies by geography.[5]

Specialties and settings

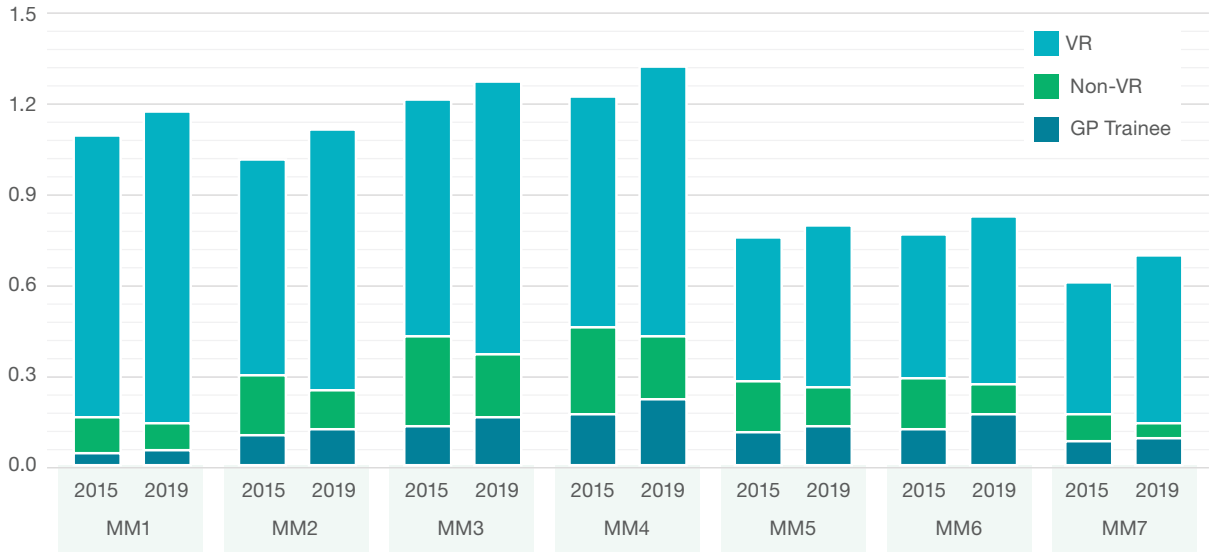
Doctors complete several years of university study followed by compulsory 12-month internships before gaining general registration. Most then spend several years training in a medical specialty, such as general practice, surgery or psychiatry.

In 2019, there were nearly 31,000 GPs in Australia, comprising 31% of the medical workforce. More than 36,000 doctors (or 36%) were registered in other medical specialties.[6]

The distribution of medical specialists varies. The number of non-GP medical specialists tends to decrease with remoteness whereas the number of fulltime-equivalent GPs per 1,000 population generally increases with remoteness up to MM 4 locations, as their roles are broader and include public health, hospital and emergency work. The number then decreases significantly in smaller remote and very remote towns. Figure 3 demonstrates the impact of town size and remoteness. MM 5 locations are small rural towns with a population between 1,000 and 5,000. MM 6 locations are remote communities whose larger populations may support group practice and Aboriginal Medical Services.

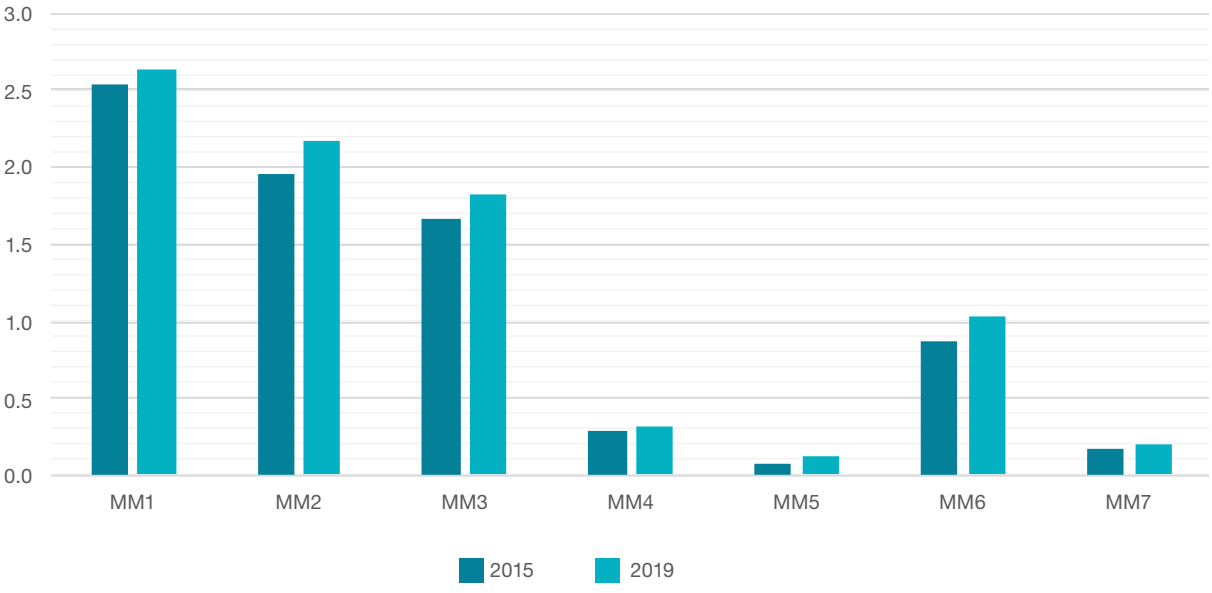
* The Modified Monash Model defines whether a location is a city, rural, remote or very remote. The model measures remoteness and population size on a scale of Modified Monash (MM) categories of MM 1 to MM 7. MM 1 is a major city and MM 7 is very remote.

Figure 3: General practitioners (Vocationally Registered (VR), non-Vocationally Registered (non-VR) and trainees) FTE per 1,000 population by MMM and GP type, 2015 and 2019



Source: Adapted from Australian Department of Health, *National Health Workforce Data Set (NHWDS) Medical practitioners, 2015 and 2019* [data set], Australian Government, 2020, accessed 22 September 2020; and Australian Bureau of Statistics (ABS), Estimated Resident Population by Modified Monash Model, ABS, Australian Government, unpublished, accessed 22 September 2020.

Figure 4: Medical specialists (excludes GP, includes registrars) FTE per 1,000 population by MMM, 2015 and 2019



Source: Adapted from Australian Department of Health, *National Health Workforce Data Set (NHWDS) Medical practitioners, 2015 and 2019* [data set], Australian Government, 2020, accessed 22 September 2020; and ABS, *Estimated Resident Population by Modified Monash Model,* ABS, Australian Government, unpublished, accessed 22 September 2020.

Doctors work in a range of settings. About 45%, or over 46,000 doctors, work in hospitals, as specialists (over 20,000) or specialists in training (over 15,000).[7]

Around 35,000 doctors (35%) work in group private practices, just over 10,000 work in solo practices, and smaller numbers work in Aboriginal and Torres Strait Islander medical services, community health services or as locums.[8] Smaller numbers of doctors have their main job in residential mental health or aged care facilities, commercial services, defence, public health units and government, correctional facilities, and education facilities.

A growing number of doctors work in hospitals in unaccredited registrar positions. Throughout the Strategy, these practitioners are referred to as 'service registrars'.

Workforce demographics

The demographics of the medical workforce is changing, with increased female representation. In 2019, 43% of doctors were women (up from 40% in 2015) and 51% of new medical graduates were women.[9] Despite this change, there is not yet evidence of gender equality in national medical leadership. Women represent only 33% of medical deans and 12.5% of hospital chief executive officers.[10] There are also significant gender imbalances in some specialties.

In 2019, the average age of the medical workforce was 46 years, with 62% of employed doctors older than 40 years, and 27% aged 55 years and older.[11] Across geographies, the average age in 2019 ranged from 45 years in MM 2 and MM 6 to 49 years in MM 7. The average age decreased between 2015 and 2019 in all areas except MM 7.

The average age of medical graduates in 2019 was 28 years, while the average age of new Fellows was 38 years. More than half of all new Fellows were aged between 35 and 44, with many likely to have been managing work and study with family and caring responsibilities.[12]

Historically, the majority of medical graduates were aged under 25 years; now, less than 50% are under the age of 25. The increase in postgraduate medical schools leads to graduates finishing their medical degrees later in life. The growing tuition and study costs mean that such graduates have more debt than their predecessors and less career time to pay back these liabilities. This may influence their desire to enter highly remunerated subspecialties.

Today's generation of doctors is calling for a different work-life balance than previous practitioners. Between 2015 and 2019, the average weekly hours for doctors fell from 42.4 to 41.8. However, while the average weekly hours decreased across all geographies, doctors in the most remote areas continue to work the most hours each week.[13]

Workforce regulation

The health workforce is highly regulated, with a key public policy aim of supporting safe high-quality care to patients. *The National Registration and Accreditation Scheme*, established on 1 June 2010, currently regulates 16 health professions with systems in place to support quality standards and avenues of complaint and investigation where patients and practitioners identify poor quality care. This national registration scheme enables movement of practitioners between jurisdictions.

Recent policy reforms support and encourage doctors working in general practice to achieve specialist qualifications. Doctors without specialist status attract a lower Medicare Benefits Schedule (MBS) rebate but can apply for support to gain Fellowship and become eligible for higher rebates.

Workforce remuneration

Doctors are funded from different Commonwealth, state and territory sources, private health insurance and patient fees. GPs and consultant specialists in private practice charge patients who can then claim all or part of this fee from Medicare according to the schedule of rebates. The gap between the MBS amount and what the doctor charges can be covered by private health insurers for in-hospital services. A doctor working in the hospital sector may be paid a salary by the hospital which is funded by the state or territory government or by a private provider. Some doctors work in a number of different settings and therefore receive a combination of payments as their income.

Policy settings

Commonwealth government

The Commonwealth defines policy settings for the provision of health care services and funds major components of the healthcare system, including in 2020–21:[14]

- Medicare Benefits Scheme (MBS) – $28.8 billion
- Pharmaceutical Benefits Scheme (PBS) – $13.4 billion
- National Health Reform Agreement contributions for public hospitals – $23.6 billion
- private health insurance rebates – $6.6 billion
- health workforce and training programs – $1.5 billion.

The Commonwealth also influences medical graduate supply and distribution through the Education portfolio's role in higher education regulation and funding. In 2020 the Australian Government provided more than $320 million to universities to support tuition and clinical training costs of students enrolled in Commonwealth Supported Places (CSPs) in medicine.

State and territory governments

State and territory governments manage and fund health service delivery and directly employ prevocational doctors, doctors in training and specialists. In 2017–18, they spent $29.9 billion on public hospitals, $1 billion on private hospitals and $10 billion on primary care.[15]

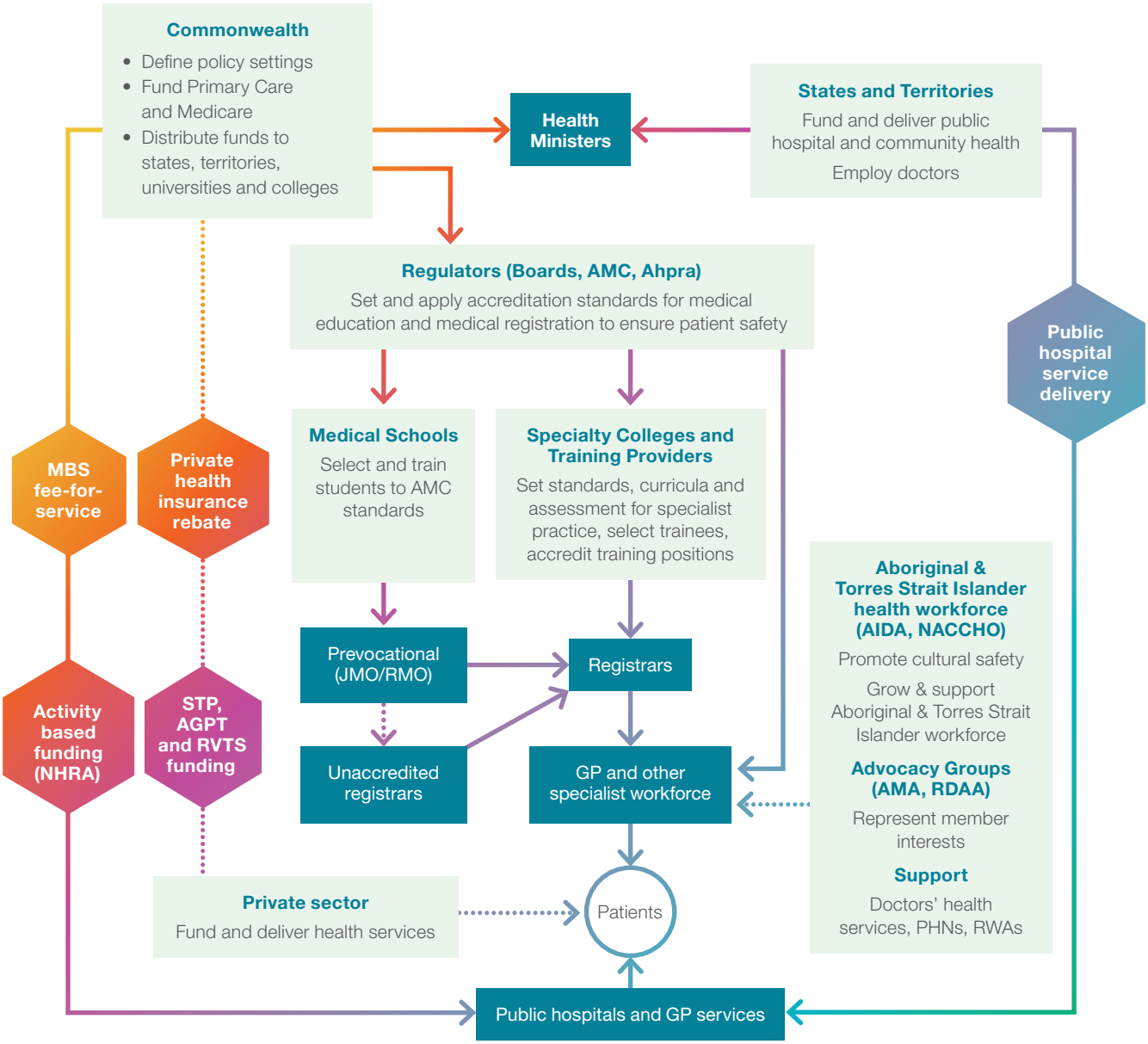
Key stakeholders

Australia's medical workforce is a complex ecosystem with multiple stakeholders. Major stakeholders include the Commonwealth Government, state and territory governments, specialist medical colleges, medical schools, medical regulators, training providers, private sector organisations, professional associations, industrial bodies, regional planning bodies and health consumers.

Together these organisations influence the medical workforce in several important ways such as:

- determining the number of places for students and specialist training
- selecting medical students and junior doctors into education and training
- planning the content, educational approach and location of training
- providing accreditation of training settings and assessment of standards
- setting payments, incentives and reward systems
- overseeing the registration and regulation of medical practice
- setting working conditions and providing ongoing professional development and support
- providing professional leadership and culturally safe practice.

Figure 5: Overview of the Australian medical workforce planning structure



AGPT: Australian General Practice Training Program, Ahpra: Australian Health Practitioner Regulation Agency, AIDA: Australian Indigenous Doctors Association, AMA: Australian Medical Association, AMC: Australian Medical Council, JMO: Junior Medical Officer, MBS: Medicare Benefits Schedule, NACCHO: National Aboriginal Community Controlled Health Organisation, NHRA: National Health Reform Agreement, PHN: Primary Health Network, RDAA: Rural Doctors Association of Australia, RMO: Resident Medical Officer, RVTS: Remote Vocational Training Scheme, RWA: Rural Workforce Agency, STP: Specialist Training Program

COVID-19 pandemic

The COVID-19 pandemic confirms the need for a national medical workforce strategy with a particular focus on collaboration between professionals and coordination of services. There was a strong nationally coordinated response to the pandemic, reflected by the key committees and working groups that were quickly set up to deal with workforce regulation, surge requirements and border restrictions. The response to the pandemic highlighted the value of a more agile and flexible workforce, as well as the value of remote working and technological solutions as governments moved to expand support for telehealth.

The challenges faced during the pandemic highlight the potential a national medical workforce strategy has in providing agreed overarching goals and a vision that can guide responses to emerging issues. Immediate issues included protecting the workforce from viral transmission, overwork, and mental health impacts of the pandemic. Elective procedures were deferred and resources were channelled into intensive care, infectious diseases and public health expertise. Longer-term issues include managing the disruption to training programs, overseas recruitment, and the impacts to migration and population growth. Understanding the long-term impact of the COVID-19 virus on those infected may also impact on models of care and demand for particular types of services in areas hardest hit by the pandemic.

From a workforce planning perspective, the pandemic poses additional challenges in the way in which future demand for a medical workforce is assessed. Border closures raise questions about the appropriate level of 'redundancy' that should be built into a demand model (including domestic and international workforce flow) as well as policy questions about the extent to which Australia can contribute internationally to the rebuilding of depleted health systems and medical workforces. Changes to regional populations and migration highlight the need for flexibility and responsiveness in Australia's workforce.

This Strategy provides a blueprint for collaborative effort to address the uncertainty and pressures brought about by crises, such as seasonal bushfires, climate change and pandemics. While COVID-19 is the domestic and global event that has required immediate action and consideration, Australia's medical workforce strategy needs to prepare for a range of potential events that may impact workforce capacity.

ENDNOTES

1 Medical Board of Australia and Australian Health Practitioner Regulation Agency (Ahpra), *Medical Training Survey 2020*, Medical Training Survey, Medical Board of Australia and Ahpra website, 2021, accessed 22 March 2021.

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6 Australian Department of Health, *NHWDS Medical practitioners*, *2015 and 2019* [data set], hwd.health.gov.au, 2020, accessed 22 September 2020

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9 Australian Department of Health, *NHWDS Medical practitioners*, *2015 and 2019* [data set], hwd.health.gov.au, 2020, accessed 22 September 2020

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14 Australian Department of Health, *Whole of Health System: key statistics fact sheet* [unpublished factsheet], Australian Department of Health, Canberra, 2021.

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Developing a National Medical Workforce Strategy

In March 2019, Australia's Health Ministers agreed that the Commonwealth, states and territories would work together to develop a national medical workforce strategy to guide the long-term planning and development of the medical workforce over the next decade.

The Medical Workforce Reform Advisory Committee (MWRAC) has overseen the development of the Strategy, supported by a Steering Committee established to focus specifically on the Strategy. Membership of MWRAC, the Steering Committee and Jurisdictional Policy and Data Committees is listed in Appendix A.

Foundations of the Strategy

Vision

The 2019 Scoping Framework articulated the vision and guiding principles that underpin the Strategy. The vision of 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 themes of this vision are defined as follows:

- **Work together** – Involve major stakeholders in key decisions, facilitated by a mechanism that supports joint planning 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 wellbeing and allow them to be professionally fulfilled, and improve the domestic self-sufficiency of the medical workforce.
- **Meet 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 peoples.

Guiding principles

The guiding principles for the development of the Strategy were as follows:

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

Consultations

The Scoping Framework

Following consultations with medical stakeholders across Australia, a Scoping Framework was endorsed by Australia's Health Ministers in November 2019. The framework set out the case for change and identified the key priorities, issues and challenges for which solutions were required. McKinsey and Company (McKinsey) was contracted to assist the Commonwealth Department of Health and MWRAC in developing the Scoping Framework and undertaking consultations.

The Scoping Framework was based on one-on-one interviews and targeted stakeholder forums, as well as analysis of available data and relevant literature. Around 70 in-depth interviews were conducted with members of MWRAC and other stakeholders, together with larger stakeholder forums in Sydney, Perth and Mount Gambier.

The Scoping Framework explored priority workforce issues (which directly affect patients) and contributing factors (which are drivers of workforce issues) and discussed opportunities to develop solutions. These are outlined in Table 2 and Table 3.

Table 2: Australia's priority workforce issues

Geographic maldistribution and inequality in health care access
Despite efforts to increase the medical workforce in rural and remote Australia, there is an ongoing shortage of GPs and other medical specialists in some communities. These contribute to geographic disparities in patient access to care and in health outcomes. International medical graduates form a significant part of the workforce in regional, rural and remote areas and should be better supported both in their day to day work and in order to gain specialist qualifications. Locums provide important cover for short-term leave in hospitals and primary care settings, filling immediate service needs and providing specialist outreach services. While data is limited, there is a general view that a growing over-reliance on international medical graduates and locums poses risks to continuity and quality of care, cultural appropriateness of care and longer-term workforce sustainability.
Over and undersupply in certain specialties
Statistical modelling suggests that Australia faces an undersupply of some specialists, such as psychiatrists, dermatologists and ophthalmologists, while there appears to be a growing oversupply of other specialists, such as emergency medicine, intensive care, cardiothoracic surgery and anaesthesia. Mismatches between supply and demand within particular specialties are further complicated by maldistribution.
Balance of generalists versus subspecialist skills
GPs and other specialists with generalist skills are vital to delivering high-quality care across a country the size of Australia. Specialists with generalist skill sets are better able to care for patients with multiple comorbidities and can play a more flexible role in the workforce, increasing adaptability in the face of changing demand. However, the trend has been towards growing subspecialisation.
Growing the number of Aboriginal and Torres Strait Islander doctors and having a culturally safe medical workforce
While the number of Aboriginal and Torres Strait Islander doctors is growing, they are still underrepresented in the workforce. All doctors should be trained in delivering culturally safe care.

Doctor work-readiness
Despite high standards of care in Australia, systemic issues can make doctors feel under-prepared to practise at crucial stages of their career, which impacts adversely on their wellbeing. Transitions from medical school to internship, and from prevocational training to specialty practice, are examples where such concerns tend to manifest.
Service delivery and changing models of care
Changing models of care, including the impact of technology and remote connectivity, are inevitable and can have a profound impact on workforce dynamics.

Table 3: Factors contributing to Australia's workforce issues

Coordination between medical workforce planning stakeholders, specifically regarding governance and accountability, and data and modelling
There is no single consolidated source of medical workforce data, and different data sets and methodologies are used to understand supply and demand forecasting and planning. Different accountabilities lead to conflicting workforce decisions that do not mutually advance a common strategic goal.
Management of the training and career pathway
The medical and training career pathway is long and complex, involving multiple decision-making entities that are not always aligned or coordinated. Specialist medical colleges have different entry points and requirements, and there is limited workforce demand data to inform career decision making.
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 and community expectations for 24/7 services. Balancing these demands with the need to establish safe working hours for doctors means that more doctors are needed to provide services, particularly in acute hospital care. This important work is often undertaken by registrars. The health system is increasingly reliant on service registrars, but this role is not well defined or supported, which has implications for doctor wellbeing.

Identifying potential workforce solutions

Following endorsement of the Scoping Framework, further consultations facilitated by McKinsey led to the development of a Consultation Pre-Read which outlined 50 potential solutions. The solutions were based on input from more than 40 workshops and conversations held with more than 400 stakeholder representatives in November and December 2019.

A full list of the identified potential solutions is in Appendix B.

From January to March 2020, further consultations focused on refining and prioritising the potential solutions. Eleven forums, two webinars and 10 workshops with various stakeholder groups engaged with around 500 people in major cities, outer metropolitan, regional and rural locations. More information on the consultations process is in Appendix C.

From the discussions held during consultations, McKinsey identified key themes as well as the impact and feasibility of each solution. The Department used this information to further refine and group the 50 solutions into the five priorities in this Strategy.

Key consultation findings

Across all the consultation activities, key findings were identified, which are reflected in the priorities and actions of the Strategy:

- Future planning frameworks need to include a focus on better understanding and incorporating community needs in service planning and workforce design.
- There needs to be a stronger focus and connection between data, planning and coordination, supported by robust governance arrangements.
- Increased flexibility is needed in virtually all elements and structures of the medical workforce.
- Individuals' career decisions need to be better supported by information, counselling and support, as well as support for mobility in employment and contracting arrangements.
- Junior doctors should be encouraged to develop a broader range of generalist capabilities before selecting a specialty.
- Telehealth services and other digital supports for medical service delivery are a priority, to better enable more complex care delivery, more innovative models of care and to support clinical supervision and training.
- Funding models need to better remunerate practitioners in rural and remote areas and better promote generalist medical careers.
- Income disparity between GPs and other medical specialties impacts career choice, particularly in areas where there are high operational costs and when entitlements are lost during transition from hospital to private practice.
- Training programs and employment arrangements for doctors need to better consider and support changing family and lifestyle requirements.
- Employment models for service registrars need to be formalised to provide better protections, safety from exploitation, and to promote wellbeing.
- There needs to be better clinical support for practitioners in rural and remote areas, including in relation to after-hours and 'on-call' arrangements.
- Specialist training reform is required to better meet the needs of rural and remote Australia, particularly in relation to selection and accreditation processes.
- The training model needs to be 'flipped' to focus on delivering training in rural and remote areas, with rotations into metropolitan centres where necessary.

Priorities and actions

Based on the consultations, the Strategy comprises five complementary priorities to drive achievement of the Strategy's vision. These are:

1. **Collaborate on planning and design**
2. **Rebalance supply and distribution**
3. **Reform the training pathways**
4. **Build the generalist capability of the medical workforce**
5. **Build a flexible and responsive medical workforce.**

Each priority is discussed below. The relationship between the consultation findings and these priorities is illustrated in Figure 6.

Figure 6: Relationship between the National Medical Workforce Strategy priorities and the consultation findings

Medical leadership and culture in effecting change

Many of the issues identified in the Strategy and discussed in the consultations highlight the importance of medical leadership and culture in effecting change. Widespread attitudes and practices have shaped the culture of medicine over time in ways which both account for and exacerbate current challenges. Medical leaders need to balance the needs of the workforce with the primary role of the profession in providing medical care. Sections of the population that are underserviced require specific action to promote equitable access to care. In particular:

- Australia's ageing population, growth in multi-morbidities, and geographic challenges require **more GPs and more generalist doctors**. Medical leaders and prevailing culture tend to value the more specific scope of practice of subspecialists and this flows into medical education, clinical placements, and preparation for specialty selection, remuneration and mentoring. Medical leaders need to recognise that a broad scope of practice is intellectually challenging and fulfilling for individuals, can be expanded safely through technologies and is critical to the sustainability and flexibility required in today's medical workforce.
- There is a stigma about medical practice in **rural and remote** Australia. This includes perceptions that working outside metropolitan areas is a form of exile or substandard practice. There are clearly challenges to some rural practice, such as limited resources and potential isolation, however this is not uniform and rural practice provides benefits including clinical variety, greater levels of autonomy and a sense of being part of a community. Medical leaders need to promote and support rural practice if the health needs of all Australians are to be adequately served.
- Medical leaders also need to invest in understanding and **championing cultural safety** throughout the health system and to actively engage in strategies to grow and support the Aboriginal and Torres Strait Islander medical workforce. They have a key role to play in improving health outcomes for Aboriginal and Torres Strait Islander peoples and identifying and eliminating institutional racism across all cultures and settings.
- The next generation of doctors expect a **workplace that is flexible and supportive**, that suits their lifestyles and balances work with life outside of work. A growing number of doctors want varied skills and experience and don't see their career pathway to be as linear as more traditional medical careers. Medical leaders need to recognise this change and support the health and wellbeing of their trainees and doctors. More flexible working arrangements, appropriate mentoring and support, and a culture that respects and empowers doctors and staff at all levels will ultimately improve workforce sustainability and patient care.
- Medical leaders must provide Australia's future medical workforce with the attitudes, knowledge and **skills needed for work with vulnerable populations** such as the elderly, culturally and linguistically diverse communities, and the physically or cognitively disabled.
- **Aboriginal and Torres Strait Islander peoples and women are currently underrepresented** within Australia's medical workforce and in positions of leadership. A greater emphasis must be placed on increasing opportunities for Aboriginal and Torres Strait Islander peoples and female doctors to be placed in senior positions, for current and future generations.

Medical leaders and the wider health system need to recognise the potentially long-term influence that their values and behaviours can have on the make-up, distribution and capacity of the medical workforce. It takes time for alternative views to influence sector-wide thinking, however participants in the Strategy consultations reported that doctors are increasingly prepared to call out unhelpful views and recognise the need for constructive change.

Broader reforms

The Strategy has not been considered in isolation. There are many major health reforms underway, some within states and territories, and others at the Commonwealth level. These include the:

- *Primary Health Care 10-Year Plan*
- *National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework and Implementation Plan 2021–2031*
- *National Digital Health Strategy and the National Digital Health and Workforce Education Roadmap*
- *National Mental Health Workforce Strategy*
- *National Preventive Health Strategy*
- *National Nursing Strategy*, and
- *The National Rural Generalist Pathway*.

A number of these strategies focus on the whole of the health workforce, while others, such as this Strategy and the *National Nursing Strategy*, focus on specific parts of the health workforce.

In developing and implementing this Strategy, consideration needs to continue to be given to the place of the medical workforce within the broader health sector, the influence it can have, and the opportunities for more integrated reform. Many of the issues to be addressed by this Strategy are evident in other parts of the health workforce, although they will also reflect the contexts and cultures of the other professions.

While each piece of work has its own outcomes and goals, workforce is integral to our health system, and a coordinated approach to broad reform will allow for significant and lasting change. It is imperative that this Strategy supports these activities, and equally that health reform activities consider workforce as a priority from the early stages of development.

Cross-cutting themes

Three cross-cutting themes were identified in the Scoping Framework. While these themes are evident in the discussion of the priorities there is value in providing some initial context. Each theme will be influenced by success in the five priorities.

The themes are:

1. **Growing the Aboriginal and Torres Strait Islander medical workforce and improving cultural safety**
2. **Adapting to and better supporting new models of care**
3. **Improving doctor wellbeing.**

Implementing the actions in the priorities will positively impact on these themes. In some instances, specific actions that target a particular need or cohort are embedded in the priorities. In others, structural changes will, in and of themselves, lead to improvements in each of the three cross-cutting themes.

Growing the Aboriginal and Torres Strait Islander medical workforce and improving cultural safety

Improving the health of Aboriginal and Torres Strait Islander peoples is a priority for the Australian Government. Ensuring cultural safety and growing the Aboriginal and Torres Strait Islander medical workforce is, and must continue to be, the joint responsibility of non-Indigenous and Indigenous practitioners, regulators and policy makers. Engagement with, and support of, an Aboriginal and Torres Strait Islander health workforce is an important priority to improve health outcomes.

Aboriginal and Torres Strait Islander people experience a higher burden of disease than non-Indigenous Australians. The Australian Institute of Health and Welfare (AIHW) reports that the overall burden of disease for Indigenous Australians is 2.3 times the rate of non-Indigenous Australians.[16] The five highest burden of disease groups are mental health and substance use disorders (19%), injuries, including suicide (15%), cardiovascular diseases (12%), cancer (9%) and respiratory diseases (8%).[17]

Evidence shows that the Aboriginal and Torres Strait Islander health workforce delivers better health outcomes for Aboriginal and Torres Strait Islander clients. The benefits to health care provision and patient outcomes are attributed to the unique skill sets and cultural insights that Aboriginal and Torres Strait Islander people bring to their health care roles.[18]

Aboriginal and Torres Strait Islander people are employed in the health care and social assistance sector more than any other industry. There is an opportunity to increase their involvement from less than 2% of the health workforce.[19] Goals for this increase are outlined further below.

The 2020 National Agreement on Closing the Gap commits to a vision in which 'Aboriginal and Torres Strait Islander people enjoy long healthy lives that are centred in culture, with access to services that are prevention focused, responsive, culturally safe, and free of racism and inequity'. Achieving this vision requires a locally qualified and skilled Aboriginal and Torres Strait Islander health workforce across the health system to lead and deliver culturally and clinically safe services for Aboriginal and Torres Strait Islander peoples and communities regardless of where they access health care.

The *National Agreement on Closing the Gap* sets out 16 national socioeconomic targets across a number of areas such as education, employment, and health and wellbeing that will improve life outcomes for Aboriginal and Torres Strait Islander peoples. The targets require an increase in the number of Aboriginal and Torres Strait Islander doctors, and for all doctors to have expertise in Aboriginal and Torres Strait Islander health and culturally safe health care delivery.

To contribute to this goal, this Strategy aligns with and actively supports the *National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework and Implementation Plan 2021–2031* (National Workforce Plan), developed concurrently with this Strategy.

Substantial barriers exist in the attraction, recruitment and retention of Aboriginal and Torres Strait Islander people in the health workforce, including financial hardship, limited pathways across the education and employment sector, lack of flexible and accessible learning opportunities, and racism and discrimination.

Implementation of the National Workforce Plan will assist in addressing these barriers and support an increase in Aboriginal and Torres Strait Islander employment in the health workforce to reach 3.43% over the next decade, which reflects parity with the projected working-age population in 2031. This is an expected increase of approximately 19,500 health workforce jobs by 2031.

Specifically, the Strategy aims to contribute to the outcomes of the National Workforce Plan through actions that:

- grow the Aboriginal and Torres Strait Islander medical workforce
- improve the capacity of the medical workforce to create and maintain culturally safe environments for Aboriginal and Torres Strait Islander doctors, patients and other health professionals.

Numerous national and jurisdictional specific policies and programs exist to attract, retain and develop the capacity and capability of the Aboriginal and Torres Strait Islander workforce across the health system. Similarly, there are many initiatives aimed at improving cultural safety across the health system.

This Strategy aims to support and complement that work, which includes:

- *The National Agreement on Closing the Gap*
- *The New National Aboriginal and Torres Strait Islander Health Plan*
- *Cultural Respect Framework for Aboriginal and Torres Strait Islander Health 2016–2026*
- *National Safety and Quality Health Service (NSQHS) Standards*
- *The Australian Health Practitioner Regulation Agency's (Ahpra) Aboriginal and Torres Strait Islander Health and Cultural Safety Strategy 2020–2025*
- The Australian Indigenous Doctors' Association (AIDA) and specialist medical colleges' collaboration on the *'Specialist Trainees in the Medical Workforce'* project.

This Strategy recommends several actions that support these goals, including but not limited to:

- Ensuring Aboriginal and Torres Strait Islander doctors are involved in joint workforce planning (Priority One).
- Further developing the Health Demand and Supply Utilisation Patterns Planning (HeaDS UPP) Tool and building upon current data, including by incorporating Aboriginal and Torres Strait Islander workforce and service data from Aboriginal Community Controlled Health Services and Aboriginal Medical Services (Priority One).
- Devising alternative structures for funding to enable and support Aboriginal and Torres Strait Islander medical students and trainees to fulfil professional, community and cultural obligations throughout the medical training pathway (Priority Three).
- Improving data sets to better understand the path for Aboriginal and Torres Strait Islander doctors from commencement of study through to medical registration and post Fellowship practice (Priority Two).
- Introducing standards and supports in prevocational training and employment to include education in cultural safety and Aboriginal and Torres Strait Islander health for all medical practitioners including international medical graduates (IMGs) (Priority Three).

Beyond these specific areas, the broader directions in the Strategy align with the calls for greater flexibility in the system to better support Aboriginal and Torres Strait Islander students, trainees and doctors. For example, actions to rebalance the workforce towards generalist scopes of practice will support all doctors, including Aboriginal and Torres Strait Islander doctors, to work to their full scope of practice. Implementation planning will further identify activities under each of the priority actions that support the objectives outlined here.

Adapting to and better supporting new models of care

There is a powerful link between the medical workforce and the type and quality of care that is provided. Different models of care are adopted in different places for a range of reasons. Shortages in some parts of the workforce require adaptation and innovation that are not necessary elsewhere. In rural areas, GPs work to a wider scope of practice and acquire greater expertise in areas that are less likely to be used by GPs in cities where referral to another specialist is more available and convenient. Outside cities, individual doctors are more likely to work across health care settings, providing both primary care clinics and services in the local hospitals and residential aged care facilities. The medical workforce needs to be considered in context, taking account of multidisciplinary models and team-based care where doctors work with other health professionals.

This has important implications for medical workforce planning. This Strategy focuses on improvements to the HeaDS UPP tool that supports medical workforce planning and analysis. The tool provides a single access point to workforce data from a number of data sets to visually highlight how the community uses health services and the health workforce. The ultimate aim is to provide a tool that better supports multidisciplinary workforce planning, is responsive to the health needs of local communities and is sufficiently flexible to accommodate different models of care. A scenario analysis capability will allow workforce planners to select a range of variables to understand and plan for the impact of changes in workforce skill mix and in models of care.

The Strategy aims to develop a medical workforce with sufficient breadth, reach and adaptability to initiate and respond with agility to opportunities to develop and implement more effective models of care, particularly as new technologies become available.

Digital technology is a key enabler to the adoption of new models of care. The *National Digital Health Strategy*, developed concurrently with this Strategy, aims to develop a workforce that is confident and capable of using digital health technologies and services. The *National Digital Health and Workforce Education Roadmap* seeks to understand the current digital capability of those in the health system and sets out the vision for transformation over the next decade. The Roadmap and the *National Digital Health Strategy* will inform future changes to training curricula as digital health and literacy continue to evolve.

Within the National Digital Health Strategy there are actions that align with the Strategy, including:

- Making help available, supporting health care providers to adopt digital technologies, including through on-demand training.
- Embedding digital health in all training pathways and within service delivery.
- Establishing a network of clinical digital health champions to encourage upskilling and build momentum.

Actions in this Strategy recognise that an innovative and flexible workforce is able to adopt new models of care for their community:

- Prioritising information and data sharing to inform more sophisticated health workforce planning approaches that move beyond individual specialty-based demand and supply forecasting to whole-of-system and scenario analysis capabilities (Priority One).
- A more equitably distributed medical workforce will better support consistency in models of care and care delivery nationally (Priority Two).
- Non-traditional models of care can be safely supported with digital technology, as well as faster patient access to diagnosis and treatment. Decision support software, electronic referrals and requests for tests and prescribing support are all currently being considered or rolled out in Australia. This needs to be reflected in medical training content and delivery (Priority Three).
- Encouraging broader scopes of practice and generalist medical capability, including through digital supports, will make it easier to adapt locally developed models of care to the needs of the community (Priority Four).
- Increasing flexibility and mobility of the medical workforce will enable a more agile and responsive approach that both necessitates and supports new and emerging models of care (Priority Five).

The significant uptake in telehealth services since the COVID-19 outbreak demonstrates an appetite to use virtual models of care to protect patients and health workers. Pre-pandemic consultations for this Strategy highlighted the potential for virtual care and supervision models to supplement services in areas of shortage (in rural and regional areas; in particular specialties; for short periods or longer term). What needs to be further considered is how virtual care is best adapted in different settings, and how to maintain it as a complementary service rather than a replacement for in-person services. Virtual workforces could also support exhausted and quarantined practitioners impacted by pandemic, flood, bushfire or other unplanned events.

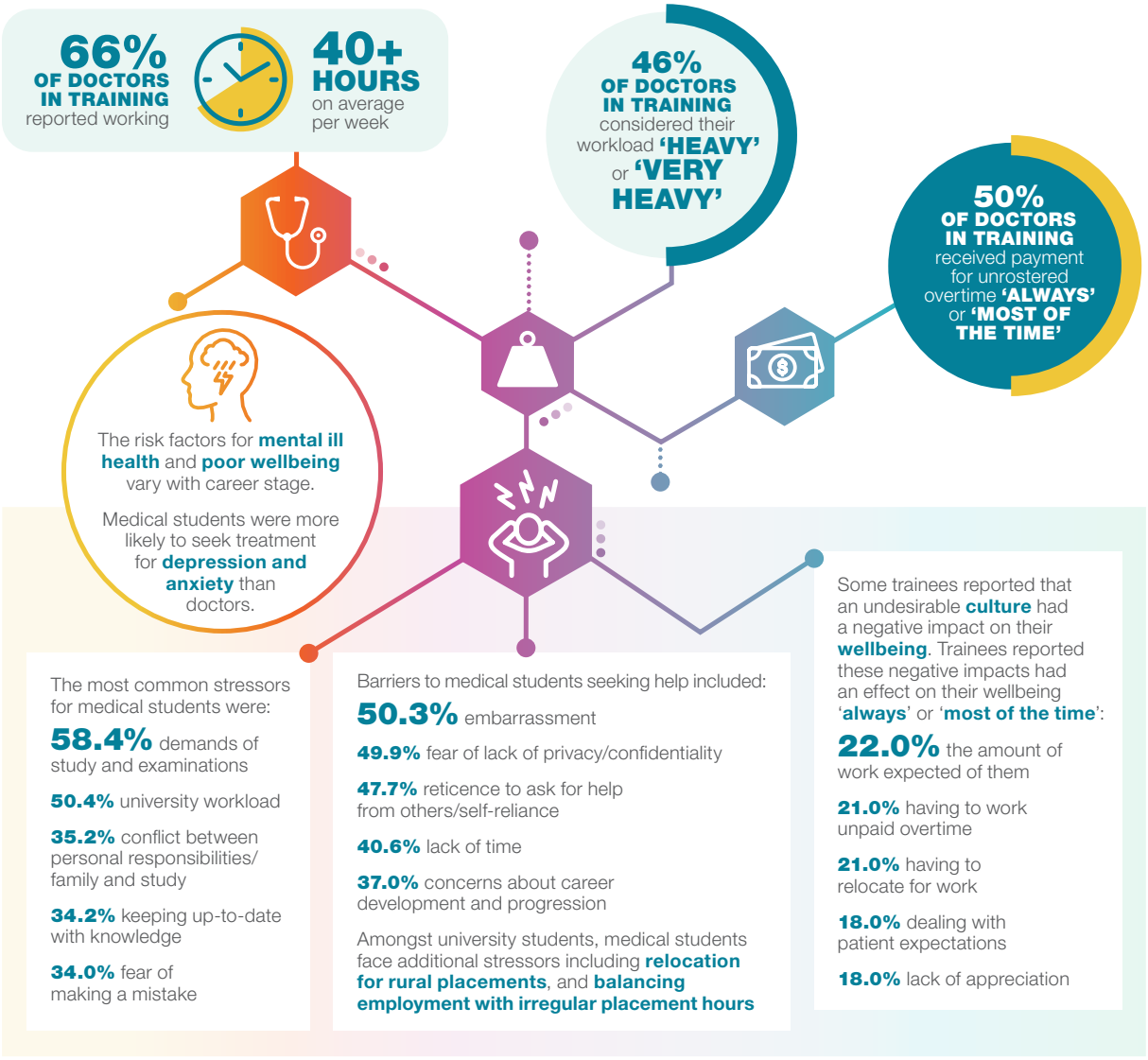
The need to align solutions to enhance the workforce in urban, rural, acute and community contexts will require careful consideration of funding, regulatory and systems capacity.

Improving doctor wellbeing

Medicine is a rewarding but challenging career. Doctors are usually more physically healthy than the general population but are more likely to suffer from psychological distress.[20] Many of the contributing factors are unique to medicine and health care: errors can have serious consequences for both patients and doctors, responsibility for patient care and wellbeing, disruptions to sleep from working shifts and being on-call, balancing community and cultural responsibilities, clinical isolation in rural and remote practice, and the need to work long hours and overtime, which is sometimes unpaid. Career uncertainty is a major stressor for doctors in training. Burnout and dissatisfaction are increasingly recognised in doctors as ongoing causes of morbidity. The consequences of burnout include suboptimal organisational culture, leading to costly turnover, patient dissatisfaction, increased medico-legal risk and financial costs.

The medical profession has higher rates of suicide and a stigma surrounding seeking medical care for oneself.[21] In November 2019, the National Law was changed so that treating practitioners are not required to report their doctor patients unless they have an impairment leading to a serious risk of harm to the public.[22] Treating practitioners are not required to report illness that is not causing such impairment. This should give doctors confidence to seek help for health conditions if they need it, while public protection is maintained.

Figure 7: A snapshot of the mental wellbeing concerns of Australian doctors in training



Source: Adapted from Medical Board of Australia and Australian Health Practitioner Regulation Agency (Ahpra), *Medical Training Survey 2020*, Medical Board of Australia and Ahpra, 2021, accessed 22 March 2021; and Australian Medical Association (AMA), *Health and wellbeing of doctors and medical students – 2020*, [position statement], AMA, 14 July 2020, accessed 25 September 2020.

A well medical workforce is in everyone's interests. Doctors provide higher quality care when they are well, they make fewer errors and have more empathy for their colleagues and those under their care. A well medical workforce also helps to create a more sustainable, efficient and cost-effective health system through increased job satisfaction, less turnover and extended personal leave.[23]

There is increasing evidence to suggest that reduced physician autonomy, organisational bureaucracy and compassion fatigue are contributing significantly to burnout and clinician ill health. The solutions to these are necessarily organisational, encompassing structural and cultural change.[24] A positive workplace culture and strong leadership are key contributors to doctor wellbeing, as with other types of professions and industries. Positive workplace culture and leadership also means negative behaviours such as bullying are not tolerated, and people impacted by those behaviours are supported to speak up without fear of repercussions.

Doctors are particularly vulnerable to psychological distress at key transitions in their careers, for example, between medical school and internship, junior doctor to vocational training, and registrar to consultant specialist. State and territory governments have implemented programs to provide extra support to doctors during these transitions, particularly for junior doctors. A positive response can be seen with the Medical Board of Australia partnering with the Australian Medical Association (AMA) to create *DRS4DRS*, a national support and coordination service for medical students and doctors, advocating for doctors' wellbeing. DRS4DRS also provides training for doctors who are treating other doctors as patients.[25]

Actions in this Strategy that will improve the wellbeing and mental health of the medical workforce, and supplement the numerous other initiatives underway, include:

- Improving workforce planning and data to provide better career planning tools to inform doctors' career choices (Priority One and Two).
- Developing a valued and supported service registrar role to provide greater flexibility for doctors seeking to better balance work and family demands and aspirations (Priority Two).
- Improving cultural safety in the workplace to provide more supportive environments for Aboriginal and Torres Strait Islander doctors, during training and beyond (Priority Three).
- Reforming training pathways to enable trainees to navigate the options available more readily and provide greater transparency about selection processes and reduce the significant uncertainty about career progression (Priority Three).
- Investing more time and resources in developing generalist skills among junior doctors before they commence specialist training to support them to work across a range of settings and geographies more confidently (Priority Four).
- Increasing the use of digital services to access professional clinical support, which will reduce clinical isolation for professionals practising in rural and remote areas (Priority Five).
- Increasing flexibility to enable a better work-life balance for doctors, and establishing portability of benefits to recognise continuity of service and give access to accrued entitlements (Priority Five).

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Part B:
The National Medical Workforce Strategy

Priority One: Collaborate on planning and design

Medical workforce planning in Australia is complex and multifaceted, with accountabilities split between various workforce planning stakeholders. The nature of Federation means that decision making is distributed and reflects the different priorities of the Commonwealth and individual states and territories. While recognising and respecting these differences, there is considerable value in working together towards a shared vision and goals where possible and practical.

Australia's medical workforce is supplied through domestic medical training of local and international students, and through immigration. The pathway to independent practice as a vocationally recognised specialist is long and involves multiple jurisdictions, portfolios, regulators, and public and private employers. It is important that their work is aligned to a shared view about the shape of the medical workforce that Australia needs into the future.

Why change to planning and design is required

Ensuring that all Australians have equitable access to clinically and culturally appropriate health care where and when they need it requires careful long-term coordination and evidence-based planning. Optimal health workforce planning needs to be undertaken collaboratively so that all involved can contribute to the development of common goals and adjust the levers within their control to meet agreed objectives. To do this effectively there is a need to share quality data and improve the evidence base that underpins workforce planning.

Four drivers underscore the need for improved collaboration and agreement on common data:

- There is an immediate need to deal with the increase in junior doctors working as locums or in unaccredited training places and waiting for several years to access specialty training programs.
- The lead time it takes to train a doctor means that planning needs to occur over a medium-time horizon. Failure to address potential under or oversupply early has significant and difficult-to-change long-term impacts for individuals and the system as a whole.
- Across the training pathways, many individuals and organisations make decisions about how many training places are needed and of what type, but their decisions are made in the absence of a formal system-wide framework with clear objectives and authority, and sometimes in the absence of comprehensive data or predictions of demand for clinical services. Ensuring these individual decisions can be aligned to the nation's future medical workforce need is imperative.
- At present there is no single consolidated source of data, nor are there agreed approaches to analysing the data that is available. There are significant data gaps and limited capacity for integration, with no current data set to, for example, track numbers from medical school through to internship, Fellowship and practice. It is also difficult to assess and evaluate the impact of workforce programs and initiatives.

Joint planning and advisory body

Previous joint work to plan collaboratively has been delivered through bodies such as the former Health Workforce Australia, then through the National Medical Training Advisory Network and its successor, MWRAC. In recent years, these efforts have focused on individual specialties or specific issues and have not translated into a national picture of the medical workforce. There have also been focused planning initiatives across the Commonwealth and State Health and Education portfolios.

The absence of an available workforce planning mechanism, together with planning that has been based on incomplete data, has seen an expansion and contraction cycle in medical training and resultant doctor numbers. These fluctuations in supply have led to long-term challenges to existing service models and have therefore come at a cost to taxpayers and to the community. Persistent maldistribution issues and a lack of access to culturally safe care comes at an even higher cost to Aboriginal and Torres Strait Islander communities and patients who continue to experience a disproportionate burden of illness and disadvantage.

The Strategy responds to this issue by recommending a joint medical workforce planning and advisory body with sufficient authority and expertise to advise and make recommendations in relation to the size and structure of the medical workforce. The body's scope should include university places, junior doctors, prevocational training, specialty training, migration policy and distribution levers. This body would include all jurisdictions with representation from key workforce organisations and may use timelimited working groups for particular activities.

The size, structure and decision-making framework for the body should be developed in the early stages of implementation of the Strategy and will need to be considered in the context of the new arrangements under the National Cabinet that have replaced the former Council of Australian Governments Health Council (CHC) structures. This includes the Health Chief Executives Forum (HCEF), the advisory and support body for the newly established Health Council.

These arrangements should seek to achieve consensus and alignment where it is most important and achievable, particularly where there are long-term consequences for the future of the workforce. There is long-term value in working together to understand and accommodate differences in workforce planning requirements of each state and territory, and to be able to explain the consequences and impacts of those differences in a constructive way that ultimately fosters a more coherent understanding of the system as a whole.

Local and regional level planning

Under the current National Health Reform Agreement 2020–25 (NHRA) the Commonwealth and jurisdictions are committed to state-wide planning for general practice and primary health care. Building on these commitments, considerable effort is required for local and regional health workforce planning, where a nuanced understanding of the issues and environment should be taken into consideration. This Strategy, while high level in recommendations and improved governance arrangements, will provide greater direction for more localised place-based and regional level workforce planning.

The provision of a broad framework, tools and support for workforce planning can be developed and shared, along with the development of avenues to escalate issues and feed into workforce reform.

The development and use of a shared planning framework would also provide opportunities for innovative local solutions to be shared.

Where applicable, local level workforce planning must be co-designed with the local Aboriginal and Torres Strait Islander community, local government and the Aboriginal and Torres Strait Islander Community Controlled Health Sector.

Several areas have been identified where an irregularity or issue exists that may be constraining the medical workforce. Some of these issues, such as locum use and reliance on IMGs, are discussed in more detail under Priority Two. In order to develop a national direction further investigation and analysis is required to better understand the scale and impact of the issues. Improved data and understanding will lead to more informed policy and decision making on both a national and local scale. A National Medical Workforce Data Strategy (Data Strategy) will support the gathering of this evidence and its integration into broader medical workforce policy.

Understanding national self-sufficiency

Building and maintaining a domestic medical workforce that is of sufficient size and capability to meet the needs of all Australian communities is a priority for the Strategy. The benefits of self-sufficiency, and the challenge of our continued reliance on IMGs became increasingly apparent during COVID-19. Defining national self-sufficiency depends on an agreed view of medical workforce capacity, capability, location and timing needed – including in preparation for heightened, sudden and/or high impact service requirements such as a pandemic or mass health emergencies. Key factors to consider include models of care, differences in local needs, workforce demographics, population changes and the infrastructure and technology available to deliver high-quality care. Improved data and evidence, alongside collaboration across the various levels of workforce planning will assist in defining and achieving self-sufficiency.

Improved data and evidence

The importance of using comprehensive data and evidence for medical workforce planning is central to the Strategy. Attempts to work collaboratively have been influenced by different views about the appropriateness of methodologies and analysis, data ownership and other data governance issues. While national workforce planning uses national data sets, jurisdictions conduct their own workforce planning for specific purposes, using state/territory specific data which results in differences in modelling outputs. As a consequence, decisions ranging from training numbers, workforce distribution policies and migration settings run the risk of being set in silos, potentially delivering outcomes at odds with each other or with the broader objectives.

A Data Strategy will deliver a single, consolidated, comprehensive and jointly understood source of data to support planning at all levels. It will enable linkages to be made between education, training, employment and regulation. Used collaboratively, the data will enable workforce planners to make assessments about the appropriate number of doctors, with appropriate skills, to be employed to deliver the best models of care to meet community needs. A coordinated approach to decision making, powered by data, will enable a holistic and integrated approach to addressing Aboriginal and Torres Strait Islander health. It will also facilitate engagement with other health and medical stakeholders, enabling open dialogue based on relevant data and evidence, and informing workforce planning for more holistic health models such as Aboriginal and Torres Strait Islander primary health organisations.

A Data Strategy will equip workforce planners with the means to adapt to changing dynamics, whether responding to short-term crises or emerging longer-term trends. Resources can be adapted to maximum effect, particularly as more workforce data becomes available over time.

As part of this, all stakeholders must assist to further develop the HeaDS UPP tool to expand beyond its current focus on primary care to cover the full health workforce, incorporating and sharing data from a wider range of data sets across the education, training and employment spectrum.

Priority One: Collaborate on planning and design	
Action	**Detail**
1. Establish a joint medical workforce planning and advisory body	1.1 Establish a joint planning and advisory body to oversee implementation and evaluation of the Strategy. This will include making recommendations to responsible Ministers.
	1.2 The joint planning and advisory body's ongoing role will seek to match workforce planning to community needs by contributing to decisions about: • the size and structure of the medical workforce • the number and distribution of university places • specialty training numbers • migration policy settings • distribution levers.
2. Develop a workforce planning framework that can be used at all levels	2.1 Develop a national framework for workforce planning that: • maximises alignment of planning objectives across Commonwealth, state and territory, regional and local levels • provides opportunities to escalate issues and feed into broader reforms, including informing the work of the joint planning and advisory body.
3. Develop and implement a National Medical Workforce Data Strategy	3.1 Develop a National Medical Workforce Data Strategy (Data Strategy) that informs local, regional, state and territory, and national medical workforce planning. The Data Strategy will: • achieve national interoperability of medical workforce supply and demand data with agreed baselines, definitions and methodologies • require collaborative data sharing to achieve consistent local, state and territory, and national workforce forecasting of supply and demand • include governance and accountability frameworks to manage data sets and to ensure that multiple sources are cleansed, combined, understood and utilised appropriately • include development of a national needs-based demand model that improves on current best practice methods and reflects the Australian health system and context • purposefully capture data to review outcomes of workforce distribution, over and undersupply of specialties • purposefully capture data to review progress in increasing the number of Aboriginal and Torres Strait Islander doctors.
	3.2 The Data Strategy will include specific priority pieces of work: • to better understand workforce reliance on service registrars, locums and migration • to track progression of medical students and doctors throughout medical education, training and careers • to identify better ways of accounting for various types of work effort, including non-clinical work, necessary for providing quality care • to identify better ways of assessing the link between workforce and optimal patient outcomes.

Priority One: Collaborate on planning and design	
Action	**Detail**
	3.3 The Data Strategy will be underpinned by: • an initial joint agreement between the Commonwealth, states, territories, specialist medical colleges and relevant peak bodies (for example, Australian Indigenous Doctors' Association) to share data to ensure an integrated data set is available for planning and coordination • further agreements with universities, private hospitals, peak bodies and funded organisations, enabling further data integration and sharing where appropriate. Note: Agreements will outline the approach to data integrity, custody and use, including considerations regarding privacy and authorisation mechanisms.
4. Further develop the HeaDS UPP Tool	4.1 Further develop the Health Demand and Supply Utilisation Patterns Planning (HeaDS UPP) Tool and build upon the current data available, including: • expanding scope from its current focus on primary care to cover other medical specialists, allied health and nursing • inviting Aboriginal and Torres Strait Islander peak health workforce organisations, Aboriginal Community Controlled Health Services and Aboriginal Medical Services to share workforce and service data to support better workforce planning for Aboriginal and Torres Strait Islander peoples and communities.
	4.2 Promote the use of HeaDS UPP by the Commonwealth, states, territories, Local Health Districts, specialist medical colleges, Primary Health Networks, Aboriginal and Torres Strait Islander health and medical organisations, Rural Workforce Agencies and other users.

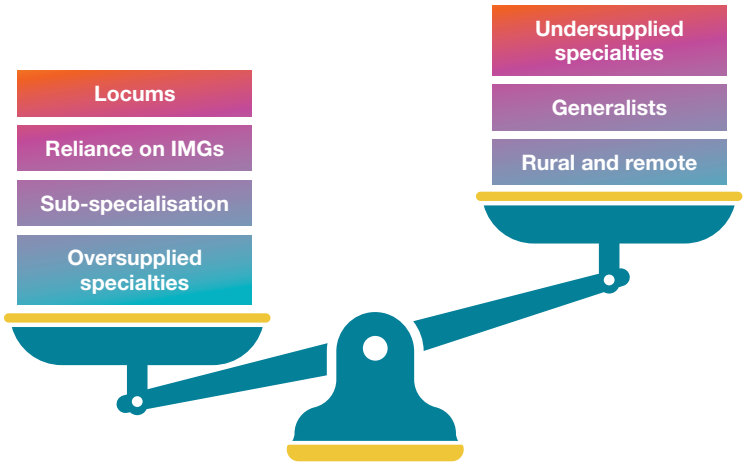
Priority Two: Rebalance supply and distribution

Inequities persist across Australia's medical workforce despite growth in the number of medical school graduates, employed practitioners and Fellows. Since 2013, the annual rate of increase of employed doctors was 3.6%, compared to population growth of 1.6%.[26] The number of medical school graduates has grown 6.2% from 3,441 in 2013 to 3,655 in 2019.[27] In 2018, the specialist medical colleges awarded approximately 3,800 new Fellowships – more than double the number a decade earlier.[28]

The imbalances in supply and distribution present in a variety of ways. Variances in the number of doctors across geographies and specialties have led to unsustainable reliance on IMGs, significant and unplanned growth of service registrars and employment of locums in lieu of permanent staff. It has also led to concerns of overdiagnosis and overtreatment in oversupplied specialties.

Data and consultations suggest that the broadest categories of imbalance, at a national level, are those shown in Figure 8.

Figure 8: Representation of significant national imbalances within the medical workforce



Why imbalance needs to be improved

Addressing these imbalances will help to address inequities in health outcomes, including between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians, and between regional, rural and remote and metropolitan populations. Getting the balance right will also assist individual doctors to have satisfying and secure careers.

Collaborative efforts are necessary to address a variety of complex and multifaceted areas of imbalance. Over the next 10 years, priorities will shift as some areas of concern are corrected and others identified. The data work identified in Priority One will help consideration of how and when this happens. Taking advantage of improvements in data and forecasting, this area of the Strategy seeks to provide a more formal and systemic approach to managing imbalances in the future.

Undersupplied medical specialties

Specialist supply in Australia is determined by the number of graduates undertaking specialist training and the number of specialist IMGs who migrate to the country. Patients are affected by undersupply through longer waiting times and distance to medical specialists, which may contribute to delays in diagnosis and treatment. Gaps in the workforce that are not being met by the domestic workforce are filled by IMGs or, in some cases, not at all. COVID-19 and the reduction in migration has strengthened the imperative to ensure that the domestic medical workforce is more aligned with community need.

Contributing factors to instances of undersupply can generally be attributed to two categories – system factors and individual factors. These are outlined in Table 4.

Table 4: Factors contributing to specialty undersupply

Category	Contributing Factors
Individual factors	• **Personal values and interests** – individual views on work-life balance, flexibility, degree of patient interaction, autonomy, workplace settings (for example, working as a team in a hospital or in private practice), leadership aptitude, interest in research and communities of practice can all influence choice of specialty. • **Low interest and lack of early exposure to specialties** – in some specialist areas (e.g. general practice) there are limited opportunities to experience the specialty, making it less likely that doctors will pursue training or a career. • **Financial drivers** –some students or trainees make career-based decisions in accordance with future expected income, financial resources and the costs of training. • **Negative undergraduate and postgraduate experiences** – poor quality or negative training experiences during early years of training can influence future career decision making. Confronting personal experiences, negative workplace culture, racism and discrimination, lack of cultural safety, and excessive work pressures can be further exacerbated in areas of reduced workforce capacity. Distorted exposure to a specialty such as psychiatry may be off-putting; for example, undergraduates may only see acute inpatient units that are dominated by patients with acute psychoses.
System Factors	• **'High bar' accreditation standards that limit training opportunities** – accreditation standards preserve the quality and integrity of training programs and these need to be balanced with overall learning opportunities of prospective training sites, particularly in rural and remote areas. • **Limited recognition of prior learning** – for example, to allow lateral movement for those who may wish to move into generalist or undersupplied specialties. • **Limited supervisor pool** – and the need to balance competing service delivery needs with supervisory responsibilities. • **Financial drivers** – some specialties are better remunerated than others. • **Service model** – specialties with low inpatient loads need fewer registrars to provide 24-hour care. This reduces the number coming through as specialists to provide the high volume of outpatient services. Examples are rheumatology, dermatology, ophthalmology. • **Infrastructure limitations** – some areas, particularly rural and remote areas, do not have the infrastructure to support the delivery of medical training and some clinical services. • **Training environments** – the majority of medical training is delivered in hospital settings, which provides students and prevocational doctors more exposure to hospital-based specialties and specialists.

Medical specialties in, or forecast to be in, national undersupply include ophthalmology, dermatology and psychiatry. Other specialties that are not yet in undersupply but appear less popular with medical students include occupational and environmental health, rehabilitation medicine, sexual health and public health medicine.[29] Drivers for undersupply differ for each specialty, but are generally linked to one or more of the individual and system factors listed above.

The issue of remuneration was raised consistently during consultations. While all doctors are well remunerated compared to the general population, there are disparities between specialties. These disparities are likely to impact on career choice of trainees and reportedly contribute to undersupply of certain specialties such as general practice.

Increasing supply is challenging because of the length of time it takes to recruit and train specialists. This makes it more important to intervene early. A national and strategic approach that considers all contributing and causal factors is important if supply is to be made steadier and more sustainable.

Impacts of medical workforce supply shortages

Insufficient numbers of specialists can exacerbate geographic shortages as those in undersupply are more likely to be offered and obtain work in metropolitan areas. This presents challenges for service delivery and waiting times, often resulting in patients having to travel long distances to access care.

Some doctors regularly visit rural or remote communities, providing a mix of face-to-face and virtual care from their work base. This model can provide episodic continuity of care and support to onsite generalist specialists.

National oversupply and local challenges

National evidence shows there are oversupplied specialties, and some cohorts within the medical workforce are growing faster than others. Drivers of national oversupply include:

- Providing 24-hour registrar cover in acute specialties with high inpatient or emergency demand
- Trainees making decisions on their preferred specialty without understanding that there may not be jobs available
- Perceptions regarding the prestige and potential earning capacity of some specialties
- Practice of basing training numbers and places on demands for service provision and historical trainee numbers, rather than modelling of future health system requirements
- Sector concerns that capping training places will be perceived as anti-competitive
- Changing models of care, for example, fewer cardiothoracic surgeons are required due to changes in treatments and available interventions.

While patients and communities can benefit from having access to a broad range of health professionals in their area, oversupply presents risks if patients are subjected to clinical procedures and invasive testing of marginal benefit. Oversupply can create an environment of work scarcity where heightened competition between practitioners puts patients at risk of (often unconscious) overservicing.

Other parts of the country, particularly regional, rural and remote areas and some outer-metropolitan areas, experience challenges recruiting and filling vacancies for specialties despite a national oversupply of practitioners.

The maldistribution of medical specialties distorts impressions over the true nature of supply. Undersupply becomes visible through patient waiting times and numbers of registered practitioners, but oversupply that leads to supplier-induced demand is harder to identify.

Emergency medicine is in national oversupply but there are job vacancies in rural areas. Despite efforts to reduce trainees in this specialty, current predictions indicate there will be an oversupply of more than 1,300 trainees (or 60%) by 2030. Despite the likelihood of not finding a consultant position at the end of training, medical students continue to show strong interest in a career in emergency medicine.[30] Addressing the drivers of this behaviour will be key to any activities that seek to rebalance the specialist workforce.

Other specialties showing signs of being in oversupply include cardiothoracic surgeons and anaesthetists, while others are more difficult to measure. There is growing interest amongst medical students in taking up a career in anaesthesia – from 8.1% in 2015 to 11% in 2019.[31]

Accurate data and needs-based demand tools are required to determine what future workforce is necessary (see Priority One). Redirecting and incentivising trainees to areas of undersupply will enable community needs to be met and provide meaningful and valued careers for doctors.

Growing the Aboriginal and Torres Strait Islander medical workforce

There has been steady growth in the number of Aboriginal and Torres Strait Islander medical graduates but, overall, the numbers remain low relative to the size of the Indigenous population and particularly in non-GP specialties. In 2019, there were 488 employed (excluding long leave) Aboriginal and Torres Strait Islander doctors.[32]

In 2019, there were 46 Aboriginal and Torres Strait Islander doctors graduating from medical programs in Australia.[33] This accounts for 1.3% of domestic medical graduates.[34] The gap widens further when considering medical specialists, with there being 184 Aboriginal and Torres Strait Islander medical specialists (and a 30% non-completion rate) compared to 61,907 medical specialists nationally.[35]

Aboriginal and Torres Strait Islander students and doctors often have to meet cultural obligations and community expectations in addition to the arduous schedule of medical training. In the 2020 Medical Training Survey Report for Aboriginal and Torres Strait Islander Doctors in Training, a higher proportion of Aboriginal and Torres Strait Islander doctors expressed concern about completing their training compared with the national average.[36] This aligns with consultation feedback, which focused on the provision of more flexible, supported pathways that continue throughout training.

The National Workforce Plan aims to increase Aboriginal and Torres Strait Islander employment across the entire health workforce, to reach working age population parity over the next decade, however achieving health workforce parity is a long-term goal. This Strategy will support the National Workforce Plan by seeking to grow the Aboriginal and Torres Strait Islander medical workforce and improve cultural safety for patients, communities and doctors. The National Workforce Plan will encourage Aboriginal and Torres Strait Islander senior high school students with an interest and aptitude for science to pursue a medical career.

Pressure points that have been identified as having a particular impact on Aboriginal and Torres Strait Islander medical students and practitioners include:

- Family, community and country responsibilities
- Conscious and unconscious bias and racism, both interpersonal and workplace, and organisational racism
- Fewer numbers of Aboriginal and Torres Strait Islander mentors and role models, which can increase the sense of isolation for trainees and practitioners
- Reduced familiarity with some teaching and training methods
- Financial constraints
- Lack of resources to study off campus, particularly in rural and remote locations
- Culturally unsafe learning and clinical practice environments.

Better understanding of the rates and reasons why Aboriginal and Torres Strait Islander medical students and trainees exit medical training would enable further targeted action. Support for prospective doctors throughout their education, and safe and dedicated environments for learning, would provide a strong foundation for long-term medical careers.

The smaller proportion of Aboriginal and Torres Strait Islander medical students and doctors often results in limited representation on governance structures and decision-making bodies. Underrepresentation, combined with reduced cultural safety, can mean consideration of Aboriginal and Torres Strait Islander doctors' needs is inadequate or overlooked. This can affect the ability of organisations and entities to successfully train, recruit and retain Aboriginal and Torres Strait Islander peoples into the workplace. Aboriginal and Torres Strait Islander senior representation and leadership in all education and medical settings is required to address this issue.

Most importantly, while all doctors have a responsibility to contribute to closing the gap, a strong Aboriginal and Torres Strait Islander medical workforce will lead to improved health outcomes for Aboriginal and Torres Strait Islander peoples and communities.

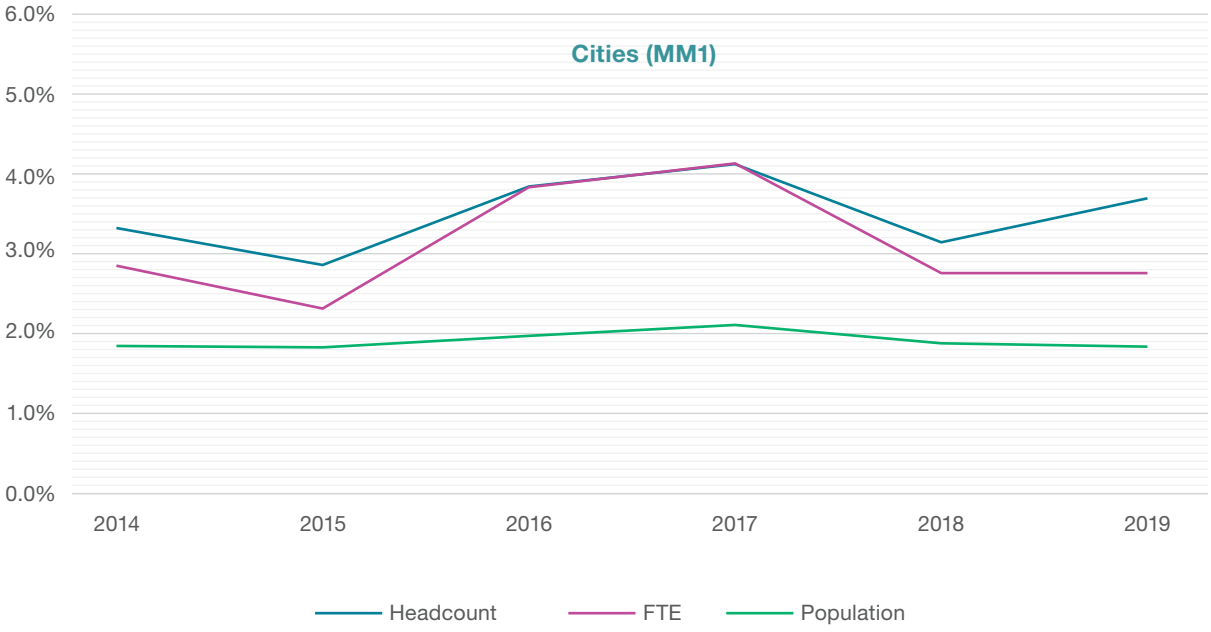
Correcting geographic maldistribution

One of the most complex and persistent issues for Australia's medical workforce is geographic maldistribution. Appropriate distribution of the medical workforce is critical for providing an appropriate level of health services for all communities.

Around seven million people, or 29% of Australia's population, live in rural and remote areas.[37]

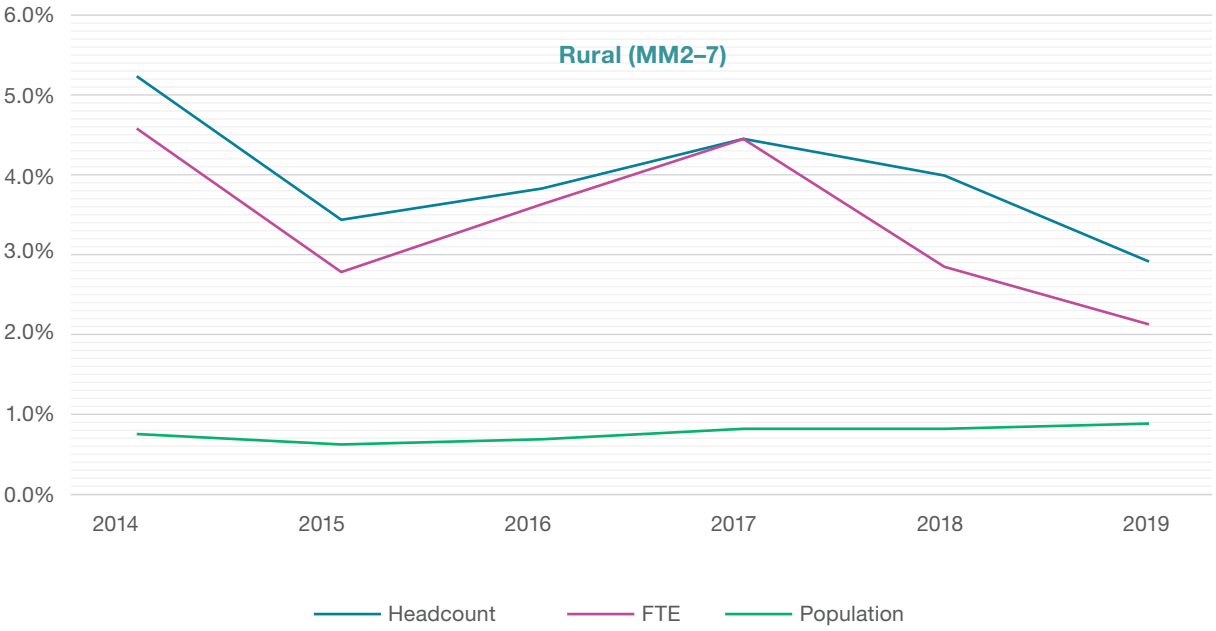
Since 2013, the annual rate of increase of employed doctors outside of the cities (MM 2 to MM 7) was 3.9%, the FTE was 3.4% and the population was 0.7%.[38]

Figure 9: Doctor (headcount and FTE) growth across MM 1



Source: Adapted from Australian Department of Health, National Health Workforce Data Set (NHWDS) *Changes in headcount and percentage for employed practitioners by MMM* [data set], Australian Government, 2019, accessed 22 September 2020.

Figure 10: Doctor (headcount and FTE) growth compared to population growth across MM 2–MM 7



Source: Adapted from Australian Department of Health, National Health Workforce Data Set (NHWDS) *Changes in headcount and percentage for employed practitioners by MMM* [data set], Australian Government, 2019, accessed 22 September 2020.

Despite many benefits and opportunities for those practising in rural and remote settings, it is clear there is a general preference for metropolitan-based practice. Causal or contributing factors for this longstanding trend include:

- Limited exposure to rural and remote settings during medical school and training
- Training programs and curricula that are heavily influenced by metropolitan health settings
- Perceptions that clinical practice in rural and remote areas is less prestigious and intellectually satisfying, and that practitioners in these areas are inferior to metropolitan counterparts
- Lifestyle requirements, including appropriate employment for partners and schooling for children
- Concern that work in a rural or remote setting will be career limiting and restrict an individual's skill acquisition or ability to return to clinical practice in a metropolitan setting
- High community-based demands, autonomy, and isolation compared to practice within a larger local workforce
- Less sophisticated clinical infrastructure to support clinical practice and other career interests such as research, teaching and new technology.

Causal factors are similar to those seen in undersupplied specialties and generalist medical career paths (as outlined in Priority Four), i.e. remuneration and recognition barriers. Addressing some of the more common elements affecting all three will result in greater impact and change.

Community impact

The impact on patients and communities of poor geographic distribution is significant. Hospitalisations that could have been prevented become more common as geographic isolation increases. In 2015–16 there were 25 potentially preventable hospitalisations per 1,000 people in major cities compared with 60.9 in very remote areas of Australia.[39] Chronic diseases such as asthma, osteoarthritis and diabetes are more common in rural and remote areas as well. Potentially avoidable deaths are 2.5 times more common in very remote areas compared to in major cities.[40]

Mental health professionals are in short supply, with numbers declining markedly with remoteness. There are only three psychiatrists per 100,000 population employed in remote and very remote areas compared to 16 in major cities. Almost nine out of ten FTE psychiatrists are employed in metropolitan areas.[41]

Rural origin and intent

The evidence shows that junior doctors and trainees who come from a rural background or who have a positive experience practising in regional, rural or remote areas are more likely to decide to practise in these areas once trained.[42] More than one third of responding graduates surveyed in 2019 stated a preference for a future career outside a capital city. This increases to 61% for students from a rural background. It is worth noting that 26% of students from a non-rural background also state this as their preference, with 10% expressing a preference to work in a regional, rural or remote area.

Figure 11: Preferred location for future practice – students from a rural background

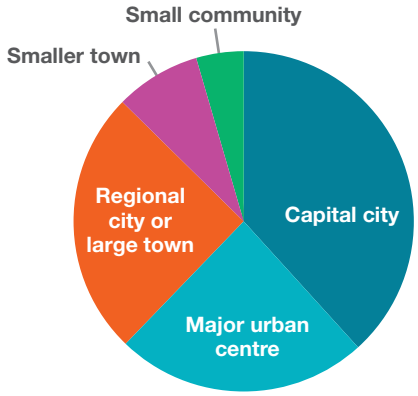
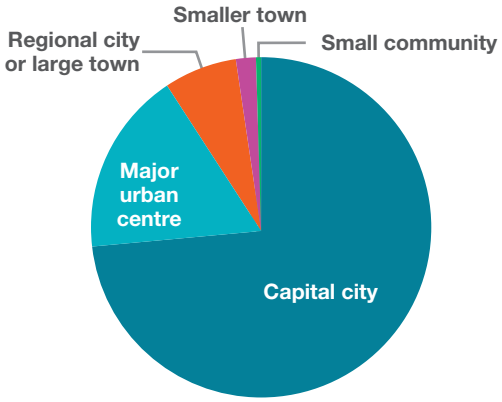


Figure 12: Preferred location for future practice – students from a non-rural background



Source: Medical Deans Australia and New Zealand, *National Data Report 2020: 2015–2019 data from final year students at Australian medical schools*, Medical Deans Australia and New Zealand website, 2020, accessed 25 September 2020.

Actions in this Strategy encourage junior doctors to gain greater positive exposure to clinical practice in rural and remote settings, in turn improving the way clinical practice in rural and remote areas is viewed and experienced. In parallel, other actions discourage high concentrations of doctors in metropolitan areas and aim to strengthen the medical workforce in areas of shortage.

Financial viability in rural clinical practice

Financial viability and sustainability of clinical practice is important to encouraging rural practice. It is not possible to sustain some specialty practices in rural or remote areas. Patients and communities accept that some specialties, like neurosurgery, are unable to be offered outside major metropolitan areas because of the infrastructure required, as well as the need for an adequate caseload. Asking all specialist doctors to live and work in rural areas is unreasonable if there is not a consistent and ongoing need for their clinical services.

However, for others, such as general practice, communities should be able to access services within their region. The current concentration of specialists in metropolitan areas has developed over time, rather than by design, and requires assessment. Consideration needs to be given to how services are funded so that practitioners can provide and maintain sustainable services. The Strategy will build on current trials of innovative funding models for primary care that seek to provide more localised solutions, developed in consultations with community and local service providers.

Better understanding the impact of locum use

Locums are a mobile, deployable and highly important part of the medical workforce, made up of doctors who are engaged to assist where there are shortfalls in staffing or when a regular doctor is unwell or completing professional development. Without locums, many medical practices would be unable to provide services in their community, which could in turn lead to adverse health outcomes. Locums play an important role in the system, providing relief to the existing medical workforce. However, concerns have been raised that locums have become an overly accessible solution to ongoing supply issues.

Employment as a locum presents many advantages over more traditional and permanent forms of employment. Locums have greater flexibility, can set their own hours and working commitments, and are often paid substantially more. This contrasts with the permanent workforce who have more responsibility for maintaining continuity of care and meeting service demands than locums, despite receiving less pay.

Drivers of increased locum use include the ease within which a hospital can use a locum to meet short-term needs without exceeding any headcount caps, and shortages in the number of doctors willing to permanently relocate to underserved areas. The disadvantages of locums are a lack of continuity of care for individual patients and hospital teams, and the significant costs of locums, which could be reinvested in larger numbers of permanent workforce. Locums are also rarely expected or able to contribute to teaching, supervision, administration and clinical governance of health services. Permanent staff must fulfil these roles; these aspects of quality care may be lost if the service only employs locums.

Under the Strategy, stakeholders will work jointly to delineate the circumstances where locum use works well and where it has become a problem, both financially and for continuity of care, and will develop strategies to mitigate the impact.

Reducing the reliance on international medical graduates

Australia's high-quality health system, along with the high standard of living, makes it an attractive destination for IMGs. Despite increasing the number of domestic medical graduates, Australia continues to rely on large numbers of IMGs, especially in regional, rural and remote communities,[43] and IMGs play an important role in improving workforce distribution and providing services where there is insufficient domestic workforce.

Restrictions on the locations in which IMGs can work and access the MBS benefits arrangements for their services were introduced in 1996. Changes to Medicare rebate structures in July 2018 have encouraged IMGs to pursue a Fellowship in their chosen specialty to improve the quality of care delivered. However, current processes that direct them to areas where there is a workforce need are complex and require review, streamlining, and alignment across governments. Further work also needs to be undertaken to ensure that doctors coming into Australia are provided with the necessary cultural safety training and knowledge of the Australian health system.

Different parts of Australia rely on IMGs more heavily than others, particularly those in rural and remote areas, and specific urban locations. IMGs are, at present, critical to ensuring the delivery of medical care in many parts of Australia.

The Strategy recognises that IMGs form an important part of the medical workforce, but that there are risks in continuing our heavy reliance on them. While the total number of IMGs working within the public hospital system is unknown, international border closures in response to COVID-19 have highlighted vulnerabilities in a system that relies on temporary and permanent international migration. The Strategy supports working towards an agreed definition of national self-sufficiency, the first step of which is understanding and modelling the domestic supply through the Data Strategy. Australia, like many other countries, will likely always benefit from some IMGs, and some doctors may choose to migrate or gain experience overseas, but the ability to deliver care without a significant reliance on IMGs is important. The Data Strategy will ensure that our view of the domestic workforce is informed by Commonwealth, state and territory data, and that any adjustments that need to be made to improve supply can be made.

Restructuring the service registrar medical workforce

A longstanding expectation is that all medical students will start as junior doctors, then train as registrars, and finally Fellow as specialists. However, this progression no longer fits the workforce needs of specialties that provide 24/7 acute care, as more doctors are needed in 'middle-grade' roles than as specialists.

Advances in diagnosis and treatment have increased the range and volume of services provided 24/7 in acute hospitals. This increased workload, and important reductions in excessive working hours, means that more middle-grade doctors, who have sufficient skill and experience to provide acute care under specialist supervision, are needed. Hospitals have logically increased the number of registrar positions to provide the middle-grade workforce they need.

Seeking accreditation from specialist colleges for these to be training positions increases the attractiveness of positions to doctors wanting to specialise, and ensures these doctors are supervised and are part of an educational program. So, the number of training positions has increased separately from consideration of the number of specialists needed.

From the perspective of filling rosters, accreditation can have downsides as colleges set limits for on-call and night duty out of concern for their trainees' welfare and education. Registrar positions in units or hospitals that do not seek accreditation, or cannot fulfil the requirements for accreditation, are called 'unaccredited registrar' or 'service registrar' positions. Unaccredited registrars usually perform the same tasks as training registrars, but without the same college requirements for supervision, education and limits on overtime and on-call work.

Thus the need for middle-grade workforce in acute care specialties has created two major issues, namely an increase in accredited training positions, which has led to an oversupply of specialists, and an increase in unaccredited registrars at risk of overwork, career uncertainty and professional isolation.

The increased numbers of junior doctors resulting from the expansion of medical school places has exacerbated this situation, by increasing competition and bottlenecks for training places. Junior doctors may reluctantly take service registrar positions hoping to gain a training position in time. This creates frustration and, for some, dissatisfaction at their career prospects.

The importance of service registrars in providing care is not always matched by recognition and respect by medical and other health professional colleagues, nor by professional or educational support, which puts them at greater risk of overuse and exploitation. For a health service, maintaining patient care and ensuring sufficient staff is the primary goal. This should be achieved while providing service registrars with a safe, structured and more supported place in the medical workforce.

Unaccredited or service registrars are not a homogenous group. Their interest in entering specialist training varies, as do their interests or preferences for working in specific specialties, or across hospital units as generalists. Doctors may not want to train as specialists for a number of reasons, including lifestyle, carer's responsibilities and wanting to combine medical work with other interests and opportunities. Their titles are similarly varied between states and territories, and public and private employers, and include hospitalist, service registrar and Career Medical Officer (CMO).

During consultations, three pathways for service registrar roles were discussed:

1. A junior middle-grade role (PGY3+) which was limited to three years – accredited prevocational role, with intention to pursue Fellowship.
2. An unlimited senior middle-grade role (PGY5+) without intention to pursue Fellowship.
3. A Fellow with an area of interest, an unlimited part-time role in addition to scope of practice – for example, a GP working under supervision in orthopaedic surgery, or a general paediatrician working as a CMO in a neonatal intensive care unit.

Consultation participants agreed on the importance of service registrars and the need to strengthen their roles to meet the service needs of hospitals, and to train the right number of specialists. Views differed on how much detail a national strategy should include on employment conditions that are determined by state and territory governments. There was consensus that the Strategy could support the collaborative development and implementation of a service registrar framework. A working group will develop this framework for trialling and evaluation in different jurisdictions. The framework will explore the following principles:

- Flexibility for doctors to enter training or other middle-grade hospital roles
- Recognition of prior learning for entry into training
- Provision of safe and collaborative rostering with clear job plans and expectations
- Options for flexible work arrangements where patient safety is maintained
- Safe supervision standards and supervision
- A reduction in inefficient administrative tasks currently performed by doctors in training.

Service registrars need an affirming name that reflects their importance in the health system. Possibilities include Clinical Associate and Senior Clinical Associate, which can be associated with a specialty or function, for example, Surgical Associate or Emergency Medicine Associate, and/or Hospitalist or Career Medical Officer.

Formalising roles, career pathways and progression opportunities, alongside positive titles for service registrars will provide them with a recognised and respected place in Australia's medical workforce. This will improve their wellbeing and job satisfaction. Some will choose this level of work long term, whereas others will select the value of worthwhile, supervised work as a short-term match with their other life commitments.

Evidence-based career choices

Highlighted across all of these areas of imbalance is a need for better access to information and support to enable doctors to plan their careers, so that they may choose to train in specialties that are undersupplied or practice in locations that are viable and sustainable.

Medical students and junior doctors report receiving career information informally. There is a lack of information on success rates of applications to specialist medical colleges, and often limited visibility of the route to Fellowship. There is also no simple way to compare specialty programs and future job prospects. There are nearly twice as many doctors enrolled in the basic training program of the Royal Australian College of Physicians as places available for advanced trainees; basic physician trainees pay training and exam fees and sit exams without knowing whether they will gain an advanced training post. As cited above, expansion in the numbers of accredited training places in other acute care disciplines, such as intensive care and emergency medicine, means that these registrars provide valuable service, and study and train in their specialty, but may not find employment once qualified.

New South Wales and Queensland are leading the way with their 'Map My Career Tool' and 'Medi-Nav' systems. Both tools are interactive and can be used to compare specialties based on supply and demand data, including data from the *National Health Workforce Data Set*, the Medical Education and Training Reports, specialist medical colleges and local recruitment campaigns. Having a national tool that synthesises data from multiple sources would enable junior doctors and medical students to make more informed career decisions, taking into consideration community need.

Improving the visibility of data from specialist medical colleges will allow students and junior doctors to make more informed career decisions. This should include information on specialty-specific competition, the number of opportunities for prevocational training rotations, the cost of training (both formal and informal), application success rates and job opportunities at the end of training.

Priority Two: Rebalance supply and distribution	
Action	**Detail**
5. Increase the number of trainees in undersupplied specialties and decrease the number of trainees in oversupplied specialties	5.1 Informed by the Data Strategy, and working collaboratively: • develop a 'traffic light' framework for diagnosing and intervening in areas of under and oversupply • develop a new methodology for determining training numbers and training locations.
	5.2 Provide wider access to career tools and individual career counselling to assist medical students and doctors to plan their careers to better match individual skills and attributes with workforce requirements.
	5.3 Build on existing investments and use funding levers, including public hospital employment positions and the Specialist Training Program, to move trainees into undersupplied specialties.
6. Grow the Aboriginal and Torres Strait Islander medical workforce	6.1 Work with Aboriginal and Torres Strait Islander communities and leaders to collaborate at every level of training to ensure that Aboriginal and Torres Strait Islander students, trainees and practitioners are supported to enter and complete training, supported and mentored by culturally safe supervisors, and have access to community-based support and mentoring by Elders.
	6.2 Devise alternative funding structures, such as part-time supernumerary posts, to enable students and trainees to fulfil professional, community and cultural obligations.
	6.3 Facilitate re-entry into medical school and medical careers. Note: Critical factors in informing further action in this area include improved data collection and visibility, training exit rates, workforce distribution and local community health needs as outlined in Priority One. Strategies to grow the Aboriginal and Torres Strait Islander medical workforce must be developed and led by Aboriginal and Torres Strait Islander students, doctors and their representative organisations in order to be successful.
7. Reduce barriers and improve incentives for doctors to work and train in rural and remote communities	7.1 Evaluate effectiveness of existing support structures for rural trainees.
	7.2 Build on innovative funding and incentive models for GPs in rural and remote areas in collaboration with regional networks and the National Rural Health Commissioner and the Primary Health Care 10 Year Plan.
8. Determine and monitor optimum use of locums	8.1 Using data gathered through the Data Strategy, determine a nationally agreed but locally responsive approach to the optimum use of locum workforce, taking account of patient, community and service needs.
9. Align migration and distribution regulation	9.1 Align migration and distribution levers across Commonwealth and jurisdictions to ensure that doctors entering the country from overseas are directed to provide services in those areas which are in most need.
10. Establish a nationally structured service registrar model for service delivery	10.1 Develop and implement a hospital service registrar framework that balances service delivery with specialty training needs, and describes the principles, accreditation standards and the most appropriate name for these roles. Note: This may include (where missing) devising suitable employment arrangements, clinical supervision and professional development for service registrars.

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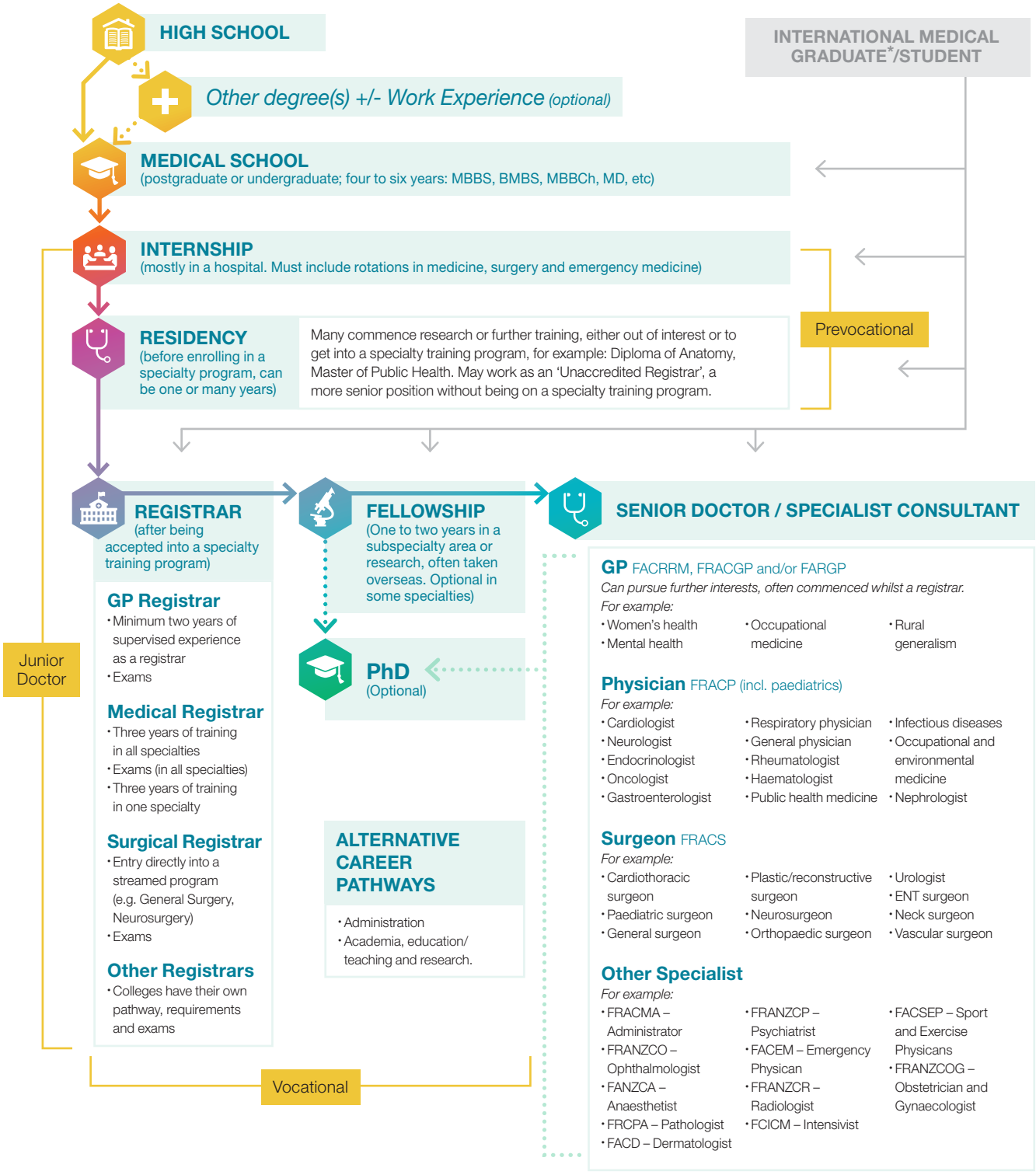
Priority Three: Reform the training pathways

Training to be a medical specialist requires a significant personal and health system investment. While there are many variables, it is estimated that the overall investment from student to qualified specialist is between approximately $1 million to $2.6 million.[†,44] It takes 10–20 years to progress through medical school, internship, residency, and then traineeship on a vocational training program to become a Fellow of an Australian specialist medical college. Public funding of medical education and training is a substantial and necessary investment in the provision of clinically, culturally safe and high-quality care for all Australians.[45] High-quality, supervised clinical experience is crucial to developing the skills and confidence to practise safely and independently and, in turn, to train and support others. Reforming training pathways is key to addressing longstanding and complex challenges that this Strategy aims to solve. Figure 13 illustrates the various stages of the training pathways.

[†] This figure was estimated by calculating the costs of a medical degree, intern training, length of time in practice, salary costs and ongoing training costs.

Figure 13: Australian medical training pathways

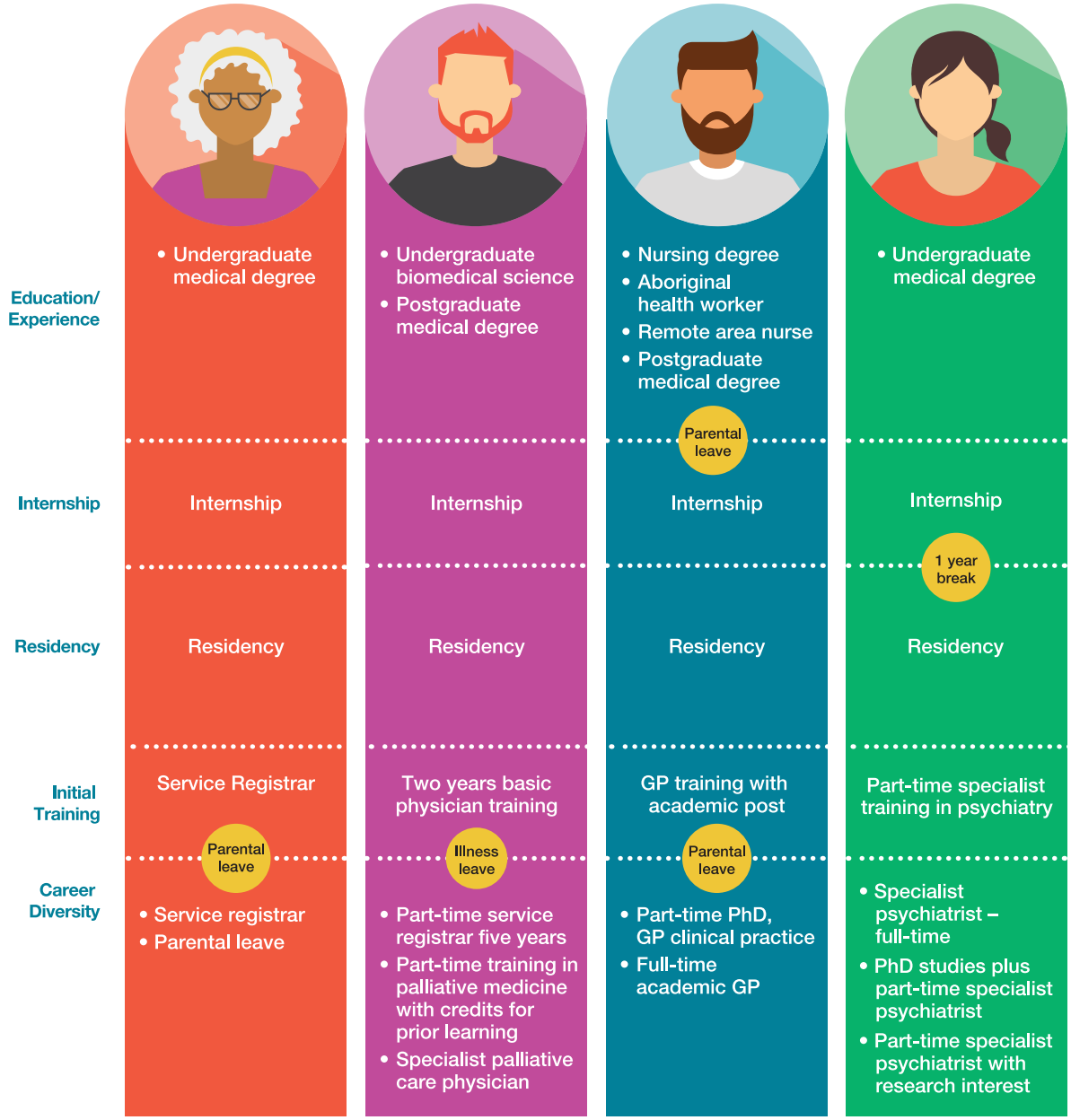


* International medical graduates' (IMGs) qualifications and experience determine their entry point into Australian medical training employment. IMGs who complete the Australian Medical Council requirements are equivalent to Australian graduates who gain general registration after internship.

Source: Adapted from Australian Medical Association (AMA), '*How to become a doctor*', AMA, n.d., accessed 14 May 2021. Australian Medical Council 'Overview of Assessment Pathways' https://www.amc.org.au/assessment/pathways/overview/ accessed 25 August 2021

The medical training and career pathways are long and complex. Individuals study and train for several years before reaching a point of career diversity.

Figure 14: Case study illustrating potential training and career pathways for doctors in Australia



The need to adapt training

Australian trained specialists are considered highly trained by international standards. However, consultations and the available literature identified challenges and areas for improvement at, and between, every level of training. This is unsurprising given that each training stage developed independently.[46] Experiences of unclear and fragmented training pathways were highlighted during consultations. Colleges vary in whether they control trainee numbers and placements. Many trainees advocate for more certainty once accepted into training, while others seek flexibility to choose their own path. Training is long by international comparisons, with doctors taking longer than previously to transit through the training pathways.[47]

While Aboriginal and Torres Strait Islander health is a national priority and requires an appropriately trained workforce, more work is required for mainstream structures to better understand and adapt to the specific workforce needs of Aboriginal and Torres Strait Islander populations within rural, remote and urban settings. Specific investment and research is required to understand and meet the differing needs within health settings. This should include understanding commonalities and differences in the skills, attributes and professional and social networks required for doctors to work successfully, enjoy their roles and remain in Aboriginal and Torres Strait Islander health settings as compared to rural health settings. Local cultural safety training and cultural mentoring is required for all health settings in all geographic locations.

Issues such as heavy workloads, and the level, degree and regularity of feedback provided by clinical supervisors, were reflected in the Medical Training Survey conducted by the Medical Board of Australia and Ahpra in 2020 and completed by over 21,000 junior doctors.[48] Increased focus on work-based assessment will reduce trainee stress regarding high-stakes exams and will support supervisors to provide regular, focused feedback for trainees.

Accreditation standards are modelled on metropolitan hospitals, where most non-GP specialist training occurs. These standards are not always evidence-based and need significant review and flexibility to reflect high-quality regional, rural and remote medical practice and the often greater opportunities for trainees in rural locations. This will enable more opportunities for trainees to train and provide services in rural areas.

Reform of the selection and distribution of trainees will provide more transparent and supportive training pathways, and should include a focus on elements which are more likely to influence choice in practice location, such as rural experience and origin.

Medical training in rural Australia

Rural clinical school and prevocational training

Recruiting more rural origin students into medicine, rural scholarships and positive learning experiences in regional medical schools and rural clinical schools has increased students' interest in working in rural areas.[49] Longer placements in rural areas have more impact.[50] The challenge is how to manage location after medical school. The majority of interns and prevocational and vocational training positions are in public hospitals in metropolitan areas, which means that rural interest and connections are frequently lost. Changes are needed to enable students who have an interest in rural practice to have a positive rural experience in PGY1 and PGY2, and then continue most of their vocational training in rural areas.

Distribution of vocational training places

Geographic distribution is also influenced by the location of vocational training. Regional and rural locations can and do provide valuable training in a range of specialties. However there continues to be an underutilisation of rural training opportunities and, where they do occur, it is often with trainees based in a metropolitan location undertaking a short-term rural rotation. Doctors who train in cities develop the skills, attributes, and professional and social networks needed for city medical practice. Those who train in rural and remote practice can gain a broader scope of practice, learn clinical courage to face unexpected challenges, learn how to access remote support, and better develop social connectedness to their community. Consequently, the distribution of training pathways should mirror the desired distribution of qualified doctors.

The Commonwealth Department of Health Distribution Working Group has considered which medical specialists can work to their full scope of practice in regional, rural and remote areas, recognising that not all specialties can practise outside metropolitan centres. This categorisation will be used as a basis for planning which specialties should deliver regional and rural training. See Appendix D for more information.

The intent is to increase training opportunities in rural locations that support trainees to complete the majority of their training in a rural location. The concept of 'flipping' the training model was raised consistently during consultations. In this approach, trainees spend most of their training time in regional or rural areas. As regional and rural registrars, they should have preferential access and support for any training required in metropolitan hospitals. This enables doctors to settle in a community when they are typically forming partnerships, building a family and a home. Their training pathway facilitates building connections to a place. An established training network in surgery demonstrates these outcomes in rural Victoria.

A number of specialist medical colleges are developing pathways to provide more rural training. One example of this is the Royal Australasian College of Surgeons Rural Committee and its development of a *Rural Health Equity Strategic Action Plan*, which outlines its rural health strategies *Represent for Rural, Select for Rural, Train for Rural, Retain for Rural and Collaborate for Rural.* The Australian General Practice Training program training requires over 50% of training to occur in rural areas. Further change is needed so that trainees who wish to remain in the same rural health and/or Aboriginal and Torres Strait Islander training posts are supported to do so in the interests of workforce retention and in delivering continuity of care. The Remote Vocational Training Scheme's Aboriginal Medical Service Stream is based on this model.

Research also shows that the successful completion of training by Aboriginal and Torres Strait Islander medical students is greatly impacted by a culturally safe training environment, adequate economic support and role models.[51]

Prioritising non-metropolitan training posts promotes the value of rural training, and recognises that regional, rural and remote communities have a greater need for doctors and are often unable to cover vacancies. The Strategy aims to stimulate rural training by developing and trialling networks that prioritise filling regional and rural positions. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) have successfully implemented this concept within their *Regional Integrated Training Program*, with applicants required to preference rural or regional positions before being selected for training. If the applicant accepts or declines an offer to train in their preferred rural or regional position, they automatically become ineligible for selection in additional rounds where metropolitan positions may be available. The prioritisation of Aboriginal and Torres Strait Islander applicants within this process will also be important in reaching workforce parity and contributing to equitable health and life outcomes and the cultural wellbeing of Aboriginal and Torres Strait Islander peoples.

To support an increase in regional and rural training, underlying structures and support systems need to change. There are opportunities to build regional training communities through collaboration across disciplines, between agencies, and in private, community and public health settings. A greater focus on the health and wellbeing of doctors and their social and cultural needs would support completion of training and a positive training experience. Supervisors in regional, rural and remote areas will require increased support to accommodate additional trainees without straining existing resources and supervision capacity. In areas that are already under resourced, investment may be required to increase the number of supervisors in order to enable training opportunities, for example, in the Aboriginal Community Controlled Health Sector.

Collaboratively set the number and distribution of education and training places

Medical School Places

The number of medical school places in Australian universities determines the extent to which Australia produces its own supply of doctors. Medical school places are offered to both Australian and international students. International students in many university courses are major contributors to the Australian economy. In medicine the equation has to balance the short and long-term health system costs and benefits with those of the University.

Internship is a prerequisite to registration as a doctor and survey data published in 2010 indicated over 80% of international students wanted an Australian internship.[52] More recent data shows that international students, who study in Australia, work in urban areas in similar ratios to domestic graduates despite policies to distribute these doctors to rural areas.[53] Clinical training of students is expensive and attempts to itemise it have struggled, with only broad estimations currently available. The number of international students who wish to stay in Australia is seen as a bonus or a cost, depending on the relative demand for doctors. In times of shortage, encouraging international students to remain in Australia provides a suitably trained workforce boost; in times of oversupply, these students use vital teaching time and facilities, and compete with domestic graduates for prevocational and vocational training positions. The impact of COVID-19 and the resultant loss of international full fee-paying students will need modelling to quantify the likely impact on workforce in the medium term.

As already noted the location of medical schools influences the distribution of the medical workforce, with more students who study rurally choosing to train and practise outside major cities.[54] Determining the number and location of Australia's medical school places is critical to the supply of the national medical workforce and should be a key priority for the data work and collaborative governance arrangements outlined in Priority One.

At present, the ability to regulate university places is limited. The Department of Education, Skills and Employment controls allocations of medical CSPs to 19 universities. The cost of medical degrees for students in CSPs is subsidised through the Commonwealth Grant Scheme. These universities are limited in the number of domestic full-fee paying places they can offer. Universities without an allocation of medical CSPs do not require approval to establish postgraduate medical courses, and so the number of full-fee paying medical school places in these courses is uncapped. From 2008 to 2011, compared with CSP students, single domestic full-fee paying students indicated a preference for work in urban locations and higher-income specialties, and were less likely to nominate as their first preference in-need specialties, specifically general practice.[55]

The long-term picture indicates periodic shifts between phases of containment and growth in Australian medical workforce supply policy.[56] Growth since 2000 has increased the number of medical schools and their intakes to reduce reliance on recruitment of IMGs and to address geographic maldistribution.[57] There were 1,030 graduates in 1990 and 3,655 in 2019.[58] There was strong support during consultations for regulation of both private and public medical school intakes.

Over time, the number and distribution of medical school places should be informed by data and evidence developed as part of the Data Strategy. This data and research must focus on supporting the successful graduation of Aboriginal and Torres Strait Islander doctors.

National pool of specialist training places

Doctors train as specialists while providing patient care and delivering services. Yet this inseparable link between service and learning is not consistently underpinned by coordinated training pathways that enable the right number of trainees to qualify, while simultaneously meeting the service delivery needs of patients and communities.

The distribution, funding and number of specialist training places is determined by a range of stakeholders, including state and territory governments, the Commonwealth, private providers and individual health services. Funding for hospital specialist training comes mainly from the employing jurisdictions, through Activity Based Funding and Teaching Training and Research block funding. The Australian Government funds approximately 7% of specialist training places, largely in regional, rural, remote and private facilities. The Specialist Training Program (STP) has increased the range of sites for specialist training but adds to the complexity of the training system and its administration. The impact of so many decision makers leads to low visibility of the big picture, with unintended impacts on training numbers and pathways.

Using supply and demand modelling from the Data Strategy, the number of trainees in each specialty that will be needed in Australia can be collated to form a 'virtual pool of training places'. This information could be used to influence the number of training positions for various specialties and establish a process to distribute trainees to where they are needed most, with an initial focus on regional, rural and remote areas, undersupplied specialties and Aboriginal and Torres Strait Islander trainees. Once there is certainty on numbers and distribution of trainees, the pool can be extended to the whole of the training pathway, including at the prevocational level.

Information on all training places would give jurisdictions further clarity regarding their current and predicted workforce and training capacity. This pool would require co-design with specialist medical colleges, jurisdictions and other stakeholders to ensure that it is effective and appropriate. Implementation would need to be staged given its complexity. The Australian Competition and Consumer Commission has advised that setting the numbers of trainees is not anti-competitive if it is clearly aligned with the public interest.

Once the pool of training places is established, the Australian Government funding that is currently provided to jurisdictions and specialist medical colleges through various agreements could be combined into a single funding source dedicated to specialist medical training.

Selection into training

Streamlining selection process

Most colleges select doctors into their training programs, using different processes and with timing varying between states. Similarly, the appointment of doctors into training positions by jurisdictions or hospital networks occurs at different times. Every year jurisdictions and colleges make job or training offers, only for candidates to receive subsequent offers that create uncertainty and a possible change of mind. This last-minute shuffling for places or jobs leads to uncertainty for trainees, who may have to move inter or intrastate, and for jurisdictions trying to provide medical services. Consultations, and the experience of COVID-19, supported a national, coordinated timeframe for recruitment and appointment processes.

It was evident that there could be more optimal, less onerous processes, if there was some national standardisation of the resume or curriculum vitae (CV) and references required for trainee candidates. Affirmative action by specialist medical colleges to select and support Aboriginal and Torres Strait Islander doctors and women through training should continue and be strengthened.

Unsuccessful candidates report not getting feedback on their applications or chances of future success. While this is not unusual across the labour market as a whole, the significant public investment in medical training warrants a more strategic approach.

Selection into training – academic stream

Academic research underpins and documents progress in medicine. All doctors must be able to appraise and implement research evidence. Some doctors will work with research teams and a few will forge a career as a clinical academic leading research. Building this practitioner researcher workforce is important for the long-term quality and safety of care and outcomes for patients and communities. There should be opportunities for clinicians to develop research skills at any stage of their career.

The current approach of using higher research degrees to select doctors into specialist training builds research capacity, but this can be lost if graduates' main interest is in clinical practice. If the focus is on gaining the qualification to satisfy specialty selection processes, the longer-term benefits to society may not be optimised.

Pathways into academic clinical medicine are currently disjointed, with some universities offering combined medical and PhD courses, but as with other specialties, there is a gap at prevocational training, and then varying ability to conduct research during specialist training.[59] For those genuinely interested in research careers, early preferential selection into clinical researcher pathways could nurture development of both clinical and research skills.[60] This would need to operate in parallel with the removal of perverse incentives in selection criteria for training, which provide undue weight on obtaining a PhD before specialty training.

Selection into training – practice stream

The intense competition for vocational training means junior doctors use their prevocational time to increase their chances of gaining selection into their specialty of choice. Junior doctors focus on specialisation work, pursuit of further qualifications, research and other courses, rather than developing a broad scope of practice. Colleges make CV scoring guides available for candidates and most give points for additional qualifications. During consultations, it was suggested that the cost and time burden of these qualifications is often not commensurate with their value, particularly if they don't contribute to success in the chosen specialty. The degree of competition for training places contributes to junior doctors' fatigue, burnout, anxiety and other mental health issues.

Another unintended consequence of selection processes is the requirement in some specialist colleges or specialist boards for large numbers of referees from the specialty or discipline. This potentially disadvantages junior doctors working in rural or regional hospitals where there are fewer specialists per discipline. Consequently, doctors are inclined to stay in urban areas to work with the requisite number of potential referees.

Selection into vocational training should focus on choosing the candidates with the best attributes for the specialty. One current example is the Australian College of Rural and Remote Medicine (ACRRM), which assesses candidates for rural competence through its accredited national selection process. In consultations, some procedural specialties noted that selection should assess hand-eye coordination, as well as the more generic skills required that could be tested via patient and colleague feedback. Validated instruments exist in other disciplines that could be trialled in medicine. Any such instruments and assessments would need to be co-designed with Aboriginal and Torres Strait Islander educators and doctors to ensure that cultural bias is addressed and that the additional skills and strengths of Aboriginal and Torres Strait Islander applicants can be suitably recognised.

Selection should also consider applicants' willingness to work where that specialty is needed. This may include weighting for the origin/place of residence of the doctor (for example, the Royal Australasian College of Surgeons has recently prioritised Western Australian trainees for local positions, to reduce the practice of Eastern seaboard trainees not staying in the state). A review of selection processes poses an opportunity to strengthen criteria relating to cultural safety.[61]

Rewarding rural experience

Rural and generalist prevocational experience provides an excellent basis for future specialty training and should be recognised in selection processes. During consultations in 2019, the Royal Australasian College of Surgeons was cited as planning to give the same selection points for a year of rural training as for holding a PhD. This recognition of rural experience is a shift that other colleges could consider. Affirmative action by specialist medical colleges to select Aboriginal and Torres Strait Islander doctors should continue and be supported.

Valuing rural practice by including more rural doctors on selection panels and in college decision making, making evidence-based changes in selection criteria for rural training, and linking with universities that have rural origin targets are practical changes that provide more opportunities for those with a genuine interest in rural practice.

Coordinated, visible and flexible training pathways

Some specialist training pathways are disjointed, leaving trainees trying to patch together a pathway that could include both rural and urban opportunities while frequently applying for jobs. Trainees are expected to move for work regardless of family/partner commitments. The current structure in Australia is perceived as offering participants little flexibility or stability, straining doctor wellbeing and providing poor visibility of future training locations.

A whole–of-training pathway view from medical school to Fellowship is required, with information provided to trainees on how to navigate it. Once on a program, pathways need to be supported, funded and made easier to transition from beginning to end. A doctor in training is a valuable investment for the whole community, so they should be well supported as they progress to Fellowship. Appropriate support will differ among doctors and their background and circumstances. Research has shown that there is a growing cohort of Aboriginal and Torres Strait Islander doctors not reaching Fellowship.[62] Options for how best to support this group to maintain them in the workforce and serving the community are needed.

Actions that assist in coordinating the training pathway to allow trainees to move around more readily and focus on the core training elements without having to constantly apply for training positions were strongly supported during consultations. While difficult to implement, having funding ‘follow the trainee’ may be one option that could reduce uncertainty and provide more flexibility in training.

The joint planning and advisory body outlined in Priority One will be able to identify the locations and specialties that will benefit from extra training places. The Commonwealth’s Specialist Training Program could be more targeted to fund such positions whilst encouraging states and territories to commit similar levels of funding. During consultations there was advocacy for a trial of funding Aboriginal and Torres Strait Islander trainees for the duration of their training, as a mechanism to improve completion rates. The concept of ‘funding following the trainee’ could also build on some existing approaches involving training networks that link training sites and support trainees to progress through their program.

Clinical supervision and accreditation

Clinical supervision is key to both learning and patient safety and this is reflected in the emphasis given to supervisor availability in specialist medical college accreditation standards. Consultations on the Strategy, and a related Department of Health project on accreditation standards, heard that the supervision standards are set according to the model, capability and capacity of metropolitan hospitals. This limits the ability of regional and rural hospitals to provide training, despite the evidence of excellent learning opportunities and varied caseload.

Accreditation of training posts is key to the location options for trainees. Requirements need to be reviewed to ensure that safe, high-quality, culturally safe regional, rural and remote training is accredited. Training sites would have flexibility to demonstrate how they will achieve the requisite standards, rather than meeting specifications that might have been designed for metropolitan-based posts. Technology and innovations, such as partial remote supervision, could support more flexible accreditation approaches.

Achieving more widespread distribution of trainees in regional, rural and remote areas to better reflect local capabilities, needs and systems will result in safer and more sustainable rural clinical services. Accreditation of specific sites for training of multiple stages of medicine, other health professions and for quality purposes, by broader accreditation agencies rather than entire training programs by a specific college, may provide leverage to better achieve the balance required.

Accreditation processes should be reviewed and consolidated to ensure that they can be conducted to maintain high standards while minimising the burden on hospitals and health services, which may be providing training opportunities for multiple specialty groups. Associated savings could be more directly invested in support for trainees and health services.

Assessment of trainees

Assessments should be relevant to the trainees' future scope of practice and likely service delivery. In the Medical Training Survey some trainees were concerned that the assessments did not necessarily reflect the curriculum. This is echoed in research undertaken by AIDA and James Cook University into the training experiences of Aboriginal and Torres Strait Islander doctors.[63]

High-stakes exams have been particularly affected by COVID-19. They are usually held in large testing centres or teaching hospitals. Examiners, trainees and patients travel intra and interstate. The ongoing pandemic and risk of an exam location becoming an infection hotspot is requiring specialist medical colleges to reconsider their approaches to assessment. This provides an opportunity to further increase the role of work-based assessments utilising direct observation of clinical practice and evaluation of exam formats that can be delivered remotely from the trainee and undertaken by suitable examiners experienced and familiar with the cultural and clinical nuances of various settings. This also provides an opportunity to progress recommendations of Aboriginal and Torres Strait Islander doctors to better recognise and value cultural knowledge, attributes and skill sets of Aboriginal and Torres Strait Islander doctors and clinicians working in Aboriginal health settings. For example, a cohort of Aboriginal doctors passed practice-based assessments for general practice Fellowship when offered that alternative to written exams.

Work-based assessment is being recognised internationally as an important complement to reliance on exams conducted at the end of training time. Concerns about the stress this created, and the validity of one-off assessments, led to the development of competency-based assessment of learning outcomes. This started in Canada and forms part of the assessment for some specialist medical colleges in Australia.

Programmatic assessment uses a combination of assessments during training that promote learning and help trainees to track and demonstrate their progress. Supervisors have a key role and will need further support and education to increase the amount of both formal and informal feedback to trainees.[64] At present there is more emphasis on trainees completing log books of procedures in tertiary units than in showing competence in working in rural or remote communities (except for ACRRM). This ACRRM example could be adopted by other specialist medical colleges, to give their Fellows the confidence that they can work in regional and rural areas.

A shift to work-based assessment and notions of entrustability will allow trainees to document their learning progressively. This will give flexibility for trainees who need to pause training or train part time.

The COVID-19 pandemic has shown that flexibility in medical training is possible. Specialist medical colleges adapted quickly to the changing environment, introducing elements of tele-supervision, online teaching and virtual assessment. Trainees have provided feedback that they would like these flexible training initiatives to continue. The Australian Medical Council (AMC) and Council of Presidents of Medical Colleges (CPMC) are documenting these changes and considering their validity and feasibility for the future.

Aboriginal and Torres Strait Islander health training

Medical students and doctors require clinical knowledge and skills to care for illnesses and issues in Aboriginal and Torres Strait Islander peoples whose prevalence and treatment varies from others in the community. Clinicians require an understanding of social and economic determinants of health and the impact of colonisation, dispossession and racism on access to appropriate health care and health outcomes. The social and cultural experiences and context of Aboriginal and Torres Strait Islander peoples across Australia is diverse. This diversity offers a lifetime of ongoing enriched professional development and learning opportunities for the medical workforce.

In addition, "health care science has been practised by Aboriginal and Torres Strait Islander peoples for millennia on this continent, and …Western health care and science has a lot to learn from the original human healers."[65]

An improved focus on Aboriginal and Torres Strait Islander health is required throughout training pathways and continuing professional development. A formalised and rigorous approach to training and assessing culturally safe practice, paired with cultural mentoring, will ensure that all doctors trained in Australia are safe and appropriate for the community.

These topics are covered in the AMC's accreditation standards for medical schools and by specialist medical colleges, but may require strengthening.

The following National Registration and Accreditation Scheme (NRAS) definition identifies the importance of cultural safety to all doctors, regardless of their training level:

> *Cultural safety is determined by Aboriginal and Torres Strait Islander individuals, families and communities. Culturally safe practise is the ongoing critical reflection of health practitioner knowledge, skills, attitudes, practising behaviours and power differentials in delivering safe, accessible and responsive health care free of racism.*[66]

Appendix E provides more information on cultural safety in practice.

While this Strategy aims to reduce Australia's reliance on IMGs in the longer term, there will always be a need to provide IMGs with cultural safety education and Aboriginal and Torres Strait Islander health training at whichever stage they enter the workforce.

Aboriginal and Torres Strait Islander medical workforce

The growth of the Aboriginal and Torres Strait Islander medical workforce is a key commitment in this Strategy and is vital to addressing health equity in Australia. Throughout implementation of this Strategy, further evidence and data will be collected to inform this priority. In addition, parties will collaborate and co-design programs with Aboriginal and Torres Strait Islander doctors and workforce organisations to ensure that this important cohort has greater visibility and emphasis in the medical workforce and national medical workforce planning.

Priority Three : Reform the training pathways	
Action	**Detail**
11. Increase specialist* training in regional, rural, remote and Aboriginal and Torres Strait Islander health settings to population parity	11.1 Reshape training programs to increase the number of training pathways and posts available in regional, rural and remote areas.
	11.2 Build training capacity in Aboriginal and Torres Strait Islander health training posts (across all locations).
	11.3 Rural and remote training posts to be prioritised, followed by regional positions and then metropolitan-based positions.
	11.4 Supervision models to better support rural training by: • providing supervisors with tailored support (such as education opportunities or financial support) to deliver quality training • supporting quality remote supervision to trainees in locations where there is limited specialist availability on-site and a need for that specialty • funding additional training places and supervision in Aboriginal Community Controlled Health Services.
	11.5 Establish, expand and formalise networked training (inreach and outreach) models that coordinate trainee distribution and create connections between metropolitan and regional health services, so that trainees can be based in regional and rural areas.
	11.6 College selection processes to continue to target skills and characteristics needed in each discipline, and include: • targeting rural origin students • rewarding rural and Aboriginal and Torres Strait Islander health experience • increasing rural representation on selection panels. * This applies to specialties that can be practised outside metropolitan areas, as per the Distribution Working Group paper at Appendix D.
12. Collaboratively set and fund the number and distribution of education and training places through a national pool	12.1 Establish a mechanism for regulating the impact of private and domestic international full-fee paying medical school places to reduce the potential oversupply of medical graduates.
	12.2 Consider establishing a national 'pool' of training places and an associated process to oversee training numbers and pathways, including distribution in regional, rural and remote locations, based on workforce supply needs. Aboriginal and Torres Strait Islander applicants will be prioritised in this pool and process.
	12.3 Target Commonwealth Specialist Training Program funding to specialties and locations according to workforce supply needs.
	12.4 Building on the training pool, consider combining specialist training funding from the Commonwealth, jurisdictions and other private sources. This may allow additional actions such as funding to 'follow the trainee', or targeting of funding to support priority workforce cohorts, such as Aboriginal and Torres Strait Islander trainees.

Priority Three : Reform the training pathways	
Action	**Detail**
13. Coordinated and visible training pathways	13.1 Develop a national portal containing information about cost of training, entry requirements, and total applicants versus number of successful applications. Highlight specific pathways for Aboriginal and Torres Strait Islander applicants including those with prior degrees and experience, e.g. Bachelor degree, qualifications in Aboriginal and Torres Strait Islander primary health care.
	13.2 Specialist medical colleges and jurisdictions to streamline and align trainee selection processes and provide feedback to unsuccessful applicants.
	13.3 Further develop pathways for Clinician Researcher trainees through a tailored program that could facilitate career progression and align with national research priorities.
14. Reform regulation of vocational training programs	14.1 The Australian Medical Council (AMC) and specialist medical colleges to continue to strengthen their focus on learning outcomes, including by reviewing assessment tools and promoting flexibility, quality and safety, while rewarding rural practice and experience.
	14.2 AMC and specialist medical colleges to continue to review and reform accreditation processes and requirements to enable flexibility in accreditation to consider local contexts and promote more regional and rural training.
15. Culturally safe training, training in cultural safety, and expertise in Aboriginal and Torres Strait Islander health	15.1 Support universal adoption and implementation of the Australian Health Practitioner Regulation Agency definition of cultural safety. Develop a tool to measure and assess safe practice.
	15.2 Standards for prevocational employment and training to include education in cultural safety and Aboriginal and Torres Strait Islander health, particularly for international medical graduates.

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Priority Four: Build the generalist capability of the medical workforce

An effective and efficient medical workforce requires a balance of doctors with broad and narrow scopes of practice across primary, secondary and tertiary care. Generalists' broad scope helps them to consider holistically the causes of illness, diagnostic and management options. Subspecialists develop expertise on particular aspects of care, research and technology. Patients with single or rare diseases can benefit from seeing subspecialists. Patients with undifferentiated illness, or with multiple conditions with multiple causes and treatment, benefit from seeing generalists who can help them navigate the competing priorities of their lives and illnesses.

The optimal balance between generalism and subspecialisation varies depending on geography, demographics, available resources and other epidemiological and system-related factors. In urban, and some larger regional areas, population numbers and caseload can support subspecialist practice. In rural areas doctors need to care for smaller populations, with a wider range of illnesses. For patients, the potential benefit of subspecialist care has to be offset against the cost and time taken to access that care. Increasing the number of generalists can increase the flexibility and mobility of the medical workforce as new diseases, treatments and models of care emerge.

Despite some progress in recognising the value of generalism in rural and remote areas, Australian students and doctors are foregoing general practitioner and generalist careers in favour of other specialties and subspecialisation. Governments, professional bodies, local organisations and educators must work together to change remuneration, training pathways and health systems to create a balanced medical workforce of generalists and subspecialists.

The need for a generalist medical workforce

Health systems that provide strong primary care are more cost-effective and are associated with a more equitable distribution of health care across populations.[67] Generalists are more likely to consider a broader differential diagnosis (rather than relying on specialty-specific pattern recognition) for patients with undifferentiated illness, potentially avoiding a delayed diagnosis. The continuity of care that can be provided by GPs is also associated with reduced hospital admissions and increased life expectancy.[68] Patient care is becoming increasingly fragmented between multiple subspecialists working in clinical silos.

Work from the Australian Commission on Safety and Quality in Health Care shows an association between oversupply of specialists and higher rates of clinical service.[69] Examples in cardiology and gastroenterology that link doctor supply and services suggest there is supplier-induced demand.[70] Subspecialisation can create workforce rigidity. There are higher costs and staffing challenges due to more subspecialists being required to cover the full range of service needs. Subspecialists and other specialists may be less able to adjust their scope of practice to meet changing service needs, which reduces the ability to redeploy doctors at a local or system level. This phenomenon was seen during the COVID-19 pandemic.

Demand for services is 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. Currently, Australians over 65 years of age represent 15% of the total population. By 2057 the proportion is projected to reach 22% and, by 2097, it will reach 25%.[71] This trend is accelerating the shift from acute to chronic and comorbid conditions. For instance, four in five people aged over 65 years have one or more chronic conditions compared to one in nine across the general population.[72] Generalist skills of clinical coordination and holistic patient care over time are vital when working with an increasingly comorbid and ageing population.

The holistic nature of general practice and integration of GPs within multidisciplinary teams is extremely important in Aboriginal and Torres Strait Islander community settings. Furthermore, the social and cultural determinants of health have a stronger focus. Whilst the burden of disease for the general population in rural and remote areas is great, the need for highly skilled GPs in Aboriginal and Torres Strait Islander community settings is arguably even greater.

Changing needs as generalists develop their skills

In the early years of medical training, all medical students and interns are effectively generalists. They are exposed to a broad range of clinical skills and knowledge in a highly supportive and safe environment, with limited autonomy and responsibility.

In the later prevocational years, as the level of clinical skills increases, a greater degree of autonomy and responsibility is required. Depending on the environment within which the doctor works, there may be high or low support for that role and the scope it requires. A career medical officer in a hospital where there are many subspecialists available will have a different experience compared to a rural generalist working in an isolated location with little support. In order to improve rural access issues, the number of practitioners that are capable and confident to work in low-support, high-responsibility generalist roles must be increased.

Definitions of generalists

There are different interpretations of the terms generalist and generalism. This section defines how these terms are used in this Strategy.

Generalist early career doctors

Prior to specialist training all early career doctors are required to complete internship and gain prevocational generalist experience. Some doctors choose to continue with generalist work in hospitals, while others move into specialist training.

Generalist specialists

Fellows of specialist medical colleges are registered as specialists with the Medical Board of Australia. Generalist specialists work across the full scope of their registered medical specialty. For example, generalist cardiologists care for patients with any heart condition, whereas subspecialist electrophysiologists care for patients with rhythm disorders. Generalist obstetricians and gynaecologists will care for pregnant women, intervene at delivery if needed, and provide gynaecological services such as colposcopy and managing prolapse, whereas gynae-oncologists care for women with gynaecological cancer. In some specialties, such as general medicine, generalism has a specific training pathway.

General practitioners

GPs provide continuity of primary care through the lifespan, becoming experts in their patients and their communities. They provide preventive and acute care, manage chronic disease and end-of-life care.

> *"General practitioners see it all; the widest variety of conditions and the greatest range of severity in patients of all ages, ethnicities and backgrounds. They are medical detectives, trained to figure out what might be going wrong, how to treat it and who patients should see."*[73]

Rural generalists

Rural generalists are a subset of GPs. The Collingrove definition of rural generalism was agreed on by the RACGP and ACRRM in 2018:

> *"A Rural Generalist is a doctor who is trained to meet the specific current and future health care needs of Australian rural and remote communities, in a sustainable and cost-effective way, by providing both comprehensive general practice and emergency care and required components of other medical specialty care in hospital and community settings as part of a rural health care team."*[74]

The following table highlights some key differences in the skills of generalists and specialists and how their medical practice contributes to health care delivery.

Table 5: The differences between generalist and specialist clinical contexts

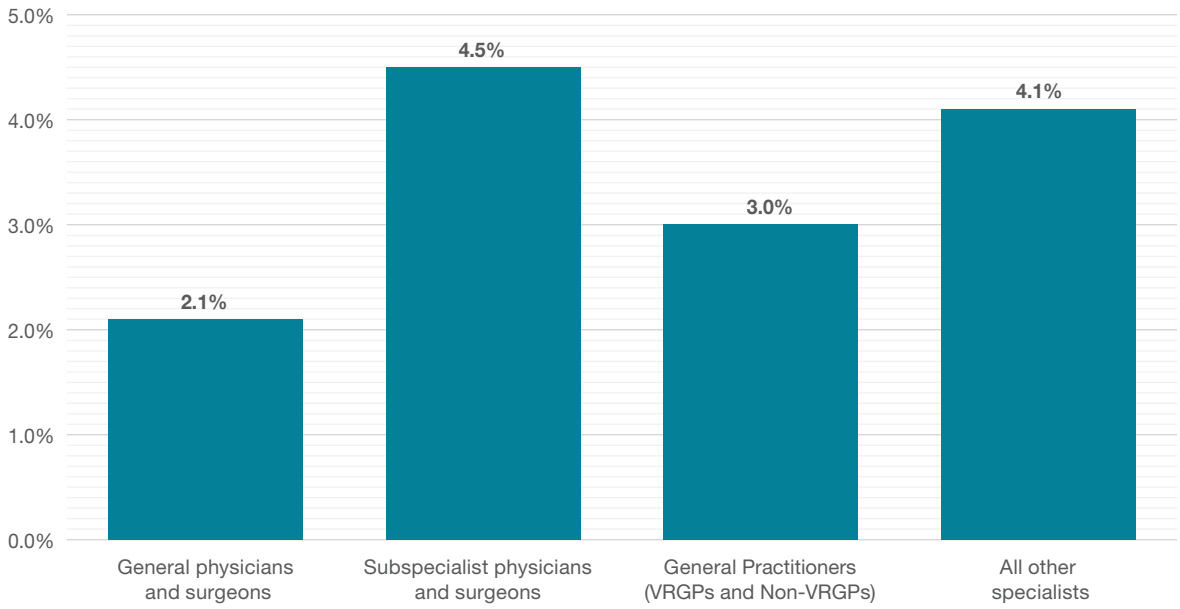
A generalist must develop the skills to	A specialist must develop the skills to
Tolerate uncertainty – generalists must manage a large proportion of patients with undifferentiated symptoms, including those who present early in the course of illness, those with evolving conditions, or those whose symptoms do not form a characteristic pattern of disease.	**Reduce uncertainty** – specialists are expected to discover a diagnosis and to investigate until this is achieved. If they are unable to identify a diagnosis within their own specialty, they are usually expected to discharge the patient or suggest referral on to another specialist, rather than manage the diagnostic uncertainty.
Explore probability – generalists see patients from an unscreened population with a relatively low incidence of disease. They require highly developed diagnostic skills, including recognition of common conditions and awareness of the limits of their knowledge. Their decisions are based on the epidemiology of the community and the consequent probability that the patient's symptoms are medically significant.	**Explore possibility** – specialists see a preselected population of patients with a relatively high incidence of serious disease. They require expert knowledge of the rare and esoteric conditions that are relatively more likely to be the cause of the problem in this population.
Marginalise danger – a key skill of a general practitioner is to recognise and act on potential dangers to patients and communities even when there is diagnostic uncertainty; this often requires referring the patient or initiating treatment before a diagnosis has been established (for example, in a case of suspected meningitis or cancer).	**Marginalise error** – a specialist must ensure that they reach an accurate diagnosis to guide treatment for the patient, in order to enable a successful outcome.

Source: Adapted from the Royal College of General Practitioners (RCGPUK), *Preparing the future GP: the case for enhanced GP training*, RACGPUK, 2012, accessed 8 October 2020.

The changing balance of generalists, non-GP specialists and subspecialists

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 4.5% per year, while the number of general physicians and surgeons has increased by just 2.1% (See Figure 15).‡

Figure 15: Compound annual growth rates of subspecialists compared to other specialists



Source: Adapted from Australian Department of Health, National Health Workforce Data Set (NHWDS) 2019 [data set], Australian Government, 2021, accessed 14 July 2021

There were 37,472 doctors working as GPs in primary care across Australia in 2019 (including vocationally registered GPs, GP trainees and non-vocationally registered GPs). The number of junior doctors applying for fully funded general practice training places has declined over the last four years, from 2,301 places in 2015 to 1,329 places in 2020.§ Similarly there has been an overall decline in the number of medical students expressing interest in a general practice career at graduation. In 2015, 17.8% of medical students identified general practice as their preferred specialty for future practice compared to 15.2% in 2019.[75] This trend needs to be reversed and a greater emphasis placed on growing general practice and generalist practitioners across the medical workforce.

Data collected by AIDA shows a very high proportion of GPs within the growing cohort of Aboriginal and Torres Strait Islander doctors. Of the 108 Aboriginal and Torres Strait Islander medical specialists identified by colleges in March 2020, 63% were GPs. At the same time GP registrars made up 104, or 56%, of the total 187 Aboriginal and Torres Strait Islander trainees.[76]

General practice is the most accessed form of health care in Australia, with almost 90% of the population seeing a GP each year.[77] Despite being so heavily accessed, general practice services represent approximately 7.7% of total government expenditure on health, receiving $9.8 billion in spending in 2018–2019.[78] This is equivalent to $391 per person annually. In 2017–2018, approximately 748,000 (7%) of all hospitalisations were classified as potentially preventable.[79]

‡ 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. 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).

§ These applications refer to Commonwealth-funded programs only, including the Australian General Practice Training Program.

Specialisation and subspecialisation

The causes of the imbalance between subspecialist and generalist skills are multifactorial but can be grouped into structural, market and individual clinician drivers (see Table 6).

Table 6: Drivers of non-GP specialisation and subspecialisation

Category	Drivers
Structural	• Narrowing professional and regulatory scopes of practice • Limited or negative general practice and generalist exposure in medical education and training • Selection into training programs • Narrow scope clinical Fellowships and subspecialty training.
Market	• Remuneration and the MBS fee-for-service model • Employment challenges in the private and public sector • Consumer demand.
Individual clinician	• Poor support and career progression for generalists • Prestige perceptions • Medico-legal risk • Changing demographics and socio-economic context.

Financial rewards

The higher MBS rebates for procedural and some subspecialist services, together with patients' willingness to pay more for those medical practitioners they perceive as having special expertise, creates incentives towards subspecialisation. Anecdotally, GPs report that the higher rebates available for skin cancer excision have led to them undertaking extra qualifications in skin cancer medicine and ceasing to deliver general practice services. Financial benefits are coupled with lower stress away from the high cognitive and emotional demands of 10–15 consultations per session with undifferentiated, acute and chronic disease and disability across the full breadth of medicine. Similarly, in-hospital practice subspecialist care can yield higher financial rewards at the same time as reducing a doctors' suitability for working on-call in acute care and reducing their out-of-hours workload.

The Queensland Rural Generalist program remunerates generalists at public hospital specialist rates. This dedicated and supportive educational program, coupled with competitive salaries, means that the program is often oversubscribed.[80] However many doctors then remain in the hospitals where they can continue to be paid as specialists, rather than combining hospital and community general practice work.

There was a strong perception in consultations that the health system inadequately rewards the investigative and adaptive leadership skills of generalist clinicians who help patients navigate uncertainty, relative to the procedural or more technical skills of those who treat already diagnosed conditions. Health systems must rebalance and reward generalism and primary care to maintain sustainability.

Potential candidates for GP training argue that they cannot afford the decrease in income when starting training, which often requires a move from a hospital where they receive penalty rates for shiftwork and overtime. Alongside rebalanced financing, recruitment to general practice would benefit from trainees having access to employment benefits such as transferrable and preserved parental, sick, long-service and holiday leave.

Doctors on the whole are much more highly paid than others in the workforce. Although difficult, it will be necessary to consider how to redistribute public funding from higher paid specialties to lower paid specialties over time, to redress the current incentives towards non-GP specialties and subspecialisation in the health system.

Positive generalist experiences throughout medical training

The proximity of most universities to large, inner-city tertiary hospitals, means medical students tend to be taught by and see non-GP and subspecialty doctors at work throughout training. Placements with generalist or primary care doctors are less common, despite GPs accounting for 29.8% of the medical workforce.[81] Consequently, students can view non-GP specialties as more prestigious, particularly as mentors encourage them – overtly or otherwise – to pursue a career in their discipline.

Students who attend universities with a greater focus on primary care in the curriculum are more likely to choose general practice on graduation. University students graduating with long periods of rural training are more likely to work in rural areas.[82] Exposure to the generalist nature of rural practice is occurring via rural clinical schools, with the opportunity expanding to entire degrees, and increasing emphasis on integration with later stages of training.

The Rural Junior Doctor Training Innovation Fund builds on state and territory networks to provide around 240 rotations in general practice for junior doctors each year. Otherwise, the early years of work as a doctor are spent almost entirely providing acute hospital care. Consistent with the findings of the National Framework for Medical Internship Review, this Strategy recommends increasing the number and duration of junior doctor placements in general practice.

Consolidation of junior doctors' generalist skills

As outlined in Priority Three, competition for many non-GP specialty training programs has intensified with the increased number of medical graduates. Non-GP specialist medical colleges are using specialty-specific clinical experience, multiple references from specialists in the same specialty, and research or higher degrees to differentiate between multiple excellent candidates. As a result, medical students and junior doctors are targeting their efforts and studies towards a specific specialty at the expense of gaining experience across a range of specialties and developing broad, generalist skills. This can contribute to job vacancies at the PGY2 and PGY3 level, as junior doctors focus on research and obtaining other qualifications to maximise selection into a training position. Health services often fill these vacancies with IMGs. This overseas recruitment subsequently creates further competition for training places.

During consultations there was extensive discussion regarding the timing of entry into specialist training. Commencement of specialist training at PGY3 would help consolidation of generalist competencies, and give junior doctors an additional year of professional and personal experience, to be certain they are making the right career-defining decisions. On the other hand, undersupply in generalist specialties, such as rural generalism and general practice, could be addressed more quickly if doctors entered training earlier.

The Australian Medical Council (AMC) is developing a two-year transition to practice framework for prevocational medical training, based on its 2019–2021 review of the *National Framework for Medical Internship (2014)*. This is planned for implementation from 2023, and will use Entrustable Professional Activities (EPA) documented in an e-portfolio. The Strategy supports this work and the principle that specialist training commences after the two-year transition period. The Strategy proposes that specialist medical colleges reduce the length of training by recognising prior learning where relevant.

Developing and maintaining generalist specialist skills during specialty training

Consultation participants reported that new Fellows are reluctant to take non-GP specialist roles that require them to cover the full breadth of their specialty as consultants. In surgical specialties, for example, there are anecdotal reports that newly qualified surgeons lack recent experience in the range and volume of procedures needed for generalist practice. This needs to be addressed so that new Fellows can confidently work in regional and rural areas, where their scope will be broad. This requires programs that develop and maintain trainees' generalist skills.

Fellowships and subspecialist training

Most non-GP specialist training programs include a final stage of training, referred to as a Fellowship that enables doctors to acquire and practise a subspecialist interest. For some colleges this is a post-specialist qualification. In others it is after completion of the high-stakes examinations, but before exiting the training program with a licence for unsupervised practice. Fellowships can be for one or two years and may be taken overseas to ensure exposure to a high volume of cases and cutting-edge expertise. In turn, Australia hosts international Fellows, but their number and impact on the training of domestic trainees is undocumented.

On commencing as a specialist, doctors who have undertaken these Fellowships have often had a one- to two-year gap from generalist practice in their discipline. This can erode their confidence and their willingness to assume a new level of responsibility across this broad scope of practice as a consultant in an area in which they now feel out of practice.

Facing oversupply and workforce saturation in cities, doctors are forced to differentiate themselves and 'find a niche' in which to earn recognition and higher remuneration. This can mean subspecialising in a limited area of practice. The balance between Fellowships that enable future specialists to learn from the best internationally and to contribute to the high quality of care delivered on their return, and the effect of higher costs and loss of generalist skills needs evaluation. This Strategy will develop mechanisms to maintain generalist skills during Fellowships.

Maintenance of generalist skills

Medical specialists are responsible for maintaining currency of their skills through continuing professional development (CPD) accredited by specialist medical colleges under a points system. During a professional career, it can be possible to gain sufficient CPD points through a narrow range of activities. This Strategy will encourage colleges and societies to provide and promote programs that ensure their members cover a range of generalist topics as well as subspecialist areas of expertise.

Supporting more generalist care through enhanced digital platforms

Computerised clinical decision support systems can support more health care being provided by generalists, augmenting knowledge in complex decision making.

Decision support systems have been in use since the 1980s, but are now developing rapidly, and have been recommended for use in Australia for some areas of practice, such as diagnostic medicine, by the Medicare Benefits Schedule Review Taskforce.

This is an important area of evolving digital capability that can harness software systems to support doctors to more easily keep up with developing areas of clinical practice (such as treatment pathways for certain types of cancers, or new medicines available to treat diabetes).

Clinical software has already been used to reduce workload for doctors and improve medicines safety outcomes for patients and communities through updates to prescribing software to support active ingredient prescribing. This came into effect under PBS legislation from 1 February 2021.

Upgrading and developing clinical software to promote interoperability between primary care, hospital and aged care clinical information systems is a continuing area of focus for the Australian Digital Health Agency and all governments. Governments are also considering the software conformance and regulatory frameworks to enhance cybersecurity across the health system.

Under this Strategy, stakeholders will collaborate to consider where incorporating decision support software into clinical systems may assist generalists to practise safely with expanded scope, and to ensure the development of software and algorithms that accurately reflect safe, evidence-based clinical guidelines and treatment pathways, and continuing referral of patients to more specialised care when appropriate.

Priority Four : Build the generalist capability of the medical workforce	
Action	**Detail**
16. Support broader education and experience of generalist skills, and rural and remote clinical practice, during medical school and on training programs	16.1 Universities to ensure GPs and other generalist specialists have significant roles in all aspects of medical course design, delivery and assessment.
	16.2 The Australian Medical Council (AMC) to work with universities and specialist medical colleges to: • ensure that general practice and generalist skills are taught, assessed and promoted throughout medical degrees • ensure that Aboriginal and Torres Strait Islander health content and cultural safety forms part of generalist training.
	16.3 Universities, medical colleges and states and territories to quarantine a proportion of training placements (based on demand and supply analysis) for students and trainees who: • are identified as being on the generalist career pathway • have a strong, long-term interest in working in rural and remote settings.
	16.4 Continue to progress the AMC's work to implement a two-year transition to practice for interns to increase early career generalist experience.
17. Require doctors to develop and demonstrate generalist medical skills prior to entering specialty training	17.1 Build specialist training on generalist foundations by: • reforming the trainee selection process to include consideration and assessment of generalist skills prior to acceptance onto training programs • removing expectations that narrowly focused academic or research qualifications will support trainee selection • commencing specialist training following completion of the two-year transition to practice.
18. Support informed decision making for generalist career pathways and encourage rewarding of generalist experience in trainee selection	18.1 Universities and specialist colleges to collaboratively develop mechanisms, such as career tools and career counselling, to steer students and trainees towards generalist career options.
	18.2 Applicants for training positions to be examined for demonstrated strong generalist experience and capabilities, as well as demonstrated skills and aptitudes for clinical practice in the discipline.
	18.3 Promote generalism as an attractive career path and work collaboratively to reduce the stigma around generalist careers.
19. Fellows to be supported to exit training with a broad scope of practice	19.1 Specialist colleges to evaluate the workforce outcomes of their training programs with final year trainees and recent Fellows. Relevant workforce outcomes include specialist distribution, and the ability to work in jobs requiring the full scope of their discipline.
	19.2 Medical specialists are responsible for maintaining currency of their skills through continuing professional development (CPD) accredited by specialist medical colleges. It is possible to maintain specialist registration through a narrow range of activities. This Strategy will encourage specialists and organisations that provide CPD to cover generalist topics as well as subspecialist areas of expertise.
	19.3 Embed assessment of cultural safety in all areas of generalist training and assessment.

Priority Four : Build the generalist capability of the medical workforce	
Action	**Detail**
20. Implement and leverage innovation from the National Rural Generalist Pathway	20.1 Continue to implement the National Rural Generalist Pathway, while supporting shared learning and generalist networks to increase communities of practice.
	20.2 Leverage innovations from the National Rural Generalist Pathway that can be adapted to other medical specialties where appropriate.
	20.3 Explore and implement meaningful ways of recognising high-performing generalist practitioners across the medical workforce.
21. Implement improved computerised clinical decision support systems	21.1 Incorporate decision support software into clinical systems to specifically assist generalists to practise safely with expanded scope.

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Priority Five: Build a flexible and responsive medical workforce

Work-life balance, career mobility and flexibility and support for wellbeing are high priority issues for most professionals, and doctors are no different. There are a number of factors that make the achievement of these objectives more difficult.

This Strategy targets initiatives to improve the working lives of doctors, including supporting effective and sustainable supply to reduce the pressure on the existing medical workforce, strengthening rural pathways to build sustainable clinical teams throughout Australia, improving visibility of the training and career pathways and supporting generalists to work across their full scope of practice. This priority underpins these initiatives by outlining specific work that could enhance the ability for doctors to work flexibly and to feel supported in their workplace and in their careers.

In consultations, career mobility was viewed as particularly important, with more doctors looking for non-linear pathways to work across different disciplines, settings and geographies. Medical training was criticised for being too much like a pipeline, with rigid requirements for entry and exit, too many risks of blockages and extended delays in progression. There was acknowledgement of entrenched gender equity issues in some specialties.

The nature of medical practice, including the requirement to respond to patient needs at unpredictable hours, can be a barrier to work-life balance and to the implementation of more flexible training approaches. The realities of life and death, variable quality of leadership, negative workplace cultures and professional isolation, especially for doctors working in rural or remote locations, can impact on doctor health and social and emotional wellbeing.

Virtual means of work and communication have created more flexibility in how people train and work across industries worldwide. The medical workforce requires adaptable structures to do the same. Responses to COVID-19 have demonstrated that change can happen quickly when required. These changes need to be evaluated and embedded where they can in order to enhance the support that is provided to the medical workforce to work safely and flexibly.

The need for more support and flexibility

More flexible career pathways will recognise that doctors' lives and interests change, allow them to decrease or increase their work hours, and progressively accumulate evidence of their experience and skills that can be recognised and transferred into different fields of practice. A more adaptable system will allow Australia to ensure a sustainable medical workforce where and when it is needed, and individual flexibility will improve career mobility, job satisfaction and the blend between professional and personal responsibilities.

Support for work-life balance is important to reduce the chances of burnout, staff dissatisfaction and high turnover. International evidence also suggests a linear relationship between working more hours and having higher rates of anxiety, depression and psychological distress. With Australian doctors falling victim to suicide at higher rates than the general population, greater support and flexibility is required to create systemic change in this space.

Healthy workplaces mean that doctors can provide higher quality care when they are well, they make fewer clinical errors and have more empathy for their colleagues and patients. A well medical workforce also helps to create a more sustainable, efficient and cost-effective health system through increased job satisfaction, less turnover and less extended personal leave.

Professional flexibility – training pathways

The overwhelming response from consultations was that doctors are expecting more opportunities to pursue non-linear careers and be able to retrain across specialties. Currently there are few mechanisms for specialist medical colleges to recognise the prior experience of doctors switching between specialties. Similarly, those who have taken service registrar or career medical officer positions to fit around family or other commitments struggle to get onto training programs once they are able to devote more time to their careers. Doctors who have completed several years of training but are unsuccessful in the final exams may exit the specialty without any evidence of the experience gained – this becomes a loss to their career and the health system.

The opportunity for specialist colleges to use programmatic assessment through training as outlined under Priority Three aims to reduce the reliance on high-stakes, single assessments. Specialist colleges can map their current assessments of competency against each other to recognise prior learning and assessment when trainees move between training programs. This would also assist with trainees re-entering programs after having a break, whether for professional or personal reasons. The modular approach of graduate certificate, diploma or advanced diploma used by the Royal Australian College of Obstetricians and Gynaecologists (RANZCOG) is an example that could be adopted more broadly. Doctors with each qualification have a recognised scope of practice that can be used for employers and hospital credentialing committees. This model could be used in other specialties for ongoing or surge workforce. For example, the public health physician workforce could be boosted with GPs trained to diploma level. This Strategy will facilitate greater effort to develop the means by which recognition of prior learning can occur.

Many Aboriginal and Torres Strait Islander doctors enter the medical workforce later in their career from other health disciplines. The Leaders in Indigenous Medical Education Network has a searchable database detailing alternate ways to enter medicine for Aboriginal and Torres Strait Islander peoples. Building on existing resources will support these lateral moves and assist in growing the Aboriginal and Torres Strait Islander medical workforce.[83]

Doctors who are supported to maintain a work-life balance and to have career mobility and flexibility generally have higher job satisfaction, will stay in the sector for longer and make less clinical errors.[84]

Medical education and training during COVID-19

COVID-19 has highlighted some of the rigidities and potential blocks in the current training pipeline from medical school to prevocational and specialist training. For example, selection systems have relied on facetoface interviews, there are mandatory rotations in subspecialist disciplines (which may require trainees to cross state borders) and assessments occur in major urban centres, not in the workplace.

Specialist medical colleges have adapted their training programs and assessments in response to COVID-19 requirements for limiting face-to-face contact, social distancing, and travel restrictions. Government departments have modified some medical workforce requirements, and accreditation bodies have implemented flexibility in accreditation of specialist medical programs and the interpretation of accreditation standards.

A review of the impacts of COVID-19 will highlight the strengths and weaknesses of the structure and composition of the workforce. The lessons learnt will enable further refinement of changes that could positively impact the way doctors are trained and provide care.

Digital health to provide clinical supervision and reduce professional isolation

The use of additional digital resources to draw upon and connect with colleagues can reduce professional and personal isolation and aid in the provision of safe quality care, as was shown during COVID-19. Digital health services will support flexible working arrangements, and can be used between doctors to provide professional clinical support and supervision, which could help to increase the number of doctors who decide to move to rural or remote areas.[85] While this is occurring organically in some areas, action is needed to promote and formalise networks of support between clinicians across geographies.

Flexibility in employment practices

While many organisations have adopted policies in support of flexible work, education and training arrangements, this is not always easy to implement. The needs of the employer and the community must balance the desire for workplace flexibility with the demands of safe and effective service delivery and resource constraints. The AMA notes that despite the difficulty, accessing flexible work and training arrangements is important, and would promote equal opportunity and diversity, enhance the participation of doctors in the workforce and support the delivery of high-quality medical care and training.[86] Flexible working arrangements are also linked to improved productivity and increased engagement and performance.[87]

Recognition of the benefits of flexible working arrangements is only slowly leading to change in medical culture, training and employment practices. Positive trends and gaps can be identified from workforce surveys and other data to inform future approaches to flexible working arrangements.

Portability and uniformity of benefits and employment arrangements

The complex structure of the health system means that each state and territory, as well as individual practices, employ doctors independently. This means that doctors who move between public and private health services, settings or jurisdictions often do not retain their employment benefits, leave is not accrued, and continuity of service is not recognised. The lack of portable entitlements, or loss of accrued entitlements, is frequently cited by stakeholders as a barrier to taking up rural practice and GP training, particularly for doctors who transition from salaried hospital posts into private general practice.

Removing barriers relating to employment conditions that may discourage doctors from entering general practice training or practising in rural and remote communities has the potential to improve recruitment and retention of doctors into training programs, particularly in regional, rural and remote areas, as well as improving access for patients to quality primary care services. A range of options to redesign general practice training employment arrangements are currently being examined in the context of general practice training reform and transition to a college-led model of training.

Trials are underway to inform this longer-term work and test the feasibility of options, while also minimising the risk of unintended outcomes on GP registrars, practices, communities and patients. In one flexible employment model in New South Wales, participating general practice trainees will be employed by the Local Health District for the period of their training and will preserve and maintain employment terms and conditions when moving between hospital and community settings. Another looks at a targeted recruitment and wage equalisation model for select remote locations. A number of organisations and regions have expressed interest in hosting similar trials. This Strategy will investigate flexible employment models as a mechanism to remove the disincentives to work across hospital and community settings and increase the attractiveness of regional and rural practice.

Strengthening workplace culture

Work culture of a specialty discipline remains a key determinant that influences students' preferred future specialty.[88] Recruitment and employment models reflect the need for medical workforce during all hours and the critical mass required to accommodate this. This also needs to be balanced with changing attitudes and expectations of the modern medical workforce. In consultations, the shortcomings of many current systems were raised with concerns about rigid and restrictive work practices.

Investment in specific leadership and managerial skills training will support workplaces to foster a positive professional culture between administrators and medical professionals.

There is an opportunity to review the contextual situations that result in high staff turnover, particularly in small rural and remote hospitals and health services, to determine the factors that may result in continued loss of staff. Innovative recruitment and employment models could positively impact the sustainability of practices and health services in the areas most needed. This Strategy will examine the factors that lead to high turnover, including bullying and harassment, for the development of a framework that could assist in recognising the supports that are needed by medical workforces in high turnover settings.

Prevocational training often occurs when trainees are looking to settle down and start a family. Five per cent of medical school graduates have children and the proportion of graduates relying on family support is gradually increasing.[89] It is also likely that medical specialties with a culture that does not support flexible working arrangements have lower participation rates of women training and working.[90] Flexibility implemented in training pathways needs to promote gender equity, particularly when considering parental leave and compulsory rotations.

Priority Five: Build a responsive and flexible workforce	
Action	**Details**
22. Review the impact of changes introduced during COVID-19, for longer term implementation in medical training and practice	22.1 Review the impacts of the pandemic on the medical workforce, focusing particularly on lessons for responding to any future public health crisis.
	22.2 Embed positive changes to selection of trainees and workforce, supervision, teaching and assessments into normal practice.
	22.3 Identify and implement changes to embed digital health service delivery as a component of medical practice, and for providing clinical support and supervision to colleagues and trainees.
23. Increase flexible working arrangements to reflect the changing needs of the medical workforce	23.1 Support the provision of flexible working arrangements, such as job sharing, part-time teaching and clinical roles, with a view to national adoption where appropriate.
	23.2 Facilitate efforts to provide mutual recognition and documentation of skills acquisition during medical careers. This could be modular using certificates, diplomas and advanced diplomas to support credentialing, switching between training pathways, increasing scope of practice, or changing careers.
24. Establish portability of entitlements for doctors across different settings	24.1 Investigate and develop innovative employment model trials that provide greater equity in employment conditions and accrued benefits between GP registrars and hospital-based registrars as they move between hospital and primary care settings.
25. Recognising and remodelling unsustainable and potentially unsafe employment models	25.1 Review environments with high staff turnover to determine common factors that lead to unsustainable services including bullying and harassment.
	25.2 Provide a framework for high turnover contexts to ensure sustainable and positive employment practices.
	25.3 Provide supports for trainees and doctors to enable help seeking behaviour.

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Next steps for the National Medical Workforce Strategy

The medical workforce is complex and this Strategy's actions are dependent on multiple organisations for implementation. The priorities outlined in the Strategy represent significant change to the medical workforce and will need to be implemented carefully, strategically and in close collaboration. This Strategy also reflects the clear risks of inaction, particularly given the long lead time to realise the impact of the Strategy and because of the multiple levers held by stakeholders of influence. The need for the Strategy remains pressing, and when complemented by an implementation plan, will facilitate driving evidence-based health policy for the immediate future.

Implementation plan

An initial implementation plan will be developed in collaboration with MWRAC, which will set out in detail across three phases, what will be achieved, by whom and when. Partnership and understanding of the various roles that each key stakeholder plays in the workforce will be critical to the success of this Strategy.

Governance

MWRAC will oversee progress as well as provide leadership on implementation and expert advice to make certain the Strategy is a success. In this, MWRAC will be supported by formal governance mechanisms and (where required) working groups to support collaboration between the Commonwealth and state and territory governments.

Working together

None of the initiatives in this Strategy can be successfully and comprehensively implemented without collaboration. Action must be driven and owned by the sector – active participation and increased engagement in changing and improving the systems in which they operate to make positive changes in their professional lives. It is the responsibility of governments, peak bodies, and education and training bodies to support and lead this process.

Implementation partners will include all organisations that affect medical workforce, operating at local, state, territory and national levels. Depending on the priority and action, partners may work in direct collaboration or in parallel.

Evaluation

Evaluation of the initial implementation will be conducted to identify areas where the Strategy is succeeding, and areas where more work needs to be done to overcome challenges in order to progress. It will also be a time to review whether the initial steps on the pathway to change have been achieved sufficiently so that the next steps may commence. This review will assess progress against key performance indicators based on feedback from the medical workforce. Evaluation of the Strategy as a whole may be supported by smaller, in-depth evaluation of major initiatives or reforms, particularly where the cost of implementation is high or the activity is particularly sensitive or untested.

Reports on progress will be made at the conclusion of each implementation phase (three in total) and at the conclusion of the 10-year period.

Expectations for the future

Following the initial implementation, a marked improvement against objectives and priorities is expected, with progress towards the goal of working together, using data and evidence, to make certain that the medical workforce sustainably meets the changing health needs of Australian communities.

Appendices

Appendix A – Committee members

Medical Workforce Reform Advisory Committee*

Organisation	Representative
Commonwealth Department of Health	Ms Penny Shakespeare (Co-Chair) Dr Brendan Murphy (previous Chair) A/Prof Andrew Singer A/Prof Susan Wearne
National Rural Health Alliance	Prof Jennifer May AM (Co-Chair)
Australian Capital Territory Health	Ms Leonie MacGregor, Dr Dinesh Arya
Australian College of Rural and Remote Medicine	A/Prof David Campbell
Australian Indigenous Doctors' Association	A/Prof Kris Rallah-Baker, Ms Monica Barolits-McCabe
Australian Medical Association	Dr Chris Zappala, Dr Sarah Whitelaw
Australian Medical Association Council of Doctors in Training	Dr Tessa Kennedy, Dr Hashim Abdeen
Australian Medical Council	Prof David Ellwood, Prof Kate Leslie
Australian Medical Students Association	Ms Clare Vincent, Ms Isabelle Nehme, Mr Daniel Zhou, Mr Jeremy Fernando, Ms Sophie Keen
Australian Private Hospitals Association	Dr Daniel Heredia, Dr Anthony Hayek
Australian Salaried Medical Officers' Federation	Dr Roderick McRae
Catholic Health Australia	Ms Annette Panzera, A/Prof Steve Bolsin
Confederation of Postgraduate Medical Education Councils	Dr Claire Blizard
Council of Presidents of Medical Colleges	Prof Philip Truskett AM, Dr Kym Jenkins
Northern Territory Department of Health	Ms Joanne Norton, Dr Marco Briceno
Queensland Health	Dr Jeannette Young, Prof Keith McNeill
Department of Health Tasmania	Prof Anthony Lawler
Department of Health and Human Services Victoria	Mr Ross Broad, Ms Nicola Farray, Ms Praveen Sharma
Medical Board of Australia	Prof Anne Tonkin
Medical Deans Australia and New Zealand	Prof Richard Murray, Prof Ian Symonds
NSW Ministry of Health	Dr Linda MacPherson
Royal Australasian College of Medical Administrators	Dr Antony Sara
Rural Doctors Association of Australia	Prof Lucie Walters
South Australia Health	Dr Michael Cusack, Prof Paddy Phillips, Mr Don Frater
The Royal Australasian College of Physicians	Prof Anne Cunningham, Prof Andrew Coates
The Royal Australian College of General Practitioners	Dr Kaye Atkinson, Dr Tess Van Duuren
Western Australia Health	Dr Paul Myhill, Dr Margaret Sturdy

* Includes all MWRAC members, past and present, who contributed to the Strategy.

National Medical Workforce Strategy Steering Committee

Organisation	Representative
Commonwealth Department of Health	A/Prof Susan Wearne (Chair) Dr Brendan Murphy (previous Chair)
Australian Indigenous Doctors' Association	A/Prof Kris Rallah-Baker, Ms Monica Barolits-McCabe
Australian Medical Association	Dr Chris Zappala, Dr Sarah Whitelaw
Australian Medical Association Council of Doctors in Training	Dr Hashim Abdeen, Dr Tessa Kennedy
Australian Private Hospitals Association	Dr Daniel Heredia, Dr Anthony Hayek
Council of Presidents of Medical Colleges	Prof Philip Truskett AM, Dr Kym Jenkins
Department of Health Tasmania	Prof Anthony Lawler
Medical Board of Australia	Prof Anne Tonkin
Medical Deans Australia and New Zealand	Prof Richard Murray
National Rural Health Alliance	Prof Jenny May AM
NSW Ministry of Health	Dr Linda MacPherson
Rural Doctors Association of Australia	Prof Lucie Walters
Western Australia Health	Dr Paul Myhill, Dr Margaret Sturdy
St Vincents' Public Hospital	A/Prof Wilma Beswick

National Medical Workforce Strategy Jurisdictional Policy Committee

The Workforce Planners Policy Group is a sub-committee of the Medical Workforce Reform Advisory Committee providing policy advice and oversight to the Workforce Planners Data Group and jurisdictional perspectives into the National Medical Workforce Strategy.

Organisation	Representative
Commonwealth Department of Health	Ms Natasha Ploenges (Chair), Ms Lynne Gillam (previous Chair) A/Prof Susan Wearne, Ms Kathryn Yuile, Ms Maureen McCarty
Department of Health Tasmania	Dr Ruth Kearon
NSW Ministry of Health	Dr Linda MacPherson
Northern Territory Department of Health	Dr Karen Stringer, Dr Sara Watson, Dr Marco Briceno
Western Australia Health	Dr Paul Myhill, Dr Margaret Sturdy
Department of Health and Human Services Victoria	Ms Sonia Denisenko, Ms Praveen Sharma, Dr Megha Swami, Ms Helen Finneran
Australian Capital Territory Health	Dr Dinesh Arya, Ms Jacinta George, Ms Geraldine Grayland
South Australia Health	Dr Hendrika Meyer
Queensland Health	Ms Megan Crawford

National Medical Workforce Strategy Jurisdictional Data Committee

The Workforce Planners Data Group is a sub-committee of the Medical Workforce Reform Advisory Committee and provides support for the data and planning of the medical workforce. The group provides a forum for the Commonwealth and state and territory governments to discuss and progress data work for the National Medical Workforce Strategy.

Jurisdiction	Representative
Commonwealth Department of Health	Ms Natasha Ploenges (Chair), Ms Lynne Gillam (previous Chair), Ms Maureen McCarty, Ms Kathryn Yuile
Department of Health Tasmania	Dr Ruth Kearon, Ms Stephanie Haines
NSW Ministry of Health	Mr Todd Hunt
Northern Territory Department of Health	Mr Kevin West, Mr Ryan Neutert, Mr Janine Stephens
Western Australia Health	Ms Sharon Wheller, Mr Nick Spendier
Department of Health and Human Services Victoria	Mr Nigel Brand, Ms Helen Finneran
Australian Capital Territory Health	Mr Cameron Bertrand-Bruce, Ms Jacinta George, Ms Geraldine Grayland
South Australia Health	Ms Donna Harden
Queensland Health	Mr Scott Barber, Mr Clement Lo

Appendix B – Potential medical workforce solutions considered in February 2020 consultations

1: Establish a joint planning mechanism to guide and coordinate decision making on the medical workforce.

2: Develop a national medical workforce data strategy, harmonised with the priorities of the NMWS.

3: Adopt consistent demand-and-supply modelling methodologies to form a national view of workforce planning.

4: Align college decision making about accreditation and training numbers with the data, modelling outputs and decisions of the joint planning process.

5: Inform and empower medical students and junior doctors with a nationally consistent, transparent and data-based tool to help them make career decisions.

6: Develop an end-to-end incentivisation plan to increase trainee numbers in undersubscribed specialties.

7: Reduce the number of tasks for which hospitals require a middle-grade workforce by improving practices, systems and processes.

8: Ensure scopes of practice for non-medical personnel are maximised where they can reduce the reliance on a middle-grade workforce.

9: Expand specialists' roles in hospitals.

10: Define options for 'middle-grade' roles (and rename these) to attract doctors into this role and service hospital demand.

11: Consider salaried and single-employer models for rural general practitioners, with incentives to maintain service levels, access and quality.

12: Develop mechanisms to support the portability of employment benefits, enabling doctors to work across different employers, regions and/or health services throughout their careers.

13: Develop pooled or block-funding models for MM 4–MM 7 areas that offer greater flexibility.

14: Enable regional bodies to provide meaningful local input into workforce funding decisions.

15: Work with communities to set service expectations and ensure adequate workforce planning and resource allocation for rural areas.

16: Expand outreach, network models and telehealth models that provide continuity of care and are attractive to doctors.

17: Ensure that all rural communities and doctors have access to 24/7 specialist clinical support.

18: Collaborate with specialist medical colleges to identify and resolve the barriers to accrediting more high-quality rural training positions.

19: Expand pathways that allow all or the majority of training to be completed in rural areas.

20: Provide specific and adequate funding to compensate, develop and support supervisors in rural areas, including GP educators and supervisors.

21: Continue to support national rollout of the rural generalist program.

22: Ensure rural experience is included as a desirable selection criterion for positions, both in medical school and throughout doctors' careers.

23: Ensure all programs undergo outcomes-based evaluation.

24: Establish mechanisms for communities to share learnings on what makes programs successful.

25: Enable new and existing programs to more effectively address critical barriers and drivers for attracting doctors to rural careers.

26: Provide leadership development training and mentorship to aspiring rural trainees and future rural medical workforce champions.

27: Support practice managers through training and the creation of a central or jurisdictional 'navigation hub' for self-serve and assisted support.

28: Improve data collection and transparency to evaluate and support effective medical school programs that increase uptake of rural roles.

29: Standardise and cap locum pay levels and terms to rebalance usage of locums versus permanent positions.

30: Address recruitment and staffing models such as approval requirements for permanent staff recruitment, to allow hospital administrators more flexibility in recruiting doctors without the need to rely on locums.

31: Create incentives that encourage limiting locum use by health services.

32: Implement new locum management models.

33: Review the IMG exemptions.

34: Document the number of IMG specialists entering under Area of Need (AoN) verses District of Workforce Shortage (DWS) criteria and assess the need to align these criteria.

35: Increase high quality exposure to generalism in medical school and the prevocational years, potentially through a competency-based transition to practice approach.

36: Ensure selection criteria for entry into specialty training programs reward generalist experience and do not encourage early subspecialisation.

37: Work with colleges to equip Fellows with the right balance of generalist and subspecialist skills throughout their training and careers.

38: Work with medical schools to determine if there is an evidence base for using medical school selection as a potential lever to increase generalism.

39: Review opportunities to reduce the ways in which the MBS fee-for-service model incentivises subspecialisation.

40: Consider financial incentives for doctors who choose to pursue a generalist career, especially in a rural and remote context.

41: Ensure that generalist skills are fostered and valued in hospital recruitment processes.

42: Educate the community on the importance of generalist skills.

43: Make generalist careers more attractive and shift prestige perceptions.

44: Improve professional and clinical support for generalists, especially in rural and remote locations.

45: Work with medical defence organisations, prevocational training networks and colleges to empower doctors within their generalist scopes of practice.

46: Create transparency for doctors throughout the training pathway.

47: Increase support for doctors to navigate and plan for their career pathway, particularly for undersupplied specialties and rural areas, and for Aboriginal and Torres Strait Islander doctors.

48: Work with colleges to increase accreditation of non-metropolitan posts through governance processes and innovative supervision approaches.

49: ‘Right size’ the training pathway.

50: Facilitate flexible approaches to training.

Appendix C – Consultation outcomes

Highlights from February 2020 consultations:

Table 7: Consultation phases for the development of the National Medical Workforce Strategy

Phase 1	Identified 50 potential solutions through consultation forums.	November 2019
Phase 2	The focus of this consultation round was to refine and test the potential workforce solutions with stakeholders. Forums were held in all states and territories in a mixture of metropolitan, outer metropolitan, regional and rural locations. A range of stakeholders attended, including senior and junior clinicians from hospitals and community-based care, medical specialist college representatives, jurisdictional workforce planners, primary health networks, medical students and academics. The Department of Health hosted two webinars, the first focusing on discussing the Strategy from a rural perspective, and the second exploring how the Strategy may impact Australia's junior doctors. The first webinar had over 560 views and a total of 68 questions submitted; the second received 435 views and 24 questions. An online consultation hub survey was launched where stakeholders were able to submit their solution preferences.	February 2020 – March 2020
Phase 3	Circulated the Strategy draft for detailed feedback from MWRAC and Steering Committee members.	November 2020 – January 2021

Stakeholders consulted during the development of the Strategy included representatives from:

- State and territory governments
- Peak bodies
- Regulators
- Medical schools
- Specialty colleges
- Aboriginal and Torres Strait Islander peak bodies
- Rural workforce and advocacy groups
- Consumer representatives
- Private hospitals

Appendix D – Medical Specialties and Locations

The Commonwealth Distribution Working Group has considered which different medical specialists can work to their full scope of practice in rural and remote areas, as not all specialties can practise or train outside of metropolitan centres. This table shows the facilities and geographies where different specialties can work and train.

Table 8: Facilities and geographies where specialties can work and train

Key: • – Doctor/specialist can exercise their full scope of practice

	Facilities				
	MM 1	MM 1+	MM 1+	MM 2/3	MM 4+
Specialties	F2F Major Centre	Private Rooms	Telehealth	F2F Regional Hospital	F2F Rural Hospital
Addiction medicine	•	•	•	•	•
Anaesthesia	•			•	•
Dermatology	•	•		•	•
Emergency medicine	•			•	•
Paediatric emergency medicine	•			•	
Intensive care medicine	•			•	
Paediatric intensive care medicine	•			•	
Medical administrator	•			•	•
Obstetrics and gynaecology	•			•	•
Gynaecology oncology	•			•	
Materno-fetal medicine	•				
Obstetrics and gynaecology ultrasound	•	•		•	•
Reproductive endocrinology and fertility	•			•	
Occupational and environmental medicine	•	•		•	•
Ophthalmology	•	•		•	•
Pain medicine	•	•		•	•
Palliative medicine	•	•		•	•
Pathology					
General, anatomical, chemical, haematology, immunology, microbiology	•			•	
Forensic pathology	•				
Physician/paediatrician					
Cardiology	•			•	
Clinical geneticist	•				
Clinical pharmacology	•			•	
Endocrinology	•	•		•	•
Gastroenterology and hepatology	•			•	•

	Facilities				
	MM 1	MM 1+	MM 1+	MM 2/3	MM 4+
Specialties	F2F Major Centre	Private Rooms	Telehealth	F2F Regional Hospital	F2F Rural Hospital
General medicine	•	•		•	•
Haematologist	•			•	
Immunology and allergy	•			•	
Infectious disease	•			•	
Medical oncology	•	•		•	•
Nephrology	•	•		•	•
Neurology	•	•		•	•
Nuclear medicine physician	•				
Respiratory and sleep medicine	•	•		•	•
Rheumatology	•	•		•	•
Community paediatrician	•	•		•	•
Neonatology	•				
Psychiatry	•	•	•	•	•
Public health medicine	•	•	•	•	•
Radiation oncology	•			•	
Radiology	•			•	•
Rehabilitation medicine	•	•		•	•
Sexual health medicine	•	•		•	•
Sport and exercise medicine	•	•		•	•
Surgery					
Cardiothoracic surgery	•				
General surgery	•			•	•
Neurosurgery	•				
Orthopaedic surgery	•			•	•
Otolaryngology Head and Neck Surgery	•	•		•	•
Oral and maxillofacial surgery	•			•	
Paediatric surgery	•			•	
Plastic surgery	•			•	•
Urology	•			•	•
Vascular surgery	•			•	

Appendix E – National Registration and Accreditation Scheme's definition of cultural safety in practice

Individual doctors have responsibilities towards practising medicine in a culturally safe manner. In order to ensure culturally safe and respectful practice, health practitioners must:

- Acknowledge colonisation and systemic racism, social, cultural, behavioural and economic factors which impact individual and community health
- Acknowledge and address individual racism, their own biases, assumptions, stereotypes and prejudices and provide care that is holistic, free of bias and racism
- Recognise the importance of self-determined decision making, partnership and collaboration in health care which is driven by the individual, family and community
- Foster a safe working environment through leadership to support the rights and dignity of Aboriginal and Torres Strait Islander people and colleagues.

For more information, see Ahpra's Aboriginal and Torres Strait Islander Health Strategy.

Appendix F – List of Abbreviations and acronyms

Abbreviation/acronym	
ABS	Australian Bureau of Statistics
ACD	The Australasian College of Dermatologists
ACEM	Australasian College of Emergency Medicine
ACRRM	Australian College of Rural and Remote Medicine
ACSEP	The Australasian College of Sport and Exercise Physicians
AIDA	Australian Indigenous Doctors' Association
AIHW	Australian Institute of Health and Welfare
Ahpra	Australian Health Practitioner Regulation Agency
AMA	Australian Medical Association
AMC	Australian Medical Council
AMSs	Aboriginal Medical Service(s)
ANZCA	Australian and New Zealand College of Anaesthetists
AoN	Area of Need
CHC	Council of Australian Governments Health Council
CICM	College of Intensive Care Medicine of Australia and New Zealand
CMOs	Career Medical Officers
COAG	Council of Australian Governments
COVID-19	Coronavirus disease of 2019, caused by the SARS-CoV-2 virus
CPD	Continuing Professional Development
CPMC	Council of Presidents of Medical Colleges
CSPs	Commonwealth Supported Places
DWG	Commonwealth Department of Health Distribution Working Group
Data Strategy	National Medical Workforce Data Strategy
DWS	District of Workforce Storage for Non-GP Medical Specialists
FTE	Full-time equivalent
Go8	Group of Eight Universities
GP	General practitioner
HeaDS UPP	Health Demand and Supply Utilisation Patterns Planning Tool
IMG	International medical graduate
IRTP	Integrated Rural Training Pipeline
JMO	Junior Medical Officer
MBS	Medicare Benefits Schedule
McKinsey	McKinsey and Company
MDANZ	Medical Deans Australia and New Zealand
MM 1, MM 2 etc	Modified Monash category 1, Modified Monash category 2 etc

Abbreviation/acronym	
MMM	Modified Monash Model
MTS	Medical Training Survey of the Medical Board of Australia
MWRAC	Medical Workforce Reform Advisory Committee
National Workforce Plan	The National Aboriginal and Torres Strait Island Health Workforce Strategic Framework and Implementation Plan 2021–2031
NHRA	National Health Reform Agreement 2020–25
NHWDS	National Health Workforce Data Set
NMTAN	National Medical Training Advisory Network
NMWS / the Strategy	National Medical Workforce Strategy
NRAS	National Registration and Accreditation Scheme
OECD	Organisation of Economic Co-operation and Development
OTD	Overseas Trained Doctor
PBS	Pharmaceutical Benefits Scheme
PGY	Post Graduate Year
PHNs	Primary Health Networks
RACGP	The Royal Australian College of General Practitioners
RACMA	Royal Australasian College of Medical Administrators
RACP	The Royal Australasian College of Physicians
RANZCO	The Royal Australasian and New Zealand College of Ophthalmologists
RANZCOG	The Royal Australasian and New Zealand College of Obstetricians and Gynaecologists
RANZCP	The Royal Australasian and New Zealand College of Psychiatrists
RANZCR	The Royal Australasian and New Zealand College of Radiologists
RACS	Royal Australian College of Surgeons
RCPA	The Royal College of Pathologists Australasia
RHMT	Rural Health Multidisciplinary Training
RWAs	Rural Workforce Agencies
VRGP (Non-VRGP)	Vocationally registered general practitioner (Non-vocationally registered general practitioner)
WHO	World Health Organization

Appendix G – Glossary of Terms

Accreditation[91]	Accreditation standards, for a health profession are used to assess whether a program of study, and the education provider that provides that provides the program of study, provide persons who complete the program with the knowledge, skills and professional attributes to practise the profession in Australia. Accreditation authorities use accreditation standards for monitoring accredited programs of study to ensure the program and its education provider continue to meet the standards.
Accredited registrar[92]	A registrar who is training to become a medical specialist, and is working in an accredited training position.
COVID-19	Highly transmissible respiratory disease caused by the SARS-CoV2 virus, also known as severe acute respiratory syndrome coronavirus 2.
Cultural safety[93]	Cultural safety is determined by Aboriginal and Torres Strait Islander individuals, families and communities. Culturally safe practise is the ongoing critical reflection of health practitioner knowledge, skills, attitudes, practising behaviours and power differentials in delivering safe, accessible and responsive health care free of racism.
Flexible working arrangements[94]	Any working arrangements that change the standard days, hours or locations on a temporary or long-term basis. Examples include part time work, job sharing, working compressed hours, staggered start or finish hours.
Generalist	A generalist is a medical practitioner who works across the full scope of their discipline rather than in a narrow scope for that specialty.
International medical graduate (IMG)	An international medical graduate or IMG is a doctor whose initial medical qualifications were acquired in a country other than Australia. Also referred to as an overseas trained doctor. IMGs are restricted in where they can access Medicare benefits in Australia. This restriction is for up to 10 years, and is commonly referred to as the 10 Year Moratorium.
Junior doctor	A doctor who has completed medical school and gained provisional or general registration but has not entered a vocational training program.
Locum	A locum is a doctor employed on a temporary contract
Modified Monash Model 2019	The Modified Monash Model (MM) defines whether a location is a city, rural, remote or very remote. The model measures remoteness and population size on a scale of MM category MM 1 to MM 7 as per below: MM 1 – Metropolitan areas – Major cities accounting for 70% of Australia's population. All areas categorised ASGS-RA1[**]. MM 2 – Regional centres – Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are in, or within a 20km drive of a town with over 50,000 residents. For example: Ballarat, Mackay, Toowoomba, Kiama, Albury, Bunbury. MM 3 – Large rural towns – Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 and are in, or within a 15km drive of a town between 15,000 to 50,000 residents. For example: Dubbo, Lismore, Yeppoon, Busselton. MM 4 – Medium rural towns – Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 or MM 3, and are in, or within a 10km drive of a town with between 5,000 to 15,000 residents. For example: Port Augusta, Charters Towers, Moree. MM 5 – Small rural towns – All remaining Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas. For example: Mount Buller, Moruya, Renmark, Condamine. MM 6 – Remote communities – Remote mainland areas (ASGS-RA 4) AND remote islands less than 5kms offshore. For example: Cape Tribulation, Lightning Ridge, Alice Springs, Mallacoota, Port Hedland. Additionally, islands that have an MM 5 classification with a population of less than 1,000 without bridges to the mainland are MM 6 for example: Bruny Island. MM 7 – Very remote communities – Very remote areas (ASGS-RA 5). For example: Longreach, Coober Pedy, Thursday Island and all other remote island areas more than 5kms offshore.[95]

[¶] The Australian Statistical Geography Standard (ASGS) is a set of geographical data that determines five levels of remoteness for areas under the Australian Statistical Geography Standard – Remoteness Area structure. Based on data gathered during the Census, the ASGS-RA divides Australia into five classes of remoteness. Remoteness is determined according to population and distance to services.

Maldistribution	There are fewer GPs and other medical specialists in rural and remote Australia. This contributes to geographic disparities in patient access to care and to health outcomes.
Medical practitioner	A person with a medical degree, also called a doctor.
Medical students	A student undertaking an entry-level medical education course at university medical schools.
Models of care[96]	A model of care broadly defines the way health services are delivered. It outlines best practice care and services for a person, population group or patient cohort as they progress through the stages of a condition, injury or event. It aims to ensure people get the right care, at the right time, by the right team and in the right place.
National Rural Generalist Pathway[97]	The National Rural Generalist Pathway facilitates the training of rural generalists.
Non-vocationally registered general practitioner[98]	Doctors who are registered with the Medical Board to work in general practice, but who do not hold a specialist qualification in general practice. Non-VR GPs are not eligible for the same level of Medicare rebates as VR GPs (defined below).
Service registrar	A service registrar is a doctor doing a similar level of work as accredited registrars, but is not in an accredited specialist training position. Other common terms for service registrar include unaccredited registrar, career medical officer, resident medical officer and hospitalist.
Scope of practice[99]	Scope of practice is the professional role and services that an individual health practitioner is trained, qualified and competent to perform.
Specialists[100]	A specialist has completed vocational training in a chosen medical field and has gained registration with the Medical Board as a specialist.
Subspecialists	A medical practitioner who focuses on one aspect of their discipline, for example, a general practitioner who only works in a skin or travel clinic, or an orthopaedic surgeon who only consults patients with knee problems.
Telehealth[101]	The International Organisation for Standardisation defines Telehealth as the 'use of telecommunication techniques for the purpose of providing telemedicine, medical education, and health education over a distance', while drawing a distinction between this and telemedicine, which is defined as the 'use of advanced telecommunication technologies to exchange health information and provide health care services across geographic, time, social and cultural barriers'.
Vocationally registered general practitioners	Vocationally registered (VR) GPs are those who have obtained Fellowship with the RACGP or ACRRM, or who (pre-1996) were placed on the Vocational Register with Medicare. Being a vocationally registered GP gives access to A1 Medicare item numbers and higher Medicare rebates.

ENDNOTES

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