

Special treatment

Improving Australians' access to specialist care

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Overview

Millions of Australians face an unenviable choice when they need to see a specialist doctor: pay high fees or wait too long for care.

Patients pay a fee for two thirds of appointments with a specialist doctor, such as a psychiatrist or cardiologist. That's much more often than for the GP, where only one in five visits costs money.

Individual visits can cost hundreds of dollars. It quickly adds up if you need to see many specialists for a chronic disease, such as complex diabetes, or to visit the same psychiatrist many times.

On average, patients who pay a fee are charged \$300 a year. Even poor people can face huge costs. One in 10 low-income patients who are billed pay almost \$500 a year. The problem is getting worse: fees have soared by 73 per cent since 2010.

Almost a million people delay or skip specialist care because of the cost. They are risking missed diagnoses and delayed treatment. That leads to avoidable suffering and adds pressure on hospitals.

Public hospitals run free clinics, but they provide just a third of all specialist care, and their wait times are often far too long. In many parts of Australia, wait times for urgent appointments are months longer than clinical guidelines recommend.

These problems have festered because the system has been running on autopilot. Governments must tackle five root problems to improve access to specialist care for all Australians.

First, we should train the specialists we need, where we need them. Training places are determined by specialist colleges and the immediate service needs of public hospitals, not the community's healthcare needs. Too few doctors have been trained in rural areas and in some specialties, such as psychiatry and ophthalmology.

Governments should establish a workforce planning body and tie training funding to its recommendations about what specialist training is needed, and where. While they work on these reforms, governments should make it easier for specialists from comparable health systems to work in Australia.

Second, governments should invest more in public clinics, so everyone can get the care they need. Specialist care is a postcode lottery: people living in the worst-served areas receive about a third fewer services than the best-served areas. Public clinics don't do enough to fill the gaps. Spending \$470 million a year would provide one million extra public appointments each year in the areas that get the least care.

Third, to make that investment go further, governments should modernise public specialist clinics, clarifying their role, spreading best practices, and publicly reporting waiting times.

Fourth, governments should take pressure off specialist care by helping GPs manage more care. Systems that allow GPs to easily get advice from other specialists could avoid 68,000 referrals each year and save patients \$4 million in out-of-pocket costs. GPs and other specialists would be paid for their time, at a cost of \$26 million a year.

Finally, the federal government should combat extreme fees. An initial consultation with a cardiologist or endocrinologist can cost up to \$370, and up to \$670 for a psychiatrist. The government should claw back public subsidies from specialists who charge extreme fees. This could save up to \$170 million a year, and would discourage excessive fees.

There is no time to waste. Without action, fees and waiting times will only get worse as Australians get older and sicker. Targeted investment and sensible reforms will ensure every Australian can get specialist treatment when they need it.

Recommendations

1. Train the specialists Australia needs

- Federal and state governments should establish a national health workforce planning body to set targets for specialist training, including the mix of specialists and the amount of rural training.
- Federal funding for specialist training should be tied to these targets. It should be increased by \$155 million a year.
- The federal government should pay specialist colleges an extra \$9 million a year to develop and expand flexible training models.
- The federal government should make it simpler for overseas-trained specialists to work in Australia.
- Specialist qualifications from more countries with comparable health systems should be recognised.

2. Invest in public clinics where they are needed most

- Federal and state governments should invest about \$500 million a year to expand public specialist clinics in areas with the least care.

3. Modernise public clinics

- The National Health Reform Agreement (NHRA) should specify the role of public clinics, and how they will change to provide more and better care.
- States should give public hospital clinics clear guidance on best practices to maximise productivity.

- The NHRA should provide \$60 million to spread best practices across the system.
- The independent hospital pricing authority should review specialist clinic funding to make sure prices encourage best practices.
- Federal and state governments should agree to shift current Medicare Benefits Schedule funding to activity-based funding.
- The NHRA should set out a framework for consistently measuring and reporting state and clinic performance.

4. Reduce unnecessary specialist referrals

- Federal and state governments should set up a system that makes it easy for GPs to get advice from other specialists.

5. Reduce extreme fees

- The federal government should withdraw all Medicare funding from specialists who charge extreme fees (fees that are, on average, more than three times the schedule fee).
- The federal government should require referrals to inform patients that they can use a referral to see any specialist, and let them know where to find information about a specialist's fees.
- The federal government should initiate a review of Medicare Benefits Schedule rebates to ensure they reflect the cost of care.
- The federal government should direct the Australian Competition and Consumer Commission to study specialists' costs and fees.

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1 High fees, long waits, and missed care

Too many Australians don't get the specialist care they need when they need it. Patients face an unenviable choice: pay high, often opaque, fees in the private sector, or join a long queue for a public appointment. As a result, diagnoses and treatments come too late, or are missed altogether. People suffer unnecessary illness and pain, and the healthcare system bears unnecessary costs.

1.1 Rising chronic disease means specialist care is becoming even more important

As chronic diseases become more common, our need for specialists¹ to prevent, diagnose, and manage complex conditions is increasing.

1.1.1 Australians are getting older and sicker

Australians are living longer than ever.² But we're also living longer with disease and disability.³ The main culprit is the rising incidence of chronic disease. Half of Australians – including 79 per cent of people older than 65 – live with at least one chronic disease.⁴ And one in five Australians live with more than one chronic condition.⁵

1. This report focuses on non-GP specialists working in outpatient settings. General practice is also a recognised medical specialty, but for simplicity in this report, when we say 'specialists', we mean non-GP specialists.
2. Our life expectancy – now 84 years – is one of the highest in the world, and still increasing. Since 1990, we've added an extra 6.9 years: Dattani et al (2023).
3. The average Australian can expect to live 12.6 years with a disease or disability: Dattani et al (ibid). This has increased by 1.8 years since 1990. That means about a quarter of the extra years of life since 1990 will be lived in ill-health.
4. ABS (2023a). Chronic diseases are long-term, non-communicable diseases such as cancer, cardio-vascular disease, diabetes, chronic obstructive pulmonary disease, and mental health conditions: AIHW (2024a).
5. In 2022, 22 per cent of Australians lived with multiple chronic conditions, up from 17 per cent in 2012: ABS (2023a).

Australia should do more to prevent chronic conditions from developing in the first place, and to help patients manage them through primary care.⁶ But specialists also play an essential role.⁷ People with long-term health conditions are more than twice as likely to have seen a specialist in the past year.⁸

1.1.2 Specialists play an essential role in the health system

Specialists are doctors with advanced training and experience who provide care in a particular field of medicine. They see patients with complex health issues – such as chronic diseases – who have been referred by another doctor.⁹

About 40 per cent of Australians saw a specialist in 2023-24.¹⁰ Older Australians are even more likely to receive specialist care. Altogether, Australian governments and patients spent \$8.7 billion on specialist care in 2021-22.¹¹

6. Breadon et al (2023), and Breadon and Romanes (2022).
7. Best-practice integrated care for chronic disease usually involves a combination of specialist advice and primary team care: S. Smith et al (2017) and Mitchell et al (2015).
8. Compared to those without long-term health conditions: ABS (2024a).
9. Nurse practitioners can also refer patients to specialists. Only specialist appointments for which patients have a valid referral are subsidised by Medicare. Nurse practitioner and GP referrals last for 12 months; specialist-to-specialist referrals last for three months: Department of Health and Aged Care (2021a).
10. ABS (2024a).
11. This includes \$5 billion in state and federal government spending on public clinics, \$2.3 billion in federal government Medicare subsidies, and \$1.4 billion in patient out-of-pocket fees: IHACPA (2023) and AIHW (2025). Spending per service across private and public services are not directly comparable, because of differences in case mix, functions (e.g. public services also teach students), and costs included (e.g. public clinic costs include some imaging and pharmacy costs).

Across all specialties, about two thirds of appointments are private appointments, where patients receive a Medicare rebate and usually also pay a fee.¹² The other third of specialist appointments are in public outpatient clinics, attached to public hospitals. They are staffed by salaried specialists¹³ and provide free care to patients.¹⁴

But the split of public and private care varies a lot across specialties (Figure 1.1). Almost three quarters of oncology and anaesthetics appointments are in the public system, but it's less than one in five for cardiology and dermatology – and less than one in 20 for psychiatry.

Problems in both the public and private parts of the system – and how it works as a whole – mean too many patients miss out on care.

1.2 Patients face high costs or long waits to see a specialist

After a referral, many patients face an unenviable choice: pay high fees for a private appointment, or submit to a long wait for a public appointment.

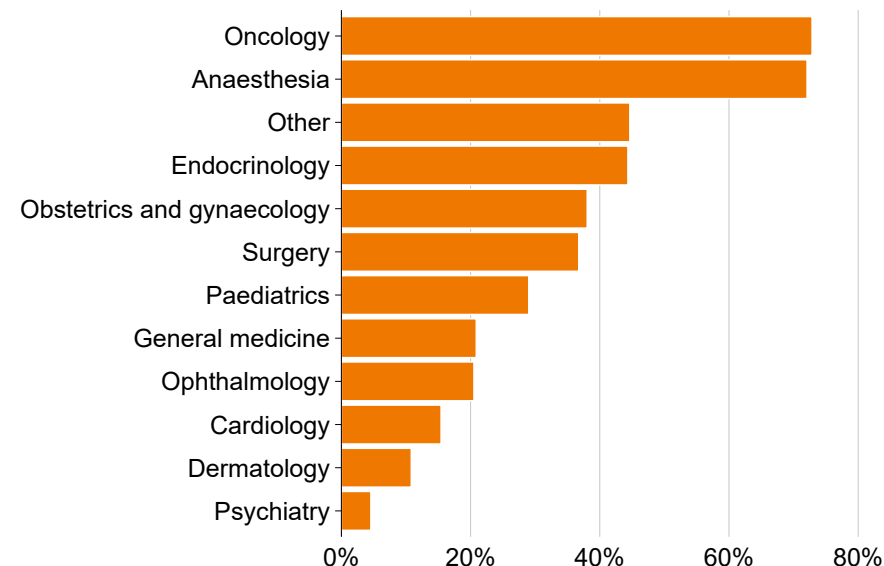
1.2.1 Private specialists can be expensive

Consumers directly pay about \$1 in every \$6 spent on healthcare in Australia – higher than many similar countries.¹⁵ Specialist appointment fees are a big share of these out-of-pocket costs.

The majority – 78 per cent – of GP visits are bulk billed.¹⁶ But most specialist appointments attract a fee. The average person who saw a

Figure 1.1: Public clinics provide the majority of care in some specialties, and small fractions in others

Share of total specialty appointments provided by public clinics, 2022-23



Note: The remaining appointments were provided by private specialists.

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b). See Appendix B.

12. Similar to primary care, where private GP businesses provide most care.

13. Many doctors work across both the public and private sectors: Cheng et al (2013).

14. Most people seen in public clinics are treated as public patients, but some clinics operate as bulk-billing Medicare clinics. Chapter 4 discusses this issue.

15. Duckett et al (2022). This contributes to our poor performance on access to healthcare, compared with our peers. In one analysis, we were second worst among 10 countries for access, beating only the US: Commonwealth Fund (2024).

16. In 2023: Department of Health and Aged Care (2025a).

specialist in 2023 had just a third of their appointments bulk billed.¹⁷ Even in low-income households, 72 per cent of people who saw a private specialist paid a bill at least once (Figure 1.2).

Among those who paid a bill, annual out-of-pocket costs amounted to \$300 on average in 2023. Specialist costs are greater than the typical annual bill for prescriptions, GPs, allied healthcare, or imaging services.¹⁸ And some patients pay more still. About 650,000 people spent more than \$574 on specialist appointments.¹⁹

Many people can comfortably afford out-of-pocket costs. But even poorer people can face big bills (Figure 1.3). One in ten low-income people who saw a specialist paid more than \$475 out of pocket.

Average out-of-pocket costs for specialist attendances have grown by 73 per cent, in real terms, since 2010: faster than for other Medicare services (Figure 1.4).²⁰ The fee for an initial consultation has risen, in real terms, for most specialties since 2019 (Figure 1.5).

High out-of-pocket costs, particularly for ongoing conditions, can contribute to economic hardship.²¹ Many Australians have very little

savings in the bank to absorb a big unexpected bill.²² Some patients report taking on debt, seeking financial aid, or cutting back on other essentials such as groceries to pay high out-of-pocket costs.²³

1.2.2 Wait times for public clinics are long

People who can't afford to pay with money often pay with time, putting their health at risk.

Wait times for a free appointment at a public clinic are often far longer than clinical guidelines recommend. Across Sydney, Melbourne, Brisbane, and Adelaide, there are 50 specialties where waiting times extend longer than a year.²⁴

One in 10 people living in Sydney and waiting for a respiratory cystic fibrosis appointment wait more than three years for a consultation. So do one in 10 people in outer regional Victoria waiting for a neurosurgery appointment, people in inner regional South Australia waiting for an immunology appointment, and people in outer regional NSW waiting for a haematology appointment.

17. Grattan analysis of Medicare-subsidised specialist attendances: see Appendix F.

18. Median annual out-of-pocket payments among people who used the service: Duckett et al (2022, p. 18).

19. This is the 90th percentile of total annual out-of-pocket payments, among people who paid a specialist bill. This is an increase from 2019, when the comparable value (after adjusting for inflation) was \$525: Duckett et al (ibid).

20. The federal government froze MBS indexation between 2013-14 and 2017-18. But the increase in out-of-pocket costs exceeds that required to make up for the freeze. As a rough estimate, if benefits had been indexed to the forecasts of Wage Cost Index 6 every year – a similar index to the unpublished one the government uses – the average benefit per service would have been \$4.40 higher (in 2025 dollars) in 2017-18 than 2012-13. But the average out-of-pocket cost per service increased even more – by \$9.60, in 2025 dollars – over the same period, and has continued rising since, even though indexation has been restored.

21. Duckett et al (2022), Callander et al (2019), Essue et al (2011), and Jeon et al (2009).

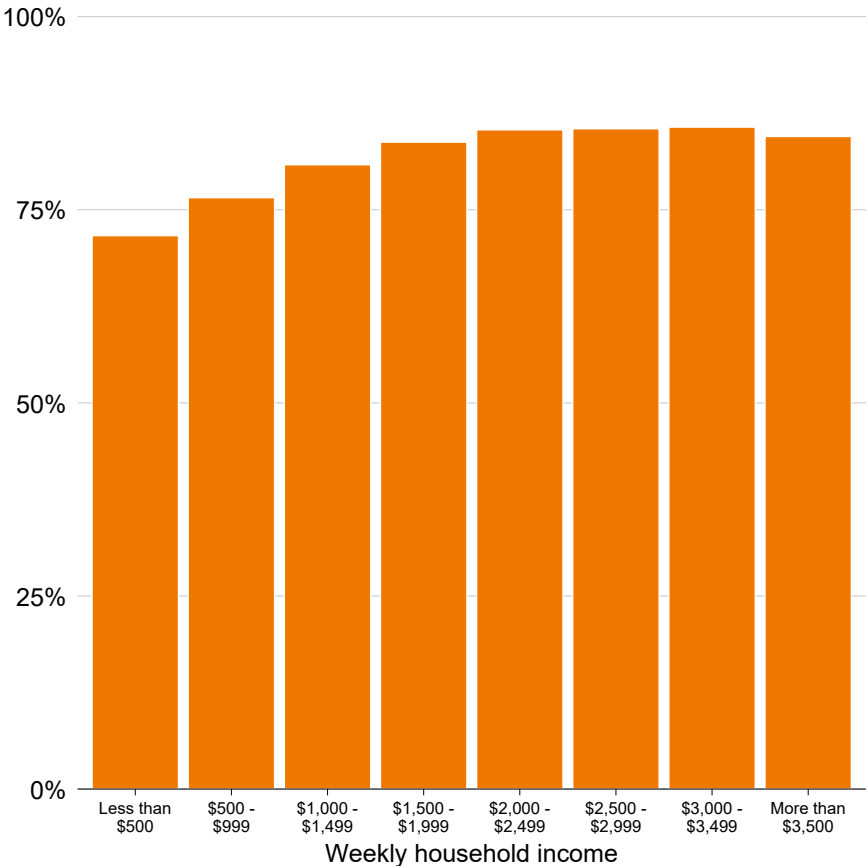
22. Coates and Cowgill (2020).

23. Robins et al (2025).

24. Grattan Institute analysis of AIHW (2024b). Outpatient clinic types where the 90th percentile of waiting times is greater than a year. Locations are patients' usual residence. Other states did not report waiting times in the national dataset we drew on. Waiting time data are not high quality. Measures of waiting times that have not been validated and have no national definitions, so are not comparable across jurisdictions. However, these results, and the more granular data available in some states, clearly point to long public wait times in some cases.

Figure 1.2: Most patients, even low-income patients, pay for specialist care out of pocket

Share of patients who paid a bill for specialist care at least once in 2023

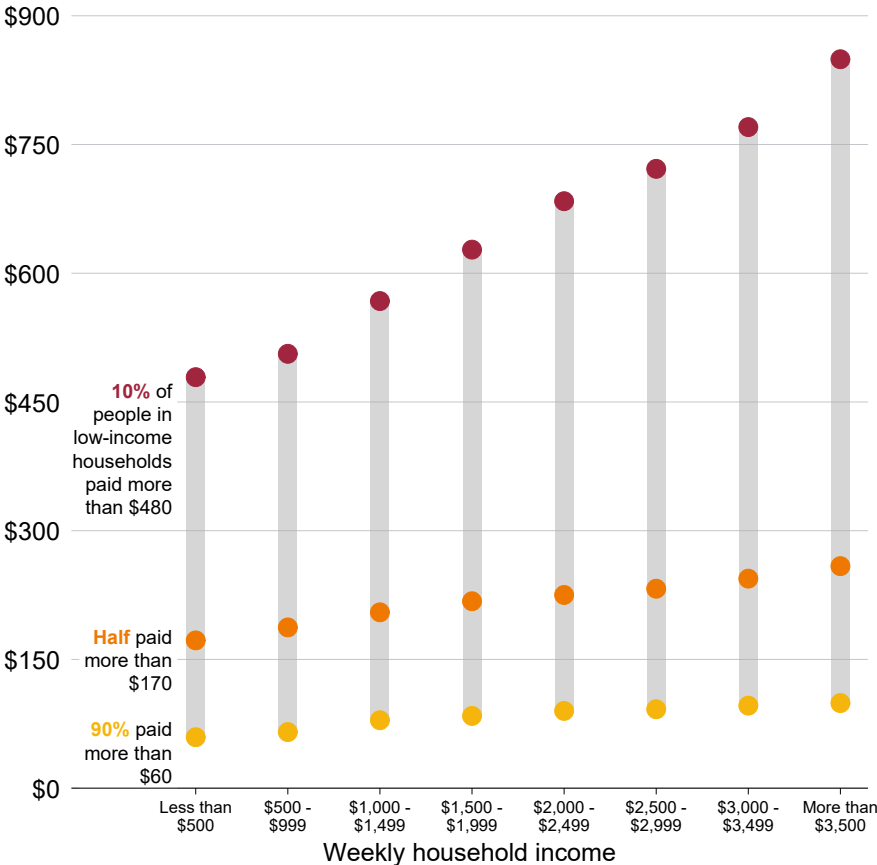


Notes: Weekly household income as reported in the 2021 Census. Among people who had at least one private specialist appointment in 2023.

Source: Grattan Institute analysis of ABS (2024b).

Figure 1.3: Even poor people can face high out-of-pocket costs

Out-of-pocket specialist costs per person, 2023

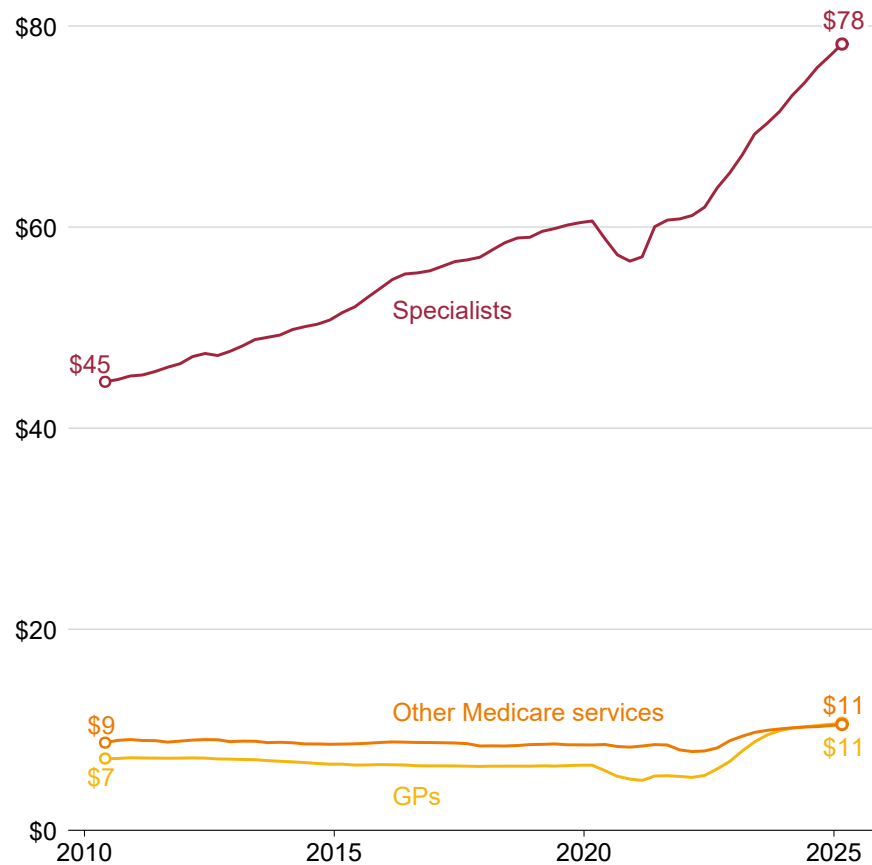


Notes: Weekly household income as reported in the 2021 Census. Total annual out-of-pocket costs. Excludes people who were exclusively bulk-billed and did not incur a cost.

Source: Grattan Institute analysis of ABS (ibid).

Figure 1.4: Out-of-pocket costs for specialist care have increased faster than for other Medicare services

Average out-of-pocket cost per service, 2025 dollars

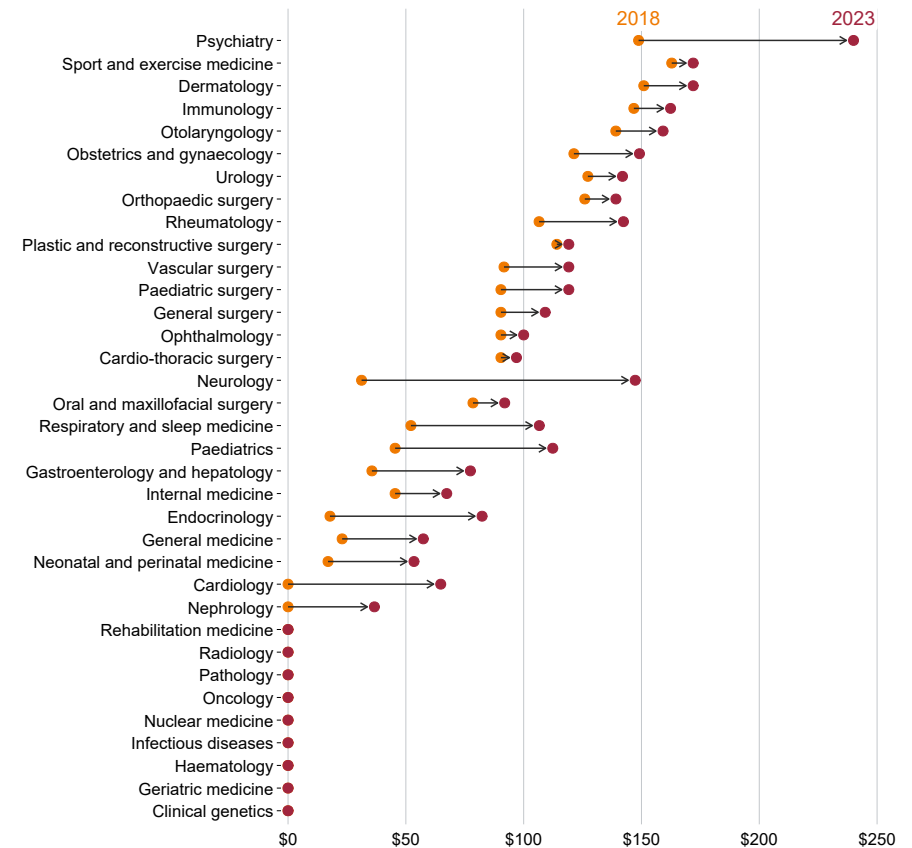


Notes: 'Specialists' is all private specialist attendances. 'GPs' is all GP non-referred attendances. 'Other Medicare services' is a weighted average of all other Medicare-subsidised services. Estimates include people who were bulk billed and people who paid a bill. Rolling 12-month average based on quarterly data.

Source: Grattan Institute analysis of Department of Health and Aged Care (2025a).

Figure 1.5: The cost of an initial consultation with most specialties has increased

Median out-of-pocket cost for an initial consultation, 2023 dollars



Notes: Median among all patients, including those who were bulk billed. Specialties with fewer than 1,000 appointments in either 2018 or 2023 were excluded. Points at zero indicate that at least half of all appointments were bulk billed.

Source: Grattan Institute analysis of ABS (2024b).

Even people with an urgent referral to a specialist can face months-long waits (Figure 1.6). In Victoria and Queensland, one in 10 people with an urgent referral for many specialties wait much longer than the clinically recommended 30 days.

About 29 per cent of people who needed to see a specialist in 2023–24 said they waited longer than they felt was acceptable. And those people were more likely to be in poor health and live in disadvantaged or remote areas.²⁵

Waiting too long for needed care can make people sicker in the long term (Section 1.4), and cause stress and frustration.²⁶ One patient told researchers: ‘There is a lot of despair and stress, and I suppose depression.’²⁷

1.3 Too many patients miss out on specialist care

High costs and long waits mean one in five Australians who need specialist care delay or skip getting it. Every year, 1.9 million people miss out.²⁸ About half of those who delay or skip specialist care – almost a million people – do so because of cost.²⁹

Some communities receive much less specialist care than others, suggesting they aren’t getting the care they need. People in wealthy communities receive about a quarter more services than people in poorer communities (Figure 1.7),³⁰ despite being healthier. Poorer

25. ABS (2024a).

26. Rittenmeyer et al (2014), and Propper (1995).

27. Harding et al (2023, p. 979).

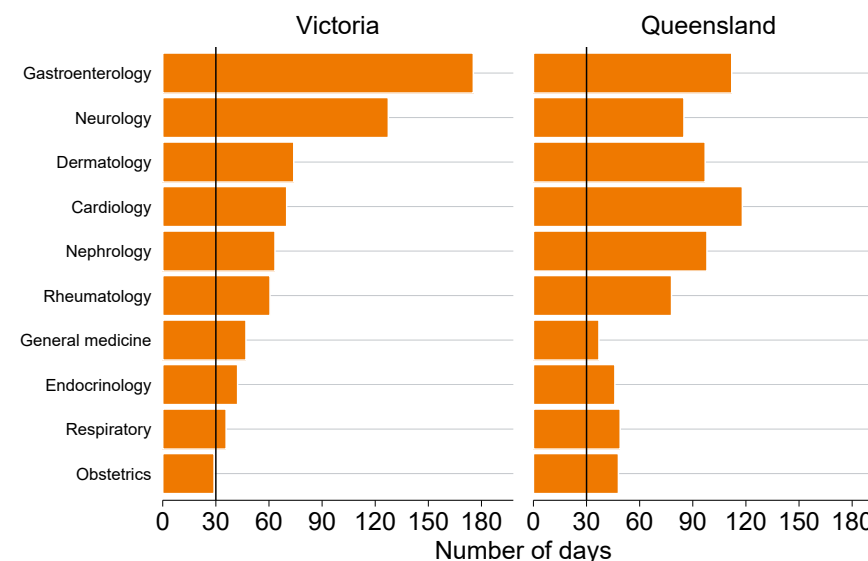
28. ABS (2024a).

29. Ibid.

30. Mean age-and-sex-adjusted service levels for areas in the most advantaged and least advantaged population-weighted quintiles of Index of Relative Socio-economic Advantage and Disadvantage. Services include public and private specialist services and are based on the location of the patient, not the specialist. For example, if a resident of Alice Springs had a telephone consultation with a

Figure 1.6: Wait times, even for urgent appointments, can exceed clinical recommendations

90th percentile of wait times for urgent first outpatient appointment



Notes: Clinical guidelines indicate that urgent first appointments should occur within 30 days of a referral. Wait times are averages across the whole state. Data are from April–June 2024. We chose Victoria and Queensland because they publish data on wait times for urgent appointments, but there is no nationally consistent way of measuring waiting times and they should not be directly compared. We chose 10 specialties for which data were reported across both states.

Sources: Victorian Agency for Health Information (2024) and Queensland Health (2025a).

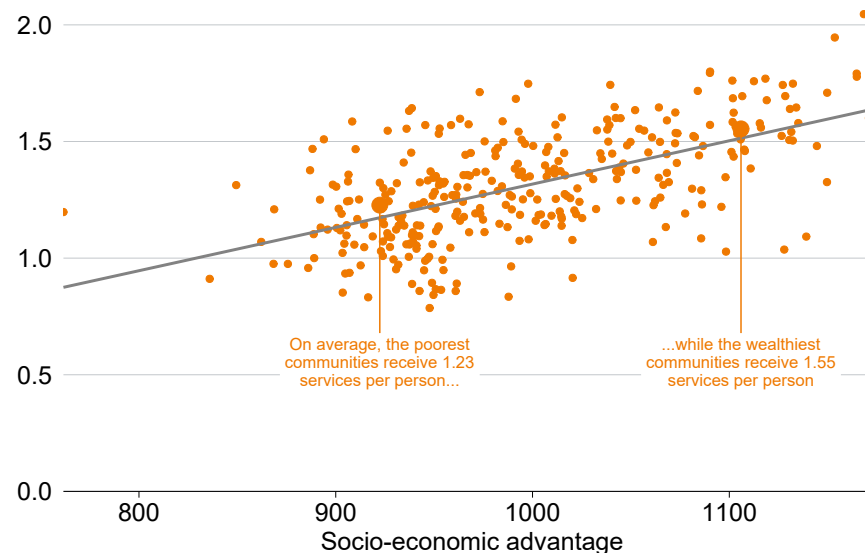
people tend to have more chronic conditions,³¹ so greater need for regular specialist visits, but less in the bank to pay for them.

People in rural communities also disproportionately miss out. If there aren't enough specialists nearby or virtual care options available, an appointment might mean extra time off work, travel, and accommodation costs.³² Half of remote and very remote areas receive less than one specialist service per person, per year (Figure 1.8). There are no parts of major cities where this is the case.

The variation in access to some specialties is even wider. People in the wealthiest communities receive more than double the number of dermatology and psychiatry appointments as people in the poorest communities.³³

Some people also miss out because they lack culturally safe care options. Indigenous Australians' care can be stymied by distance, communication, and cultural safety barriers.³⁴ And language barriers, poor cultural competency, transport difficulties, and other system factors can affect access to specialist care for people from culturally and linguistically diverse backgrounds.³⁵

Figure 1.7: People in poorer areas receive fewer specialist services
Number of specialist services per person, 2022-23



Notes: Each point represents one small area (SA3). SA3s are geographical areas typically covering a population of between 30,000 and 130,000 people. Specialist services are counts of public and private service events, adjusted for the age-and-sex profile of each community (see Appendix B). Socio-economic advantage is the Index of Relative Socio-economic Advantage and Disadvantage: ABS (2023b).

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

specialist in Darwin, that appointment would be captured in the Alice Springs service count, not the Darwin service count. See Appendix B for data limitations.

31. Duckett et al (2022).

32. Zucca et al (2011), Venchiarutti et al (2023), and Thorn and Olley (2023).

33. Mean age-and-sex-adjusted service levels for areas in the most advantaged and least advantaged population-weighted quintiles of Index of Relative Socio-economic Advantage and Disadvantage.

34. O'Brien et al (2021). Indigenous Australians received just over half as many specialist services as other Australians, after adjusting for age, in 2017-18: National Indigenous Australians Agency (2025).

35. Khatri and Assefa (2022).

1.4 Missed care is bad for patients and bad for the health system

A specialist visit requires a referral, which means that a doctor is concerned about a serious health condition that warrants further attention, or is uncertain about a health risk.³⁶ For example, a GP might have identified a suspicious mole, lump in a breast, or abnormal blood test result that needs specialist attention. The costs of missing out on this care can be high.

Patients' conditions can deteriorate while they linger on waiting lists. Long waits or missed care can delay crucial diagnoses and treatment.³⁷ In other cases, waiting for treatment or missing care means enduring pain and distress.³⁸

Long waiting lists and missed care are also costly for the health system.³⁹ Sicker patients are likely to need more intensive – and expensive – care (such as hospital treatment) down the track. And long waiting lists gum up the health system, increasing administrative costs associated with checking that referrals, diagnostics, and contact details are up to date; booking and re-booking appointments; and managing the increased risk of patient non-attendance.

36. Referrals can be made by GPs, or within hospitals. Nurse practitioners can also refer patients to specialists.

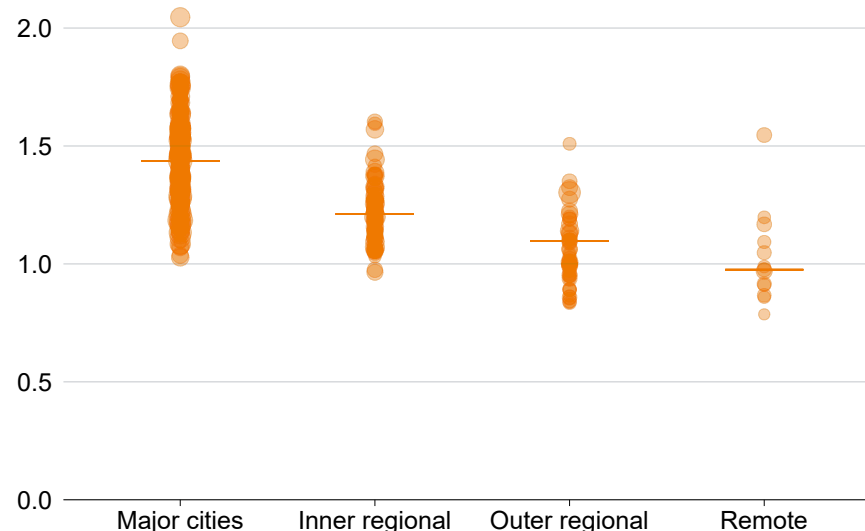
37. For example, delays to cancer treatment increase mortality: Hanna et al (2020). See also: Prentice and Pizer (2007), A. K. Lewis et al (2021), and Reichert and Jacobs (2018).

38. For example, people waiting more than six months for chronic pain outpatient appointments report increasing rates of distress, pain interfering in their daily life, and increased medication use: Burke et al (2020). Patients waiting to be assessed by a specialist for cataract surgery are at increased risk of falls and losing their driver's licence: Huang-Lung et al (2022).

39. Nyman et al (1998), Rolfson et al (2012), and James et al (2024).

Figure 1.8: People in regional and remote areas receive fewer specialist services

Number of specialist services per person, 2022-23



Notes: Each point represents one small area (SA3). The larger the point, the bigger the area's population. SA3s are geographical areas typically covering a population of between 30,000 and 130,000 people. The horizontal line indicates the median for each remoteness area. Specialist services are counts of public and private specialist service events (including virtual consultations) for residents of each SA3, adjusted for the age-and-sex profile of each community (see Appendix B).

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

1.5 Governments need to take charge

Long waits, high fees, and missed care reflect a specialist system that is running on autopilot. Governments haven't done enough to steer the private and public systems to deliver the best results for patients.

It is widely accepted that mixed private and public healthcare markets, such as Australia's specialist market, must be carefully managed.⁴⁰ Individual players – patients, doctors, clinic managers, and training bodies – lack the motivation, information, or system-wide perspective needed to deliver the best results.

The rest of this report shows what governments should do to steer the system towards better results:

- Train the specialist workforce Australia needs (Chapter 2).
- Invest in public clinics where they are needed most (Chapter 3).
- Make public specialist clinics more efficient (Chapter 4).
- Support GPs to do more, thereby reducing specialist referrals (Chapter 5).
- Reduce excessive fees (Chapter 6).

Patients will benefit if governments get to work. More care could be handled by a patient's GP, with specialist advice, avoiding the hassle of a specialist visit. More public appointments in under-served areas, and more productive clinics, will mean shorter waiting times. Severe shortages of some specialties in some regions will lessen. And patients will get fewer extreme fee shocks.

40. See, for example, Productivity Commission (2018, p. 79) and Department of Prime Minister and Cabinet (2023).

1.6 The scope of this report

This report focuses on outpatient specialist care. These are the referred consultation appointments that are typically provided in private clinics or public outpatient clinics.⁴¹ They are not covered by private health insurance.

Access to primary care is a barrier to specialist care for many, since patients need to get a referral from a GP or other health professional to see a specialist. Governments should support GPs to manage more chronic disease (reducing the need to refer patients to specialists) and make sure patients in 'GP deserts' can get care. This report does not cover these topics, but they are addressed in our 2022 report, *A new Medicare: Strengthening general practice*.⁴²

41. Many specialists also provide treatment – for example, a patient may have an initial consultation with a surgeon, and then the doctor might operate on that patient in a hospital. We focus only on the initial consultation, not the treatment.

42. Breadon and Romanes (2022) show how fairer and more flexible funding, multidisciplinary teams, and improved management of the system would enable general practice to do more.

2 Train the specialist workforce Australia needs

For too long, specialist training numbers have been determined by the priorities of specialist colleges and the immediate service needs of public hospitals. This has left Australia without enough specialists in some disciplines, and in many rural areas.

Specialist training places should be tied to community needs. To do that, Australia needs better workforce planning that sets clear goals based on how many specialists will be needed across the country. Training funding should be tied to those goals. And the bodies that train and accredit specialists should be accountable for their role in achieving the goals.

It will take time to change the training system. To help fill gaps in the meantime, it should be easier for specialists to migrate to Australia.

2.1 The training system is not producing the specialist workforce Australia needs

Australia's specialist training system (Figure 2.1) isn't responding well enough to our healthcare needs.⁴³ Over the past decade, the number of specialists has grown, but under-supplied specialties such as dermatology, psychiatry, and ophthalmology have lagged (Figure 2.2). And there aren't enough specialists in rural areas, in part because there are too few opportunities for rural training.

Figure 2.1: How Australia's GPs and specialists are trained

Medical student: 4-to-6 years

University degree focused on academic learning and clinical placements to gain foundational medical knowledge and practical skills. The number of Commonwealth-supported places is set by the federal government.

Pre-vocational trainee: 2+ years

Graduate doctor, undertaking practical, non-specialised training. Hospitals deliver training programs and employ trainees as junior doctors. Places are funded by hospitals. State and federal governments provide block funding for teaching, training, and research.

Registrar: 3-to-7 years

Advanced training in which trainees specialise in a particular area of medicine. Specialist medical colleges deliver training programs in collaboration with health services. Registrars are employed by health services and have more clinical responsibility and independence than trainee doctors. Most places are funded by hospitals, in addition to some federal government funding through the Specialist Training Program. State and federal governments provide block funding for teaching, training, and research.

Fellow

Fully qualified specialist, recognised by the relevant college, Australian Medical Council, and Medical Board of Australia as being able to independently provide expert care in their field.

Source: Department of Health and Aged Care 2023a.

43. This report focuses on the role of specialists in outpatient clinics, but many also work in inpatient care settings, and the issues in the training system that we describe affect the supply of specialists across the whole system.

2.1.1 Some specialties have been persistently under-supplied

Australia's specialist workforce has doubled as a share of the population in the past two decades,⁴⁴ but shortages of some specialties have persisted. Dermatologists, psychiatrists, and ophthalmologists have been identified as under-supplied.⁴⁵

The problem isn't fixing itself: under-supplied specialties have grown more slowly than average (Figure 2.3). For example, the number of ophthalmologists increased by just 19 per cent in the decade to 2023, while the number of emergency medicine specialists – estimated by the Department of Health and Aged Care to be adequately or over-supplied⁴⁶ – more than doubled.

Australia also needs more generalist physicians and surgeons. Generalists play a key role in regional areas that do not have the population to sustain doctors working in every sub-specialty.⁴⁷ And sub-specialisation makes the workforce less flexible, which could make care more fragmented, less efficient, and less safe.⁴⁸ But the number of sub-specialist physicians and surgeons is increasing twice as fast as the number of generalist physicians and surgeons.⁴⁹

44. OECD (2023).

45. Department of Health and Aged Care (2019), Department of Health and Aged Care (2018a), Department of Health and Aged Care (2017a), and Department of Health and Aged Care (2016a). Obstetrics and gynaecology specialists are projected to be under-supplied by 2030: Department of Health and Aged Care (2018b).

46. Department of Health and Aged Care (2017b).

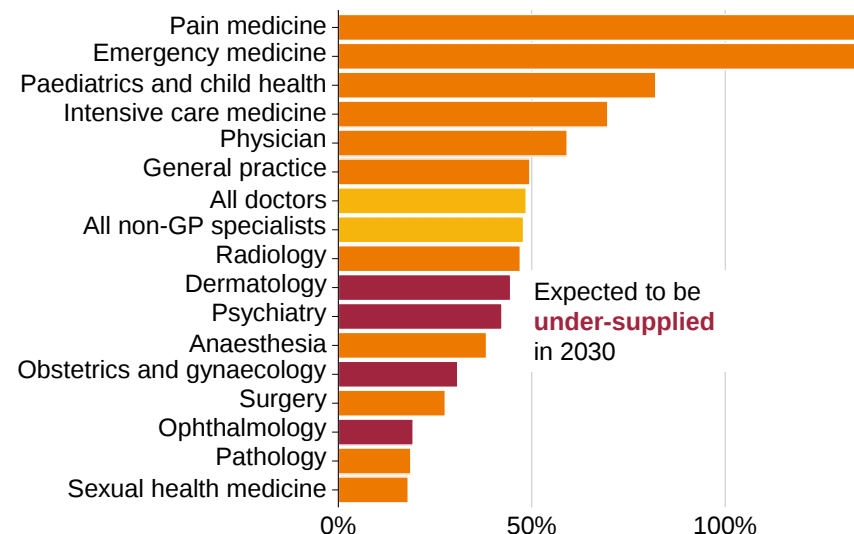
47. Sub-specialists focus on a narrow field within a medical specialty. For example, sub-specialist electrophysiologists are cardiologists who care for patients with heart rhythm disorders.

48. Department of Health and Aged Care (2021b).

49. Comparing annual growth rates from 2013 to 2021: Department of Health and Aged Care (ibid). However, rural generalists will soon be recognised as a specialty in their own right: M. Butler (2025a).

Figure 2.2: Under-supplied specialties are growing more slowly than the average

Growth in number of doctors from 2013 to 2023



Note: 'All doctors' excludes medical practitioners with no stated specialty, because this category is mostly comprised of doctors who have not completed specialist training.

Sources: Department of Health and Aged Care (2023a), Department of Health and Aged Care (2018a), Department of Health and Aged Care (2018b), Department of Health and Aged Care (2017a), and Department of Health and Aged Care (2016a).

A lack of training positions is a big part of the problem. Most under-supplied specialties – including dermatology, obstetrics and gynaecology, and ophthalmology – have many more applicants for vocational training each year than positions available.⁵⁰ For example, in 2022, 111 people applied for dermatology training, but only 40 trainees started in 2023.⁵¹

Psychiatry is the exception, with fewer applicants than available training positions.⁵² Programs to entice medical graduates to psychiatry have helped, but there are still too few trainees.⁵³

2.1.2 There's too little postgraduate training in rural areas

Rural health services struggle to fill vacancies. They're often left employing temporary locum staff to fill gaps, increasing costs and reducing continuity of care for patients.⁵⁴ In 2019, there were nearly 200 specialists per 100,000 people in major cities, but fewer than 70 per 100,000 in remote communities.⁵⁵

More rural training would help, because students who train in rural areas are more likely to later practise in rural areas.⁵⁶

50. RANZCO (2024), and RANZCOG (2024).

51. Australasian College of Dermatologists (2022), and Department of Health and Aged Care (2023b).

52. In 2022 there were only 1,834 current psychiatrists in vocational training but 2,112 available training posts: Department of Health and Aged Care (2023b).

53. Nguyen and Solanki (2023).

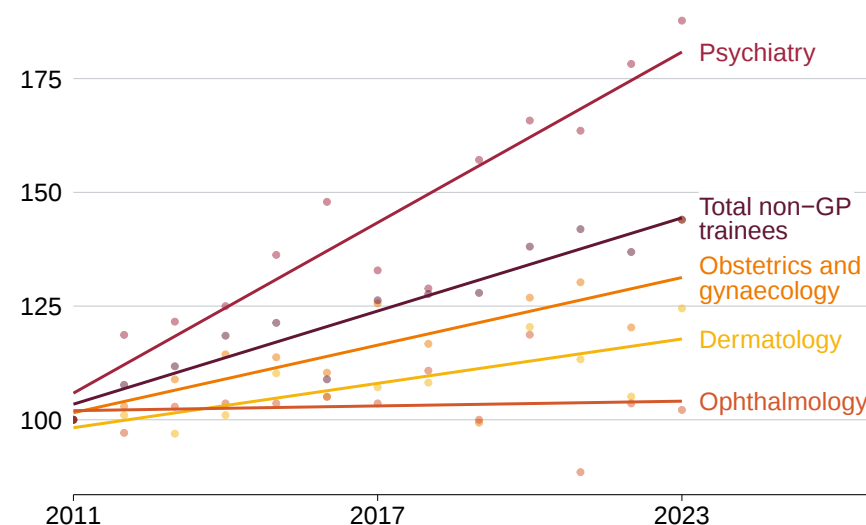
54. Kruk (2023), Department of Health and Aged Care (2022a), May (2023), Department of Health and Aged Care (2019, p. 26), Department of Health and Aged Care (2021b), and Kruk (2023).

55. The problem is even worse for under-supplied specialties such as dermatology. Fewer than 8 per cent of dermatologists work outside major cities: Department of Health and Aged Care (2023a).

56. Malhi et al (2019), O'Sullivan and McGrail (2020), McGirr et al (2019), Playford et al (2017), and McGrail et al (2023). A study of University of Queensland graduates found that specialists with a rural background who completed two years of medical

Figure 2.3: Psychiatry has increased its trainee numbers, but other under-supplied specialties are not catching up

Trainees by specialty, relative to 2011



Note: Indexed for each specialty, with 2011 trainee numbers = 100.

Source: Department of Health and Aged Care (2023b).

Many undergraduate medical students have the opportunity to train in rural areas: about 34 per cent complete at least six months of their clinical training in rural areas.⁵⁷ But there are fewer opportunities for rural postgraduate training. A third of final-year medical students say they intend to work outside the major cities, but just 14 per cent of specialist trainees actually do.⁵⁸

2.2 Why we're not training the specialists we need

Persistent shortages of some types of specialists, and in many rural areas, are caused by problems with the way we plan, fund, and accredit specialist training.

2.2.1 Poor workforce planning

Australia needs a comprehensive, long-term workforce plan to ensure we have the specialist workforce to meet our healthcare needs.⁵⁹ At the moment, there is no comprehensive national workforce planning mechanism.

Planning is important because of the long time lags and many players involved in training specialists.

It takes at least 12 years to train a medical specialist (Figure 2.1 on page 15), so governments need to look ahead to identify what specialists will be needed to meet our future health needs.⁶⁰

school training in rural areas were 16 times more likely to practise in rural areas than metropolitan students with no rural training. Rural-background students who didn't do rural training were only twice as likely to practise in rural areas: Kwan et al (2017).

57. Medical Deans Australia and New Zealand (2024).

58. Medical Deans Australia and New Zealand (2024), and Department of Health and Aged Care (2024a).

59. WHO (2006), OECD (2013), and *Health Workforce Policies in OECD Countries* (2016).

60. HWA (2014).

Governments, universities, medical colleges, and health services all make decisions on how many and what types of specialists are trained in Australia. Without a plan – backed by funding and accountability – their decisions on training volumes, skills, and locations won't be aligned to each other, or to community needs.⁶¹

But, since the national planning and advisory body, Health Workforce Australia, was abolished in 2014, supply and demand modelling has been ad hoc and fragmented.⁶²

There is very limited system-wide data on workforce supply, workforce demand, training activity, or training capacity.⁶³ Governments, medical colleges, and regulators use different data and methods to forecast specialty supply and demand. As a result, Australia does not have a shared understanding of what the workforce should look like or the changes needed to secure it.⁶⁴

2.2.2 Funding for specialist training is disconnected from workforce needs

The lion's share of specialist training funding comes from public hospital budgets.⁶⁵ This funding is mostly dictated by how many services hospitals deliver — through Activity-Based Funding — and how much training they deliver, through Teaching, Training,

61. HWA (2014) and Department of Health and Aged Care (2019).

62. A committee, the Medical Workforce Advisory Collaboration, currently advises governments on workforce issues, but isn't equipped to undertake comprehensive, whole-system planning: Department of Health and Aged Care (2025b). Other models have been published, but focus on individual specialties rather than the system as a whole: Department of Health and Aged Care (2016a), Department of Health and Aged Care (2016b), Department of Health and Aged Care (2017a), Department of Health and Aged Care (2017b), Department of Health and Aged Care (2018a), and Department of Health and Aged Care (2018b).

63. Kruk (2023), and Department of Health and Aged Care (2022b).

64. Department of Health and Aged Care (2021b).

65. Ibid.

and Research funding. Neither of these funding sources is linked to workforce planning, and both lock in the current distribution of training places, disadvantaging rural areas.

Hospitals increasingly rely on registrars (see Figure 2.1) to deliver core services. But the immediate need for hospital trainees does not match the long-term need for these specialists (Box 1). This contributes to too much training in some areas, such as in emergency medicine, and too little in others, such as dermatology.

The federal government's Specialist Training Program (STP) aims to address these imbalances by funding new positions in under-supplied specialties and in rural, remote, and private hospitals.⁶⁶ But the program is too small and inflexible to enable the training system to respond to workforce needs.⁶⁷

Some states have their own targeted funding programs to boost training in under-supplied specialties and regions.⁶⁸ But this funding is also too small to make much difference.

2.2.3 Specialist colleges aren't delivering the workforce Australia needs

Specialist colleges control crucial steps in the training process for Australia's specialists.⁶⁹ But they are not set up to take into account

66. The program includes a contribution towards the trainee's salary, a rural support loading, and other allowances for training support: Department of Health and Aged Care (2017c) and Department of Health and Aged Care (2023c).

67. Training positions funded by the STP are just 7 per cent of the total: Department of Health and Aged Care (2017c).

68. For example, the Victorian Medical Specialist Training Program: Victorian Department of Health (2025) and Department of Health and Aged Care (2022a).

69. Specialist colleges' roles include: developing curricula and goals for training programs; accrediting hospitals and other services as training sites; selecting junior doctors for specialist training; supervising trainees; examining trainees; and assessing overseas-trained specialists: ACCC and Australian Workforce

Box 1: Hospitals' reliance on registrars skews training places

Historically, all medical students followed a clear path from junior doctor, to registrar, to specialist. Now, health services increasingly rely on a large cohort of 'middle-grade' trainee doctors – rather than specialists – to deliver 24/7 acute care.^a

This means that in some specialties, such as emergency medicine, hospitals fund more training positions than there is future need, or jobs, for fully accredited specialists.^b In contrast, training positions in under-supplied specialties such as dermatology often go unfunded.^c

Health services are also employing more unaccredited registrars who complete similar tasks but are not recognised as trainees and cannot progress towards fellowship.^d Unaccredited registrars have fewer protections than trainees and are more likely to feel dissatisfied or burn out.^e

The registrar workforce model should change, to create attractive alternatives to specialist accreditation. A new model should support sustainable, long-term, non-specialist medical roles that attract non-accredited doctors in fields with high demand for registrar workers. The Department of Health and Aged Care is developing a framework for service registrars and career medical officers to help address this.^f

- a. Doctors who have sufficient skills and experience to provide care under supervision but aren't qualified specialists: Department of Health and Aged Care (2021b, p. 41).
- b. Rosie (2015) and Department of Health and Aged Care (2019).
- c. Department of Health and Aged Care (2019).
- d. Department of Health and Aged Care (2021b).
- e. Ibid.
- f. Department of Health and Aged Care (2024b).

the interests of the community as a whole. Their processes often add red tape and complexity, stymieing supply.⁷⁰

Colleges' interests and expertise don't align with community needs

Colleges are not set up to solve workforce shortages. They are led by members, whose interests may not align with broader system goals.⁷¹ And colleges' expertise is in their specialty's skills and knowledge, not the system-wide effects of training and accreditation decisions.⁷²

Colleges are accountable to the Australian Medical Council (AMC), an independent regulatory body that sets the standards colleges must meet to be accredited. But the AMC's standards are often vague and disconnected from community needs.⁷³

Most day-to-day college work is completed pro bono by fellows, and operations are largely funded by trainee and membership fees.⁷⁴ This means colleges have limited resources to develop new training models or adapt their practices, and their funding is not linked to clear targets or performance indicators.

Officials Committee (2005), National Health Practitioner Ombudsman (2023), and Australian Medical Council (2023).

70. Woods (2017), Department of Health and Aged Care (2022a), and National Health Practitioner Ombudsman (2023).

71. Blair and Durrance (2014).

72. National Health Practitioner Ombudsman (2023) and ACCC and Australian Workforce Officials Committee (2005).

73. For example, the AMC standards do not require colleges to consider how well trainee selection aligns with community needs, including rural background and experience: Australian Medical Council (2023). In 2024, the AMC began a review of the standards for assessment and accreditation of specialist medical programs. And an independent review of complexity in the National Registration and Accreditation Scheme is considering giving health ministers more power to direct accreditation bodies such as colleges: Dawson (2024).

74. See, for example, RACP (2023), Australasian College of Dermatologists (2022), and RANZCOG (2023).

To address this, the federal government provides some funding to colleges under the Specialist Training Program (STP) and the Flexible Approach to Training in Expanded Settings (FATES) program.⁷⁵ But these programs are currently too small to have a big impact.⁷⁶

Accreditation is inconsistent and inflexible

Hospitals or health services that wish to host a trainee must be accredited by the relevant specialist college, to ensure they can provide a safe, high-quality training environment.⁷⁷ But the process is flawed.

Colleges' accreditation rules vary significantly. Some lack transparent policies and adequate procedures.⁷⁸ And internal politics can affect accreditation decisions.⁷⁹

Accreditation is inflexible, with strict requirements about the types and volumes of care seen during training, and how trainees are supervised (Box 2). Requirements are often based on historical practices rather than evidence, limiting the uptake of successful flexible and remote

75. Australian Government (2021).

76. The STP partially supports just 7 per cent of training positions: Department of Health and Aged Care (2017c). The FATES program provided \$29.5 million over four years (2021/22–2024/25) in competitive grants to colleges to support improvements in the distribution of specialist training: Australian Government (2021).

77. Department of Health and Aged Care (2022a).

78. National Health Practitioner Ombudsman (2023).

79. Department of Health and Aged Care (2022a). These concerns date back decades. A joint report by the ACCC and the Australian Health Workforce Officials Committee in 2005 said: 'A recurring theme is that at times colleges' processes appear to lack procedural fairness and transparency, and that they 'unreasonably' restrict entry to college fellowship': ACCC and Australian Workforce Officials Committee (2005, p. 3).

supervision models.⁸⁰ This puts a handbrake on new training places, particularly in rural areas.⁸¹

Trainee selection is focused on the wrong things

Colleges put too much weight on narrow academic metrics such as publications and higher degrees when selecting trainees. These requirements are expensive and burdensome for junior doctors,⁸² and risk excluding applicants from poorer and rural backgrounds,⁸³ with no evidence that they make for more competent trainees.⁸⁴

Colleges also haven't fully integrated broader health system goals, such as increasing rural training, into their selection processes.⁸⁵

Trainees are at risk of burning out and dropping out

Specialist trainees are at high risk of burnout and psychological distress.⁸⁶ Training program demands contribute to this risk.

Many trainees lack support at work, particularly on rural rotations and in new jobs, and bullying and discrimination are common.⁸⁷ Trainees

80. Martin et al (2018), Martin et al (2022), Coleman et al (2022), Cameron et al (2015), and Department of Health and Aged Care (2022a).

81. Department of Health and Aged Care (2022a). It can also limit access to care, with rural health services that are unable to host training lacking the workforce needed for some types of care: National Health Practitioner Ombudsman (2023).

82. Stehlik et al (2025).

83. Brandenburg et al (2024), Glick (2000), and Larkins et al (2015).

84. Withers et al (2021) and Department of Health and Aged Care (2021b).

85. A 2021 study found that most specialist colleges had no rural-focused criteria for selecting trainees: McGrail et al (2021) Those that did implement rural criteria gave insufficient weight to rural background and experience. No colleges reported on rural selection outcomes.

86. Parr et al (2016), Soares and Chan (2016), and Ganes and Sunder (2024).

87. Balhatchet et al (2023), and Wilkes et al (2024).

Box 2: Barriers to accreditation for training sites

There are many examples of how the inflexibility of college rules and a lack of accountability can limit training opportunities.

The Northern Territory has no accredited training sites for facial trauma, despite having a similar volume of cases to Victoria. College requirements that each training location have four trainees are not feasible for NT health services.^a

In rural NSW, a health service faced resistance to establishing a training position because other specialists did not believe a regional centre was suitable for training. The site met accreditation requirements, but when the health service wrote to the college to establish the position it did not receive a response. Later, when the NSW government intervened, the college assessed the site and it was eventually accredited.^b

A proposal for an innovative Basic Physician Training in Paediatrics and Child Health post in Far North Queensland received positive feedback from Brisbane's Directors of Physician Education. But the The Royal Australasian College of Physicians rejected the post because it did not align with the existing training model.^c

a. Department of Health and Aged Care (2022a, p. 38).

b. Ibid (p. 71).

c. Ibid (p. 70).

often work long and unpredictable hours, while studying for high-stakes exams, increasing the risk of stress and burnout.⁸⁸

These factors contribute to high rates of attrition and failure in some fields, such as surgery and ophthalmology.⁸⁹ And they help to explain the gender gap in some specialties.⁹⁰ Long and inflexible hours are particularly difficult for people with child-caring responsibilities, which often fall to women.⁹¹

2.3 Overseas specialists face high barriers

Changes to the training system take time, but workforce shortages are acute now. Specialists who have been trained overseas have an important role to play in ensuring Australians can get needed specialist care. But moving to Australia is complex, costly, and slow.

To practise here, internationally qualified specialists must be assessed by the relevant college.⁹² These assessments help ensure that they meet Australia's high standards. But it can take up to two years, and \$45,000, to be approved to practise in Australia.⁹³ Colleges' assessment practices and outcomes vary,⁹⁴ and place too much

emphasis on the direct comparability of qualifications.⁹⁵ Administrative duplication and blockages also slow things down.⁹⁶

For many applicants, individual college assessments are overkill. Countries with similar systems to Australia, such as New Zealand, Canada, and the UK, provide expedited pathways for international specialists from trusted health systems and qualifications.⁹⁷

Australia has introduced expedited pathways for anaesthetists and obstetricians and gynaecologists from the UK and Ireland, and psychiatrists from the UK. Pathways for general medicine, general paediatrics, and diagnostic radiology are currently being considered.⁹⁸ But there are many more opportunities. The UK, for example, recognises specific specialist qualifications from 12 different countries and the European Union.⁹⁹

2.4 How to fix supply

Funding and accountability should be linked to a system plan, so the future specialist workforce meets community needs.

2.4.1 Plan for the future

A dedicated national health workforce planning body should be established.¹⁰⁰ The new body should cover the whole health workforce, including specialists, GPs, nurses, and allied health professionals. Part

88. Balhatchet et al (2023).

89. Forel et al (2018), Australian Medical Council (2021), and Jessup et al (2025).

90. Wasserman (2023).

91. Wood et al (2021).

92. Colleges assess candidates on their qualifications, training, and experience, to determine comparability to an Australian specialist: Medical Board of Australia (2021). Substantially or partially comparable applicants must then complete a period of supervised practise and any other requirements of the college.

93. Kruk (2023, p. 6).

94. Deloitte Access Economics (2017), AMC (2023), and Medical Board of Australia (2024). Despite the Medical Board of Australia introducing standards: Medical Board of Australia (2021). One reason is ambiguity in the requirements for accreditation under the *Health Practitioner Regulation National Law Act 2009*.

95. Sondergaard (2008) and Kruk (2023).

96. Applicants must provide the same information to multiple authorities: Kruk (2023), and the Australian Health Practitioner Regulation Agency processes applications too slowly: ACT Health (2023) and NSW Health (2023).

97. Kruk (2023).

98. Medical Board of Australia (2025).

99. General Medical Council (2025).

100. As recommended by the National Medical Workforce Strategy, and supported by the Australian Medical Association: Department of Health and Aged Care (2021b) and Australian Medical Association (2025).

of its job should be to determine the necessary size and distribution of the specialist workforce, the mix of specialties, and the right balance of sub-specialists and generalists.

The new body should get sufficient funding and authority to do its job well. It should be a national body, accountable to all jurisdictions, because both the federal and state governments shape, and have a stake in, the health workforce.

It should have a well-defined, narrow role, focused on technical research and advice. It should: collect, collate, and publish a medical workforce and training dataset; publish supply and demand modelling every two years;¹⁰¹ and recommend the number and distribution of university places and training positions.¹⁰²

If governments cannot agree to establish a new body, existing structures should be significantly strengthened. Health ministers should give the Medical Workforce Advisory Collaboration, a committee that advises health ministers, expanded expertise, ongoing funding to develop workforce modelling, and a five-year work plan.¹⁰³

2.4.2 Tie training funding to workforce needs

A national pool of funding for training places should be established under the National Health Reform Agreement (NHRA). Training places would be eligible for funding from the pool only if they align with the recommendations of the national planning body on how many positions

are needed in each specialty, sub-specialty, and location (both state and rurality).¹⁰⁴

Teaching, Training, and Research (TTR) funding in the NHRA should be increased by 20 per cent – an additional \$155 million per year. The existing and extra TTR funding should be allocated to the national pool of training places. States and territories should receive federal funding only if they deliver the recommended training positions.¹⁰⁵

State and territory governments should develop strategies to reorient training places to align with the planning body's recommendations. For example, this could include reducing hospitals' reliance on registrars for service delivery (Box 1).

2.4.3 Fund colleges to shift training

Colleges should, along with states and territories, agree to facilitate the training places funded under the national pool.

The federal government should give more support to colleges to help them develop flexible training programs and expand training. The Flexible Approach to Training in Expanded Settings (FATES) program should be continued beyond 2024-25 and expanded. Funding for the program should be doubled, to \$17 million per year. Colleges should remain eligible only if they sign on to the national training targets and demonstrate progress towards them.

101. The supply and demand modelling should account for changes in labour supply, such as falling average hours worked: AIHW (2024c).

102. The new body should also make recommendations on migration and distribution policy settings, including District of Workforce Shortage and Distribution Priority Area measures.

103. Department of Health and Aged Care (2025b). Membership should expand to include expertise in workforce modeling, with specialist colleges taking an advisory role.

104. Funding allocated to each position should reflect differences in the cost of training in remote areas and between different specialties.

105. This aligns with recommendations in the mid-term review of the National Health Reform Agreement that TTR funding should be more transparent, and that regional and rural hospitals should get an equitable distribution: Huxtable (2023).

2.4.4 Make training standards more consistent

Training standards should be more consistent and transparent. Work is underway to do this,¹⁰⁶ including a review of the Australian Medical Council's standards for colleges, and work revising the standards and procedures for the accreditation of specialist training sites.¹⁰⁷

The revised accreditation rules should:

- provide core standards for all specialist training sites, accounting for differences between sites, especially rural sites;
- provide specialty-specific standards for training sites, where necessary; and
- outline the process for the assessment of sites against the standards, as well as complaint resolution mechanisms.

As part of the broader review of standards for colleges, the AMC should give colleges clear guidance to ensure their training requirements and selection processes align with health system goals.¹⁰⁸ This should include requiring colleges to use trainee selection criteria and curricula that promote generalist and rural roles.

Once the revised sets of standards are in place, the AMC should regularly review colleges' processes to ensure they adhere to them.

If after three years the changes haven't made training more consistent and responsive to community needs, legislation should be amended so that health ministers can give clearer policy direction to the bodies responsible for registering and accrediting medical professionals.¹⁰⁹

106. A taskforce is advising ministers on reforming specialist accreditation:

Department of Health and Aged Care (2025c)

107. Australian Medical Council (2025).

108. The AMC has a legislated objective to facilitate access to care and enable a flexible, responsive, and sustainable workforce: Queensland Parliament (2009).

109. As recommended by Cormack (2024), and under consideration by Dawson (2024).

2.4.5 Lower barriers for overseas specialists

Australian authorities should reduce costs and time for overseas specialist applicants and employers,¹¹⁰ by removing duplication, aligning standards and evidence, and allowing applicants to provide information through a single portal.

The Medical Board of Australia and the Australian Medical Council should identify trusted and comparable health systems and qualifications for medical specialists. Specialists who have sufficient experience in these systems, or recognised qualifications, should be eligible for provisional registration without having their knowledge and skills reassessed.

The number of specialties eligible for expedited pathways from countries with similar health systems to Australia, such as the UK, Canada, and New Zealand, should be expanded as a priority.

To streamline assessments, final decisions on the comparability of overseas specialists should be made by the AMC rather than specialist medical colleges. This would enable the AMC – where sufficient evidence of comparability is available – to recommend provisional registration without additional college assessments. Colleges could then assess more complex cases.¹¹¹

As part of these changes, the *Health Practitioner Regulation National Law Act 2009*¹¹² should be amended to allow greater consideration of the experience and skills of specialists.¹¹³

110. As recommended by Kruk (2023).

111. The AMC would keep drawing on expertise from specialist colleges as needed. This model has recently been proposed by Medical Council of New Zealand (2024) and was an escalation recommendation of Kruk (2023).

112. Queensland Parliament (2009).

113. In addition to the equivalence of qualifications.

Changes to skilled migration policy more broadly would also open the door for more overseas-trained specialists to work in Australia.¹¹⁴ The federal government should reform the points test by allocating visas to migrants – such as medical specialists – who are likely to make the biggest economic contribution to Australia. The government should also invest more in attracting skilled migrants.¹¹⁵

The federal government should make it easier for hospitals and health services to sponsor the workers they need, by simplifying and speeding up the process for employers to sponsor visas.¹¹⁶ And state and territory governments should offer more help to hospitals and health services to recruit and sponsor the workers they need.¹¹⁷

114. Coates et al (2024).

115. Our recommended changes to the points test would result in more medical practitioners being granted points-tested visas: Coates et al (ibid, p. 58).

116. Grattan has previously recommended changes to temporary and permanent employer-sponsored visas. See Coates et al (2022).

117. Coates et al (2024, p. 59).

3 Invest in public clinics where they are needed most

Public clinics provide essential specialist care. For many Australians, private specialists simply cost too much, or are too far from where they live. But governments have not invested enough in public clinics where they are needed most, leaving too many gaps.

Governments should commit to a national minimum level of specialist access. Over the next five years, they should target the worst gaps, and spend \$470 million a year to provide an extra 984,000 public specialist services in the most under-served areas. After this, governments should continue to expand public specialist care, to keep cutting waiting times and improving access.

3.1 Public care doesn't make up for big gaps in private care

There are big differences in access to care across communities (Figure 3.1).¹¹⁸ After adjusting for differences in age, sex, health, and wealth, people in the worst-served areas receive about a third fewer services, per person, than people in the best-served communities.

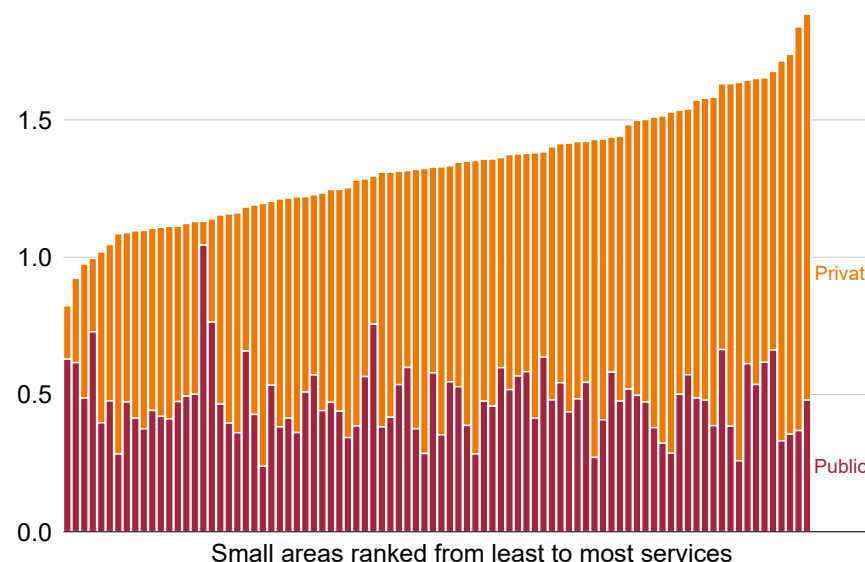
In a universal health system like Australia's, public specialist clinics should plug the gaps left by the private market. But public investment could be much better targeted to the areas missing out on private care.

The communities that receive the least private services receive about 26 fewer private services, per 100 people, than the median.¹¹⁹ But

118. Our analysis is based on the location of the patient, not the specialist. For example, if a resident of Alice Springs had a telephone consultation with a specialist in Darwin, that appointment would be captured in the Alice Springs service count, not the Darwin service count. These results merge data from two different sources, and should be treated as indicative only: see Appendix B.

119. Bottom fifth of communities for total private specialist services, weighted by population. These figures are not adjusted for age, sex, and other drivers of healthcare demand and should be interpreted as only crude indicators of access.

Figure 3.1: Public services don't make up for low private services
Specialist services per person, 2022-23



Notes: Each bar represents one small area (SA4). SA4s are geographic areas that typically encompass a population of between 100,000 and 300,000 people in regional areas and 300,000 to 500,000 people in cities. Numbers are actual service use, not adjusted for age, sex, health, or wealth. See Appendix B.

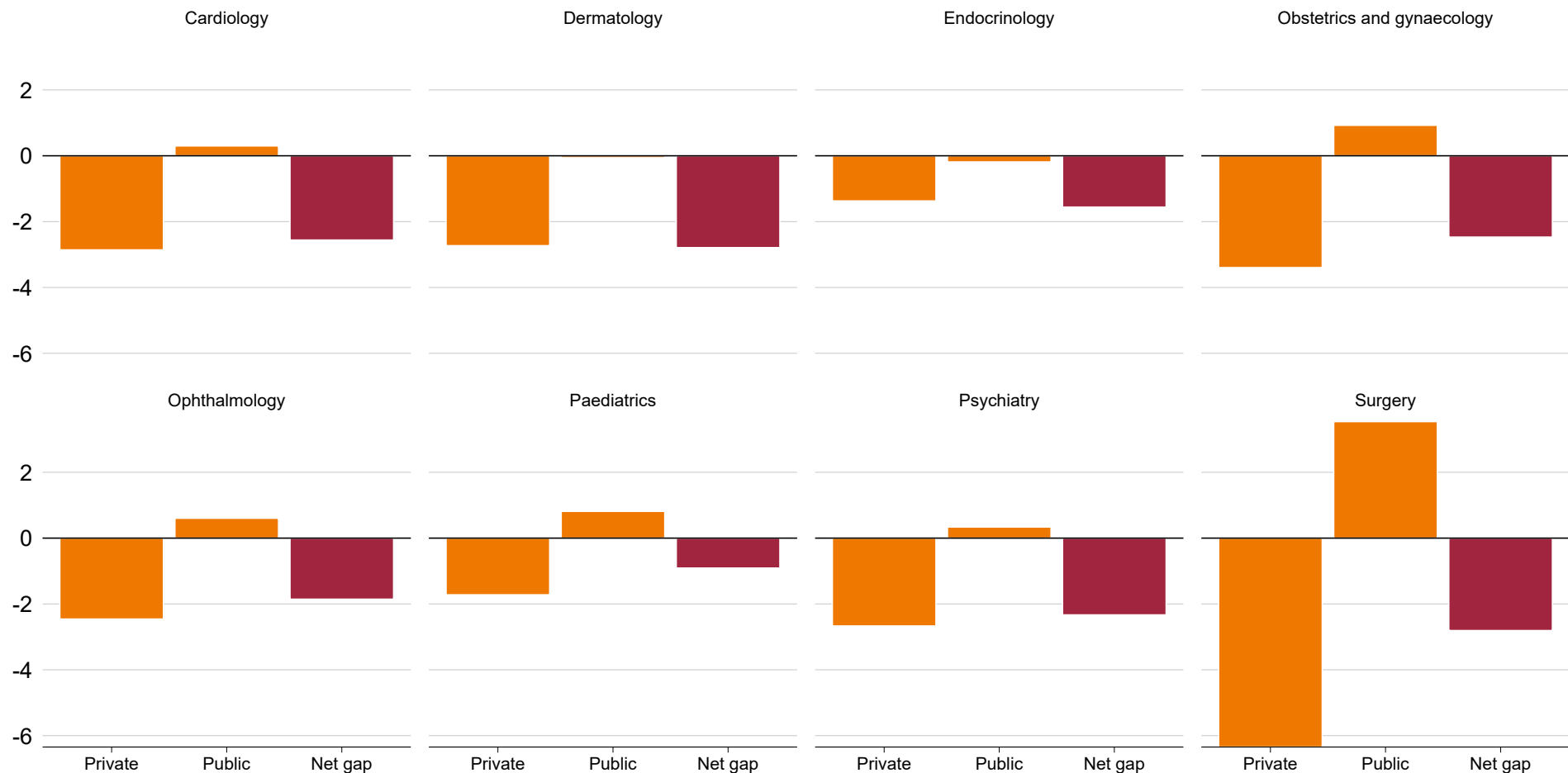
Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

those same communities only receive an additional three public services, per 100 people.

The gaps are even bigger for some specialties (Figure 3.2). There are very few additional public dermatology, endocrinology, cardiology, and psychiatry services in the communities with the fewest private appointments for each of those specialties.

Figure 3.2: Public services only partly compensate for missed private services – and not at all in some specialties

Number of services per 100 people in bottom private quintile, relative to median



Notes: Bottom quintile is the bottom 20 per cent of SA3s for private specialist services, weighted by population. SA3s are geographical areas typically covering a population of between 30,000 and 130,000 people. Data are from 2022-23.

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

3.2 Target the worst first

Governments should expand services in the areas that have the worst access to care. We recommend a national target to pull the bottom quarter of the country up to the 25th percentile of services per person, for each specialty, within five years (Figure 3.3).¹²⁰

Our estimates – adjusted for age and sex only – point to 81 communities that require additional investment in at least one specialty.¹²¹ An additional 984,000 appointments every year to expand public services to fill all of these gaps would cost approximately \$470 million.

The communities that need the biggest increase in services are remote and regional communities, such as outback NT, SA, WA, and Queensland (Figure 3.4). But other places, including parts of major cities, are missing out on particular specialties – for example, people in North East Perth receive far fewer paediatrics appointments than average, and residents of South West Sydney receive far fewer psychiatry appointments than the rest of the country (Figure 3.5).

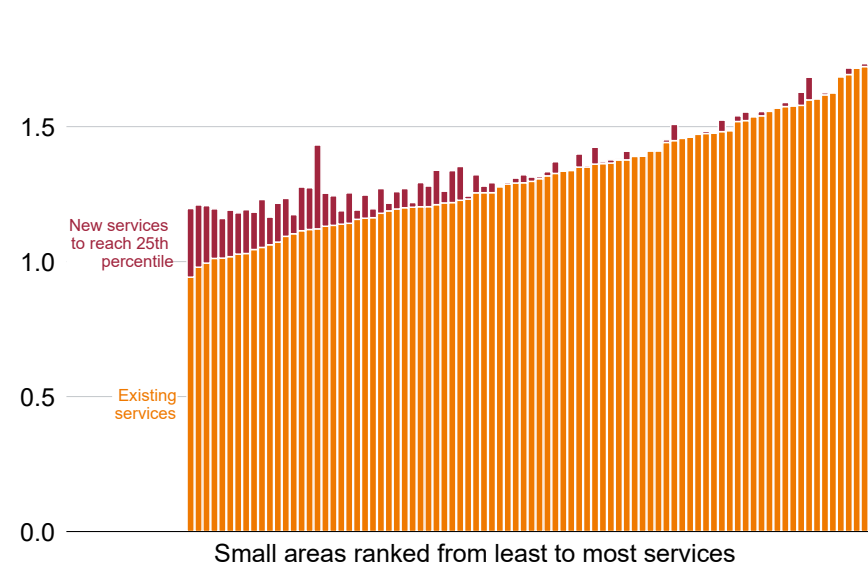
Sicker and poorer communities need more care than average, so governments should use more sophisticated models for each specialty to decide where to invest. They should also validate and improve the underlying data if required (these data were not originally collected for the purpose of service planning.)

To show how needs-adjusted estimates of service use could inform system planning, we adjusted each community's overall specialist service use (that is, not split out into individual specialties) to account for health and wealth, as well as age and sex.

120. The estimates of service use and target threshold should be adjusted for each community's need and non-need characteristics, as we outline in Appendix B.

121. Almost all of the 88 SA4s included in our analysis. SA4s typically have a population of 100,000-300,000 in regional areas and 300,000-500,000 in cities. Our cost estimates are conservative (Appendix B) and would be reduced by reforms to increase productivity in public clinics (Chapter 4).

Figure 3.3: More services are needed to help the least-served communities catch up to the 25th percentile
Specialist services per person



Notes: Each bar is one SA4. SA4s are geographic areas that typically encompass a population of between 100,000 and 300,000 people in regional areas and 300,000 to 500,000 people in cities. Adjusted for community age-and-sex profile only. Based on 2022-23 data. Services required to catch up to 25th percentile for each specialty. See Appendix B.

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

We found that adjusting for need is important. Areas that are missing out, typically poorer areas, have even greater need for care than average, so the access gap is even starker than it initially appears (Appendix B).

3.3 Commit to filling the biggest gaps

The minimum level of specialist care should be enshrined in the National Health Reform Agreement, setting a new level of accountability for providing an effective safety net in all communities.¹²²

The Agreement should commit to new funding from both levels of government to achieve the target.¹²³ The new funding should be tied to regions that are below the target and should not be counted towards any cap in the growth of public hospital funding.

3.4 Making it happen

Public services should be expanded to meet the 25th percentile target. Governments have few levers to direct private specialists to work in particular areas. Any efforts to encourage them to do so are likely to be expensive and ineffective (see Box 9 on page 49). And public clinics have broader benefits for the system, such as modelling best-practice multidisciplinary models of care, and training the next generation of specialists (Chapter 4).

Targeting the 25th percentile is a balanced goal that reflects the urgency of filling healthcare gaps, but acknowledges workforce and budget constraints.¹²⁴

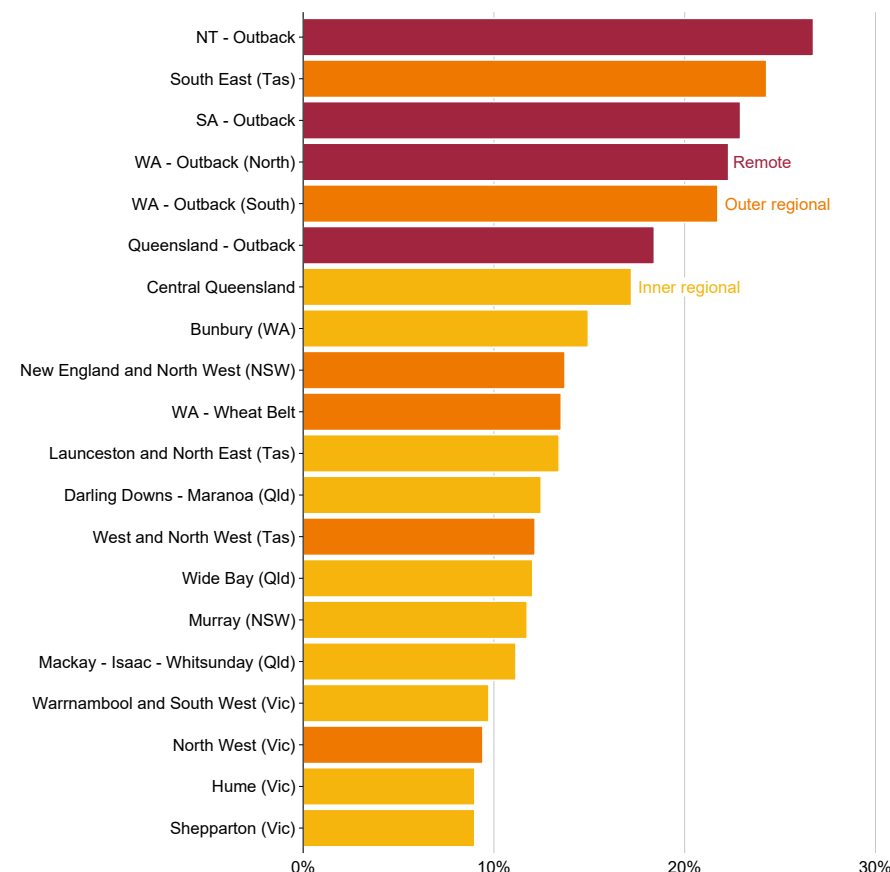
122. This could be included as an addendum to the Agreement. The minimum level of services should be adjusted for need: see Appendix B for more information.

123. Public specialist clinics are jointly funded by the federal and state governments, with the rules set out in the National Health Reform Agreement.

124. Our recommendations on migration (Chapter 2) and public clinic productivity (Chapter 4) will help address these constraints.

Figure 3.4: Rural and regional communities require the biggest proportional increase in specialist services

Percentage change in total services to reach 25th percentile for each specialty

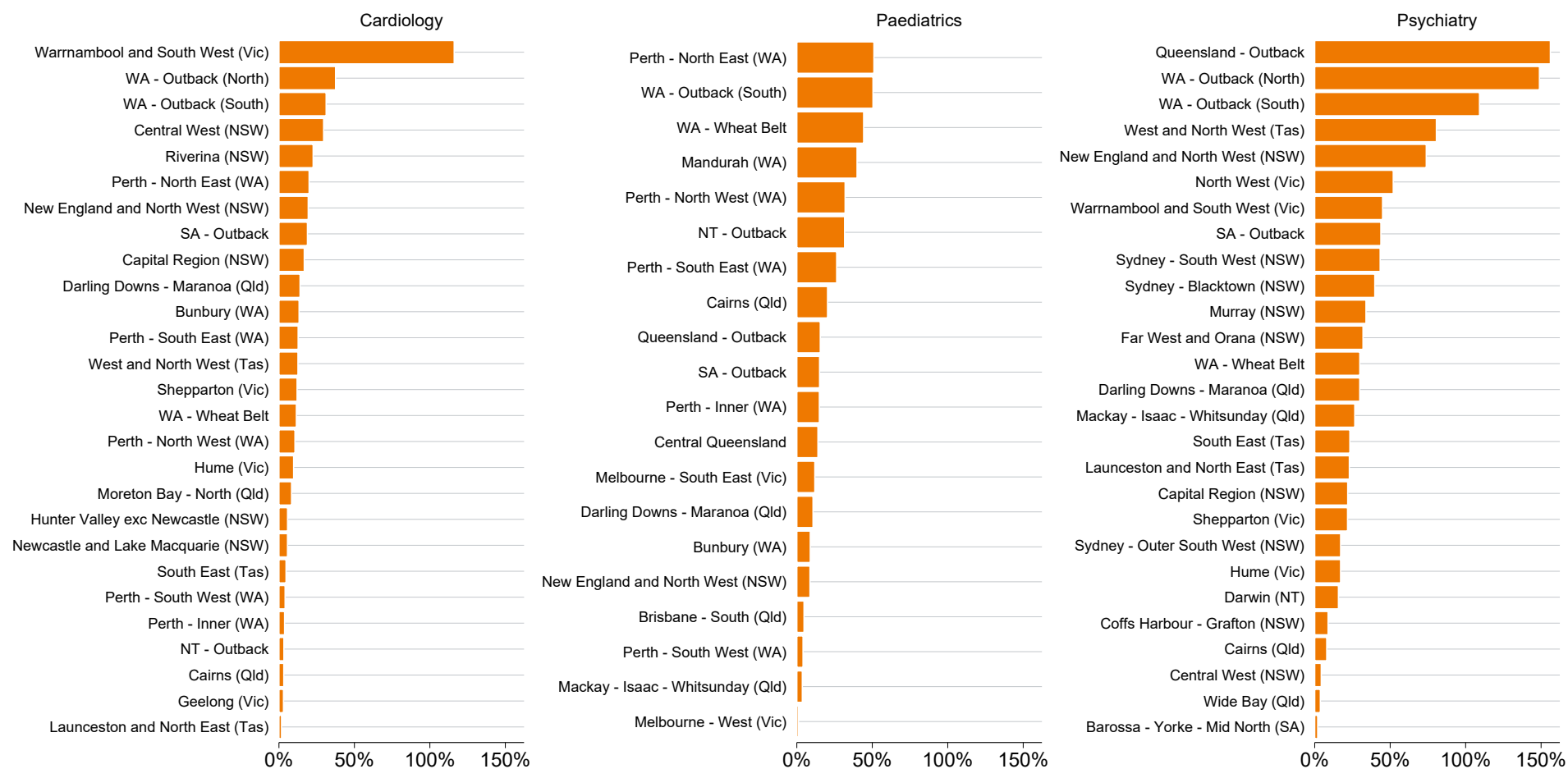


Notes: Chart shows the top 20 SA4s by percentage change. SA4s are geographic areas that typically encompass a population of between 100,000 and 300,000 people in regional areas and 300,000 to 500,000 people in cities. Adjusted for community age-and-sex profile only. Based on 2022-23 data.

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

Figure 3.5: Some communities need big increases in cardiology, paediatrics, and psychiatry care

Percentage increase in total services to reach 25th percentile



Notes: Based on 2022-23 data. Adjusted for community age-and-sex profile only. See Appendix B.

Sources: Grattan Institute analysis of AIHW (2024b) and ABS (2024b).

State governments should have flexibility in how they meet their targets. Standard models may not be practical or efficient, especially in rural areas. New investment is an opportunity to do things in new and better ways (Chapter 4). Governments might build and staff new clinics in under-served areas, but the target could also be met through virtual care (Box 3), fly-in-fly-out workers, or patient transport.¹²⁵

Governments should also consider the broader health infrastructure in each community. They could invest more in existing providers, such as Aboriginal Community Controlled Health Organisations, regional outreach programs, or private providers, rather than building new services from scratch.¹²⁶

To account for the additional costs of providing care in some under-served communities – particularly rural communities – our cost estimates include a 20 per cent loading relative to the average cost of delivering services, as well as the standard rural loadings that are applied to public hospital service delivery (Appendix B).

3.5 What next?

Our five-year target is conservative, and the Agreement should allow states to go further if they can.

In five years, it will be easier to expand public specialist care further due to fewer unnecessary referrals (Chapter 5), more specialists (Chapter 2), and greater clinic productivity (Chapter 4). And in five years, it will be time for governments to agree a new national health funding deal.

125. Our costings include recurrent costs, but not capital costs, because this would require detailed service planning: see Appendix B. Since new care is a small share of current services in most regions, and some new care could be virtual, new infrastructure may not be needed in many regions.

126. Breadon and Romanes (2022).

Box 3: Virtual care can reduce access gaps

Virtual consultations can improve access to specialist care. They eliminate the time, cost, and effort associated with travelling to see a specialist in person, and can reduce wait times.

Rural and Indigenous communities can particularly benefit from virtual care. A study of virtual renal care in rural Queensland found a significant improvement in attendance rates, from 80 per cent to 90 per cent, for follow-up visits.^a

In Western Australia's Fitzroy Valley, a virtual Ear, Nose, and Throat (ENT) program increased the number of children able to be screened every 18 months from 148 to 710, and reduced median wait times from 141 days to 22 days.^b

Beyond improved access, studies of telehealth services for Indigenous communities have reported improved social and emotional wellbeing, better clinical outcomes, and fewer inter-hospital transfers.^c

a. Venuthurupalli et al (2018).

b. Reeve et al (2014).

c. Caffery et al (2017).

Governments should use that agreement to chart the next stage of investment and reform. That should include raising the minimum level of specialist care guaranteed for all communities, and it could include goals for the share of all specialist care that is free to patients.

Continuing to expand public specialist care will keep cutting waiting times and expanding capacity to train specialists. It will also give consumers meaningful choices to avoid high-fee specialists, putting downward pressure on out-of-pocket costs.

Through these staged investments, governments will move closer to population health budgeting, where healthcare resources are allocated according to each community's needs (Box 4).

Box 4: Population health budgeting is the long-term aim

Australian governments' ultimate goal should be population health budgeting: allocating funding for public outpatient clinics based on measures of health need in each area.

Population health budgeting is used overseas, including in England, Scotland, the Netherlands, and parts of Canada and Sweden.^a These models allocate funding according to an area's demographic characteristics (such as age, sex, and socio-economic status), morbidity, mortality, and costs of provision.

One study of this resource allocation approach in England found that it reduced the mortality gap between affluent and deprived areas.^b

a. Penno et al (2013).

b. Barr et al (2014).

4 Modernise public clinics

As explained in Chapter 3, public specialist clinics should be expanded to improve access to care in the worst-served parts of Australia. But to meet growing demand, drive down wait times, and get the best value for taxpayers, public clinics must also be more productive.

Governments should lay out clearer roles and goals for public specialist clinics, fund them differently, and help them improve. This would help make the whole system work better.

4.1 There is room to improve public clinic productivity

There is limited evidence on how productive public specialist clinics are. Clinics' staffing and processes vary widely, making it difficult to compare. And it is hard to measure how efficiently they perform some of their roles, such as clinical training.

But many studies and successful pilot programs point to opportunities to improve, such as by changing workforce roles, improving scheduling and triage, and better using technology (Box 5).¹²⁷

And the huge variation in how clinics operate strongly suggests that best practices could be shared much more widely. Even within single specialties in major cities, there is big variation in the share of appointments that are review appointments (Figure 4.1) and the uptake of virtual care (Figure 4.2).

Missed opportunities to work more effectively are partly the result of a policy vacuum. Specialist clinics have little clarity on their role and their goals, funding models block change, and there is too little support for clinics to improve.

127. In our consultation with clinicians, hospital executives, and state health departments, we commonly heard that productive practices are not systematically scaled up across hospitals, so that public clinics operate in inconsistent ways.

Box 5: Productivity improvements are possible

Our literature reviews suggest that changes to workforce roles and improvements to processes can increase specialist clinic productivity and cut wait times.

Changing workforce roles, typically making greater use of allied and other health professionals, are a promising approach. All of the studies we considered, across a wide range of clinic types,^a found reductions in average wait times, in several cases by months. No study found that the quality and safety of care was worse, and four of the five studies that assessed costs found that they fell.^b

Studies of other projects to improve productivity – such as improved scheduling and triage, better use of technology, and new models of care – are also encouraging.^c They found that the new approaches reduced wait times, resulted in fewer missed appointments, and lowered cost. None found that patient satisfaction or the quality of care deteriorated.

- a. Orthopaedic, surgical, ear nose and throat, geriatric, gastroenterology, neurosurgery, and urology. For citations and limitations see Appendix C.
- b. The other study reported higher costs, but only because of forgone MBS revenue for specialist care, which we recommend removing (Section 4.5).
- c. Although the quality of evidence is lower: see Appendix C. Our findings align with a previous systematic review of interventions to reduce waiting times in outpatient clinics: Naiker et al (2018).

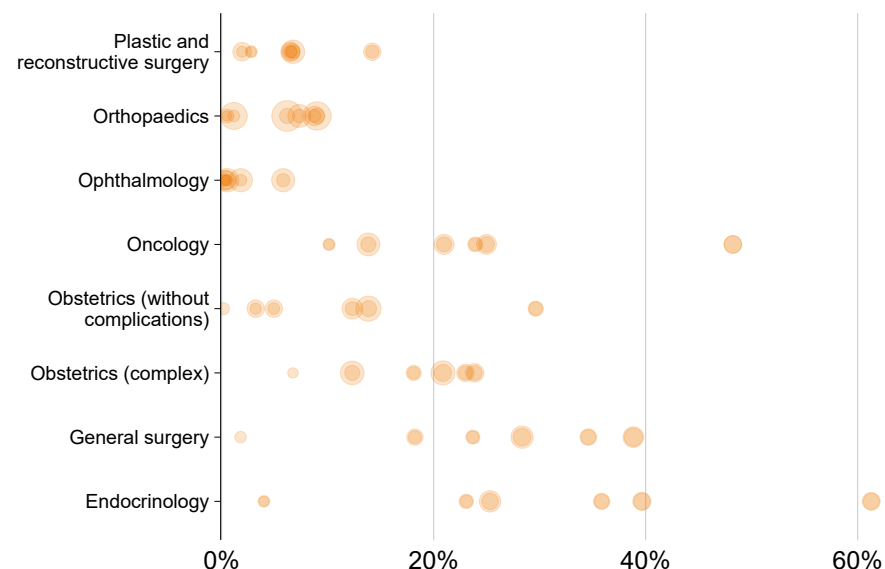
Figure 4.1: There is big variation in the share of review appointments...
Proportion of total appointments that are review appointments, by metropolitan Primary Health Network, 2022-23



Notes: Each point represents the patients residing in one metropolitan Primary Health Network (PHN). PHNs coordinate and commission healthcare in an area. Only PHNs whose residents received more than 100 consultations in that specialty are shown. Our data only contain data on patients' usual residence, not the location of providers. But patients' residence should be a reasonable proxy for provider location for large, metropolitan geographic catchments like PHNs. We excluded consultations where it is unknown whether the consultation was new or review. Only publicly funded services are included. The eight specialties with the highest public volume are shown. 'Oncology' is medical oncology consultation.

Source: Grattan analysis of AIHW (2024b) and ABS (2024b).

Figure 4.2: ... and in the share of appointments delivered virtually
Proportion of total appointments that are delivered virtually, by city, 2022-23



Notes: Each point represents patients residing in a major city. Our data only contain data on patients' usual residence, not the location of providers. But patients' residence should be a reasonable proxy for provider location for cities. Only publicly funded services are included. The eight specialties with the highest public volume are shown. 'Oncology' is medical oncology consultation.

Source: Grattan analysis of AIHW (2024b) and ABS (2024b).

4.2 There is no vision for the system

Some states have strategic plans for improving outpatient services,¹²⁸ but there is no national vision for the role of these services within the broader health system.

Without agreement on the basics, it's no surprise that each clinic does things in different ways.

4.3 Accountability for performance is weak

Accountability for performance is weak. Data are collected on only a few measures, such as outpatient activity.

Other important performance measures, such as appointment wait times and patient outcomes, are inconsistently defined and measured across the country. For example, NSW, WA, NT, and ACT do not report outpatient appointment wait times, and the states that do report them measure them differently.¹²⁹

4.4 Funding models don't promote efficient care

Public hospital specialist clinics are funded in one of two ways. About 88 per cent of services are funded through Activity-Based Funding (ABF), where the federal and state governments provide funding based on the average cost of care.¹³⁰ The other 12 per cent of services are funded on a fee-for-service basis through the Medicare Benefits Schedule (MBS), with patients bulk billed.¹³¹ Each funding method has flaws.

128. See, for example, Tasmanian Department of Health (2022).

129. Victoria and Queensland report median and 90th percentile wait times, Tasmania reports the 75th percentile, and South Australia reports the median and maximum.

130. Some programs and services are also block funded. The terms of this funding are agreed in the National Health Reform Agreement.

131. AIHW (2024d).

4.4.1 Activity-Based Funding doesn't encourage the most efficient models of care

Activity-Based Funding (ABF) reflects the average cost of how care is delivered now, not how it should be delivered. It doesn't take into account whether care should take place in a different part of the health system. For example, some care currently provided by specialist clinics could instead be delivered by GPs (Chapter 5), but ABF rewards clinics seeing these patients.

Similarly, ABF doesn't factor in whether care can be delivered in a better way. For example, its prices are based on average workforce costs. But a different mix of clinicians, such as allied health workers playing a bigger role, might be able to deliver the same care more cheaply (Box 6).

4.4.2 Medicare funding for public clinics is inflexible, and adds complexity and risk

Allowing public outpatient clinics to operate as bulk-billing Medicare clinics has some advantages. It can give clinics an additional source of revenue, assist with staff retention, and provide patients with more choice.¹³²

But MBS funding models can also be a barrier to efficient care. To receive Medicare funding, patients need a referral to a named specialist, rather than a general referral.¹³³ This makes it hard for clinics to use innovative workforce mixes, even when they are clinically proven and more efficient.

132. See Department of Health and Aged Care (2023d). But the purpose and benefits of these arrangements are not always clearly defined or measured: Victorian Auditor-General's Office (2019).

133. The service does not need to be provided by the particular named specialist, but it must be provided by a clinician of the same specialty exercising a right of private practice: Victorian Department of Health (2023).

MBS funding also adds administrative complexity and cost, and creates opportunities for fraud. The National Health Funding Body estimates that governments pay twice – once through ABF, and once through MBS – for close to \$400 million worth of services a year.¹³⁴ Audits and investigations in several states have reported inadequate monitoring and risks of non-compliance.¹³⁵

4.5 A comprehensive reform agenda for public specialist clinics

A comprehensive reform agenda is needed that makes it clear what public clinics are for, how they should operate, and what they should achieve. And it should give them funding and support to help get there.

A clear role, and directions for change

The National Health Reform Agreement (NHRA) should set out a clear role for specialist clinics within the broader health system, and outline how they should improve.

Public clinics' role should include filling gaps in access to care (Chapter 3), modelling best-practice care,¹³⁶ supporting GPs (Chapter 5), training junior specialists (Chapter 2), and research.

The NHRA should set out clear directions for how clinics can improve their productivity. These directions could include shifting to virtual care

delivery where it is safe and effective to do so, making better use of the workforce through full-scope and generalist roles, and connecting better with primary care (Box 6).¹³⁷

Performance reporting

The NHRA should also set out a nationally consistent framework to measure and report states' and clinics' performance. There should be measurable targets and clear definitions, to enable monitoring and comparisons.

The performance measures should include the share of patients seen within clinically recommended times. They should also reinforce the directions for change, for example by including the share of care that is delivered virtually and the number of secondary consultations.

Better funding models

Funding for public specialist clinics should encourage the right care, in the right settings, from the right people.

The national hospital pricing body¹³⁸ should ensure its pricing model encourages best practices. New prices should reflect the cost of optimal workforce mixes and care delivery models, rather than the cost of current practices.

There should also be loadings or penalties to encourage clinics to deliver care in ways that make the whole health system more efficient. For example, there should be a small decrease in funding for review or follow-up appointments, from the second follow-up appointment

134. Huxtable (2023, p. 63).

135. Concerns about private practice rights leading to inappropriate conduct and maladministration risks were reported by the Independent Commission Against Corruption in South Australia: Lander (2019) and Vanstone (2023). Queensland Audit Office (2013) and Victorian Auditor-General's Office (2019) found evidence of lost revenue. And a survey of NSW doctors found that most respondents did not have the opportunity to review MBS billings before they were submitted by their hospital, many did not understand how billing was done, and some respondents were concerned about inappropriate billing practices: Australian Medical Association (NSW) (2023).

136. Meagher et al (2022), and Klumpp and Su (2019).

137. Another future reform direction is integrating artificial intelligence, which has the potential to improve efficiency through task automation, screening and diagnosis, and patient monitoring: Productivity Commission (2024) and Alowais et al (2023).

138. The Independent Health and Aged Care Pricing Authority (IHACPA).

Box 6: Three ways to improve specialist clinic productivity

1. Virtual care

Virtual care can be safe, effective, and cheaper than in-person care. Virtual follow-ups have been shown to be safe and effective for cancer surgery, general surgery, arthroplasty, and cardiovascular ambulatory-sensitive conditions.^a Virtual appointments save patients waiting time and transport costs; most people prefer them for follow-up appointments.^b And it may be cheaper for the health system in the long run, by avoiding the need for new capital investment.

rpavirtual in NSW uses multidisciplinary teams and virtual delivery models to provide high-quality care to patients outside hospitals.^c The service frees up hospital beds and has high patient satisfaction.^d

2. Full-scope roles

Allowing doctors, nurses, and allied health professionals to work to the top of their scope can improve the quality and timeliness of care, and boost satisfaction for workers.

The Gold Coast University Hospital implemented a top-of-scope model in a gastroenterology clinic in 2016. Dietitians assessed and provided diet and lifestyle management strategies for low-risk patients.^e Wait times were reduced and there was no change in re-referral rates compared to traditional models.^f

3. Better connecting with primary care

Better referrals make specialist clinics more efficient. Several states have developed, or are developing, simple and consistent digital referral systems for public specialist clinics.^g

These systems increase efficiency, avoid errors and waste from manual processing, and cut wait times.^h In future, they could integrate artificial

intelligence to triage patients and check that appropriate diagnostic tests are completed.ⁱ

All states should introduce these systems, and GPs should be required to use them when referring patients to public clinics.

Specialist clinics can also do more to help GPs. Chapter 5 explains how public specialist clinics can free up capacity and make the whole system more efficient by providing quick, written advice to GPs.

More intensive knowledge sharing initiatives can also pay dividends. For example, the Diabetes Alliance in NSW aims to support general practices to better manage diabetes. Specialists conduct case conferences with GPs and practice nurses, and provide feedback on each clinic's processes and outcomes. Patients who are part of the case conferencing record improvements in metabolic markers.^j

The benefits also spill over to other patients. Diabetes screening rates increase for all patients at participating clinics, and there are improvements in key metabolic markers across the board.^k

a. McAlister et al (2023), Xiao et al (2023), Oates et al (2021), Healy et al (2019), and El Ashmawy et al (2021).

b. Snoswell et al (2022) and Oates et al (2021).

c. Sydney Local Health District (2024).

d. Wilson et al (2025).

e. Mutsekwa et al (2019b).

f. Mutsekwa et al (2021).

g. Queensland Audit Office (2021), eHealth NSW (2024), and SA Health (2023a).

h. Azamar-Alonso et al (2019), Hendrickson et al (2016), Clarke et al (2010), and Tobin-Schnittger et al (2018).

i. Abdel-Hafez et al (2023), Wee et al (2022), and Nobes et al (2024).

j. Including haemoglobin, blood pressure, and cholesterol: Acharya et al (2019).

k. Acharya et al (2024).

onwards. This would encourage clinics to shift ongoing, straightforward care to GPs, and provide support through secondary consultation.¹³⁹

Governments should replace MBS funding for public specialist clinics with Activity-Based Funding. This replacement funding, like the investment in new services we recommend (Chapter 3), should be excluded from any cap on funding growth in the NHRA. The change should start with hospitals in major cities, since MBS funding may help retain clinicians in rural areas where workforce supply is limited and fragile.¹⁴⁰

Support to change

Changing how specialist clinics work will be complex and will take time. Clinics can't be expected to go it alone. Support from health departments, local health networks, and hospital administration will be essential for success.¹⁴¹

States should outline clear standards and guidance for clinics on best practices in areas such as triage, workforce roles, and appointment and wait-list management. They should also provide change-management support,¹⁴² and share lessons from leading clinics. Clinics should have

some flexibility to adapt approaches to local needs, but the standards would be a useful default.¹⁴³

And governments must properly fund clinics to undertake this modernisation work. The NHRA should provide \$60 million in grants for projects that target measurable improvements in productivity.¹⁴⁴

These changes should not be yet more short-term, small-scale trials. Instead, funding should be provided for a menu of changes linked to the agreed national vision for specialist clinics. It should be used to spread best practices across multiple clinics, and those practices should be sustainable without ongoing funding.

139. There is good evidence that many patient follow-ups can be managed just as effectively in primary care (with specialist support as needed through secondary consultation), or virtually. See Chapter 5.

140. Several experts we consulted suggested that specialists share in MBS specialist clinic income, and that withdrawing it could jeopardise retention of specialists in rural areas, where replacing them will often be difficult and costly. While the switch to ABF is done for metropolitan hospitals, states should assess the risks for rural workforce retention, along with how to manage this risk, ahead of applying the policy nationwide.

141. Horne (2004) studied the factors influencing the adoption of clinical evidence into hospital practice across four Victorian hospitals. He found that a commitment from administrators to provide necessary resources (both knowledge and financial) was essential for changes to be embedded in clinical practice.

142. Le-Dao et al (2020).

143. A lack of local ownership and insufficient engagement with clinicians can be barriers to successful implementation: Francis-Auton et al (2024).

144. These grants could be allocated and managed through the Innovation and Reform Agency proposed in the Mid-Term Review of the National Health Reform Agreement, if it is established: see Huxtable (2023). They should be accompanied by specific performance targets.

5 Reduce unnecessary referrals

Specialist referrals for patients whose care could be managed by their GP with some quick advice chew up time and money. State governments should set up a system that enables GPs to seek written advice from specialists, and the federal government should fund GPs to use it.

Our proposal would avoid more than 60,000 referrals and save patients \$4 million in specialist fees per year, without compromising the quality of care. It would free up specialists to focus on more complex cases, and cut waiting times for patients who do need to see a specialist.

5.1 It's hard for GPs to get advice from specialists

GPs can manage most aspects of ongoing patient care.¹⁴⁵ But as chronic diseases increase, care is getting more complex, making it harder for GPs to diagnose and decide on treatment plans without advice from specialists.¹⁴⁶

At present, GPs have few easy options for getting a second opinion. They must use their own professional network or independently find the right support. And they are not directly paid for time spent planning or discussing complex care with other doctors.

As a result, GPs may refer patients to specialists even when they could manage their care more quickly, more cheaply, and just as well, with some quick advice. This adds cost and time for patients who don't actually need a referral, and adds to wait times for those who do.

145. GPs have the most consistent contact with patients. In Australia, 83 per cent of people saw a GP in 2023-24, whereas only 39 per cent saw a non-GP specialist: ABS (2024a).

146. Tzartzas et al (2019).

5.2 Secondary consultation systems help GPs manage care

Secondary consultation is a safe and efficient way for GPs to get a second opinion on patient care.¹⁴⁷

Secondary consultation is a doctor-to-doctor discussion about a specific patient question. GPs ask a question and share relevant patient information. Specialists then provide detailed recommendations on diagnosis and care, or advise that a referral is necessary.¹⁴⁸

In Australia, most secondary consultation happens informally, often through existing professional networks or by junior staff at public hospitals.¹⁴⁹ But more formal systems have been developed. Queensland's eConsultant Partnership Program provides advice from multiple specialties to GPs across the state.¹⁵⁰

Secondary consultation systems in the US and Canada have reduced referrals, helped GPs develop their skills, and cut wait times and costs for patients (see Box 7 on page 41 for an example).¹⁵¹

147. Liddy et al (2019a).

148. Alternative models connecting GPs and specialists, including co-location or co-consultation, also offer potential benefits for patients. But evidence on the efficiency, impact, and cost-effectiveness of such models remains unclear: S. Smith et al (2017) and Winpenny et al (2016).

149. Tzartzas et al (2019).

150. Job et al (2022). The Western Australian Government has committed to trialling a similar program: RACGP (2025).

151. Secondary consultation has been successful in several regions of the US and Canada, with examples including Champlain eConsult BASE™, Ontario eConsult, and Los Angeles Safety Net eConsult: Liddy et al (2019a), Liddy et al (2018b), Singh et al (2022), and M. L. Barnett et al (2017).

Evaluations of these systems suggest they make many referrals unnecessary, with 70-to-90 per cent of cases able to be managed by a GP (Figure 5.1).¹⁵²

5.3 States should set up secondary consultation systems

Drawing on successful examples here and overseas, states and territories should develop secondary consultation systems that enable GPs to quickly and easily get specialist advice. The systems must be easy for GPs and specialists to use, widely available, and trusted as a source of timely, high-quality advice (Box 8).

Each state government should engage a public hospital to deliver secondary consultation, and that hospital should roster specialists to staff the system.¹⁵³ These systems should be underpinned by national clinical guidance, and funding from the federal government to compensate GPs for using the system.¹⁵⁴

We calculate that this could provide at least 140,500 secondary consultations a year across Australia. This could avoid about 68,000 referrals a year, split across the public and private system, reducing wait times and saving patients \$4 million in out-of-pocket costs. And, based on specialist advice, an additional 4,700 patients would receive a referral that the GP was not otherwise planning to make, providing essential specialist care.

152. Liddy et al (2019a).

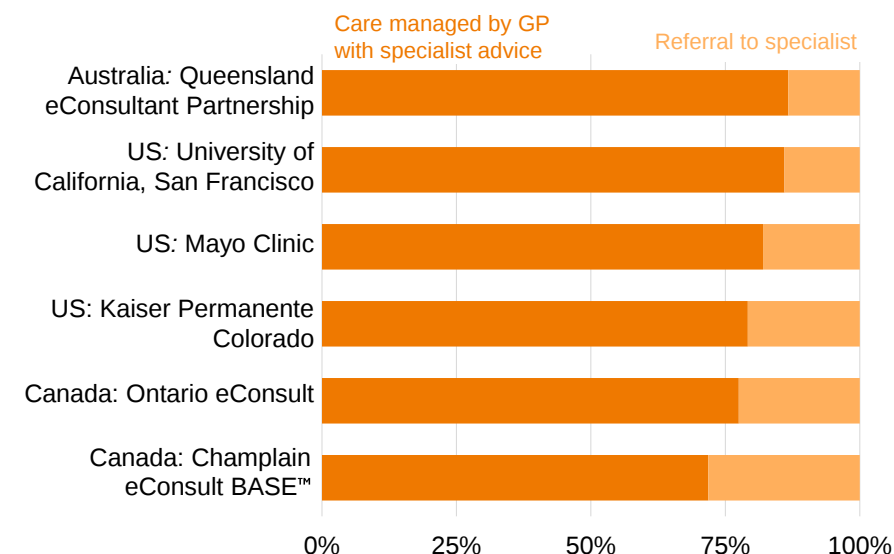
153. Public hospitals have diverse staff, administrative capability, and a lower cost base than private specialists. The typical model should be for a single public hospital in each state to manage the system, but smaller jurisdictions could share resources, and the lead hospital could engage specialists working in other hospital systems. Primary Health Networks and other stakeholders should be engaged in planning and delivery.

154. In the longer term, GP funding should be reformed to cover indirect care, including secondary consultation: Breadon and Romanes (2022).

The system would cost governments about \$26 million a year (see Appendix E).¹⁵⁵

Figure 5.1: After secondary consultation, most cases can be managed by GPs

Outcome of secondary consultation, proportion of cases



Notes: The proportion is of cases for which GPs sought advice, not all referrals. The examples differ in structure of service delivery and methods of measuring patient outcomes. Reported results have been interpreted to maximise comparability.

Sources: Wrenn et al (2017), North et al (2015), Job et al (2021), Fort et al (2017), Singh et al (2022), and Liddy et al (2018a).

155. Costs and benefits would be split across federal and state governments. An estimated \$4 million worth of avoided specialist visits could be redistributed to patients awaiting care.

Box 7: Electronic secondary consultation in the Champlain eConsult BASE™ model

In Canada, Champlain eConsult BASE™ provides large-scale secondary consultation. In Champlain, where the program started, more than 75 per cent of GPs – about 1,600 practitioners – are registered in the program.^a It has since expanded to five other Canadian provinces.^b

GPs provide patient information and ask a clinical question through a web-based platform. The case is assigned to a specialist, who replies with recommendations within a week. It is available to all GPs and patients in active regions, and covers 152 specialty groups.^c

Assessments of the program have found:

- up to 60 per cent of planned specialist referrals can be managed by GPs with the advice provided;^d
- health system costs are lower because more care is managed by GPs;^e
- some patients, whom GPs would have otherwise *not* referred to a specialist, *are* referred as a result of the advice; and^f
- GPs see value in the program for the quality of patient care and their own professional development.^g

a. Champlain eConsult BASE (2020) and Canadian Institute for Health Information (2023).

b. Champlain eConsult BASE (2020).

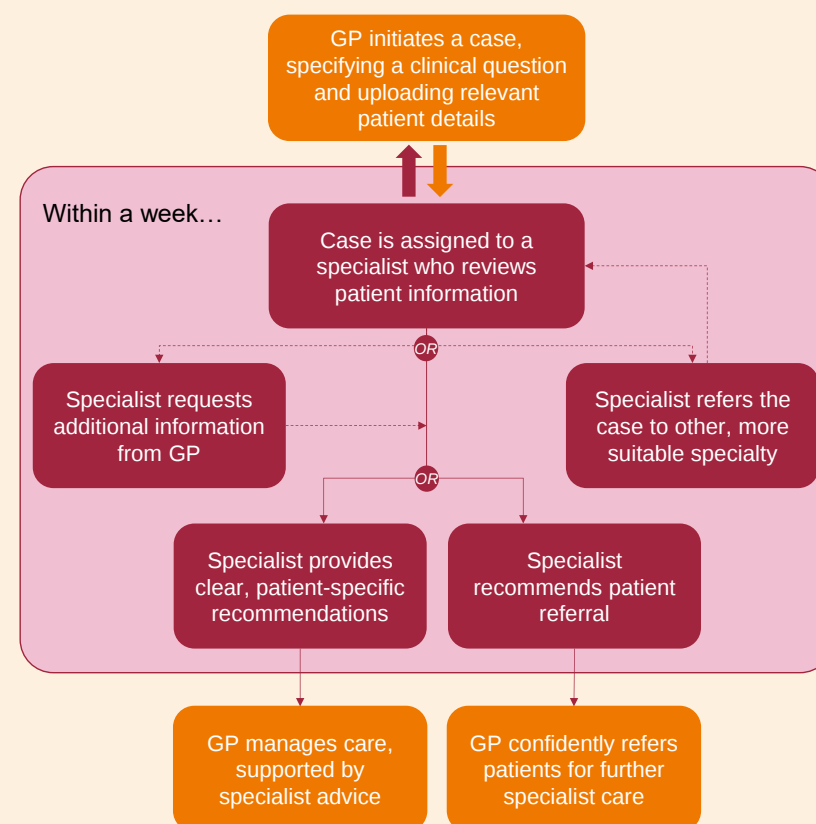
c. Ibid.

d. Liddy et al (2018a).

e. Liddy et al (2015b).

f. Liddy et al (2018a).

g. Liddy et al (2015a).



Sources: Champlain eConsult BASE (2020) and Liddy et al (2018a).

Box 8: Delivering secondary consultation in Australia

Secondary consultation should be embedded into GPs' everyday practice.

To maximise the chances of success, secondary consultation systems should be:

- **Digital and asynchronous:** A digital system should be set up that enables GPs to send relevant written information and receive a response within a set number of business days ('asynchronous'). This avoids the need to match GP and specialist schedules, and mimics existing referral processes.^a
- **All-inclusive:** It should include all commonly referred specialties, to maximise usefulness for GPs.
- **Fully funded:** GPs and specialists should be compensated for their time spent engaging in secondary consultation.
- **Free and widely accessible:** Secondary consultation should be considered a tool to support clinical decision-making, accessible for all patients without added cost.^b
- **High-quality:** Advice should be provided by specialists with a specified minimum qualification, who are trained in delivering care in this new way. Responses should be monitored against quality standards.

See Appendix D on page 76 for further detail on how the system should be designed.

a. Liddy et al (2013).

b. This is distinct from telehealth or other patient-to-specialist communication, where the patient is receiving an additional service.

Federal government

1. Work with clinical bodies to set standards for use and participation.
2. Fund GPs to use the system, through MyMedicare.



State and territory governments

1. Engage select public hospital(s) to deliver and manage secondary consultation, allocating specialists to staff the system.
2. Coordinate or procure digital systems to enable secondary consultation.
3. Monitor program delivery, with quality and use metrics tied to program funding.
4. Work closely with Primary Health Networks and other stakeholders to recruit and support GPs.



Primary Health Networks

1. Deliver tailored support to GPs to encourage uptake.
2. Work with states to identify areas of need and ongoing improvement.

6 Reduce extreme fees

Even with more public services, and more specialists, excessive fees will still be a problem. That is because neither market forces, nor government policy, are constraining them.

More than one in five Australians who saw a specialist in 2023 were charged an extreme fee¹⁵⁶ at least once. One in 10 Australians who paid to see a psychiatrist was charged \$400 in out-of-pocket costs for their initial consultation alone.

There is no good reason for these extreme fees. They aren't needed for specialists to be fairly compensated for their skills, or to provide quality care. They don't cross-subsidise care for poorer patients. But they do stop people from getting care they need. And most patients lack the information or ability to shop around to avoid them.

The federal government should remove public funding from specialists who charge extreme fees, and name them publicly.

6.1 Some specialists charge very high fees

Specialists are paid by the government and patients for their services. From the government, they receive the 'schedule fee': a fixed payment for a particular type of service, specified in the Medicare Benefits Schedule. For example, in 2024 the schedule fee for an initial specialist

consultation was at least \$99, and \$300 for an initial psychiatry consultation.¹⁵⁷

Specialists typically charge patients a fee on top of the schedule fee. Those fees are often double, and sometimes triple, the schedule fee. This means patients pay hundreds of dollars for a single consultation.

The average out-of-pocket cost for a single consultation with an extreme-fee-charging specialist exceeded \$200 for almost every specialty in 2023.¹⁵⁸ Some are even higher. A single consultation with an extreme fee-charging psychiatrist was \$670 in 2023, and \$350 for endocrinologists and cardiologists (Figure 6.1).

Hundreds of thousands of people see specialists who charge extreme fees every year. In 2023, 240,000 patients saw a dermatologist charging an extreme fee; 132,000 people saw an extreme-fee obstetrician or gynaecologist, and 92,000 people saw an extreme-fee ear, nose, and throat specialist.

There are six specialties where more initial consultations attract an extreme fee than are bulk billed (Figure 6.2). More than a third of initial dermatology consultations are charged at more than triple the schedule fee.

6.2 There is no valid justification for extreme fees

Some variation in fees is warranted. Patient complexity and the clinic location affect the cost of providing services, and a specialist's skills

156. We define extreme fees as those more than triple the Medicare schedule fee, on average. For each specialist, we calculate the ratio of fee charged to the schedule fee for each service, then take the average of these ratios. We also calculate the average fee charged across all services relative to the average schedule fee. Specialists who have a ratio above 3 for either measure are designated extreme-fee chargers. The first definition captures specialists who consistently charge extreme fees, and the second captures those who charge a subset of their services at exorbitant rates.

157. Department of Health and Aged Care (2024c).

158. Except oncology.

or experience may affect their value.¹⁵⁹ But these factors don't justify extremely high fees, which are not supported by industry bodies such as the Australian Medical Association.¹⁶⁰

Specialists can run a profitable business and earn a high income without charging extreme fees. Medical specialties are the highest-earning occupations in Australia: nine of the top 10 occupations by income are medical specialties (Figure 6.3). The median specialist clinic is more profitable than the median GP, legal, finance, or construction business.¹⁶¹

These high profits and incomes reflect the *average* specialist. Those with extreme fees, who charge up to 65 per cent more for an initial consultation than the average specialist, earn a great deal more. That puts their income well above the level needed to attract or reward even professionals with the most extensive skills and experience.¹⁶²

There is no evidence that extreme fees are linked to better performance or quality. Australian and international studies have found that higher fees and higher hospital costs are not robustly associated with better surgical or patient-reported outcomes, or decreased mortality.¹⁶³

159. Sabanovic et al (2023) found that specialist fee variation in Australia reflects patient- and system-level factors, as well as the specialist's gender, values, and perception of their own experience and skills.

160. Australian Medical Association (2024).

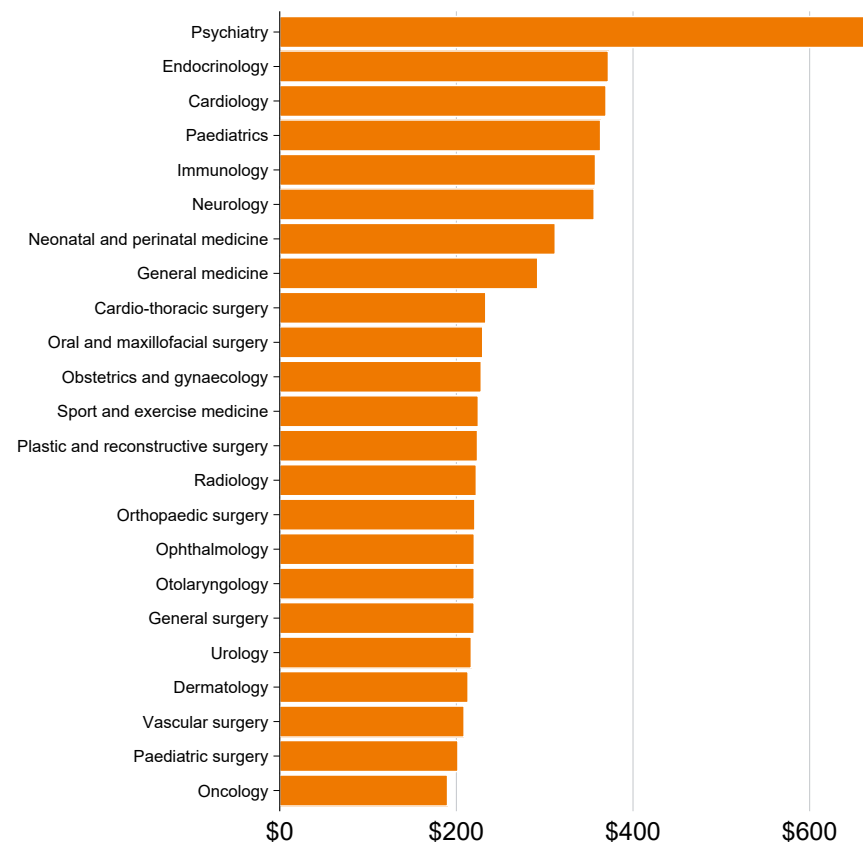
161. A. Scott (2022).

162. In fact, when doctors' total incomes are high, further increases to the hourly wage rate have no effect, or even reduce hours worked: Cheng et al (2018), Kalb et al (2018), Lee et al (2019), and McRae and J. R. G. Butler (2014).

163. For example, see Hussey et al (2013), Gutacker et al (2013), Sankaran et al (2024), and Hillis et al (2017). Unpublished analysis by the Royal Australasian College of Surgeons and Medibank found no correlation between out-of-pocket costs and surgery quality, as proxied by length of stay: Hillis et al (2017).

Figure 6.1: Extreme fees can reach hundreds of dollars for a single consultation

Average out-of-pocket cost per consultation, among extreme-fee-charging specialists, 2023

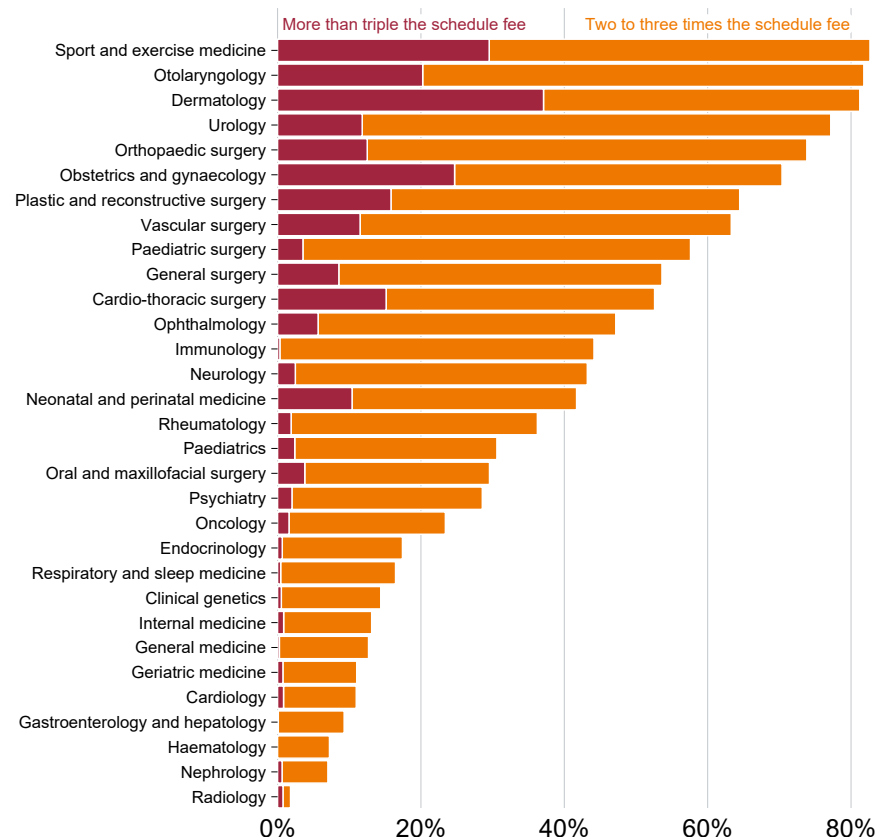


Notes: Cost for an initial consultation: Medicare Benefits Schedule items 104, 110, and 296. See Appendix F for more detail on data.

Source: Grattan Institute analysis of ABS (2024b).

Figure 6.2: More than a third of dermatologist initial consultations are charged at more than triple the schedule fee

Share of initial consultations

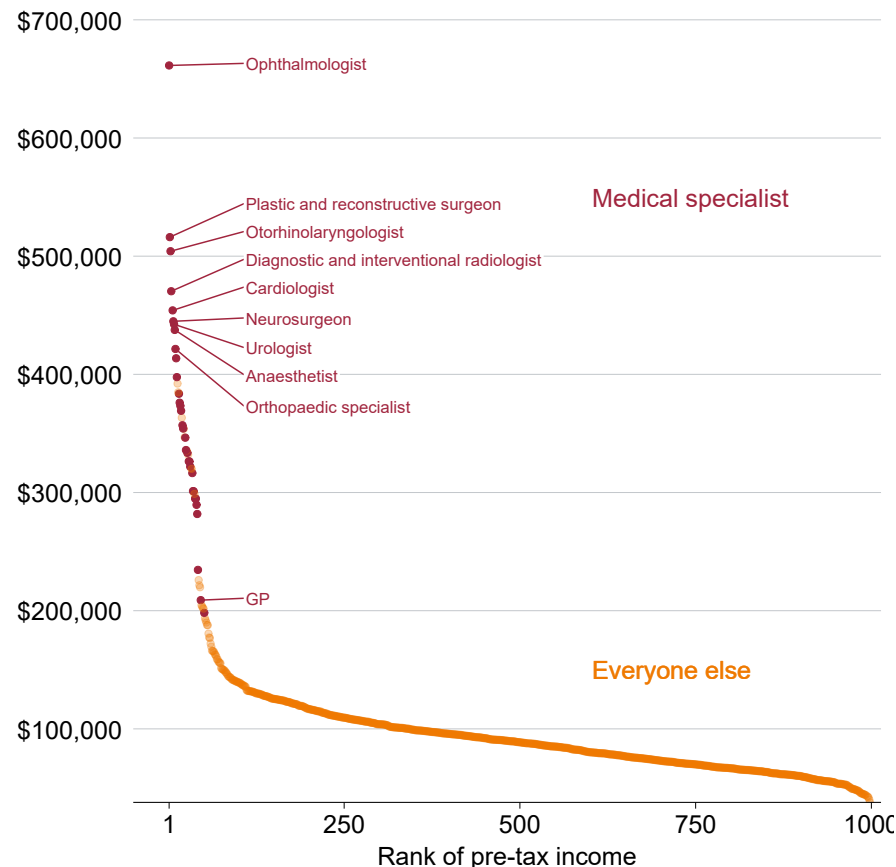


Notes: Initial consultations are Medicare Benefits Schedule items 104, 110, and 296. See Appendix F for more detail on data.

Source: Grattan Institute analysis of ABS (2024b).

Figure 6.3: Most of the highest-earning occupations in Australia are medical specialties

Mean pre-tax income, by occupation, 2021-22



Notes: Mean total taxable income. Only occupations with at least 30 individuals are shown. Results are substantially similar if income is adjusted for average hours worked. Medical specialties were still 9 of the top 10 highest-earning occupations.

Source: ATO (2024).

Many specialists do cross-subsidise, charging higher-income patients more than lower-income patients.¹⁶⁴ But our analysis shows that specialists charging extreme fees do this *less*. That is, they offer poorer patients even less of a discount than other specialists, despite charging much more on average (Figure 6.4).

6.3 Extreme fees reflect an uncompetitive market

In most markets, extreme prices would fall over time, as new providers enter the market and people choose options that offer better value for money. But that's not the case for specialist care.

Problems with specialist training mean new providers can't easily enter an in-demand field, even if they see the opportunity to serve patients currently paying excessive fees (Chapter 2). And patients lack the information they need to shop around for better value.

Governments aren't stopping extreme fees either. There are no policies or regulations limiting specialist fees.¹⁶⁵

6.4 Help patients shop around

The government has set up a fee disclosure website, and announced plans to publish average fee data on it.¹⁶⁶ This is a positive step: reliable price information should be available for patients who want it. The government should also add information on specialists' bulk-billing rates, and whether they provide services via telehealth.

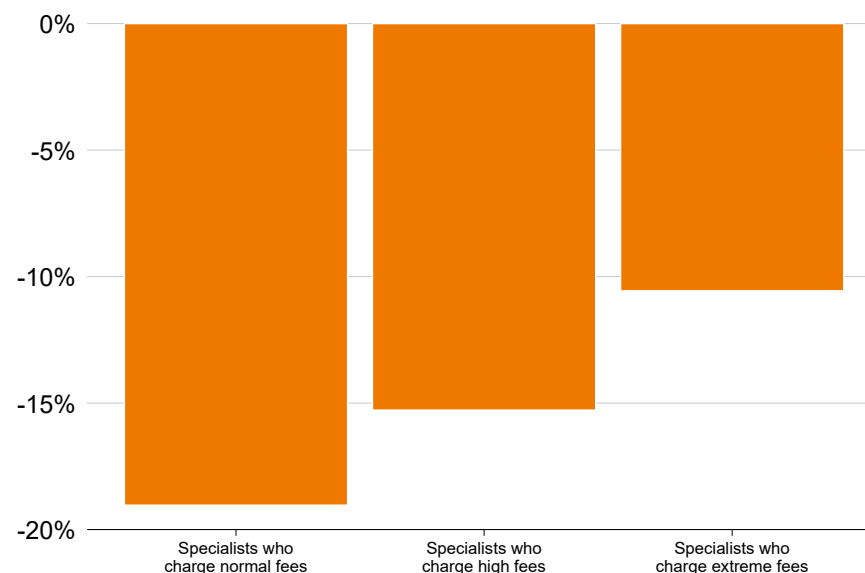
164. Johar (2012), and Abiona et al (2024).

165. The Constitution allows the federal government to make laws with respect to medical services, but not to authorise any form of civil conscription. This has been interpreted by some as limiting the ability of the government to regulate fees directly (for example, see Department of Health and Ageing (2009)), though others argue that this clause does not prevent fee regulation: McDonald et al (2023).

166. M. Butler (2025b).

Figure 6.4: Specialists who charge extreme fees offer a smaller discount than other specialists to their lower-income patients

Discount on out-of-pocket costs for lowest-income group, relative to costs for the highest-income group



Notes: Average out-of-pocket cost for initial consultations. 'Lowest-income group' is people whose equivalised household income is less than \$500 per week. 'Highest-income group' is people whose equivalised household income is more than \$3,500 per week. Specialists who charge 'normal fees' charge fees up to double the schedule fee, on average. Specialists who charge 'high fees' charge between double and triple the schedule fee, on average. Specialists who charge 'extreme fees' charge more than triple the schedule fee, on average. See Appendix F for more detail.

Source: Grattan Institute analysis of ABS (2024b).

But making price information available isn't enough to guarantee effective patient choice. GPs are the biggest influence on which specialist a patient visits, but they are not obliged to provide patients with any cost information, beyond the truism that they could face out-of-pocket costs.¹⁶⁷

Patients' rights should be clearer. The federal government should amend the regulations for referrals,¹⁶⁸ to require that each include a prominent and easy-to-understand statement that patients can use an alternative to the specialist named on their referral, and directing them to the Medical Costs Finder website.¹⁶⁹

6.5 The government should directly tackle extreme fees

While efforts to strengthen patients' ability to shop around are positive, transparency alone won't be enough.¹⁷⁰ The federal government should legislate to claw back Medicare funding from specialists who charge extreme fees. Other ways to control fees have significant drawbacks (see Box 9).

Specialists who charge extreme fees should be required to repay the government the value of the Medicare rebates paid for their services that year.¹⁷¹

The government should publish a list of extreme-fee specialists, to give patients and GPs more information and discourage extreme fees.

If current practices were continued, we estimate this would affect fewer than 1,500 specialists across 29 specialties – less than 4 per cent of all specialists. Dermatology, obstetrics and gynaecology, and sport and exercise medicine have the highest share of specialists who would be affected (Figure 6.5). But even in these fields, most specialists would be unaffected.

We estimate this measure would raise up to \$170 million in revenue, which could be directed towards the expansion of public clinics we proposed in Chapter 3.¹⁷²

These changes would create an incentive for clinics charging extreme fees to under-report what they charge.¹⁷³ To reduce the risk of inaccurate reporting, the federal government should implement the recommendations of a 2023 review of Medicare integrity and compliance.¹⁷⁴

167. RACGP (2019), Chernew et al (2018), Yahanda et al (2016), and Victoor et al (2013). There is no requirement that referrals name a specific specialist, but convention dictates that they often do: The Medical Republic (2018).

168. The Health Insurance Regulations 2018 (Cwlth).

169. The former was recommended by the Productivity Commission: Productivity Commission (2018, p. 307).

170. A fee transparency tool is unlikely to cause a significant drop in out-of-pocket costs. Usage of these tools tends to be low, though patients who use them do pick cheaper options: Mehrotra et al (2018) and Zhang et al (2020). There is also the risk that prices increase due to tacit collusion (as happened with fuel prices through FuelWatch: Byrne and Roos (2019)), which the government should monitor.

171. The benefits should not be clawed back from patients; rather, the value of the benefits associated with that specialist's services should be repaid by the specialist.

172. Grattan Institute analysis of ABS (2024b)

173. Reporting of fees charged is required by regulations: Commonwealth Of Australia (2018).

174. The review found extensive vulnerabilities, that non-compliance may cost \$1.5 billion to \$3 billion a year, and that the compliance regime needs a structural overhaul: Philip (2023).

6.5.1 Schedule fees and price setting should be reviewed

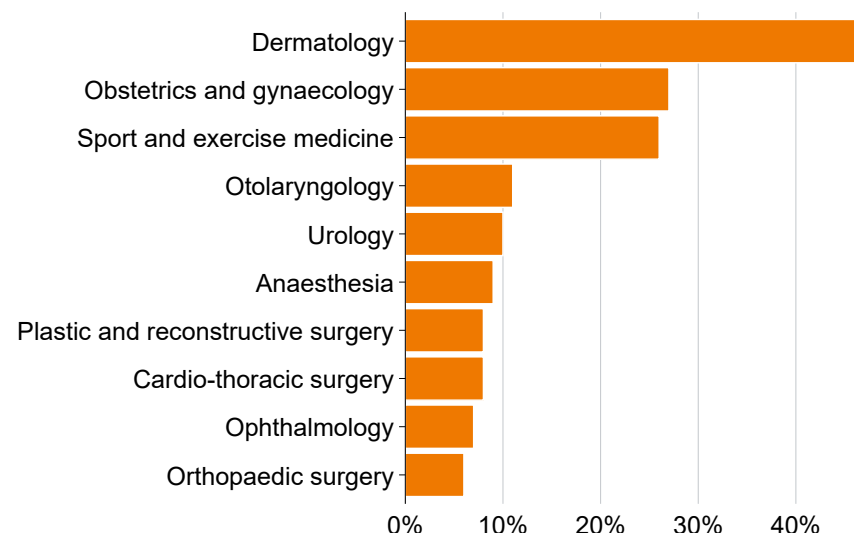
The main cause of extreme fees is specialists' market power, not low schedule fees. Extreme fees are so many times greater than schedule fees, and so rare, that it's unlikely they are mainly a response to an inappropriately low schedule fee. But schedule fees and specialists' price setting should still be reviewed.

Schedule fees are rarely reviewed and often hotly contested.¹⁷⁵ The 2020 MBS review recommended that the federal government streamline fees and introduce a standardised approach to fee setting.¹⁷⁶ The federal government should initiate an independent review of schedule fees to test whether they reflect the cost of care. The review should initially focus on specialties and services, such as dermatology, where extreme fees are most common.

At the same time, the federal government should direct the Australian Competition and Consumer Commission to study how specialists set prices, including how closely their prices reflect the costs of providing care.

Better understanding the costs of care could allow a new, broader definition of excessive fees which targets more than a few extreme outliers. If the reviews find that schedule fees are too low, they should be increased. After that, or if the reviews find that schedule fees are appropriate, the government should tighten the definition of extreme fees.

Figure 6.5: Nearly half of dermatologists charge extreme average fees
Proportion of doctors who charged extreme fees in 2023, by specialty



Notes: Charging extreme fees is defined as charging triple the Medicare schedule fee on average per service, or in total across all services. Specialists who saw fewer than five patients in 2023 are excluded from this analysis. Top 10 specialties are shown. See Appendix F for more detail on data.

Source: Grattan Institute analysis of ABS (2024b).

175. Department of Health (2020, pp. 39–42). Schedule fees are typically indexed annually, based on growth in wages and prices, though indexation can be frozen, as was done in the 2010s.

176. Department of Health (ibid), recommendation 12.

Box 9: Other ways to control fees have significant drawbacks

Raising Medicare rebates or expanding Medicare Safety Nets

Increasing Medicare rebates or expanding Medicare Safety Net arrangements^a are unlikely to be the best way to address extreme fees for specialist appointments. Doctors tend to increase fees when they know patients will be eligible for additional benefits.^b For example, about 43 cents of every dollar spent on increased rebates through the Extended Medicare Safety Net in 2008 flowed to doctors.^c

Introducing bulk-billing incentives for specialists

Introducing bulk-billing incentives for specialists would be a costly and inefficient way to tackle out-of-pocket costs. Specialists are unlikely to bulk bill unless the value of the incentive exceeds the value of the fee they would otherwise have charged. This means a new incentive would have the most effect where it is needed least: appointments with relatively small fees. The extreme fees that we discuss in this chapter would probably remain untouched, unless the incentives were very generous. But any such changes would be very costly.^d

- a. The Original and Extended Medicare Safety Nets provide higher rebates to people whose out-of-pocket healthcare costs exceed a particular threshold. But the arrangements encourage specialists to increase fees, and most safety net spending supports the most well-off consumers: Department of Health (2020, p. 24). These arrangements are currently under review: Department of Health and Aged Care (2024d).
- b. Yu et al (2019).
- c. Centre for Health Economics Research and Evaluation (2009).
- d. For example, as a back-of-the-envelope calculation, it would cost at least \$1.8 billion just to provide sufficient incentive for *half* of the appointments that currently attract a fee to be bulk billed. (This estimate is based on 2023 data. It assumes that the government must also pay the incentive for appointments that are bulk billed under existing arrangements, and can't tailor the incentive by specialty provider or Medicare item.)
- e. It would outlaw extreme fees rather than simply making them unattractive, so we expect it would be more likely to constitute civil conscription.

Instead, governments should make more free specialist care available by expanding public clinics. Further subsidising private specialists would entrench existing workforce models, whereas public clinic investment should come alongside productivity improvements (Chapter 4).

Kicking extreme-fee-charging doctors out of Medicare

Another approach could be to make all services provided by extreme-fee doctors ineligible for a Medicare subsidy. But this would expose patients to even larger out-of-pocket costs: they would not receive a rebate at all. In contrast, under the clawback mechanism we propose, the specialist would pay the penalty at a later date, making it more difficult to pass on to consumers.

Direct fee regulation

Directly regulating extreme fees, such as by setting fee caps, is similar to imposing penalties, but could be open to legal challenges.^e However, this should be considered if our recommendations are implemented and do not reduce extreme fees.

Appendix A: The cost of our recommendations

Estimated costs for our key recommendations are outlined in Table A.1. All other costs are assumed to be absorbed within existing budgets.

Our costings do not account for the flow-on effects of our recommendations.

For example, reducing wait times and expanding access to specialist care (Chapter 3) may increase demand for inpatient care in the short term, if patients join surgery waiting lists after seeing specialists more quickly. But it may also reduce demand in the long term, if patients' conditions are addressed with specialist care before they deteriorate.

Similarly, expanding the supply of some specialties may increase Medicare costs, as these specialists meet previously unmet demand.

Table A.1: Summary of costed recommendations

Recommendation	Cost estimate	Payer	Details
Train the workforce Australia needs			
The federal and state governments should establish a national health workforce planning body (Section 2.4.1).	\$138 million per year	Federal government	Half of the budgeted cost of Health Workforce Australia (HWA; \$209.9 million in 2013-14), inflated. ^a We estimate that our body's proposed functions will require about half the resourcing of HWA, which had a broader remit.
The federal government should provide an additional \$155 million in Teaching, Training, and Research funding to support the new training places (Section 2.4.2).	\$155 million per year	Federal government, through National Health Reform Agreement (NHRA)	We recommend a 20 per cent increase to the \$755 million Teaching, Training, and Research funding in 2023-24, inflated. ^b
The federal government should fund specialist colleges to develop and expand more flexible training models (Section 2.4.3).	\$8.6 million per year	Federal government	We recommend doubling the \$8.6 million available for flexible training programs in 2024-25 (assuming current funding will be extended). ^c
Invest in public clinics where they are needed most			
The federal and state governments should invest \$470 million a year to expand public specialist clinics in areas with the least care.	\$470 million per year	Federal government and state governments, through NHRA	See Appendix B.6.
Modernise public clinics			
The National Health Reform Agreement should provide funding to spread best practices across the system.	\$60 million, one-off cost	Federal government and state governments, through NHRA	We used the \$13.03 million 2020-21 estimated cost of a Victorian Health Innovation Fund initiative as the baseline for a one-off change-management cost. ^d We scaled up in line with population and inflation.
Reduce unnecessary specialist referrals			
The federal and state governments should set up a system that enables GPs to get direct advice from other specialists within three days.	\$25.5 million per year	Federal government and state governments	See Appendix E. The Queensland and WA governments have already committed to secondary consultation systems, so net new funding will be less than our estimate.

Notes: Costs are in 2024-25 dollars, inflated by seasonally adjusted Consumer Price Index. Costs for all other recommendations are assumed to be absorbed within existing budgets.

Sources: a. Commonwealth of Australia (2014). b. National Health Funding Pool Administrator (2024). c. Australian Government (2021). d. Council on Federal Financial Relations (2021).

Appendix B: How we measured specialist service use and access gaps

This appendix describes how we measured and compared specialist service use across different areas. We combined data on public and private specialist attendances at the SA3 level. We used this data to identify regions that are missing out on specialist care, in raw terms and after adjusting for differing health needs using a regression model.

B.1 Data sources

We used data on:

- public specialist attendances for residents of each SA3,¹⁷⁷ from the Australian Institute of Health and Welfare (AIHW);¹⁷⁸
- private specialist attendances for residents of each SA3, from Medicare microdata in the Australian Bureau of Statistics Person Level Integrated Data Asset (PLIDA); and¹⁷⁹
- demographics, health service use, and health status, publicly available from the ABS and AIHW.

B.1.1 AIHW public hospital data

We used data on specialist services in the public hospital system from the AIHW non-admitted patient (episode-level) database.¹⁸⁰

177. SA3s are a geographic area defined by the ABS. There are 359 SA3s, each with a population of between 30,000 and 130,000 people. Our data capture the place where each patient lives, not the place where the specialist was located. For example, if a resident of Alice Springs had a telephone consultation with a specialist in Darwin, that appointment would be captured in the Alice Springs service count, not the Darwin service count.

178. AIHW (2024b).

179. ABS (2024b).

180. AIHW (2024b). The episode-level database captured about 98 per cent of total consultation services in 2021-22.

Our analysis included all medical consultation clinics (Tier 2 classification 20 series), excluding general practice (Tier 2 classification 20.06), patient-end telehealth services (Tier 2 classification 20.55), and case conferences where the patient was not present (Tier 2 classification 20.56).¹⁸¹

We included services that occurred in a public hospital, regardless of funding source. Three quarters of services were provided to public patients, 22 per cent per cent of services were funded by Medicare, and another 3 per cent per cent were funded by other sources.

The data on public outpatient attendances are collected by each state and territory, and may not be directly comparable (for more on data limitations, see Appendix B.7.1 on page 64).

B.1.2 Medicare microdata

We used de-identified unit-level data from the ABS PLIDA dataset.¹⁸² The data we used for this report are:

- Medicare Benefits Schedule (MBS) data from January 2018 to December 2023;
- the 2021 Census; and
- the Person Linkage Spine between the Medicare Consumer Directory and the Census data.

We defined specialist services as items in the 'Specialist Attendances' broad type of service category. We also included several obstetrics,

181. Telehealth services are recorded at both the patient and specialist end, so we omitted them to avoid double counting.

182. ABS (2024b).

and oral and maxillofacial, items that are specialist attendance-like. This definition is used by the AIHW in the *Referred medical specialist attendances* report.¹⁸³ We assigned items to a specialty (e.g. cardiology) according to their specialty provider code.

We excluded items that occurred while a patient was in admitted hospital care, which are outside the scope of this report.

We excluded items that had no assigned specialty type. We also excluded counter-intuitive values, which may have been data entry errors, such as items with negative fees, benefits paid, schedule fees, or number of services. Some of these items may have represented refunded services, in which case excluding them would overstate total services and fees. However, these services made up a negligible share of the total, and excluding them did not affect the results.

B.1.3 Demographic and population health data

We compiled demographic and health indicators for each SA3 from the ABS and AIHW.¹⁸⁴ The variables are described below.

B.2 Combining public and private specialist attendance data

The public hospital and Medicare data have slightly different definitions and variables.

The public hospital specialist attendances data contain service events by clinic type, aggregated to the SA3 of the patient's usual address. Public service events are classified as an episode of care. This means that multiple attendances within the same clinic on the same day are counted as one event.

183. AIHW (2024e). The specific item codes we included were: 16399, 16401, 16404, 16406, 16407, 16408, 16500, 16590, 16591, 75150, and 75153.

184. ABS (2024c), PHIDU (2024a), PHIDU (2024b), ABS (2022a), AIHW (2024f), ABS (2022b), and AIHW (2023).

The Medicare data contain a record of each specialist attendance, by specialist provider, and the postcode of the patient's usual address.

To combine these two data sources, we:

1. categorised public clinics according to the provider's usual specialty;
2. matched Medicare records to the patient's SA3 of usual residence;
3. counted the number of unique episodes of care within the Medicare unit records, following the definition used by the Independent Health and Aged Care Pricing Authority for public outpatient care; and
4. subtracted the number of Medicare-funded services in public hospitals from the total estimate of Medicare-funded services, to avoid double counting.

B.2.1 Categorising public clinics according to the usual specialty of the provider

The public hospital data had information about specialist clinics. To match the Medicare data, which has information about specialist providers, we assigned each type of public outpatient clinic a specialty according to the usual provider listed in the *Tier 2 Non-Admitted Services Definitions Manual* (Table B.1).¹⁸⁵

We report results for 13 specialty groups. We chose the groups based on service volumes and to allow sensible comparison between public and private services.

185. IHACPA (2021a). Where there were multiple usual providers, services were allocated equally between them. Where there was no clear usual provider, we consulted with clinicians and hospital administration experts to approximate a match between clinic type and specialty.

Table B.1: Classification of Tier 2 outpatient clinics and specialties to a specialty group

Specialty group	Tier 2 clinics	MBS providers
Anaesthesia	20.02 Anaesthetics	Anaesthetics
Cardiology	20.22 Cardiology	Cardiology
Dermatology	20.33 Dermatology	Dermatology
Endocrinology	20.34 Endocrinology 20.28 Metabolic bone	Endocrinology
General medicine	20.05 General medicine	General medicine Internal medicine
Obstetrics and gynaecology	20.37 Assisted reproductive technology 20.38 Gynaecology 20.39 Gynaecological oncology 20.40 Obstetrics (pregnancy without complications) 20.53 Obstetrics (complex pregnancy) 20.54 Maternal fetal medicine	Obstetrics and gynaecology
Oncology	20.42 Medical oncology (consultation) 20.43 Radiation oncology (consultation)	Oncology
Ophthalmology	20.17 Ophthalmology	Ophthalmology
Paediatrics	20.04 Developmental disabilities 20.11 Paediatric medicine	Paediatrics
Psychiatry	20.45 Psychiatry 20.50 Psychogeriatric	Psychiatry
Surgery	20.32 Breast 20.23 Cardiothoracic 20.27 Craniofacial 20.18 Ear, nose, and throat (ENT) 20.07 General surgery 20.48 Multidisciplinary burns clinic 20.16 Neurosurgery 20.29 Orthopaedics	Cardio-thoracic surgery General surgery Neurosurgery Oral and maxillofacial surgery Orthopaedic surgery Otolaryngology

Continued on next page

Table B.1 – continued from previous page

Specialty group	Tier 2 clinics	MBS providers
Surgery (continued)	20.12 Paediatric surgery 20.46 Plastic and reconstructive surgery 20.31 Spinal 20.01 Transplants 20.36 Urology 20.24 Vascular surgery	Paediatric surgery Plastic and reconstructive surgery Urology Vascular surgery
Other	20.52 Addiction medicine 20.21 Anti-coagulant screening and management 20.14 Epilepsy 20.25 Gastroenterology 20.08 Genetics 20.49 Geriatric evaluation and management (GEM) 20.09 Geriatric medicine 20.10 Haematology 20.26 Hepatobiliary 20.41 Immunology 20.44 Infectious diseases 20.28 Metabolic bone 20.35 Nephrology 20.15 Neurology 20.03 Pain management 20.13 Palliative care 20.47 Rehabilitation 20.19 Respiratory 20.20 Respiratory – cystic fibrosis 20.30 Rheumatology 20.51 Sleep disorders	Addiction medicine Clinical genetics Clinical pharmacology Gastroenterology and hepatology General practice* Geriatric medicine Haematology Immunology Infectious diseases Microbiology Nephrology Neurology Nuclear medicine Occupational medicine Pain medicine Palliative medicine Pathology Public health Radiology Rehabilitation medicine Respiratory and sleep medicine Rheumatology Rural and remote medicine* Sexual health medicine Sport and exercise medicine
Excluded	20.06 General Practice and Primary Care	Emergency medicine Intensive care

Notes: *Only items provided by GPs and rural and remote medicine specialists that were classified as specialist attendances were included in our analysis.

B.2.2 Matching Medicare records to the patient's SA3 of usual residence

In the Medicare data, we only have each patient's postcode of usual residence, not SA3. We followed three steps to assign each patient to an SA3.

First, we assigned everyone whose postcode had a one-to-one match with an SA3 to that SA3.

Second, for patients whose postcodes corresponded to several SA3s, we linked patients' Medicare records with the Census. Where the Medicare record and Census had the same postcode, we assigned the Medicare record to the SA3 listed in the Census.

Third, for all remaining records, we randomly assigned the patient to one of the SA3s that overlaps with that postcode. The random assignment was weighted by the number of services in the linked Medicare-Census data that occurred in each SA3, for a given postcode.

B.2.3 Counting unique episodes of care within MBS unit record data

Service events in the public hospital dataset are classified as an episode of care. This means that multiple attendances within the same clinic on the same day are counted as one event.¹⁸⁶ To apply the same rule to Medicare services, we counted all service events that occurred for the same patient, on the same day, in the same specialty, as one event.

B.2.4 Subtracting Medicare-funded public hospital services

Our count of public specialist services included those funded by Medicare in public hospitals (Appendix B.1.1). To avoid double

186. IHACPA (2021b).

counting, we subtracted the number of MBS-funded events in public hospitals in each SA3 from the estimate of total MBS-funded events in each SA3, to reach our final estimate of private specialist services.

In a small number of cases,¹⁸⁷ this resulted in an estimate of a negative number of total specialist services for one specialty in an SA3 (that is, the estimated number of MBS-funded public hospital events exceeded the estimated total MBS-funded events for that specialty, in that SA3). In those cases, we set the estimated number to zero.

B.3 Age-sex standardisation

We adjusted the raw estimates of service use, for each specialty, in each SA3 by the age-sex profile of each SA3. Without this adjustment, our results might have been misleading. For example, one SA3 might use fewer specialist services, but just because it has a relatively young (and healthy) population, rather than any access barriers.

We used the indirect method of age-sex standardisation.¹⁸⁸ This method compares actual services with the number of services that each SA3 would have received, given its population structure, if the average service level for different age-sex buckets was the same across Australia.

First, we calculated the national average number of services per person, for each specialty, for each age-sex bucket.¹⁸⁹ We then multiplied these rates by each SA3's actual population (split by age and sex buckets).¹⁹⁰

187. 0.22 per cent of service events.

188. AIHW (2011).

189. For example, nationally, 0–4 year-old females receive 0.2 paediatrics services per person.

190. For example, if an SA3 had 100 0–4 year-old females, we'd expect to see 20 paediatrics services for that cohort in that region.

For each specialty, we calculated an age-sex-standardised rate of service use:

$$\frac{\text{actual services}}{\text{age-sex estimated services}} \times \text{national average services per capita}$$

Appendix B.8 presents estimates of age-sex standardised service use by specialty for each SA4. If an SA3 is receiving fewer services than would be expected based on its age-sex profile, its adjusted rate of use is below the national average; if it is receiving more, it is above.

B.4 Modelling specialist service use

Age-sex standardisation goes some way to adjusting for the different health needs of people in different regions. But people of the same age and sex can differ widely in their health and need for specialist care. For example, all other things being equal, we would expect a community with a higher rate of complex chronic diseases to need more specialist appointments per person. A community with a lower fertility rate than average probably requires fewer obstetrics appointments than expected based on its age-and-sex profile.¹⁹¹

These measures of health need are highly correlated with other SA3 characteristics, such as socio-economic status and remoteness.¹⁹² If we don't account for these other factors, our estimates of how service use varies with differences in need would be biased.¹⁹³

191. Some of the largest gaps between actual and age-sex-adjusted service use that we identified were for obstetrics and gynaecology in regions with low birth rates, highlighting the need to adjust for a broader set of need variables.

192. AIHW (2021).

193. For example, we might observe that communities with a higher rate of diabetes see specialists less often, but only because those communities are on average more remote and face bigger barriers to accessing care.

To try to overcome this challenge, we estimated specialist service use as a function of each SA3's 'need' and 'non-need' characteristics:

$$y_i = \beta_0 + \sum_j \beta_j X_{i,j} + \sum_k \beta_k Z_{i,k} + \epsilon_i \quad (\text{B.1})$$

where y_i is the specialist services per capita of SA3 i , β_0 is the model intercept, β_j is the coefficient of need variable X_j , β_k is the coefficient of non-need variable Z_k , and ϵ_i is the error term. There are j need variables and k non-need variables included in the model.

'Need' variables (X_j) are those that we think legitimately influence specialist service use. These include:

- **age and sex:** the proportion of each SA3's population in five-year buckets (for example, females aged 0–4 years, males aged 0–4 years, females aged 5–9 years, etc.), from the 2021 Census;¹⁹⁴
- **disease prevalence:** the proportion of each SA3's population that reported having various long-term health conditions in the 2021 Census. We also included a measure of cancer prevalence from the Australian Cancer Database;¹⁹⁵
- **disability:** the proportion of each SA3's population aged 0-64 with a profound or severe disability, as reported in the 2021 Census;¹⁹⁶
- **Aboriginal and/or Torres Strait Islander:** the proportion of each SA3's population that identified as Aboriginal and/or Torres Strait Islander in the 2021 Census;¹⁹⁷

194. ABS (2024c). We omitted the proportion of the population aged 85 years or over and male to avoid perfect collinearity: this is captured in the intercept.

195. PHIDU (2024a). We included a separate rate for each condition: arthritis, asthma, dementia, diabetes, heart disease, kidney disease, a lung condition, a mental health condition, stroke, or other long-term condition. We also included the proportion of the population with one, two, or three-or-more long-term conditions.

196. Ibid.

197. PHIDU (2024b). Aboriginal and Torres Strait Islander people typically have poorer health outcomes than other Australians, even after adjusting for socio-economic status and measurable health risk factors: AIHW (2024g).

- **temporary migrant:** the proportion of each SA3's population that is a temporary migrant in our model, from the Australian Census and Temporary Entrants dataset.¹⁹⁸ Most temporary migrants do not have access to Medicare, so most of their specialist service use will not be captured in our data; and¹⁹⁹
- **GP visits:** the total Medicare benefits, excluding bulk-billing incentives, associated with GP visits in each SA3 in 2022-23,²⁰⁰ adjusted for the proportion of the population that are temporary migrants (and cannot access Medicare-subsidised primary care). More GP visits could reflect greater health needs. We also control for the share of the population who do not see a GP at all in a given year, as a 'non-need' access variable.

'Non-need' (Z_j) variables are those that we think illegitimately influence specialist service use. These include:

- **socio-economic status:** each SA3's Index of Relative Socio-economic Advantage and Disadvantage (IRSAD), calculated as the population-weighted mean of the 2021 IRSAD scores of all SA2s within each SA3;²⁰¹
- **remoteness:** a factor variable with each SA3's classification in the the Australian Statistical Geographical Classification: major cities; inner regional; outer regional; remote and very remote;²⁰² SA3s were classified according to where the majority of the population lived.²⁰³ In Equation (B.2), where we set non-need variables equal

to a national reference category, major cities is the reference category;

- **state:** a factor variable with each SA3's state or territory. In Equation (B.2), where we set non-need variables equal to a national reference category, Queensland is the reference category;
- **travel time to nearest hospital:** the minimum travel time to a hospital in each SA2, published elsewhere.²⁰⁴ We calculated a population-weighted average of the travel times in each component SA2 to derive an estimate for each SA3;
- **access to GP:** the proportion of the population in each SA3 that visited a GP at least once in 2022-23,²⁰⁵ adjusted for the proportion of the population that are temporary migrants (and cannot access Medicare-subsidised primary care). We separately control for the number of GP visits as a measure of need;
- **private health insurance coverage:** the proportion of the population aged 20 and older with private health insurance in 2019-20, from Australian Taxation Office data.²⁰⁶ Private health insurance does not cover the outpatient specialist attendances analysed in this report, but it may cover related treatments; and²⁰⁷
- **out-of-pocket costs:** average out-of-pocket cost for residents of each SA3 for a specialist attendance in 2022-23.²⁰⁸

198. ABS (2022a).

199. Temporary migrants are all migrants on temporary visas except subclass 444 (New Zealand citizens), because New Zealand citizens have access to Medicare. Some other countries also have reciprocal health agreements with Australia, but we do not control for this effect.

200. AIHW (2023).

201. ABS (2023b).

202. We grouped remote and very remote areas together, due to low counts.

203. ABS (2022b).

204. Barbieri and Jorm (2019).

205. AIHW (2023).

206. PHIDU (2024b).

207. For example, private health insurance does not cover the cost of an appointment with an obstetrician, but it might cover the cost of giving birth in a private hospital with that specialist in attendance.

208. AIHW (2023).

B.4.1 Our estimated model

We estimated our model with robust standard errors. Our estimated model (Table B.2) explained about 85 per cent of the observed variation in service use across Australia in 2022-23.

Not all of our coefficients were individually significant, and some had unexpected signs. But the age–sex variables were jointly significant (F-score = 3.27), and so were the disease variables (F-score = 2.67).

B.5 Using our model to predict need-standardised service use by SA3

After estimating the model, we used it to predict how many services each SA3 would have received in a counterfactual scenario where it had its own need profile, but all non-need variables were equal to the national average, or a fixed reference category ($\bar{Z}_k$):

$$\hat{y}_i = \hat{\beta}_0 + \sum_j \hat{\beta}_j X_{i,j} + \sum_k \hat{\beta}_k \bar{Z}_k, \quad (\text{B.2})$$

Because we picked a reference category for remoteness and state, our total predicted services deviated slightly (by 1.4 per cent) from the actual total services. We rescaled all the estimates by this factor so total estimated services are equal to total actual services in 2022-23.

We use this to calculate a measure of ‘need-standardised’ service use for each SA3. This rate gives us a way to compare actual service use in each SA3, while adjusting for each SA3’s different need profile:²⁰⁹

$$y_i^{IS} = y_i - \hat{y}_i + \bar{y} \quad (\text{B.3})$$

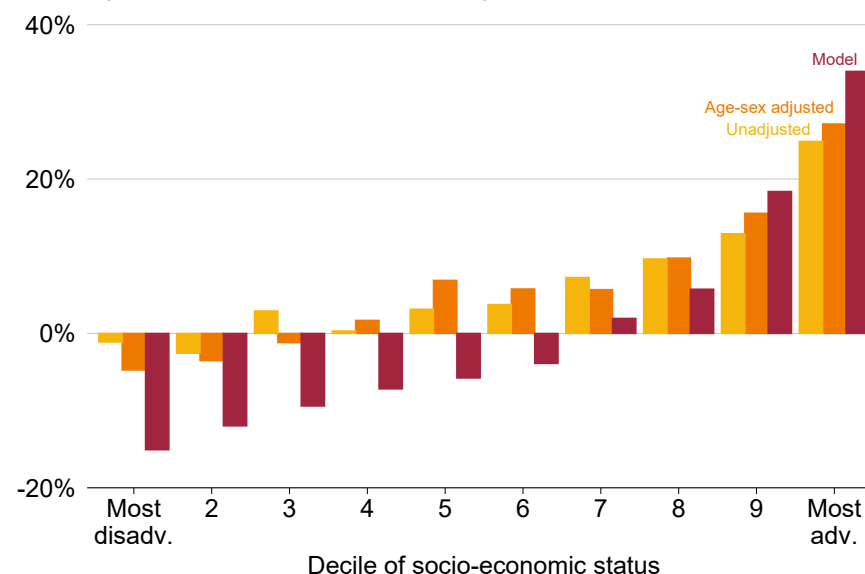
209. The adjustment is equal to the estimated change in specialist services for that SA3’s need profile, relative to the national mean need profile: $\sum_j \hat{\beta}_j (\bar{X}_j - X_{i,j})$. For example, an SA3 with a higher rate of disease than average ($\bar{X} < X_i$) would have an estimate of $y_i^{IS} < y_i$.

where y_i is actual service use, $\hat{y}_i$ is the service use predicted by Equation (B.2), and $\bar{y}$ is the national mean of service use.

Appendix B.8 presents estimates of need-standardised total service use for each SA4. The need-standardised estimates suggest that the disparity in service access is even greater than suggested by crude and age-standardised rates – that is, areas that are missing out have even greater need for care than average, so the access gap is even more stark than it initially appears. Poorer areas miss out more (Figure B.1).

Figure B.1: Our model suggests larger socio-economic disparities in healthcare use than simpler models

Actual specialist service use relative to expected service use



Notes: Unadjusted service use is if each SA3 received the national average level of specialist services per capita. Age-sex adjusted is if each SA3 received the national average, adjusted for the age-sex profile of its population. Modelled is if each SA3 had its own need profile, but the national average for non-need variables.

Source: Grattan analysis of ABS (2024b) and AIHW (2024b).

Table B.2: Our estimated regression model

Variable classification	Category	Variable	Coefficient estimate	p-value	Significance
Non-need	Remoteness	Inner regional	0.00	0.84	-
Non-need	Remoteness	Outer regional	-0.04	0.28	-
Non-need	Remoteness	Remote	-0.08	0.24	-
Non-need	State	ACT	-0.21	0.01	**
Non-need	State	NSW	0.07	0.02	*
Non-need	State	NT	0.09	0.20	-
Non-need	State	SA	0.11	0.02	*
Non-need	State	Tas	-0.01	0.81	-
Non-need	State	Vic	-0.01	0.73	-
Non-need	State	WA	-0.02	0.67	-
Non-need	Socio-economic status	IRSAD score	-0.01	0.01	*
Non-need	Socio-economic status	IRSAD score squared	0.00	0.00	**
Non-need	Access to healthcare	Proportion of the population that saw a GP in the last 12 months	0.00	0.53	-
Non-need	Access to healthcare	Time to nearest hospital	0.00	0.37	-
Non-need	Access to healthcare	Proportion of the population with private health insurance	0.00	0.11	-
Non-need	Access to healthcare	Average out-of-pocket cost	0.00	0.00	**
Non-need	Other demographic characteristics	Proportion of the population that is a temporary migrant	-0.01	0.07	*
Non-need	Other demographic characteristics	Proportion of the population aged 0-64 with a disability	0.09	0.00	**
Non-need	Other demographic characteristics	Proportion of the population that is Indigenous	0.00	0.46	-
Need	Health need	Medicare GP benefits per person	0.00	0.00	***

Need	Health need	Proportion of population reporting they have one long-term health condition	4.82	0.35	-
Need	Health need	Proportion of population reporting they have two long-term health conditions	7.84	0.42	-
Need	Health need	Proportion of population reporting they have three or more long-term health conditions	12.26	0.47	-
Need	Health need	Proportion of population reporting they have arthritis	-5.71	0.28	-
Need	Health need	Proportion of population reporting they have asthma	-7.41	0.13	-
Need	Health need	Proportion of population reporting they have cancer	4.95	0.24	-
Need	Health need	Proportion of population reporting they have dementia	-10.12	0.21	-
Need	Health need	Proportion of population reporting they have diabetes	-2.72	0.57	-
Need	Health need	Proportion of population reporting they have heart disease	2.43	0.69	-
Need	Health need	Proportion of population reporting they have kidney disease	13.65	0.10	-
Need	Health need	Proportion of population reporting they have a lung condition	-9.49	0.09	*
Need	Health need	Proportion of population reporting they have mental health condition	-4.28	0.40	-
Need	Health need	Proportion of population reporting they have had a stroke	-10.09	0.35	-
Need	Health need	Proportion of population reporting they have any other long-term condition	0.26	0.90	-
Need	Age and sex	Proportion of the population 0-4 female	9.60	0.39	-
Need	Age and sex	Proportion of the population 0-4 male	13.76	0.17	-
Need	Age and sex	Proportion of the population 5-9 female	3.94	0.71	-
Need	Age and sex	Proportion of the population 5-9 male	2.41	0.81	-
Need	Age and sex	Proportion of the population 10-14 female	6.08	0.58	-
Need	Age and sex	Proportion of the population 10-14 male	0.15	0.99	-
Need	Age and sex	Proportion of the population 15-19 female	2.42	0.79	-
Need	Age and sex	Proportion of the population 15-19 male	5.40	0.60	-
Need	Age and sex	Proportion of the population 20-24 female	4.31	0.67	-
Need	Age and sex	Proportion of the population 20-24 male	9.06	0.32	-
Need	Age and sex	Proportion of the population 25-29 female	10.75	0.25	-
Need	Age and sex	Proportion of the population 25-29 male	-2.38	0.80	-
Need	Age and sex	Proportion of the population 30-34 female	15.18	0.13	-

Need	Age and sex	Proportion of the population 30-34 male	3.95	0.70	-
Need	Age and sex	Proportion of the population 35-39 female	-15.74	0.13	-
Need	Age and sex	Proportion of the population 35-39 male	9.19	0.35	-
Need	Age and sex	Proportion of the population 40-44 female	4.24	0.69	-
Need	Age and sex	Proportion of the population 40-44 male	6.50	0.53	-
Need	Age and sex	Proportion of the population 45-49 female	10.61	0.33	-
Need	Age and sex	Proportion of the population 45-49 male	6.28	0.54	-
Need	Age and sex	Proportion of the population 50-54 female	0.84	0.94	-
Need	Age and sex	Proportion of the population 50-54 male	11.84	0.29	-
Need	Age and sex	Proportion of the population 55-59 female	4.43	0.67	-
Need	Age and sex	Proportion of the population 55-59 male	8.84	0.41	-
Need	Age and sex	Proportion of the population 60-64 female	16.10	0.13	-
Need	Age and sex	Proportion of the population 60-64 male	-1.89	0.86	-
Need	Age and sex	Proportion of the population 65-69 female	6.22	0.58	-
Need	Age and sex	Proportion of the population 65-69 male	-1.51	0.89	-
Need	Age and sex	Proportion of the population 70-74 female	15.19	0.17	-
Need	Age and sex	Proportion of the population 70-74 male	3.45	0.76	-
Need	Age and sex	Proportion of the population 75-79 female	14.41	0.15	-
Need	Age and sex	Proportion of the population 75-79 male	-11.72	0.35	-
Need	Age and sex	Proportion of the population 80-84 female	-1.45	0.92	-
Need	Age and sex	Proportion of the population 80-84 male	0.07	1.00	-
Need	Age and sex	Proportion of the population 85 or older female	16.12	0.16	-
		(Intercept)	-1.24	0.89	-

B.6 Estimating and costing our proposal for additional specialist services

In Chapter 3, we propose that SA4 regions that are below the 25th percentile of adjusted service use should receive additional investment to bring them up to the level of the 25th percentile. SA4s are the largest sub-state regions in the ABS Australian Statistical Geography Standard, and are a better scale for specialist care service planning than SA3s.

The target level of access is the 25th percentile of age-sex adjusted services per person, for each specialty. We calculated how many additional services each SA4 below that percentile would need to reach that level of access: a total of 984,000 services for 81 SA4s.

We estimate the cost of providing these extra services to be \$470 million. To reach this estimate, we first calculated a weighted-average cost for specialist consultations in each specialty group:

$$\text{Weighted avg. cost}_g = \frac{\sum_i P_i Q_i}{\sum_i Q_i} \quad (\text{B.4})$$

Here, each i represents a Tier 2 specialty outpatient clinic in specialty group g (Table B.1 shows the how Tier 2 clinics are allocated to specialty groups). The P_i are nationally efficient prices for each non-admitted clinic type from the Independent Health and Aged Care Pricing Authority's 2024-25 determination.²¹⁰ The Q_i are national counts of services for each clinic type, from the public outpatient clinic data we obtained from AIHW (Appendix B.1.1).

210. IHACPA (2024).

Then, we calculated an adjustment factor (AF) for each SA4 j based on additional loadings:

$$AF_j = (1 + TRAF_j)(1 + RRAF_j + IAF_j \times \text{Indigenous population share}_j) \quad (\text{B.5})$$

The adjustment factors, and formula, are also specified by the national price setting authority.²¹¹ $RRAF$ is the loading that applies to patients who reside in rural areas: 7 per cent for outer regional areas and 20 per cent for remote areas. $TRAF$ is the loading that applies for treatment provided in rural areas: an extra loading of 2 per cent for remote areas.²¹² We assume that all patients who live in a remote area will receive their additional specialist services in that area. This may mean that we overstate the cost slightly, because some may be able to receive virtual care.

IAF is the Indigenous adjustment factor of 3 per cent, which applies to patients who identify as being of Aboriginal and/or Torres Strait Islander origin. We assume that Indigenous patients will use additional specialist services at the same rate as the rest of the population of that SA4. This means we may underestimate the total cost, because Indigenous people have, on average, greater health needs than others.

Finally, we calculated the total cost of new services by multiplying the weighted average cost by the adjustment factor and new services needed, in each specialty g , in each SA4 j :

$$\text{Total cost} = \sum_{gj} \text{Weighted avg. cost}_g \times AF_j \times \text{New services needed}_{gj} \quad (\text{B.6})$$

211. IHACPA (ibid). We did not include other adjustments, such as for paediatrics or multidisciplinary clinics. Our conservative 20 per cent buffer covers these costs.

212. There are higher loadings for very remote areas, but we grouped remote and very remote areas together for our analysis due to low counts. Our conservative buffer should cover additional costs in very remote areas.

We then added an extra 20 per cent to the total cost as a conservative buffer. This covers some additional costs that might arise with new service delivery that we did not include in our estimate, including patient transport, higher salary costs to attract the workforce, and change management and planning costs.

B.7 Limitations

B.7.1 Data limitations

Our analysis relies on data merged from two different sources, based on data collected for different purposes. These results should be treated as indicative only. Governments should validate the accuracy of the data before using it to inform service planning.

Our data on public specialist access are collected separately by state governments. There are differences in the way each jurisdiction collects data. This is particularly the case for the waiting time measures, which are not a nationally defined or validated measure, and should not be compared between jurisdictions.

Another limitation of our data is that they exclude specialist services provided by non-government organisations, such as the Royal Flying Doctor Service, Heart of Australia, Fred Hollows Foundation, and Royal Far West. These organisations disproportionately serve people in remote and very remote areas, so our estimates might slightly understate the level of service provision in those areas.

Our estimates of population rates of disease and disability come from self-reported Census data. They don't capture the severity of disease, or whether the condition requires ongoing care. And self-reported data are known to be biased: it's likely that there is more undiagnosed disease among people with poor healthcare access and health literacy, who are often disadvantaged. This means our estimates of the health needs of disadvantaged communities may be systematically too low.

B.7.2 Model limitations

Our model is simple and exploratory. Our linear regression model assumes that the effect of all need and non-need variables are additively separable; in reality, there are likely to be complex interactions and non-linear relationships among the variables. Some may be subject to reverse causality. And many of our variables are highly correlated, making individual coefficient estimates less robust.

The controls we include for need and non-need variables are rudimentary. A multitude of other factors – such as health literacy, transport options, and social capital, among others – affect specialist service use. To the extent that these are correlated with the variables we do include, our estimates may be biased.

Our analysis does not capture the substantial variation in need and access that occurs within communities. Future work could use individuals, rather than SA3s, as the unit of analysis, by linking microdata on individuals' service use and characteristics. This would allow for a much more fine-grained analysis of need, at an individual specialty level.

B.8 Table of results for SA4s

SA4	Total specialist services per person (adjusted for need)	Services per person (adjusted for age and sex)											
		Anaesthesia	Cardiology	Dermatology	Endocrinology	General medicine	Obstetrics and gynaecology	Oncology	Ophthalmology	Other	Paediatrics	Psychiatry	Surgery
Capital Region (NSW)	1.12	0.02	0.06	0.04	0.03	0.02	0.11	0.06	0.07	0.26	0.06	0.04	0.29
New England and North West (NSW)	1.19	0.02	0.06	0.05	0.04	0.06	0.15	0.13	0.07	0.19	0.05	0.03	0.26
Murray (NSW)	1.18	0.02	0.08	0.03	0.02	0.06	0.14	0.07	0.06	0.18	0.06	0.04	0.32
Central West (NSW)	1.21	0.02	0.06	0.03	0.04	0.05	0.15	0.07	0.09	0.26	0.06	0.05	0.29
Central Coast (NSW)	1.22	0.02	0.09	0.04	0.03	0.04	0.17	0.08	0.10	0.34	0.09	0.07	0.29
Coffs Harbour - Grafton (NSW)	1.41	0.04	0.09	0.03	0.03	0.06	0.15	0.16	0.07	0.27	0.07	0.05	0.36
Far West and Orana (NSW)	1.24	0.03	0.12	0.04	0.04	0.02	0.15	0.07	0.08	0.29	0.07	0.04	0.30
Hunter Valley exc Newcastle (NSW)	1.27	0.03	0.07	0.04	0.04	0.05	0.20	0.10	0.08	0.27	0.06	0.05	0.32
Illawarra (NSW)	1.42	0.01	0.10	0.06	0.04	0.05	0.17	0.07	0.10	0.45	0.06	0.09	0.33

Mid North Coast (NSW)	1.34	0.03	0.07	0.04	0.02	0.09	0.18	0.14	0.10	0.29	0.06	0.05	0.31
Newcastle and Lake Macquarie (NSW)	1.33	0.02	0.07	0.06	0.04	0.04	0.18	0.10	0.09	0.28	0.07	0.08	0.34
Richmond - Tweed (NSW)	1.24	0.01	0.07	0.04	0.03	0.05	0.15	0.10	0.10	0.27	0.07	0.09	0.31
Riverina (NSW)	1.28	0.02	0.06	0.04	0.03	0.06	0.15	0.06	0.07	0.21	0.07	0.08	0.34
Southern Highlands and Shoalhaven (NSW)	1.29	0.02	0.09	0.06	0.04	0.03	0.15	0.06	0.09	0.35	0.07	0.07	0.34
Sydney - Baulkham Hills and Hawkesbury (NSW)	1.66	0.01	0.16	0.10	0.07	0.02	0.20	0.07	0.13	0.35	0.06	0.07	0.31
Sydney - Blacktown (NSW)	1.42	0.04	0.16	0.05	0.09	0.03	0.22	0.12	0.11	0.39	0.07	0.04	0.27
Sydney - City and Inner South (NSW)	1.69	0.01	0.12	0.12	0.07	0.03	0.10	0.09	0.14	0.44	0.07	0.12	0.28
Sydney - Eastern Suburbs (NSW)	1.96	0.01	0.13	0.18	0.08	0.06	0.14	0.08	0.17	0.43	0.09	0.15	0.37
Sydney - Inner South West (NSW)	1.43	0.01	0.14	0.08	0.09	0.04	0.17	0.08	0.13	0.42	0.06	0.05	0.30

Sydney - Inner West (NSW)	1.69	0.01	0.16	0.14	0.08	0.03	0.14	0.09	0.15	0.40	0.07	0.12	0.31
Sydney - North Sydney and Hornsby (NSW)	1.90	0.01	0.13	0.18	0.08	0.03	0.16	0.06	0.15	0.38	0.07	0.15	0.33
Sydney - Northern Beaches (NSW)	1.73	0.01	0.11	0.13	0.05	0.05	0.15	0.06	0.15	0.35	0.06	0.11	0.36
Sydney - Outer South West (NSW)	1.33	0.02	0.14	0.04	0.08	0.04	0.21	0.07	0.14	0.40	0.08	0.04	0.35
Sydney - Outer West and Blue Mountains (NSW)	1.47	0.01	0.13	0.06	0.08	0.05	0.25	0.11	0.12	0.42	0.07	0.08	0.34
Sydney - Parramatta (NSW)	1.38	0.02	0.15	0.07	0.08	0.04	0.18	0.10	0.12	0.40	0.06	0.05	0.26
Sydney - Ryde (NSW)	1.63	0.01	0.15	0.13	0.07	0.03	0.15	0.06	0.14	0.35	0.07	0.09	0.29
Sydney - South West (NSW)	1.22	0.02	0.13	0.06	0.09	0.06	0.19	0.07	0.13	0.40	0.05	0.04	0.29
Sydney - Sutherland (NSW)	1.77	0.01	0.12	0.15	0.07	0.05	0.21	0.07	0.14	0.45	0.08	0.08	0.37
Hume (Vic)	1.16	0.03	0.07	0.03	0.03	0.08	0.16	0.06	0.07	0.20	0.06	0.04	0.31
Melbourne - West (Vic)	1.22	0.02	0.09	0.06	0.05	0.05	0.17	0.05	0.10	0.25	0.05	0.05	0.29
Shepparton (Vic)	1.18	0.03	0.06	0.02	0.03	0.12	0.16	0.08	0.06	0.21	0.07	0.04	0.33

Latrobe - Gippsland (Vic)	1.20	0.03	0.09	0.03	0.03	0.06	0.15	0.06	0.06	0.26	0.07	0.06	0.30
Warrnambool and South West (Vic)	1.22	0.02	0.03	0.04	0.03	0.05	0.21	0.07	0.08	0.20	0.07	0.04	0.36
Ballarat (Vic)	1.32	0.01	0.09	0.07	0.03	0.07	0.23	0.08	0.06	0.22	0.08	0.08	0.33
Bendigo (Vic)	1.23	0.01	0.08	0.04	0.02	0.08	0.17	0.09	0.07	0.23	0.07	0.07	0.34
Geelong (Vic)	1.41	0.02	0.07	0.05	0.06	0.03	0.21	0.09	0.10	0.30	0.08	0.08	0.37
Melbourne - Inner (Vic)	1.53	0.01	0.10	0.13	0.04	0.06	0.11	0.05	0.11	0.31	0.06	0.14	0.33
Melbourne - Inner East (Vic)	1.56	0.01	0.10	0.11	0.05	0.05	0.15	0.06	0.12	0.30	0.06	0.13	0.33
Melbourne - Inner South (Vic)	1.68	0.01	0.12	0.14	0.06	0.07	0.18	0.05	0.12	0.34	0.07	0.14	0.38
Melbourne - North East (Vic)	1.42	0.02	0.09	0.08	0.05	0.07	0.20	0.05	0.10	0.31	0.06	0.09	0.36
Melbourne - North West (Vic)	1.23	0.02	0.11	0.08	0.06	0.07	0.19	0.05	0.10	0.33	0.05	0.07	0.35
Melbourne - Outer East (Vic)	1.36	0.01	0.09	0.06	0.06	0.04	0.17	0.06	0.11	0.29	0.07	0.08	0.34
Melbourne - South East (Vic)	1.25	0.01	0.10	0.05	0.07	0.05	0.17	0.05	0.11	0.30	0.05	0.05	0.29
Mornington Peninsula (Vic)	1.37	0.01	0.13	0.05	0.05	0.04	0.17	0.06	0.10	0.30	0.07	0.07	0.40

North West (Vic)	1.29	0.03	0.11	0.03	0.02	0.06	0.17	0.08	0.06	0.20	0.07	0.03	0.37
Wide Bay (Qld)	1.00	0.03	0.08	0.02	0.02	0.05	0.16	0.06	0.06	0.19	0.07	0.05	0.34
Moreton Bay - North (Qld)	1.09	0.03	0.07	0.03	0.04	0.06	0.13	0.08	0.09	0.25	0.06	0.06	0.39
Logan - Beaudesert (Qld)	1.12	0.03	0.09	0.04	0.06	0.05	0.17	0.07	0.08	0.26	0.05	0.07	0.35
Central Queensland (Qld)	1.13	0.02	0.08	0.02	0.02	0.07	0.16	0.05	0.06	0.14	0.05	0.06	0.33
Ipswich (Qld)	1.17	0.02	0.08	0.04	0.04	0.05	0.14	0.07	0.08	0.26	0.06	0.10	0.37
Toowoomba (Qld)	1.11	0.02	0.07	0.02	0.03	0.07	0.15	0.04	0.08	0.21	0.06	0.07	0.36
Cairns (Qld)	1.16	0.03	0.07	0.02	0.03	0.04	0.14	0.06	0.09	0.22	0.04	0.05	0.31
Darling Downs - Maranoa (Qld)	1.12	0.03	0.06	0.02	0.03	0.04	0.14	0.05	0.07	0.19	0.05	0.04	0.31
Queensland - Outback (Qld)	1.12	0.04	0.08	0.02	0.04	0.07	0.14	0.05	0.06	0.18	0.05	0.02	0.27
Townsville (Qld)	1.20	0.02	0.08	0.02	0.03	0.04	0.16	0.06	0.11	0.28	0.07	0.05	0.33
Brisbane - East (Qld)	1.40	0.02	0.08	0.07	0.05	0.05	0.18	0.07	0.10	0.28	0.06	0.12	0.37
Brisbane - North (Qld)	1.32	0.01	0.09	0.10	0.05	0.04	0.15	0.06	0.11	0.27	0.06	0.11	0.35
Brisbane - South (Qld)	1.48	0.02	0.10	0.10	0.06	0.04	0.15	0.06	0.11	0.28	0.05	0.12	0.33
Brisbane - West (Qld)	1.62	0.01	0.10	0.14	0.05	0.03	0.15	0.05	0.11	0.27	0.06	0.16	0.33

Brisbane Inner City (Qld)	1.65	0.01	0.10	0.16	0.05	0.03	0.12	0.06	0.11	0.27	0.06	0.17	0.34
Gold Coast (Qld)	1.30	0.01	0.09	0.05	0.03	0.05	0.16	0.06	0.09	0.28	0.06	0.09	0.37
Mackay - Isaac - Whitsunday (Qld)	1.22	0.03	0.09	0.01	0.02	0.05	0.13	0.06	0.09	0.18	0.05	0.04	0.37
Moreton Bay - South (Qld)	1.26	0.02	0.08	0.07	0.04	0.04	0.14	0.06	0.10	0.26	0.06	0.09	0.36
Sunshine Coast (Qld)	1.27	0.01	0.09	0.05	0.03	0.04	0.13	0.06	0.09	0.27	0.06	0.06	0.33
Perth - North East (WA)	1.18	0.02	0.06	0.05	0.02	0.04	0.14	0.06	0.10	0.24	0.04	0.07	0.30
Bunbury (WA)	1.16	0.02	0.06	0.03	0.02	0.02	0.13	0.04	0.08	0.19	0.05	0.06	0.33
Mandurah (WA)	1.17	0.02	0.07	0.03	0.02	0.04	0.13	0.04	0.12	0.21	0.04	0.06	0.35
Western Australia - Outback (South) (WA)	1.20	0.05	0.05	0.02	0.02	0.04	0.13	0.05	0.06	0.17	0.04	0.03	0.33
Western Australia - Wheat Belt (WA)	1.21	0.03	0.06	0.03	0.02	0.04	0.14	0.06	0.08	0.18	0.04	0.04	0.30
Perth - Inner (WA)	1.62	0.01	0.07	0.14	0.03	0.04	0.12	0.05	0.12	0.27	0.05	0.13	0.31
Perth - North West (WA)	1.29	0.02	0.06	0.07	0.02	0.04	0.16	0.05	0.10	0.25	0.04	0.07	0.30

Perth - South East (WA)	1.26	0.02	0.06	0.06	0.03	0.04	0.13	0.06	0.11	0.25	0.04	0.06	0.29
Perth - South West (WA)	1.35	0.02	0.07	0.07	0.03	0.04	0.15	0.07	0.11	0.27	0.05	0.08	0.32
Western Australia - Outback (North) (WA)	1.27	0.06	0.05	0.03	0.02	0.05	0.12	0.04	0.11	0.13	0.06	0.02	0.30
South Australia - Outback (SA)	1.17	0.04	0.06	0.03	0.01	0.08	0.15	0.05	0.06	0.18	0.05	0.04	0.24
Adelaide - Central and Hills (SA)	1.68	0.01	0.13	0.12	0.03	0.07	0.17	0.05	0.11	0.31	0.07	0.12	0.38
Adelaide - North (SA)	1.25	0.02	0.12	0.07	0.02	0.08	0.16	0.05	0.10	0.26	0.07	0.07	0.35
Adelaide - South (SA)	1.55	0.01	0.11	0.10	0.03	0.06	0.18	0.05	0.10	0.34	0.10	0.09	0.38
Adelaide - West (SA)	1.55	0.02	0.14	0.11	0.03	0.05	0.17	0.06	0.12	0.38	0.08	0.08	0.38
Barossa - Yorke - Mid North (SA)	1.34	0.03	0.09	0.04	0.01	0.06	0.16	0.05	0.08	0.21	0.06	0.05	0.31
South Australia - South East (SA)	1.30	0.02	0.09	0.04	0.02	0.05	0.16	0.05	0.07	0.22	0.05	0.05	0.36
West and North West (Tas)	1.09	0.01	0.06	0.02	0.03	0.03	0.12	0.05	0.11	0.22	0.07	0.03	0.33
Launceston and North East (Tas)	1.12	0.01	0.07	0.03	0.03	0.02	0.12	0.05	0.10	0.20	0.06	0.04	0.28

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South East (Tas)	1.11	0.01	0.07	0.03	0.02	0.03	0.15	0.02	0.09	0.14	0.07	0.04	0.26
Hobart (Tas)	1.30	0.01	0.09	0.06	0.03	0.04	0.16	0.03	0.12	0.19	0.09	0.07	0.32
Darwin (NT)	1.39	0.05	0.08	0.04	0.03	0.04	0.13	0.13	0.12	0.23	0.06	0.05	0.40
Northern Territory - Outback (NT)	1.30	0.06	0.07	0.01	0.02	0.22	0.08	0.07	0.07	0.18	0.04	0.07	0.23
Australian Capital Territory (ACT)	1.31	0.01	0.08	0.04	0.03	0.12	0.10	0.06	0.08	0.29	0.05	0.06	0.25

Appendix C: Methodology for productivity improvement literature reviews

We conducted two targeted literature reviews to gauge the potential for productivity improvements in public outpatient clinics. This appendix outlines our methodology.

C.1 Rapid review on process improvements

We undertook a rapid review to explore evidence-based interventions that have been shown to increase outpatient clinic productivity.

C.1.1 Search approach and inclusion criteria

We searched Web of Science and Scopus in June 2023. After conducting an initial search primarily focusing on the productivity of outpatient services, a narrower search method was defined to focus on the operations within the clinic. The search strategy used a combination of the key terms 'efficiency/effectiveness/productivity', 'improvement', and 'outpatient clinic/specialist clinic'.

We assessed the relevance of papers by scanning their title and abstract, then reading the full text of papers deemed relevant. We only included articles published in the past 10 years and studies from OECD countries. We excluded studies that focused on the outcomes of a specific disease or in-patient services.

C.1.2 Results

The literature search returned 464 studies exploring productivity in specialist outpatient clinics. After screening the title and abstract, 75 studies remained. After applying the inclusion and exclusion criteria, 29 studies were analysed to identify the key research findings.

All studies were from high-income OECD countries, and most were from the UK and the US. The studies were set in a range of specialist

outpatient clinics including, but not limited to, psychiatry, orthopaedics, rheumatology, neurology, and ophthalmology.

The key themes identified from the literature were:

- alternative practitioners delivering care (explored in more depth in our second literature review, see Appendix C.2);²¹³
- using health technology;²¹⁴
- improved scheduling;²¹⁵
- using process mapping; and²¹⁶
- novel methods of care delivery.²¹⁷

C.1.3 Limitations

Our rapid review was not a comprehensive or systematic review. We identified some potential directions for change, but not specific process improvements that should be implemented, nor the potential magnitude of change.

The majority of studies (23/29) were observational studies of quality improvement projects, where outcomes before and after the

213. Yarbrough et al (2022), Beijer et al (2016), Meehan et al (2019), K. A. Taylor et al (2019), Sørensen et al (2015), Koksvik et al (2013), and El Alaoui and Lindefors (2016).

214. Dorsey et al (2013), Ryan et al (2014), and Lim et al (2022).

215. Babayoff et al (2022), Volk et al (2020), Swan-Mahony et al (2018), Glowacka et al (2017), Leeftink et al (2022), and Lagman et al (2021).

216. Huddle et al (2016), Heijink et al (2022), Ciulla et al (2018), Lin et al (2013), Berg et al (2019), Zhou et al (2014), and Johannessen and Alexandersen (2018).

217. Anugraha et al (2022), Lynton et al (2020), Seppen et al (2023), Plamondon and Provencher (2022), Hollander et al (2015), and Moe et al (2016).

introduction of a new initiative are compared. The aim of these studies is typically to demonstrate an improvement in a single clinic, not to prove the intervention works. They are useful to highlight potential avenues for improvement, but are often highly contextualised and may not be transferable to other settings. There were few randomised controlled trials or large sample studies.

C.2 Literature review on workforce substitution

We undertook a more focused literature review on workforce substitution in Australian specialist outpatient clinics.

C.2.1 Search approach and inclusion criteria

We searched PubMed, Scopus, Web of Science, and Google Scholar in August 2023.

We used the following search terms: *Australia (Workforce OR staff OR team OR professional*) AND ("task substitution" OR "Role substitution" OR "extended scope" OR "advanced scope") AND ("public specialist clinic*" OR outpatient OR "specialist service*" OR "public clinic*")*.

Studies cited by articles we identified in the literature search were also considered.

We only included studies that took place in Australia in public specialist outpatient clinics. We excluded studies that took place in primary or acute care settings (such as workforce substitution at GP clinics or in emergency departments).

Qualitative, quantitative, and mixed-methods studies were included. Studies that did not include outcome measures for patient satisfaction, cost, wait time, patient safety/adverse events, or quality of care were excluded.

C.2.2 Results

The literature search returned 364 results. After screening the title and abstract and after applying the inclusion and exclusion criteria, 19 studies were analysed to identify key research findings. Most of the included studies (14/19) included wait time as a primary outcome of the study, as well as quality of care, patient satisfaction, and cost. All studies were conducted in Australia, with the majority of the research coming from Queensland health services. Studies were set in a variety of specialist outpatient clinics including, but not limited to, orthopaedics, surgical, geriatrics, and urology.

Non-specialist healthcare practitioners, including physiotherapists,²¹⁸ podiatrists, audiologists,²¹⁹ speech-language pathologists,²²⁰ dietitians,²²¹ and occupational therapists²²² were found to play roles across multiple specialities.

No adverse safety events were reported in any of the included studies. No significant differences were described in terms of clinical efficacy and functional outcomes.²²³

All studies that reported on wait times found reduced or significantly reduced wait times for specialist care.²²⁴ The majority of the patients

218. Morris et al (2011), Blackburn et al (2009), L. B. Oldmeadow et al (2007), Marks et al (2016), Large et al (2014), Walsh et al (2014), Tampin et al (2015), and Brennen et al (2019).

219. Pokorny et al (2021), Payten et al (2020), Távora-Vieira et al (2022), and Eakin et al (2022).

220. Seabrook et al (2019), and Schwarz et al (2022).

221. C. Lewis et al (2023), Simmance et al (2019), and Mutsekwa et al (2019a).

222. Cox et al (2020).

223. Marks et al (2016), and Large et al (2014).

224. Blackburn et al (2009), Marks et al (2016), Pokorny et al (2021), Seabrook et al (2019), Payten et al (2020), Cox et al (2020), Mutsekwa et al (2019a), Tampin et al (2015), and Saxon et al (2018).

seen by substitute workers in specialist clinics were managed without the need for specialist intervention.

Five studies described costs from workforce substitution.²²⁵ Savings were reported in all but one of the five studies.

C.2.3 Limitations

All studies included in the review, with one exception,²²⁶ were case-control or cohort studies. This makes them susceptible to selection bias and confounding. Specialties and health services choosing to use workforce substitution may be more motivated, or have greater scope, to improve practices, so the findings may not be generalisable more broadly. The majority of research came from Queensland health services; this may limit the applicability to other settings.

Additionally, the relatively short cohort study periods may not accurately capture the long-term effects of workforce substitution. The results may also have been influenced by the Hawthorne effect, where people change their behaviour in response to being observed. This may diminish the benefits of workforce substitution when scaled more broadly.

The studies were conducted across different specialties, in different states and health services, so may not be generalisable more broadly.

Finally, patient and GP experiences and preferences regarding workforce substitution were not a primary outcome of this review, leaving a potential gap in understanding the patient and primary care provider perspective.

225. Morris et al (2011), Marks et al (2016), Payten et al (2020), Simmance et al (2019), and Brennen et al (2019).

226. One randomised controlled trial was identified: Marks et al (2016).

Appendix D: Details of our proposed secondary consultation system

D.1 Digital and asynchronous

A digital system should be set up so that GPs send relevant information and receive a response within a set number of business days.

Text-based messaging should be the basis for this digital system. The specific system deployed will need to meet minimum criteria to ensure security and simplicity (Table D.1).²²⁷

Allowing communication at different times avoids the need to match the schedules of already time-poor GPs and specialists.²²⁸ Using a text-based system also matches existing processes for clinical notes and specialist referral, simplifying integration into clinical practice.²²⁹ This approach provides both doctors with more flexibility to fit secondary consultation into their schedule.²³⁰

D.2 All-inclusive

Secondary consultation systems should aim to cover most areas of clinical inquiry for most patients.

227. Secure messaging is used in most GP clinics and could be the basis for secondary consultation. This may be the simplest and most cost-effective solution, but would require working closely with existing vendors to ensure the system is suitable and secure. Proof of concept has already been demonstrated in the Queensland eConsultant Partnership Program: Job et al (2021).

228. Systems that facilitate immediate communication often have a full-time or on-call doctor for each specialty, making them expensive and dependent on a high and consistent number of cases to fill specialist time. For example, this was the case for the previously funded Australian GP Psychiatry Support phone line: Productivity Commission (2020, p. 468).

229. Liddy et al (2013).

230. GP time includes initial submission of the patient case and follow-up once a response is received. Specialist time similarly includes time to review and submit a response and any follow-up with the GP: Liddy et al (ibid).

Table D.1: A secondary consultation system must be usable and secure

It must allow GPs to...	And should also...
Specify a clinical question	Include a post-completion survey for GPs
Attach or input patient history	Be accessible by admin staff in GP clinics
Select a relevant specialty	Specify expected wait times for different specialties
Attach patient diagnostic results	Auto-generate relevant referral paperwork
Securely store and transmit patient data, and communicate back-and-forth with specialists	Integrate with existing clinical systems, or make data easily transferable between systems

Sources: Job et al (2021) and Liddy et al (2013).

GPs already have a lot of options for clinical decision support, but most are specific to a clinical problem or patient type.²³¹ There is no one-stop shop for GPs to find what they need, and each individual tool is easily forgotten or ignored.²³² Instead, the most successful international models of secondary consultation have a broad scope.²³³

Secondary consultation systems could start with a smaller set of specialists, but expand coverage over time.²³⁴

231. Tools include formal clinical guidelines, websites or digital decision support, and programs offering services for specific patients or specific clinical questions.

232. Job et al (2022).

233. Liddy et al (2019a).

234. Once established, it could also be expanded to allow specialists to use the system when considering referral to another specialist.

D.3 Fully funded

Consistent, reliable funding is critical for large-scale system change. State governments should fund the direct costs of specialist time²³⁵ and administrative time for managing the cases, training and on-boarding specialists, and tracking the quality of specialists' responses.

The federal government should also support the rollout by funding compensation for GP time²³⁶ and programs to promote uptake among GPs.²³⁷

D.4 High-quality

Clear clinical and legal guidelines should be developed to ensure the right care is directed for a second opinion, while patients who need a specialist referral still receive one. The guidelines should be created with, or endorsed by, key clinical bodies,²³⁸ and specify a minimum level of qualification for specialists.²³⁹

235. Specialists should be salaried part-time through a selected public hospital. This creates flexibility for changes in demand, while ensuring sufficient capacity to answer all GP requests.

236. A lack of compensation can be a barrier to use of clinical tools. We recommend providing a quarterly incentive payment as part of MyMedicare, with an additional small fee for each request. GPs would be eligible for the payment if their clinic is registered for MyMedicare and they use the system at least once in the period. They would not be required to have each patient registered for MyMedicare to receive the payment.

237. We recommend providing specific funding to Primary Health Networks (PHNs) for GP supports in their region. Supporting GPs is a core function of PHNs, and this could leverage existing networks while building added PHN capability for similar future programs.

238. Guidelines should include recommendations for quality use by GPs, expected standards of response for specialists, and legal implications on responsibility for care: Liddy et al (2013) and Petre et al (2023).

239. Specialists should be required to have a minimum number of years of registered medical practice, sufficient to provide advice on a broad range of patients: Keely and Liddy (2021).

GPs will not use secondary consultation if advice is not fast enough or not targeted enough to guide care.²⁴⁰ Quality standards and measurement can ensure advice is timely and relevant, so GPs can meet their duty of care to patients.

The quality of specialist responses should then be consistently assessed against the overarching guidelines and quality standards.²⁴¹

240. Ibid.

241. GPs should be asked to rate their experience with the service at the close of each case. This could be a short survey – as used in Champlain BASE eConsult™ – and include questions on referral intentions, outcomes, and the perceived relevance and helpfulness of specialist advice: Keely et al (2022).

Appendix E: How we costed secondary consultation

Large-scale secondary consultation could provide 140,500 services per year in Australia at an estimated cost to government of \$25.5 million per year (Figure E.1).²⁴² This would save patients \$4 million in out-of-pocket costs from avoided specialist visits, and provide specialist care in 4,700 cases that would otherwise not have received referred specialist care.

This appendix describes the three steps we used to estimate the annual cost and health system benefits:

- **Step 1.** We estimated the number of secondary consultation cases per year.
- **Step 2.** We estimated the cost to deliver and support this number of secondary consultations, including adding 20 per cent to the total cost as a conservative buffer.
- **Step 3.** We then estimated the change in healthcare spend, for the government and patients, associated with secondary consultation cases.

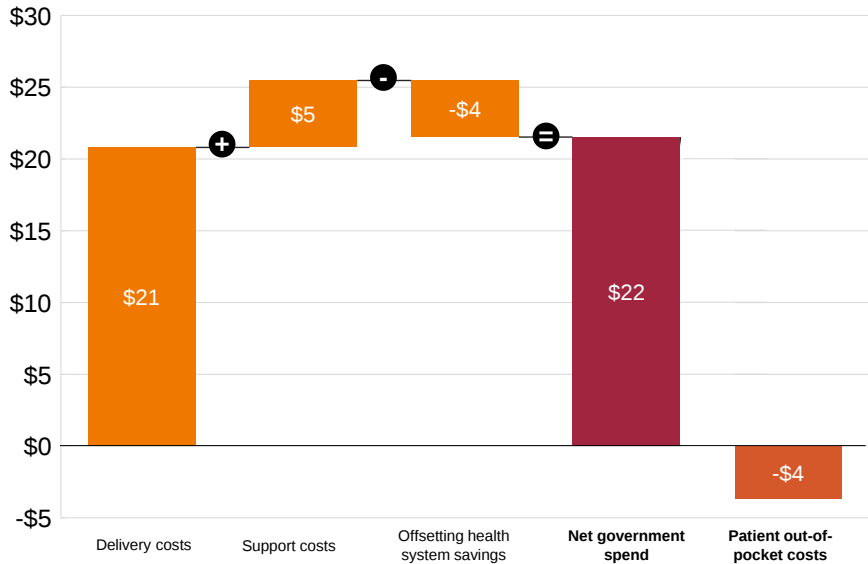
The cost of secondary consultation will change depending on use of the system. It is more cost effective at a larger scale (Table E.1).

E.1 Step 1. Estimating the number of secondary consultations

Under our proposed model, all GPs could access secondary consultation for their patients. We used publicly available data on the

242. The Queensland and Western Australian governments have already committed funding to secondary consultation systems, so new funding required will be less than our estimate: RACGP (2025) and Queensland Health (2025b).

Figure E.1: Estimated costs and savings for secondary consultation
Ongoing costs and savings, \$ millions



Notes: Values in 2024 dollars. Estimates are for base case estimate of 140,500 consultations per year.
Source: Grattan Institute estimates.

Table E.1: Estimated costs at different levels of use

	Number of consults	Government cost	Health system cost	Patient cost
Low uptake	51,200	\$11.7m	-\$1.4m	-\$1.3m
Base case	140,500	\$25.5m	-\$3.9m	-\$3.7m
High uptake	306,300	\$51.2m	-\$8.6m	-\$8.0m

Note: Values in 2024 dollars.
Source: Grattan Institute estimates.

number of GPs in Australia and their growth over the past five years to estimate the number of potential GP users.²⁴³

Not all GPs will use the system.²⁴⁴ We drew on the the Champlain eConsult BASE™ program to estimate the number of active GPs (who submit at least one case every year).²⁴⁵

We used the same case study to estimate the number of cases of secondary consultation for each active GP.²⁴⁶ On top of this base-case assumption, we have tested a high and low case for the number of cases per GP.²⁴⁷

E.2 Step 2. Estimating the cost of secondary consultation

We estimated the cost of secondary consultation across: delivery costs for each case, and support costs for the service.²⁴⁸

We then added 20 per cent to each of these cost estimates as a conservative buffer.

E.2.1 The cost of delivering secondary consultation

Secondary consultation needs the GP's time to submit the case, and the specialist's time to reply to the case.

243. Department of Health and Aged Care (2023e).

244. Liddy et al (2018a).

245. GP uptake is assumed to increase each year for the first four years it is available, from 6 per cent in Year 1 to 30 per cent in Year 4 (and all following years). It is expected that at full scale, uptake could be as high as 45 per cent, which would increase costs – and benefits – proportionately: Liddy et al (ibid).

246. GPs are estimated to submit five cases in their first year using secondary consultation and 11 in all subsequent years of active use: Liddy et al (ibid).

247. The high case assumes 24 cases per year, or two per month. The low case assumes only four cases per year, or one per quarter.

248. Secondary consultation is already happening informally. We do not account for the savings generated from replacing this with a clearer and more effective approach, making our estimates of time taken conservative.

Under our recommended model, GP payment would be split into:

1. a fixed annual payment for each participating GP of \$156; and
2. an additional payment for each case submitted of \$5.

This is based on a GP payment of \$18.95 per consult, with 75 per cent through the fixed payment, for GPs submitting the expected number of consults per year (as in Appendix E.1 on the previous page).²⁴⁹

The estimated cost for specialist time is \$105 per case. We averaged public specialist minimum wages across all six states and applied a mark-up of two times the base wage.²⁵⁰ The average wage per minute was multiplied by the assumed average time to complete a secondary consultation of 26 minutes.²⁵¹

E.2.2 The cost of supporting secondary consultation

Secondary consultation entails administrative costs to assign and manage the cases within agreed timeframes.²⁵² We estimated the administrative cost as \$16 per case. We assume wages of 80 cents

249. This GP payment is based on Medicare Benefits Schedule (MBS) Item 91790, a telehealth attendance by a GP for a simple or straightforward medical problem. This item specifies a need for short patient history and limited management: Department of Health and Aged Care (2024c).

250. Public specialist wages were averaged across the most recent Enterprise Agreements for each state, and exclude registrars and senior specialists. The average for each state was weighted by the total state population: ABS (2024d). The mark-up accounts for differences between the base wage and actual wages in a typical public hospital and on-costs excluded from the base wage rate: Job et al (2023).

251. This assumption is based on the average time reported in the Queensland eConsultant program: Job et al (ibid). The time to complete is expected to decrease over time to 10-to-15 minutes, based on overseas experience: Liddy et al (2018a) and Keely et al (2020).

252. Job et al (2023).

per minute for clinical administration and an average administrative time for each consultation of 20 minutes.²⁵³

High-quality specialist responses are important.²⁵⁴ We estimated one hour of training per year for each specialist, including initial training, reviewing individual feedback, and refreshing knowledge of secondary consultation systems and processes.²⁵⁵

Once secondary consultation is active, word-of-mouth can drive more GP use. Promotion and support for GPs will be important in the early years to get sufficient scale.²⁵⁶ We assumed an annual budget of \$35,000 for each Primary Health Network (PHN), for at least the first six years, to provide targeted GP promotion and support.²⁵⁷

We assume secondary consultation will use existing software systems and incur no additional costs.²⁵⁸ We have not costed any added activity by the Department of Health to establish regulations and negotiate changes to these systems.

253. The approach for estimating administrative time is based on the method used by Job et al (2023). It assumes a Level CA3 employee salary for administrative support, based on the latest Queensland Enterprise Agreement, with a 30 per cent mark-up on the base salary: Pidgeon (2023).

254. Keely and Liddy (2021).

255. Specialists were assumed to be compensated at the same rate as for time completing secondary consultations. The number of specialists active was estimated using an average number of cases per specialist per year of 53: Keely et al (2022) and Keely et al (2020).

256. Liddy et al (2013).

257. Based on assumed salary of 0.5 FTE of time for each PHN: Payscale (2025). This could be reduced once at a sufficient scale.

258. Secure messaging, as used in the Queensland eConsultant Partnership Program, may be the most cost-effective option, requiring minimal adjustment and already deployed in many GP clinics. See Appendix D on page 76 for more detail.

E.3 Step 3. Estimating the change in healthcare spend

Use of secondary consultation affects GPs' referral choices, with flow-on effects for cost. We estimated these effects by considering the cost of each added or avoided specialist referral.

Secondary consultation can result in a specialist referral or management by a GP. The cost impact depends on whether the patient would have received a specialist referral or not without the secondary consultation. We estimated this based on the outcomes from three Canadian studies (Figure E.2 on the next page). The most common outcome was avoided referral (49 per cent). Secondary consultation did not change the referral outcome in around half the cases (48 per cent) and added a referral in only 3 per cent of cases.²⁵⁹

The cost of an added referral is assumed to include one initial consultation with a specialist and 1.6 follow-up consultations.²⁶⁰ These patients are assumed to have avoided one follow-up visit with their GPs. For patients avoiding referral, only an initial specialist consult is assumed to be avoided. Instead, the patient is expected to have one additional GP visit, to plan next steps for care.

The costs for specialist referral and follow-up care were estimated by:

- *Estimating the cost of public specialist care:* The average specialist salary per minute referenced in Appendix E.2.1 on the preceding page and an average time per consultation of 41 minutes.²⁶¹

259. Singh et al (2022), Liddy et al (2019b), and Liddy et al (2018a).

260. Calculated based on the ratio of Medicare rebates registered for initial consultations to those for follow-up consultations: ABS (2024b).

261. The same consultation time of 41 minutes was used for initial and subsequent visits, providing a conservative estimate of cost: Job et al (2023). In practice, subsequent visits are likely to be shorter, decreasing the cost of added referral.

- *Estimating the cost of private specialist care:* The weighted average patient out-of-pocket fee and Medicare Benefits Schedule rebate for an initial consult and subsequent consult across all specialties.²⁶²
- *Weighting public and private specialist costs:* The split of care delivered across private (two-thirds) and public (one-third).²⁶³

The cost for GP follow-up was estimated using publicly available data on the average cost per appointment.²⁶⁴

These costs were combined to estimate the net cost for an avoided referral and an added referral (Table E.2).

E.4 The cost of eReferral

Electronic referral has not been costed. Most states in Australia are already working on these systems. This means they will have already spent upfront for the design process,²⁶⁵ and have budgeted for the ongoing cost.²⁶⁶ We expect the cost to be about \$4 million per year across Australia, with this mostly within the range of reasonable budgeting for each state. The spend is also expected to be partially offset by efficiency gains in public clinics.²⁶⁷

262. ABS (2024b).

263. Appendix B.

264. Services Australia (2023).

265. For example, SA Health spent about \$650,000 in 2022-23 to design and deliver eReferral: SA Health (2023b).

266. This is expected to cost up to \$1 million per year for larger states, based on the NSW contract with HealthLink for 2023-25: Payne (2025).

267. These efficiency gains could generate between \$2 and \$6 in cost savings per referral processed, based on economic evaluations of different referral processes: Hume Whittlesea Primary Care Partnership (2022) and Azamar-Alonso et al (2019).

Figure E.2: Classification of secondary consultation outcomes

	Referral occurs	No referral occurs
Referral planned	No change in healthcare spending 22%	Avoided referral 49%
No referral planned	Added referral 3%	No change in healthcare spending 26%

Note: The percent of each outcome is based on the average across three studies weighted to the study sample size.

Sources: Singh et al (2022), Liddy et al (2019b), and Liddy et al (2018a).

Table E.2: Cost impacts for health system and patients

	Health system cost	Patient cost
Specialist first appointment	\$125	\$70
Specialist follow-up appointment	\$95	\$35
GP appointment	\$50	\$10
Avoided referral	-\$75	-\$60
Added referral	\$225	\$120

Notes: Values in 2024 dollars. Patient costs for specialist appointments are an average of out-of-pocket costs for private appointments and public appointments (\$0 for the latter), weighted by the average split of care across private and public. Avoided referral is calculated as the cost of GP follow-up minus that of specialist first consultation only. Added referral is the total of specialist first consultation and 1.6 specialist follow-up consultations, minus the cost of GP consultation.

Appendix F: How we analysed data on specialist fees

F.1 Data sources

We used de-identified unit-level record data from the ABS Person Level Integrated Data Asset (PLIDA).²⁶⁸ PLIDA combines various datasets with information on health, government payments, and population dynamics. The data we used for this report are:

- Medicare Benefits Schedule data from January 2018 to December 2023;
- the 2021 Census; and
- the Person Linkage Spine between the Medicare Consumer Directory and the Census data.

MBS data

We defined specialist services as items in the 'Specialist Attendances' broad type of service (BTOS) category. We also included several obstetrics and oral and maxillofacial attendance-like items.²⁶⁹

We excluded items that had counter-intuitive values, that could have been data entry errors. We excluded items with no assigned specialty type or with negative fees, benefits paid, schedule fees, or number of services. It may be that some of these items were refunded services, in which case excluding them would overstate the total amount of services and fees. However, these services made up a negligible share of the total, and excluding them did not affect the results.

268. ABS (2024b).

269. The specific item codes we included were: 16399, 16401, 16404, 16406, 16407, 16408, 16500, 16590, 16591, 75150, and 75153.

F.2 Analysis of fees and out-of-pocket costs

Our analysis on fees and out-of-pocket costs mostly uses data from January to December 2023.

We defined the out-of-pocket cost per service as the difference between the fee charged by the provider and the benefit paid by Medicare. Most of the time, the benefit paid is equivalent to 85 per cent of the schedule fee for the item.

A service was considered bulk billed if the bulk-billing flag was set to 'direct billed' or if the out-of-pocket cost for the service was \$0. In practice, there is only a small number of services where the bulk-billing flag was set to 'patient billed', but the out-of-pocket cost was \$0. We chose to classify these as bulk billed for this analysis, given the focus on the cost to the patient.

Given the focus on specialist services in outpatient settings, we excluded services that were performed in-hospital. These items tend to be related to hospital treatment or hospital substitute treatment (hospital in the home). We also excluded services provided by emergency care and intensive care specialists.

Most of the analysis uses the Medicare dataset. For the analysis that considers demographic characteristics, we use the linked Medicare and Census dataset. As a result, there may be minor differences in some values, but these are not material.

F.2.1 Classifying extreme fee-charging doctors

We classified doctors as charging extreme fees if they charge more than triple the Medicare schedule fee, on average. For each specialist, we took the following steps:

- calculate the average fee charged across all of their services;
- calculate the average schedule fee across all of their services;
- compare these two numbers; if the ratio of the average fee charged to the average schedule fee is more than 3, the doctor is classified as an extreme fee-charging doctor;
- for each individual service, calculate the ratio of the fee charged to the schedule fee; and
- calculate the average of this ratio across all the doctor's services; if the average is greater than 3, the doctor is classified as an extreme fee-charging doctor.

We excluded specialists who saw fewer than five patients in the year.

The first definition captures specialists who consistently charge extreme fees, and the second captures those who charge a subset of their services at exorbitant rates. Applying both definitions should prevent a specialist from redistributing the fees they charge across services to avoid being penalised.²⁷⁰

270. For example, a specialist may reduce fees for all services to ensure they charge less than three times the schedule fee on average, but they may offset lost revenue by increasing fees significantly for their most costly services. In this situation, the average service would cost less than three times the schedule fee, but the total fees charged by that doctor could be more than triple the schedule fee.

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