

A new Medicare

Strengthening general practice

Peter Breadon and Danielle Romanes



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Overview

Australia's universal healthcare system, Medicare, started in 1984. Much has changed in the four decades since, but the government's approach to general practice – the backbone of our health system – hasn't kept up.

As this report shows, a system designed for an earlier era hasn't been updated to respond to the rise of chronic disease, or to tackle gaping disparities in access to care, rates of disease, and life expectancy.

The complexity of GP work has grown immensely, as the population has grown older and rates of mental ill-health and complex chronic disease have climbed. But the model for general practice has changed little. GPs are struggling to fit more and more care into appointments that still average 15 minutes, and lack the support of a broader team.

Other countries have reformed general practice, and their rates of avoidable hospital visits for chronic disease are falling. Australia has spent 25 years on a merry-go-round of tests and trials that have not changed the system, and our rates are holding steady. We are spending more and more on hospitals, while neglecting general practice: the best place to tackle chronic disease.

Patients suffer the consequences. People with chronic disease live shorter lives, with more years of ill-health, and lower earnings. The effects are worst for poorer Australians, who are twice as likely to have multiple chronic diseases as wealthy Australians.

Australia's health workforce is also struggling. Hospital staff are overwhelmed with demand. And GPs report being stressed, disrespected, disillusioned; struggling to meet increasingly complex demand in a system that does not support them.

More of the same won't work. To turn the tide on chronic disease, Australia needs a new Medicare, with three big changes.

First, general practice needs to be a team sport, with many clinicians working under the leadership of a GP to provide more and better care. This is common overseas and evidence shows it can deliver excellent results. Australia must dismantle the regulatory and funding barriers that force GPs to go it alone. To accelerate change, 1,000 more clinicians, such as nurses and physiotherapists, should be employed in general practices serving the communities with the biggest gaps in care.

Second, Australia needs a new way to fund general practice. The current model is broken, actively discouraging team care and rewarding speed, not need. Australia is one of the last wealthy countries to fund general practice this way. Practices should be able to choose a new funding model that supports team care and enables GPs to spend more time on complex cases, by combining appointment fees with a flexible budget for each patient that is based on their level of need.

Third, general practices cannot keep working without clarity and support from government. They need a clear vision about where general practice is heading, with support and accountability for getting there. Primary Health Networks should roll out key recommendations in this report and monitor a new set of measures that show how well the system is working. That will help them guide and improve the system, including improving people's access to healthcare in rural areas.

Reform is overdue, but an opportunity has arrived. The system is in crisis and the Federal Government has set aside \$250 million a year to respond. That money can fund the recommendations in this report; repairing the foundation of our health system and creating a new Medicare that is ready for the decades ahead.

Recommendations

Bring Medicare into the 21st Century by giving general practices support to tackle chronic disease, with bigger workforce teams, more flexible funding, and support and accountability to make the change.

A bigger team

Expand access by making general practice a team sport, with more clinicians using all their skills to share the load with GPs:

- Fund 1,000 new nurses, physiotherapists, mental health clinicians, pharmacists, and other allied health workers in the highest-need communities, to work within general practices alongside GPs and provide fee-free care
- Engage an independent commission to remove regulatory barriers that stop primary care workers from safely using all of their skills, and to explain the new rules clearly
- Reduce waits and costs for specialist care, by contracting specialist advice for GPs to help them manage complex cases without referring patients to private specialists or hospital waiting lists

A new funding model for Medicare

Change funding to support team-based chronic disease care, match funding with need, and close access gaps:

- Allow general practices to opt in to a new funding model that funds more care for patients who need it, and supports GP leadership, team-based care, and ongoing relationships with patients
- In practices using this new model, expand access to the Medicare Benefits Schedule for nurse practitioners and physician assistants

- In rural areas where access to care is low or at risk, fund Primary Health Networks (PHNs) to support fragile practices or set up new services in partnership with states and local hospitals.

Shaping the system

Set a clear direction and support improvement

- Show where we are going, with a long-term strategy for general practice that outlines what good care looks like, how it should be delivered, and how it fits into the broader system
- Give PHNs real powers to shape markets by rolling out the new funding model, the new workforce roles, and specialist support
- Measure what matters and encourage improvement with new data and reporting on access to care, quality of care, patient satisfaction, health outcomes, and who is being left behind
- Develop a strategy to improve data collection and use across the health system.

Committing to change

Avoid another dead-end trial by committing to a long-term plan:

- Commit to rolling out the new funding model over 10 years
- Give practices the help they need to adapt, including funding, expert advice, data analysis, and leadership training for GPs
- Invest in the capability of PHNs and the department of health to support and manage system performance.

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1 Medicare's midlife crisis

Australia's universal healthcare system, Medicare, started in 1984.¹ It was a different time: perms were still in fashion, INXS had their first hit single, and you could still pay for things with a one cent coin.

Much has changed in the four decades since, but the government's approach to general practice – the backbone of our health system – hasn't kept up. As this report shows, a system designed for an earlier era hasn't been updated to respond to the rise of chronic disease, or to tackle gaping disparities in access to care, rates of disease, and life expectancy.

This chapter explains what general practice is and the biggest challenges it needs to tackle. It shows that recruiting more general practitioners (GPs), or increasing funding, won't solve the deep structural problems Medicare faces. Without reform, costs will continue to rise and the system will fail to meet growing demand for care, especially for those who need it most.

1.1 Primary care is the backbone of the health system

Primary care is given at the first point of contact with the health system, when people get a check-up, or think they might have an illness or disease. For most people with chronic long-term diseases,² primary care is the main pathway into the health system, and where they get help to manage their conditions. When primary care is working well, the whole system is more effective, efficient, and equitable.³

1. A reincarnation of Medibank, introduced by the Whitlam Government in 1975: Barer et al (1990).
2. AIHW (2018a, p. 511).
3. Starfield et al (2005).

Box 1: There are many different kinds of primary care clinics

General practices come in several forms. Two types of primary healthcare practices already demonstrate some elements of the vision we set out in this report.

Aboriginal Community Controlled Health Organisations (ACCHOs) deliver holistic, comprehensive, and culturally appropriate primary healthcare for the Aboriginal communities that initiate and operate them. ACCHOs already have some of the aspects of best practice described in Chapter 2, including continuous and empowering relationships with patients through a team-based workforce model.^a

Community health services provide primary care for disadvantaged people who find it hard to get care in private general practice. Community healthcare is provided by multidisciplinary teams and based on a more integrated model of care, with both a clinical and social focus. Community health can be effective and efficient at preventing and treating persistent, long-term, or recurrent conditions.^b

While the focus of this report is on private general practices, our recommendations are highly relevant to ACCHOs and community health services and they should be eligible for the same funding allocations that we propose.

- a. The evaluation of the Health Care Homes trial found ACCHOs were better able to adapt to a new payment model for chronic disease care, with better team communication, more comprehensive care plans, and greater engagement with patients in developing them: Department of Health and Aged Care (2022a).
- b. Rosen et al (2010).

While primary care is given in many settings,⁴ the focus of this report is on general practices, because they provide the vast bulk of diagnosis and treatment (Box 1 on the preceding page). Various health workers can provide care in general practices, but in Australia patients are usually seen by GPs.

1.2 Chronic disease is a fundamental challenge

One of the biggest changes of the past half-century has been the rapid rise of chronic disease. Conditions such as heart disease, diabetes, and mental illness made up just 12 per cent of GP caseloads in 1962,⁵ but by 2015 this had more than doubled to 27 per cent.⁶ And rates have continued to rise rapidly since then (Figure 1.1).

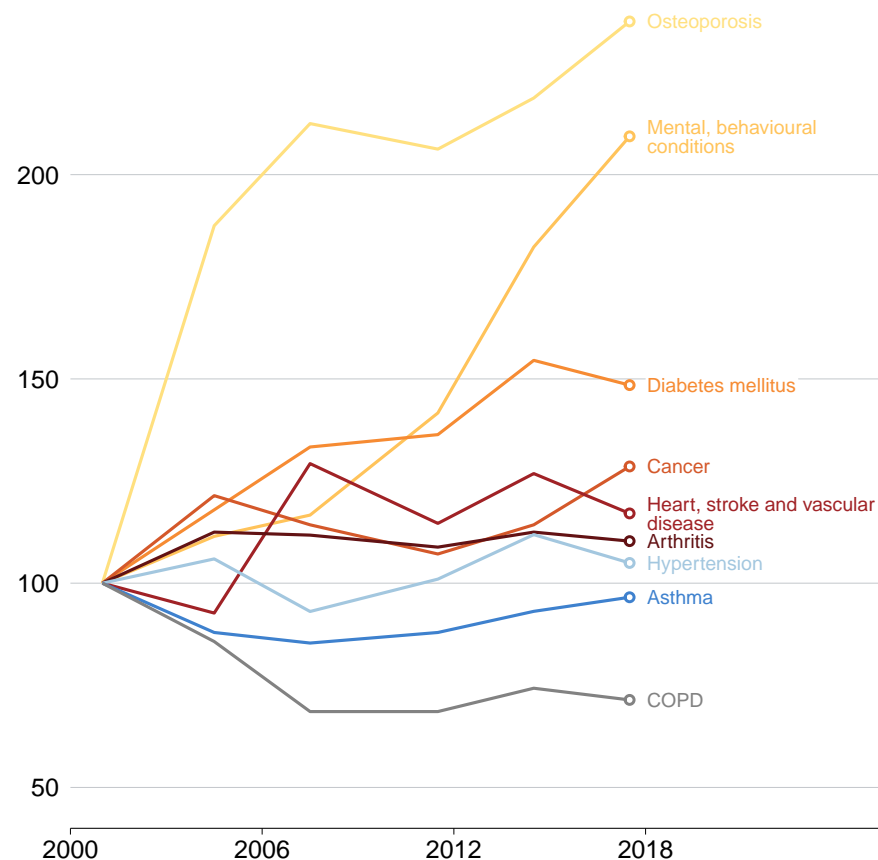
Today, almost half of us live with a chronic disease.⁷ Chronic diseases make up two thirds of the disease burden and contribute to nearly nine in 10 deaths.⁸ This trend will continue, as our population ages and the prevalence of some chronic disease risk factors, such as obesity, increases.⁹

Unlike short-term health problems, chronic diseases rarely go away, and often deteriorate over time. Without careful management, they often progress to cause serious ill health and disability.

4. For example, primary care services can be given in a variety of settings outside the hospital, such as medical, nursing, diagnostic clinics, pharmacies, allied health clinics, mental health clinics, dental clinics, aged care facilities, in the home, and schools and community sites: Swerissen and Duckett (2016).
5. Chronic cardiovascular conditions, endocrine and metabolic conditions, and mental disorders: Harris and Zwar (2014a).
6. This is the most recent available data because BEACH was stopped: Britt et al (2016).
7. AIHW (2022a). Proportion is 47 per cent, or 11.6 million people.
8. For 10 chronic conditions. Proportions are 66 per cent and 89 per cent, respectively. Osteoporosis excluded from disease burden: AIHW (ibid).
9. Treasury (2010, p. 8); Magliano et al (2009); Marquina et al (2022); and Savira et al (2021).

Figure 1.1: Rates of many chronic diseases are rising

Indexed change in per capita incidence of chronic disease in Australia (2001 = 100)



Notes: COPD = Chronic obstructive pulmonary disease. Back problems, hayfever, and kidney disease are excluded. Because disease rates are self-reported, some change may be influenced by changing awareness of different conditions. There are many other rapidly growing causes of morbidity and mortality in Australia, such as dementia; however, this chart is limited to diseases included in the national health survey.

Source: ABS (2018a).

This is especially true for people who have more than one chronic condition, which is the case for half of all Australians older than 65.¹⁰ Their conditions can interact, making treatment and management more complex, and compounding the health impact.

This impact is hard to overstate. Compared to people with no long-term conditions, people with multiple conditions are six times more likely to suffer some form of disability, restriction, or limitation. They are eight times more likely to report high levels of psychological distress.¹¹

For many, the impact of chronic disease is prolonged. On average, Australians spend 13 per cent of their lives in ill-health, more than people in most other countries.¹²

There is strong evidence about the kinds of primary care that can best prevent and treat chronic disease (Chapter 2). But as this report shows, Australia's health workforce policies (Chapter 3), funding model (Chapter 4), and management of the system (Chapter 5), make it hard for general practice to deliver that care.

1.3 Many people are not getting the care they need

The burden of chronic disease is unevenly spread across the population, but Australia's primary care system does not align resources with need at a regional level, or within a neighbourhood or general practice.

1.3.1 There are big gaps in some rural GP services

Rural areas have greater need but fewer GPs.¹³ Compared with people in major cities, people in small rural towns have about 35 per cent fewer

GPs,¹⁴ see their GP about half as often,¹⁵ and are 30 per cent more likely to report waiting too long for an appointment.¹⁶

GPs without much local competition are likely to charge higher prices and bulk-bill fewer of their patients.¹⁷ As a result, rural patients pay higher out-of-pocket costs to see their GP.¹⁸ There is no evidence that GPs charging out-of-pocket costs provide better or longer services.¹⁹ But these costs can be a barrier to care for poorer people, and increase their financial stresses.²⁰

Shortages are bad for GPs too. While most GPs in major cities work fewer hours compared to many other professions,²¹ GPs in small towns work about 20 per cent longer and attend callouts after-hours about five times more often.²²

-
14. For every 100,000 people there were 123 full-time equivalent GPs in inner-metropolitan areas, but only 83 in small rural towns. Department of Health and Aged Care (2022b).
 15. These figures refer to Modified Monash areas MM5 to MM7. People living in inner-metropolitan areas on average saw the GP almost 7 times in 2020. People living in more remote areas saw the GP about half as often.
 16. Respondents in rural areas reporting waiting 'too long' 29 per cent of the time, compared to 22 per cent from inner areas: ABS (2022a).
 17. Research shows the bulk-billing rate increases by 6 percentage points for every additional GP per 10,000 population: Gravelle et al (2016).
 18. Relative to average and metropolitan out-of-pocket costs: Duckett et al (2022).
 19. For example, a 2015 study found no association between bulk-billing and consultation length: Lourenco et al (2015), and a 2022 study found bulk-billing has no independent effect on low-value care: Scott et al (2022). Another 2022 study found that in major cities, more bulk-billing and fewer out-of-pocket costs within areas were associated with increased odds of continuity-of-care, long consultations, and care planning: Butler et al (2022).
 20. Duckett et al (2022).
 21. According to the 2021 Census, the median GP living in a capital city worked 39.5 hours per week – just above the professional occupation average of 39.25 hours per week. This data was captured during the pandemic, when GPs may have been working longer hours than usual. Grattan analysis of ABS (2022b).
 22. Duckett and Breadon (2013) and M. R. McGrail et al (2011)

10. AIHW (2022a).

11. 2017-18 National Health Survey results reported in AIHW (ibid).

12. PC-life-lived-disability

13. AIHW (2022b).

Other clinicians could help these GPs to shoulder the load, as Chapter 3 shows. This is common overseas and has been called for by the Australian College for Rural and Remote Medicine.²³ But Australian regulation and funding policy limits how much work GPs can share with a team, forcing many to work with little support.

1.3.2 Poorer people are not getting the GP services they need

While rates of bulk-billing for GP services are high overall, particularly for patients with concession cards, disadvantaged Australians still face barriers to care. For example, compared to those in the wealthiest areas, older Australians in the poorest areas are almost three times as likely to not to see a GP at least once a year.²⁴ When disadvantaged Australians do visit the GP, they are about 35 per cent more likely to report waiting too long for appointments,²⁵ and are more likely to have shorter consultations, after need is factored in.²⁶

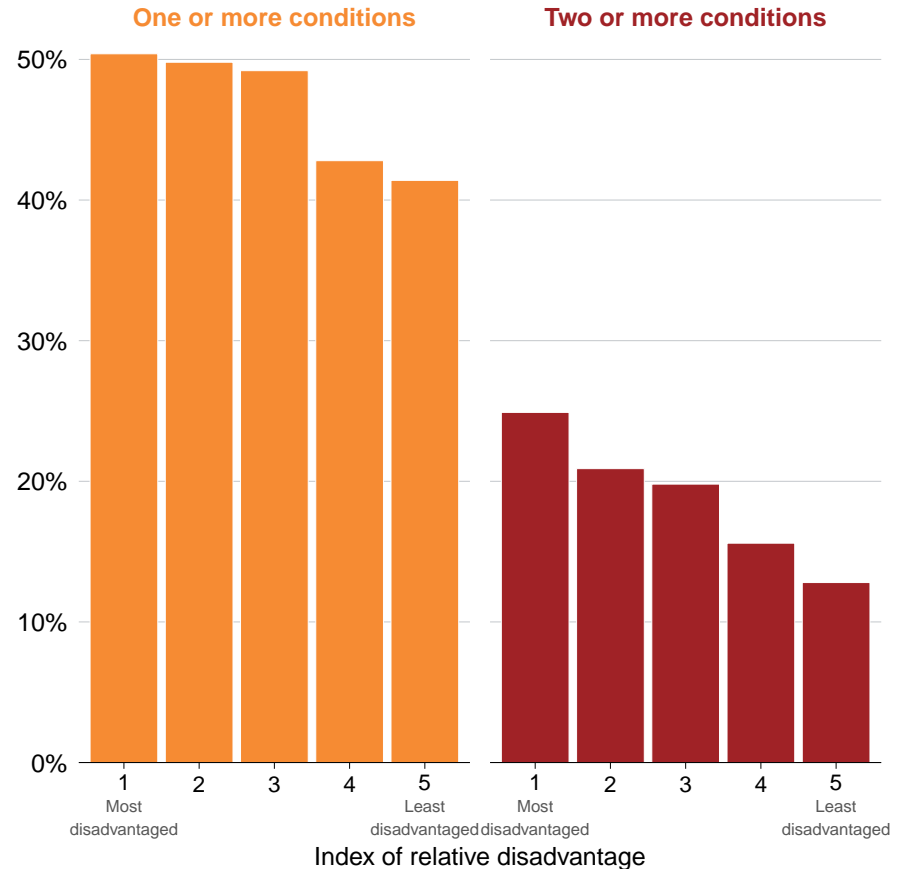
This is all despite a greater need for care: compared to the wealthiest Australians, the most disadvantaged are twice as likely to have multiple chronic conditions (Figure 1.2), with much higher rates of disability and psychological distress, as discussed above.

In Australia we pride ourselves on our universal health system. But as Chapter 4 and Chapter 5 show, the funding model does not reward clinicians who provide care to those who need it most, and there is little emphasis on equity in managing the system.

23. Australian College of Rural and Remote Medicine (2021).
 24. About 0.8 per cent of people 65 or older living in the least disadvantaged decile of areas did not see the GP over the course of a year, compared to 2.3 per cent in the most disadvantaged decile: Grattan analysis of AIHW (2021 a).
 25. ABS (2022a).
 26. ABS (2018b), Britt and Valenti (2005) and Furler et al (2020). Recent ABS patient reports also show that higher-disadvantage people were less likely to report that the GP spent enough time with them (75 per cent 'always' among the most disadvantaged vs 79 per cent among the least disadvantaged): ABS (2022a).

Figure 1.2: Disadvantaged Australians have higher rates of chronic disease

Rates of chronic disease prevalence by index of socioeconomic disadvantage



Source: ABS (2022c).

1.3.3 Access barriers for allied health care are high

Allied health workers, such as psychologists and physiotherapists, provide essential care for patients with chronic disease. But as this section shows, people who are poorer or who live in rural areas face big barriers to getting such care.

Allied and mental health workers are sometimes co-located with general practice in Australia, but most patients have to go elsewhere to get this care.²⁷ Many other countries are working to change this.²⁸ The UK, parts of Canada, and New Zealand have all made major investments to bring thousands of allied health workers into general practice teams.²⁹

Compared to GP care, allied health services have higher average out-of-pocket charges³⁰ and make up a bigger share of household spending on health.³¹ And they are growing fast.³² The bulk-billing rate for allied health services is about 40 per cent lower than the rate for GPs, and has dropped by 20 per cent over the past 10 years.³³ These

figures represent the national average, and are likely to be worse in areas where shortages of allied health professionals are more severe.

While there is no limit on the number of GP visits a patient can have, access to MBS-funded allied health services is heavily restricted.³⁴

Psychologist appointments are even more expensive: only about 40 per cent of patients were bulk-billed for all their appointments in 2019.³⁵ Those who paid for services spent \$223 on average; many people paid much more. The costs are a high barrier: one in six adult Australians needing to see a psychologist report skipping it due to cost.³⁶ Costs are compounded by shortages, with long waits to see a psychologist, particularly in rural areas.³⁷

These barriers create profound inequity in Medicare spending

Figure 1.3 on the next page sets out the stark consequences of this. While people in the poorest areas of Australia are more than twice as likely to be in high psychological distress compared to people in the wealthiest areas, they receive about half as many MBS-funded allied mental health services. And while people in the poorest areas are almost twice as likely to have two or more chronic diseases, they receive no more allied health services than the rest of the Australians.³⁸

27. Co-located allied health professionals are often hired as sole traders and not integrated with general practice teams (unlike practice nurses). Australia recently expanded financial incentives for general practices to recruit up to one additional allied health worker (or nurse) as part of the general practice team. But as Chapter 4 explains, Medicare discourages GPs from sharing their work with allied health staff, so these incentives may not drive true team care. Instead, they may at most lead to more substitution of nursing work for allied health work (as both staff are funded from the same budget).

28. Freund et al (2015).

29. NHS England (2022a); advice from the NZ Ministry of Health.

30. During the 2021-22 financial year, allied health services had an average co-payment of \$60.60, compared to \$42.20 for GP services. Grattan analysis of Department of Health and Aged Care (2022c).

31. Duckett et al (2022, p. 25).

32. Ibid (pp. 9, 10, 18).

33. Duckett et al (ibid). In 2021-22, bulk-billing rates for allied health services were 51 per cent on average, compared to 88 per cent for GP services. Department of Health and Aged Care (2022c).

34. M. L. Barr et al (2019).

35. Duckett et al (2022).

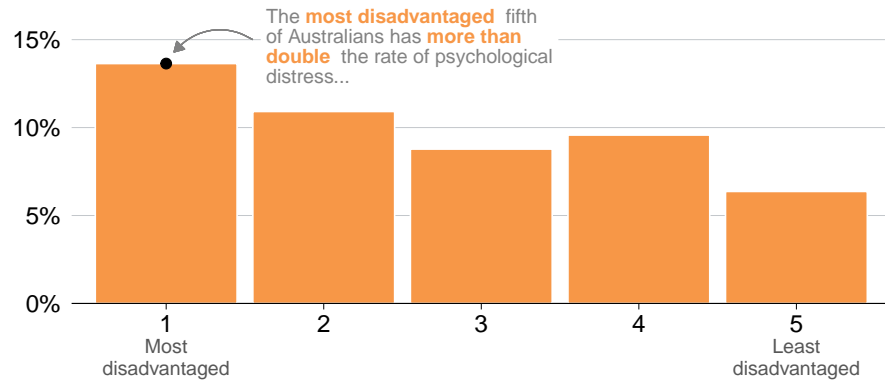
36. Ibid (fn. 104, p. 25).

37. Varela et al (2021).

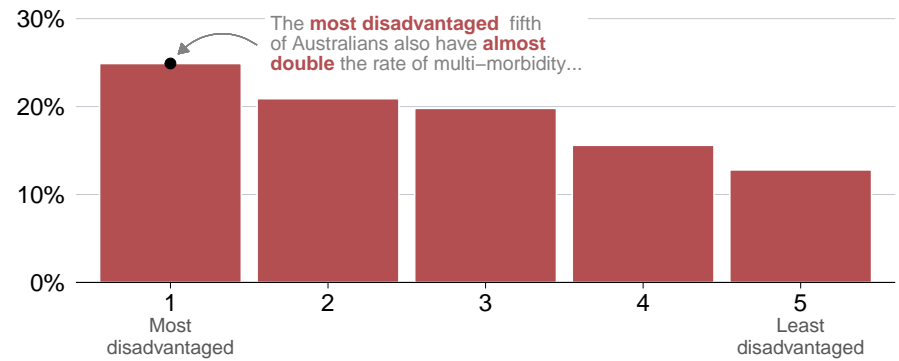
38. This is probably caused by Medicare funding policy that imposes a flat cap on the number of allied health services a person with chronic disease can receive, regardless of complexity and need. While there are some non-MBS-funded sources of mental healthcare that are free, such as public hospital outpatient services and school-based care, they are unlikely to explain the bulk of the discrepancies shown here.

Figure 1.3: Medicare-funded allied health services are needed most, but used least, by more disadvantaged Australians

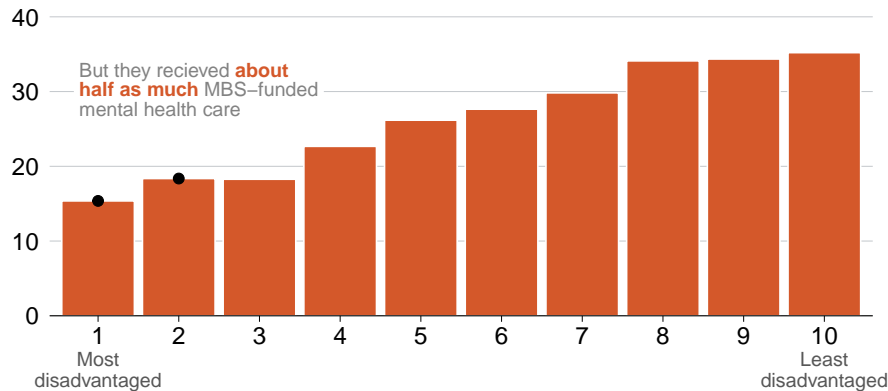
Proportion of adults with high or very high psychological distress, by quintile of relative disadvantage



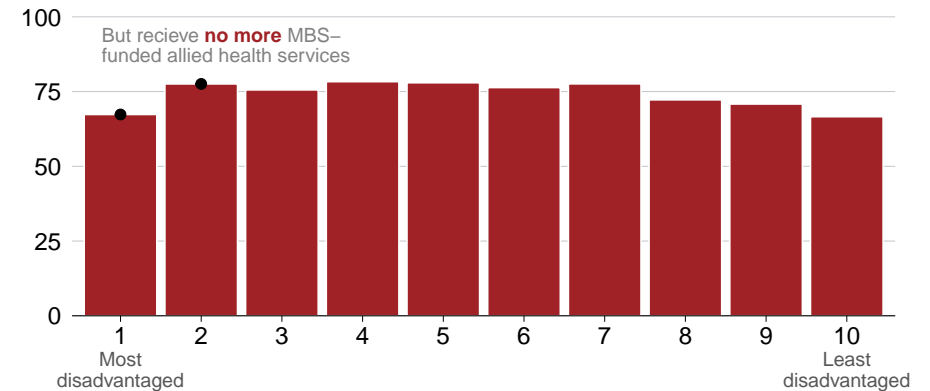
Proportion of people with two or more chronic diseases, by quintile of relative disadvantage



Average mental health services per 100 residents, by decile of disadvantage



Non-mental health allied health services per 100 residents, by decile of disadvantage



Source: Grattan analysis of Torrens University (2022), ABS (2022c) and Services Australia (2022a).

Note: Relative disadvantage is calculated using 2016 values, because these are the latest data available.

This pattern is known in healthcare as the Inverse Care Law: the supply of services tends to be greatest where the need for them is lowest.³⁹ As Chapter 4 shows, the Inverse Care Law pops up again and again in Medicare as a consequence of poorly designed policies, which penalise GPs for providing longer appointments for people in poorer health, and reward further growth of general practices in well-served areas while other areas have few or none.

1.4 GPs are rowing against the tide

The rising tide of chronic disease is not happening because the health workforce doesn't care.⁴⁰ According to their patients, Australian GPs are providing excellent care. Recent surveys found that more than 90 per cent of patients thought their GP showed respect, listened carefully, and spent enough time with them.⁴¹

GPs are struggling with intensifying caseloads

The rise of chronic disease is putting GPs under pressure. They need longer consultations to manage patients with multiple chronic diseases.⁴² But as Chapter 4 shows, Australia's funding model discourages longer appointments. As a result, GPs are trying to fit more and more complex care into appointments that still average 15 minutes (Figure 1.4).

This takes a toll. A 2019 study of GP attitudes found that time-bound appointments, increasing patient complexity, and the consequent administrative and emotional burdens on GPs are intensifying time pressures and clinical load. This is leading to burnout, poor health, and abiding concerns for quality of care.⁴³

39. Hart (1971).

40. For brevity this section focusses on GPs, who make up the bulk of the workforce.

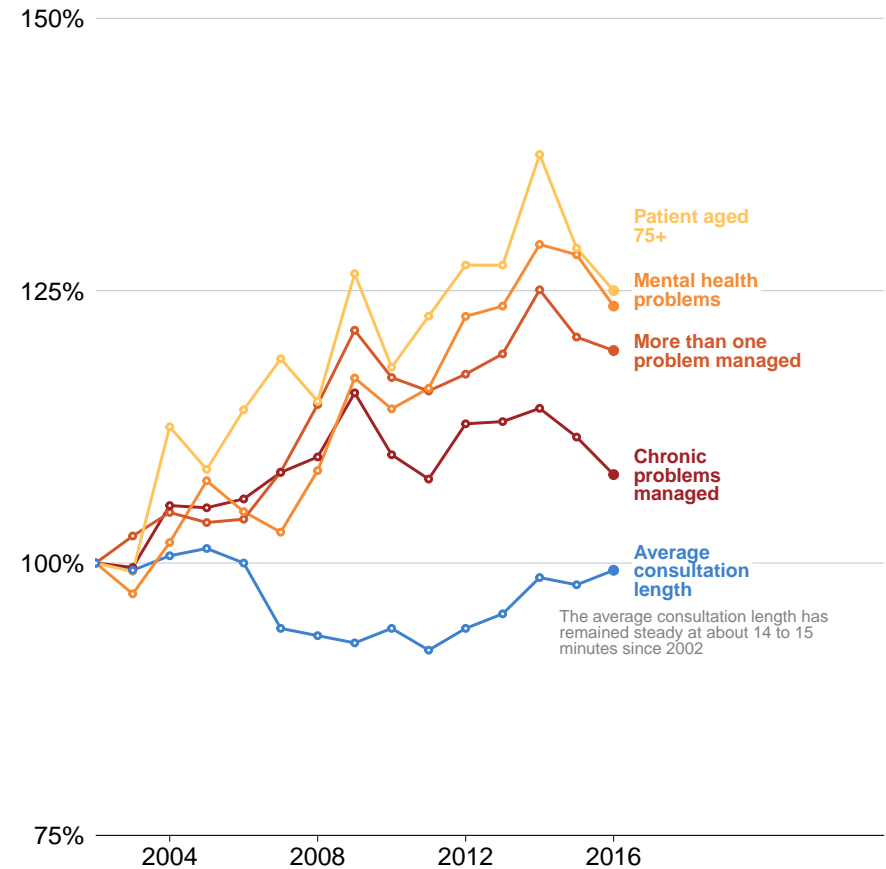
41. ABS (2021).

42. Britt and Valenti (2005).

43. Strazdins et al (2021).

Figure 1.4: GP work has become complex, but consultation length hasn't changed

Per cent change in GP consultation characteristics over time



Source: Grattan analysis of Britt et al (2011) and Britt et al (2015).

‘I think general practice is getting harder. We’re getting expected to do more and more complex things and it’s hard to, especially ... the complexity of managing multiple health issues.’

‘That’s a huge pressure, always keeping things moving and just the pressure. People so rarely come in with one problem, and some days I just find that absolutely exhausting. Everybody has at least three problems and want you to get it all done in 15 minutes.’

The system does not support GPs

Good chronic disease management also requires coordinating patient care across different parts of the health system (as Chapter 2 shows). But GPs in Australia have very little support from the system to do this (Figure 1.5). For example, they are much less likely than GPs in high-performing countries to be notified soon after their patient sees a specialist, goes to an emergency department, or is admitted to and discharged from hospital – all things that can happen often for patients with complex chronic disease.

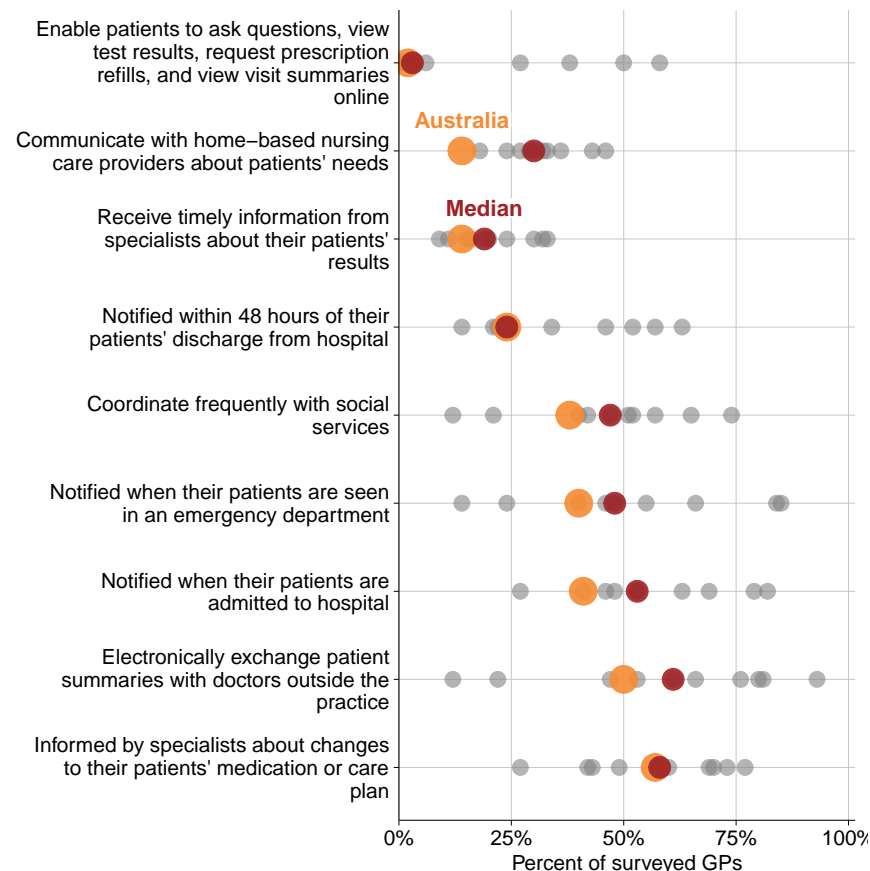
Ultimately, GPs are rowing against the tide. Medicare was mostly designed in the 1960s and 1970s when injuries and infections had the biggest impact on our health.⁴⁴ There has been too little structural reform to help GPs respond to the rise in chronic disease.⁴⁵

Where changes have been made, they have mostly been tweaks to a model that remains a poor fit for today’s challenges (Chapter 4).⁴⁶ Since 1997, there have been four major trials of new care and funding models, but none have been made permanent (Chapter 6).

44. Medicare was established in 1984 but is largely based on the short-lived Medibank scheme, introduced by the Whitlam Government in 1975 but later dismantled by the Fraser Government: Biggs (2016) and Harris and Zwar (2014b).
 45. Duckett and Willcox (2011, Chapter 3).
 46. Duckett and Swerissen (2017, pp. 10–11); and Department of Health and Aged Care (2014).

Figure 1.5: System management is weak, with GPs disconnected from key information and partners across the system

Proportion of surveyed Australian GPs who report the following statements are true relative to GPs in other high-income countries



Source: *The Commonwealth Fund* (2019).

It's no wonder that recent surveys find declining morale and rising levels of stress and burnout among GPs.⁴⁷ And GPs are much less likely to recommend general practice to junior doctors than they were 10 years ago.⁴⁸

1.5 Failure to tackle chronic disease has a rising cost

Even before the pandemic, Australia's spending on health was growing rapidly.⁴⁹ Australia's spending growth will continue, with the Treasury estimating that health will account for 26 per cent of federal government spending in 2060, up from 19 per cent now.⁵⁰

Hospital costs are growing faster than primary healthcare costs (Figure 1.6), and chronic disease is part of the reason. Chronic conditions are involved in about half of hospital admissions.⁵¹ And hospital admissions for chronic disease that might be avoided through better management in primary care are not falling in Australia, as they are in many other OECD countries.

Chronic diseases also have broader economic impacts. Compared to people with no long-term conditions, people with multiple chronic conditions are more than twice as likely to be unemployed or not seeking work.⁵² One study estimated the lost income caused by chronic disease at \$7.4 billion in 2015. By 2030, it is projected to rise to \$8.7 billion, with the cost in government welfare payments and lost taxation revenue reaching \$14.3 billion.⁵³

47. RACGP (2022a).

48. In 2021, 48 per cent of GPs responded that they were less likely to recommend general practice as a career compared to 10 years ago, compared to 21 per cent responding that they were more likely: RACGP (2021).

49. OECD (2022a).

50. Treasury (2021, p. xii).

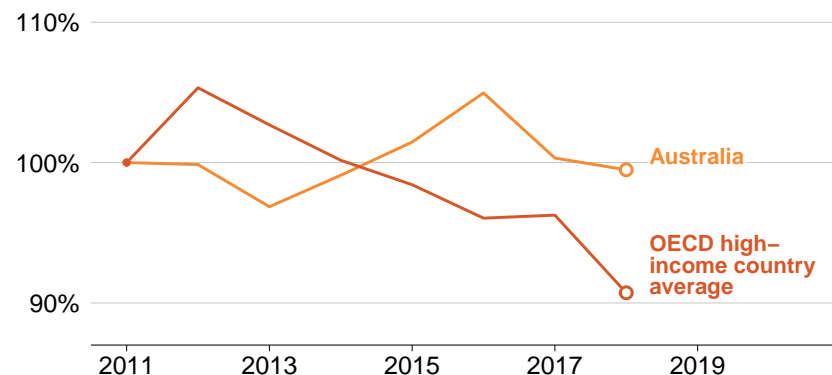
51. 52 per cent in 2019-20: AIHW (2022a).

52. 2017-18 National Health Survey results, with 26 per cent and 14 per cent reporting not being in work or looking for work, respectively: AIHW (ibid).

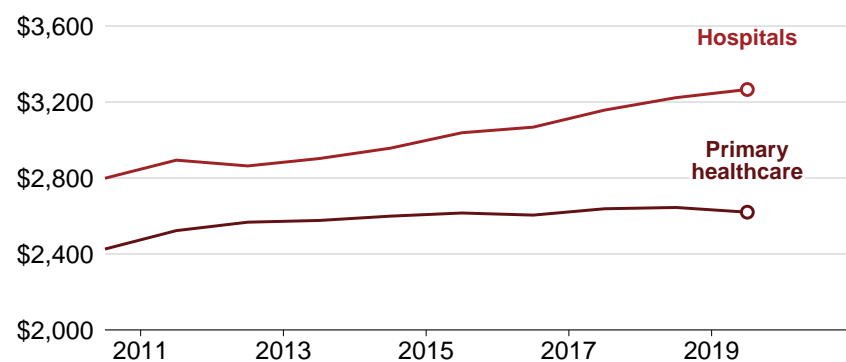
53. Values have been inflated from 2015 dollars. Schofield et al (2016).

Figure 1.6: Potentially preventable hospital admissions are not falling in Australia, and primary care spending has flatlined

Per cent change in potentially preventable hospitalisations per person, age-standardised



Per capita expenditure from all sources on hospital and primary care



Note: Potentially preventable hospital admissions include those from asthma, COPD (chronic obstructive pulmonary disease), congestive heart failure, diabetes, and hypertension, for the population over the age of 15.

Source: Grattan analysis of OECD (2022b) and AIHW (2021b).

1.6 The Strengthening Medicare Fund is an opportunity for generational reform

Federal Health Minister Mark Butler recently said that ‘primary care is in its worst shape since Medicare began’.⁵⁴ Many general practices are feeling battered. As one news story put it, GPs feel

‘underpaid compared with specialist peers. Overloaded with admin. Stressed out by the pressures of COVID-19. No longer aspirational to med-school graduates.’⁵⁵

The Federal Government convened a ‘Strengthening Medicare Taskforce’⁵⁶ to advise on how to spend \$250 million a year to fix the foundation of the health system.

More GPs and higher Medicare rebates have been put forward as candidates for the funding.⁵⁷ But, as Box 4 shows, Australia has many GPs, with more on the way. And general practices have survived the four-year MBS freeze⁵⁸ battered but intact, with higher take-home pay and steady profit margins.⁵⁹

More of the same – more GPs, and more funding under the same model – will not be enough to relieve the pressure on general practices. It will not address the structural mismatch between Australia’s outdated primary care system and the care Australians need.

Instead, deeper, structural causes of general-practice strain must be addressed. Rates of chronic diseases are growing and there is

54. M. Davey and Convery (2022).

55. Hooton (2022).

56. Department of Health and Aged Care (2022d).

57. RACGP (2022b); and Dalzell (2022).

58. Introduced as a temporary measure in 2013 and formalised in 2014, the MBS freeze kept rebates stagnant for years. Some aspects have been lifted since 2017, with rebates for standard GP visits resuming normal indexation in 2018.

59. From 2009-10 to 2020-21, profit margins for GP practices remained steady at about 35-to-40 per cent of turnover: Scott (2022).

Box 2: What our recommendations would mean for GPs

Many GPs in Australia feel demoralised and devalued (section 1.4). Many are suspicious of reform proposals after the Medicare rebate freeze, complaints about government pandemic communication, and a new review into Medicare fraud.

Our recommendations would improve access, quality, and outcomes for patients. But they would also improve working conditions for GPs:

Bigger teams would support GPs in their work, sharing the load and freeing up GPs to deal with complex cases (Chapter 3).

A new funding model would make team-based care and increased leadership demands financially viable, and:

- Fund work that is not directly funded now, including team leadership, planning, secondary consultation, and improving care
- Make funding more flexible, with less micromanagement through complex MBS rules
- Link funding with need, supporting longer consultations for people with complex care and social needs (Chapter 4)

Change would be supported with funding, expert advice, infrastructure upgrades, and data analysis. This recognises that it is hard to change processes, practices, and culture (Chapter 6).

Importantly, we recommend that these changes are **voluntary**, not imposed. We also show how to ensure sufficient planning, consultation, and communication with the sector, which have been too limited in previous trials (Chapter 6).

an ongoing challenge of providing equitable care. GPs are not well supported to tackle either problem.

Australia needs real reform: a new Medicare designed for the challenges of the 21st Century.

How this report is structured

The rest of this report shows how to build the new Medicare, setting out:

- The best-practice care that we need general practice to deliver (Chapter 2)
- The team-based workforce model general practice needs to deliver best-practice care (Chapter 3)
- The flexible and needs-based funding model GPs need to improve quality and equity (Chapter 4)
- How the system should be managed, with greater support and more accountability (Chapter 5) and
- How to roll out these changes, and how to make them stick (Chapter 6)

Data and digital tools and systems are critical enablers of these changes, but beyond the scope of this report (see Box 5).

Collectively, these chapters set out a series of interlocking reforms that would enable government to deliver on the 'quintuple aim': improving population health, enhancing the care experience for patients, reducing long-term system costs; and all done in a way that lifts health equity and clinician well-being.⁶⁰

60. Nundy et al (2022).

Box 3: What our recommendations would mean for patients

Patients are struggling to manage increasingly complex health problems, with the most vulnerable the hardest hit. Our proposed changes offer the following improvements to patients.

More **access** to healthcare from bigger, multidisciplinary teams, meaning...

- Reduced waiting times
- More time with their care team
- Priority bookings at their enrolled practice

Patients in under-served areas would particularly benefit from the 1,000 new nurses and allied health workers providing fee-free care in these areas (Chapter 3).

Patients in rural areas would benefit from our proposals to stabilise vulnerable practices and plug access gaps (Chapter 4).

All patients would benefit from higher **quality** of care owing to...

- GPs with more time to invest in patients' care, and more support from specialists to look after complex cases
- Greater continuity of care and monitoring by healthcare workers familiar with their history, goals, and values
- More support to self-manage their chronic diseases, enhancing independence and improving outcomes

Just like for GPs, the new model would be **voluntary**, with patients free to opt in or out.

Box 4: National GP shortages aren't the main problem

There are GP shortages in many rural areas. GPs right across Australia are seeing a surge of demand from care deferred during the pandemic, the growing complexity of illness in the community (Section 1.2), and long-COVID. In a sudden reversal of recent trends, waiting times have increased, and bulk billing rates have fallen.^a

But a national decline of GPs does not seem to be behind current pressures. Compared to the past, compared to other countries, and based on the amount of services delivered and patient waiting times, Australia's supply of GPs seems better, not worse.

The number of GPs should grow to keep up with the prevalence of chronic disease, but that expansion is in the pipeline, with the number of GPs in training increasing by 77 per cent in the past 10 years.

While no measure is perfect, almost all the indicators we have suggest that deeper changes are needed than simply boosting GP supply further (see right). A more detailed discussion of GP supply and finances is at Appendix B.

	Comparator	Current
GP supply		
GP FTE per 100,000 population ^b	1997: 88	2021: 120
GP FTE per 100,000 older than 65 years ^c	1997: 724	2021: 720
GP headcount compared to the OECD ^d	OECD: 88	Aus: 123
Internationally trained GPs (FTE) ^e	2015: 13,171	2021: 16,041
Number of GPs in training ^f	2011: 3,156	2021: 5,600
Annual GP consultations per person ^g	2015: 6.3	2021: 6.9
Balance between demand and supply		
Proportion of patients who 'waited too long' for a GP appointment ^h	2014: 23%	2021: 23%
Share of consultations longer than 20 mins ⁱ	2010: 10.2%	2021: 20.3%
Average consultation length (minutes) ^j	2010: 14.1	2015: 14.9
Proportion of non-referred GP services which are bulk-billed ^k	2010: 79.8%	2022: 83.4%
GP profit margins ^l	2010: 39%	2021: 36%

a. ABS (2022a); and Department of Health and Aged Care (2022c).

b. DHAC GP dataset, FY year ending: Department of Health and Aged Care (2022b). Comparator years were chosen as 2010, or the closest year before 2010. If no data before 2010 were available, the nearest available date was used.

c. Grattan analysis of ABS (2022d) and Department of Health and Aged Care (2022b).

d. For 2020: OECD (2022b).

e. Department of Health and Aged Care (2022b).

f. RACGP: RACGP (2021, Section 5.4).

g. DHAC GP dataset, FY year ending: Department of Health and Aged Care (2022b).

h. Before the pandemic, the proportion of patients reporting they waited too long for a GP appointment had fallen to a low of 16 per cent. This increased to 23 per cent in 2021-22, probably because of the pandemic and a surge in demand for services: ABS (2022a).

i. Grattan analysis of Medicare item reports: Services Australia (2022b). Although longer consultations have become more common, very short consultations (type A) have also grown over the past 10 years, which explains why average consultation length has not significantly changed.

j. Irving et al (2022). Data beyond 2015 are unavailable.

k. Quarterly Medicare statistics, Q1 2022-23 : Department of Health and Aged Care (2022c).

l. As a proportion of turnover.Scott (2022)

Box 5: Data and digital tools are outside this report's scope

Data, digital tools and systems are critical enablers of the changes recommended in this report. They let primary care teams know when their patients have been in hospital, or had new care recommended by other doctors. They help general practices compare the impact of their care to the care of other practices. And they show where resources are needed.

These systems are not working well. Australia's main digital health tool, My Health Record, is not user-friendly and few clinicians use it.^a Progress on data collection and analytics has been agonisingly slow.^b And federal funding for world-leading data collections on general practice has ended.^c

The solutions to these problems are technically complex and sit outside the scope of this report. However, they are critical to improving chronic disease care and must be undertaken as part of any review and changes to the general practice sector. We recommend that the federal government provide the system with a plan to rapidly improve digital and data tools and their use across the health system.

- a. For example, it is rarely used by private hospitals or specialists: Mesquita and Edwards (2020).
- b. Funding to develop the Primary Health Care Data Asset, a long-awaited archive of patient information including diagnoses, treatments, and outcomes, was established in 2018. The project entered a two-year consultation phase, but little progress has been made since and its impact has not been evaluated. Some general practices have begun volunteering their patients' data to PHNs and disease surveillance repositories, reflecting some progress: Canaway et al (2022).
- c. For example, funding for the BEACH (Faculty of Medicine and Health (2022)) and MABEL (Melbourne Institute (2022)) data collections ended in 2016 and 2021. Their data are out of date, but used extensively throughout this report because is no more-recent Australian evidence available to replace them: Swannell (2016) and Atlay (2021).

2 How general practice should be

This chapter is about how general practice *should* be. First, it describes the role general practice plays in the broader healthcare system and the four essential functions it delivers. Next, it talks about the model of care that evidence shows is most effective for managing chronic disease. Finally, it identifies the capabilities general practices need to deliver that model of care.⁶¹

2.1 The role of general practice

General practice is often the first point of contact with the health system, when people get a check-up, or think they might have an illness or disease. General practices diagnose and treat many conditions, give advice and treatment to prevent problems or stop them getting worse, and refer patients to specialists. General practice is the foundation of the healthcare system: when it is working well, the whole system is more effective, efficient, and equitable.⁶²

2.1.1 General practice has four essential functions

The role of general practice can be boiled down to four essential functions:⁶³

- **First contact:** where patients go first when they have new health concerns

61. This chapter, and this report more broadly, is informed by three interlinked and foundational models in the primary care literature: Wagner's chronic care model (Bodenheimer et al (2002b)), Starfield's four pillars of primary care practice (Starfield et al (2005)), and Bodenheimer's 10 building blocks of high-performing primary care (Bodenheimer et al (2014)).

62. Starfield et al (2005).

63. Adapted from Starfield (1998).

- **Continuity:** care is ongoing and patient-focused, rather than short-term and disease-focused
- **Coordination:** care is integrated, with referrals and information-sharing across the system
- **Comprehensiveness:** all health issues are treated, except those too uncommon or specialised for clinicians to reasonably maintain competence in them.

2.2 The most effective model of care for chronic disease

Managing chronic disease is general practice's most important job. As Chapter 1 showed, chronic disease accounts for the overwhelming majority of disease and death in Australia. And evidence shows that the way we deliver chronic disease care matters a lot.

There are four proven aspects of primary care that provide better outcomes for patients with chronic disease: patient-centredness, continuity, support to self-manage, and integration. When these are in place, patients with chronic disease get care more easily, are happier with it, and are more likely to follow their care teams' advice. As a result, they live longer lives, in better health.

2.2.1 Patient-centred care

When chronic disease care is patient-centred, general practices work with their patients to:

- build long-term partnerships based on care and trust
- understand the whole person, not just their health conditions
- explore illnesses and the patient's experience of them

- find common ground with patients on what the health problem is, how it will be managed, each other's roles, and care goals⁶⁴

Along with chronic disease care, promoting health and preventing disease is an essential part of high-quality, patient-centred care. A lot of chronic disease can be prevented by systematically working with patients to understand and help them address their health risks (Box 6).⁶⁵

All these aspects of patient-centred care have a big impact for patients with chronic disease, improving health-related quality of life and reducing hospital admissions.⁶⁶

2.2.2 Continuity of care

Continuity of care happens when the same clinician 'serves as advisor, advocate, and friend as the patient moves through the various stages of medical care'.⁶⁷ Continuity enables clinicians to build up knowledge of their patients' history, goals, and values, helping them provide better and more efficient care.⁶⁸

The evidence strongly bears this out: when continuity of care is higher, patients are more likely to follow their doctor's advice, take their medications, use preventive services when offered, use hospital services less, and be satisfied with their care.⁶⁹ Continuity of care

64. Stewart (2001).

65. Thirty-eight per cent of chronic disease is preventable and caused by modifiable risk factors: AIHW (2018b). Many can be addressed through primary care, for example diet, exercise, and smoking, or through social prescribing to promote mental health: see Appendix A.

66. John et al (2020).

67. Farlex (2012).

68. Gray et al (2003).

69. Ibid.

Box 6: The '5As' approach to primary prevention in general practice

The '5As' is an internationally accepted framework for management of behavioural risk factors in primary healthcare, highlighted in the Royal Australian College of General Practitioners' *Red Book* guide to prevention.^a

It consists of:

- Ask – A systematic approach to asking all patients about risk factors, opportunistically as they present for other conditions and/or by recall for health checks
- Assess – Assess readiness to change, and dependence (for smoking and alcohol)
- Advise – Provide brief, non-judgemental advice with patient education materials
- Assist/agree – Work with the patient to set agreed goals for behaviour change; provide motivational interviewing; refer to telephone support services, group lifestyle programs, or individual providers (e.g. dietitian or exercise physiologist); consider pharmacotherapy
- Arrange – Regular follow-up visits to monitor maintenance and prevent relapse.

a. RACGP (2016).

is literally a matter of life and death, with evidence overwhelmingly showing people live longer when they have it.⁷⁰

Continuity is beneficial for all patients, but especially for people with chronic disease.⁷¹ The more complex a person's care needs, the more important continuity is for quality care.⁷²

Most Australian patients already see the same GP.⁷³ But this is not the same as continuity if a GP's responsibility for a patient is limited to individual appointments. True continuity involves *ongoing* responsibility for a patient, providing oversight and support beyond appointments. This can include, for example, reaching out to patients overdue for routine care, and sharing responsibility for improving their health over time.

2.2.3 Self-management support

For people living with chronic illness, managing their conditions is no simple task. It can require big changes to their behaviour and diet. It is likely to require learning to monitor a condition, take medications and use new devices and technologies, and work with a broad range of healthcare providers. Clinicians deliver a tiny fraction of the healthcare these patients receive – most of it is provided by patients themselves, or their family or carers.

For these reasons, the most beneficial chronic disease intervention that general practices can provide is helping patients to self-manage.⁷⁴ This means supporting them and their carers to build the knowledge and confidence to manage their condition, linking them with tools,

70. Eighteen (82 per cent) of 22 high-quality studies reported statistically significant reductions in mortality with increased continuity of doctor care: Gray et al (2018).
71. Nutting et al (2003).
72. Servellen et al (2006).
73. Wright et al (2018); and McRae et al (2011).
74. Reynolds et al (2018).

resources, and devices that support them to do so, and routinely following up with them to troubleshoot problems and celebrate successes.⁷⁵

The evidence shows these supports for self-managing chronic disease improve health, quality of life, knowledge, and satisfaction with care.⁷⁶

2.2.4 Integrated care

One of the biggest challenges to chronic disease care is system fragmentation.⁷⁷ Chronic disease is often complex, long-term, and socially-determined, requiring help from multiple health and social care providers at once. Integration can involve working with all of these providers to help patients access their care, and connect the different pieces of it.⁷⁸

Systematic reviews find that integration of care can increase access to services, quality of care, and patient satisfaction.⁷⁹

2.3 The capabilities general practices need

To provide this model of care, general practices have to be set up in the right way. GPs need teams, resources, and systems designed to make it easy to deliver the best chronic disease care.

75. While digital tools and data are outside the scope of this report (Box 5 on page 18), they are a critical enabler of effective self-management by patients: Bodenheimer et al (2002a).

76. Reynolds et al (2018).

77. Shaw et al (2011).

78. Of course, not all patients need integration; it depends on the complexity of their condition and the patient's capability to navigate the system and manage their own condition. Generally, only patients with high complexity and low capability will need significant care integration from their general practice team.

79. Baxter et al (2018).

2.3.1 Multidisciplinary teams

In the most effective general practices overseas, GP jobs look very different to how they often are in Australia. Instead of providing most clinical services that their patients might require – from management of coughs and colds to complex chronic conditions – GPs' clinical time is prioritised: GPs make the most complex diagnoses, they treat patients with acute (severe and sudden) problems and intervene in stubbornly difficult chronic cases, and they train team members.⁸⁰

Other team members support patient self-management, arrange for routine periodic tasks (for example, the regular blood, eye, and foot checks people with diabetes need), and ensure appropriate follow up.⁸¹

Depending on their qualifications, team members can do more complex clinical tasks such as triage, simple diagnosis, mental health support, and medication prescribing (see Chapter 3). And some team members can do non-clinical tasks such as helping patients with social problems, which take up a lot of GP time.⁸²

These team-based approaches to care have been shown to improve quality of care and health outcomes in patients with chronic disease, particularly diabetes and hypertension.⁸³ They also have benefits for patients more broadly, by enabling speedier access (see Box 7), freeing up GP time for more complex care, and enabling patients to be better supported by a broader team with diverse skills and more ongoing touchpoints for care.

2.3.2 GPs need clinical decision support

'I think we in general practice very much miss that supervision and being part of a peer support group. So, I think [decision support]

80. Bodenheimer et al (2002a).

81. Ibid.

82. Britt and Valenti (2005).

83. Reynolds et al (2018).

Box 7: The team effort to care for Jake

Jake lives with type 1 diabetes.^a He has struggled for years with bouts of frequent hypoglycaemia (dangerously low blood sugar) and has just run out of emergency glucose injection pens to treat it. Jake urgently needs a repeat prescription for them, but there are few GPs in his town and a two-week wait to see a GP.

Jake instead books in to see the nurse practitioner that day. She is part of the team that has been working with Jake for years. She gives him an updated prescription. She asks him about the hypoglycaemia, checking on how he is coping and taking detailed notes that she can share with his GP later on. Jake confides that he is struggling to sleep and feeling anxious. The nurse and Jake talk through some strategies to help with this. She encourages Jake to reach out to his psychologist, and his peer support group.

Jake and the nurse also discuss continuous glucose monitors, a device which automatically tracks blood glucose and alerts the wearer to low levels. Jake has had reservations about these in the past, but agrees that given his increasing difficulties, it is worth a try. The nurse completes a referral to the regional outpatient clinic to get him started on one.

The nurse catches Jake's GP between appointments later that day and updates her. The GP is alarmed and books him in. Since the history, prescription, and referrals have already been taken care of, she is able to squeeze him in for a short visit the next day. She then calls Jake's endocrinologist for advice; Jake is the only person with type 1 diabetes she is caring for, and his case is complicated. They discuss two new strategies that Jake might try, which his GP talks him through the next day.

a. This case study has been adapted from a true story.

certainly positively impacts on your own ability to cope with stresses from patients. And I think if you bring a case. . . that has been difficult to manage, it is good to have that support.⁸⁴

It is hard to keep up with the vast volume of medical evidence. Reading all the journal articles relevant to primary care would take more than 20 hours a day, according to one estimate from 2002.⁸⁵ Instead, clinicians often rely on clinical guidelines,⁸⁶ but these are not updated frequently, can run to a thousand pages, and can lack clarity or quality.⁸⁷ When up-to-date national guidelines are unavailable or obtuse, clinicians must then trawl through multiple other overlapping sources for solutions.⁸⁸

To provide up-to-date, expert care for their patients, GPs need to be able to call as needed on the expertise of disease specialists practicing in hospitals and the community. Ideally, GPs should be able to make a quick phone call to a specialist when needed, without requiring a referral.⁸⁹ When GPs are well-supported by specialists, their patients benefit.⁹⁰

2.3.3 Information systems

Providing high-quality chronic disease management can be time-intensive, and the average full-time GP in Australia cares for about 830 patients.⁹¹

To make the work manageable, clinical information systems need to make it easy to keep track of patients' health and care over time, and as they visit different parts of the health system.

These include electronic health records,⁹² updated by different care providers as the patient travels across the health system, so that a GP knows when a patient has seen a specialist or visited a hospital, and the outcomes of their care.

GPs also need data analysis to make it easy to plan care and respond to patient needs. Modern information systems analyse data that practices hold on their patients' health conditions and care. Practices can, for example, generate hospital admission risk scores that help GPs prioritise patients for extra support, and give alerts for patients that are overdue for tests or follow-ups.

Investment in technology is a critical enabler here: poor digital and data systems a major obstacle to improvement in the general practice sector. As Box 5 on page 18 notes, the federal government should develop a digital and data strategy for primary care. We also cover the data needs for managing the system in Chapter 5. We cover workforce reform, funding models, and system governance in much more detail in the following three chapters.

84. Royal Children's Hospital (2021).

85. Alper et al (2004).

86. Expert interpretations of the evidence and what it means for clinical practice.

87. NHMRC (2014).

88. For example, the NHMRC type 2 diabetes clinical guideline developed by the Diabetes Australia Guideline Development Consortium has 935 pages: Bayram et al (2009). The RACGP has developed its own diabetes management handbook, which is more current and 200 pages: RACGP (2020).

89. Bodenheimer et al (2014).

90. A. W. Russell et al (2013).

91. Department of Health and Aged Care (2022b).

92. Digital forms of patient records that include patient information such as medical history, allergies, test results, and treatment plans.

3 A team effort

Chapter 1 showed how GPs are struggling to prevent and manage growing rates of complex chronic disease in a system that doesn't support them. Chapter 2 showed that the best way to address this is to turn primary care into a team sport, with other clinicians sharing the load. That can give GPs time to provide more and better care to their highest-need patients, and let general practice teams give all patients faster access and more support when it is needed.

For most clinics, this way of working is nearly impossible today. This chapter shows how to make it a reality, and what it will take:

- Section 3.1 shows that Australian GPs are working with much less support than their peers in many other wealthy countries
- Section 3.2 describes how different kinds of clinicians can work together in a team to deliver care⁹³
- Section 3.4 shows how general practices would need to change their ways of working to support team-based care
- Section 3.5 sets out the financial and regulatory barriers that must be removed
- and Section 3.6 shows how all of these reforms can be brought together and accelerated, with government funding 1,000 new workforce roles in the areas of highest unmet need.

Without all of these changes, moving to team-based care will backfire. New staff will not use their full skills due to regulatory and cultural barriers. Care will become fragmented, with GPs losing sight of patient care, and patients missing out on a stable, ongoing contact point.

93. While evidence supports the role of nurse-led clinics, this chapter's focus is the most common model in Australia and other wealthy countries, which is GP-led.

Finally, quality of care may be jeopardised, without robust ways to clarify roles, share information, and manage risk.

As discussed later in this report, further changes to funding (Chapter 4) and intensive change management (Chapter 6) will also be needed to support clinical governance and new ways of working.

While the change won't be easy, the payoff will be worth it. As this chapter shows, patients will have more access, and better care. GPs will be able to choose a model with more sustainable workloads and a bigger impact.⁹⁴ And government will be able to reduce the biggest gaps in access and outcomes.

3.1 GPs don't need to go it alone

As Chapter 1 showed, there has been a huge increase in the share of the population with significant and complex healthcare needs over the past few decades. But while demand has transformed, our way of meeting it has not.

The system still overwhelmingly relies on GPs, who make up about 74 per cent of the clinical staff in general practices (Figure 3.1 on page 27). GPs are highly skilled medical specialists who complete five years of medical school⁹⁵ then further training for three to four years. They can manage most conditions independently, providing holistic care to patients across their life and diagnosing and treating most illnesses along the way.

94. As discussed in Chapter 6, this is proposed to be an opt-in model for GPs. This recognises the need to move away from a one-size-fits-all approach that requires all GPs to work in the same way, to one that offers choice.

95. Monash University (2022). Or four years as an undergraduate: The University of Melbourne (2022).

But while GPs *can* deliver virtually all primary care, it isn't efficient or optimal for them to do so. The health budget is finite, and as a highly skilled workforce, GPs have a high cost.⁹⁶ When GPs use all their skills to manage complex conditions, keeping patients well and preventing expensive hospital admissions or specialist referrals, the cost is well worth it. But when GPs do simpler tasks rather than delegating them, patients lose out. Their GPs don't have time to see them sooner, or to spend longer with them, and they can't get the support of a broader team to manage their conditions.⁹⁷

A lot of GP care can be done by others. For example, a leading estimate is that at least half of preventive care, and at least a quarter of chronic disease care, can be safely delegated (Table 3.1), with the remaining care performed by GPs and highly skilled clinicians who can work on their behalf (see Section 3.2.2).⁹⁸

3.1.1 Australian GPs delegate much less care than their peers overseas

Team-based care is increasingly used in general practice overseas (see Box 8 on the following page for a best-practice example) and in almost all other fields of medicine: from emergency departments and operating

96. The direct cost of a full-time GP is about \$308,000 per year (Grattan analysis of Department of Health and Aged Care (2022c)). This value is the estimated revenue earned per full-time GP from Medicare Benefits Schedule funding in financial year 2021-22. It excludes co-payment fees. This is about double the cost of a nurse practitioner or physician assistant, almost triple the cost of a registered nurse or physiotherapist, and more than triple the cost of a diploma-qualified nurse or medical assistant.

97. A critical need, as Chapter 2 showed.

98. Subject of course to other critical success factors being in place, including appropriate supervision. It is important to note these figures represent care that *should* be currently delivered by GPs; it may not always be due to time constraints: Altschuler et al (2012). Note also these estimates were developed by clinicians and apply to US demographic data; they would be slightly different, albeit directionally similar, in Australia.

Table 3.1: Much care can be delegated

Share of care delegated			Maximum patients a practice can provide high-quality care for	Increase in patients cared for
Prevention	Chronic	Acute		
0%	0%	0%	983	0%
50%	25%	0%	1,387	41%
66%	30%	0%	1,523	55%
77%	47%	0%	1,947	98%

Notes: The estimate that up to 77 per cent of preventive services could be delegated is based on the following assumptions. First, screening (performing and interpreting tests, such as pap smears) continues to be done by GPs, nurse practitioners, and physician assistants. Second, these clinicians would explain immunisations and chemoprophylaxis (drugs to prevent conditions, for example statins to manage blood pressure and oral contraceptives to prevent pregnancy) to their patients, but delegate their administration to other team members. Third, all routine preventive counseling (for example, on diet and physical activity) could be delegated. The estimate that up to 47 per cent of chronic disease care could be delegated is based on an assumption that one-third of GP time was needed for patients with well-controlled or stable conditions (of which 75 per cent of care can be delegated) and two-thirds for patients with poorly controlled or unstable conditions (of which 33 per cent of care can be delegated). This degree of delegation assumes that other staff could provide much of the routine chronic care services involving patient education, behaviour-change counselling, medication adherence counseling, and protocol-based services delivered under standing physician orders.

Source: Altschuler et al (2012).

Box 8: Multi-disciplinary teams in the ‘Nuka’ model of care

I think it's the leading example of healthcare redesign in the nation, maybe the world

– Don Berwick, former CEO, US Inst. for Healthcare Improvement

Under the ‘Nuka’ model of primary care in Alaska, teams have long-term relationships with their ‘customer owners’ (patients). The teams focus on population health, tackling domestic violence, substance abuse, and obesity.

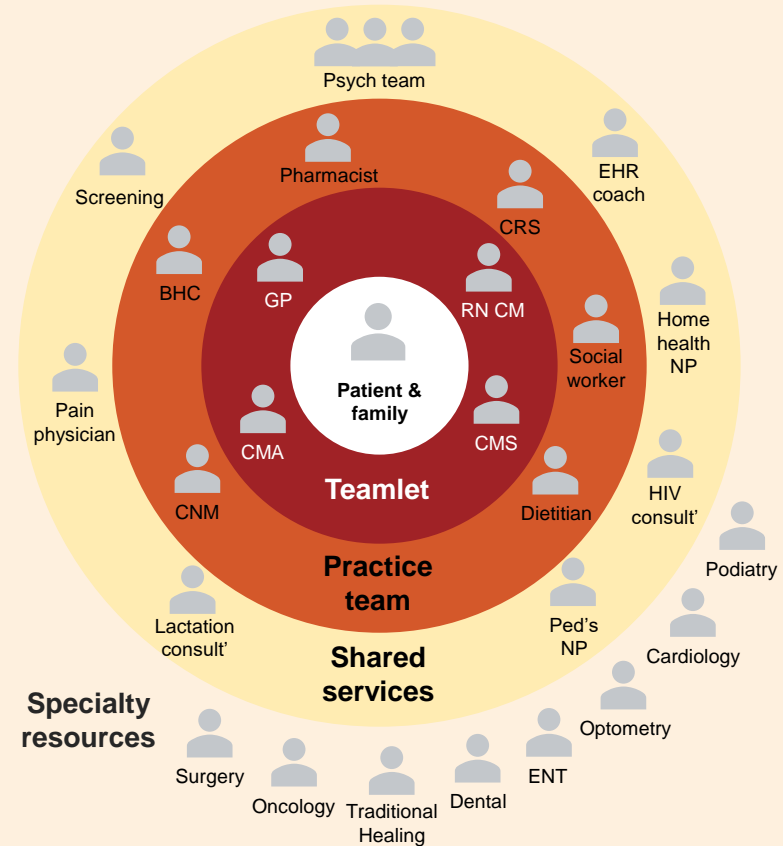
‘Teamlets’ have four clinicians. The GP (or nurse practitioner) handles only the most complex care, especially diagnosis. A nurse manages routine health issues and triage. An administrator schedules care and communicates with patients. A medical assistant greets patients and does routine monitoring.

To support collaboration, Nuka seats teamlets together, requires doctors to engage with their teams, and has teams come together for regular huddles to plan the day and review data.

Each teamlet looks after about 1,400 patients. One interdisciplinary team supports about seven teamlets, with a dietician, pharmacist, social worker, behavioural health consultants, and midwives.

A further layer of clinicians chosen based on patient need are readily available to the team, and include psychiatrists. A final layer of specialists are available through referral. This integration with speciality care is a major theme of the model, which seeks to avoid emergency room visits and hospital stays through continuous primary care.

Nuka has achieved transformational change, cutting demand for care by 30-to-60 per cent, reducing binge drinking, suicide, stroke, death from heart disease and cancer, and improving infant mortality, child asthma, and immunisation.



Notes: RN CM = registered nurse care manager; CMS = case management support; CMA = certified medical assistant; CRS = community resource specialist; CNM = nurse midwife; BHC = behavioural health consultant; EHR = electronic health record; ENT = ear, nose, and throat specialist; NP = nurse practitioner. ‘GP’ and ‘teamlet’ used for consistency with this report.

Sources: Routledge (2020), Charlesworth et al (2016), Collins (2015) and Baird et al (2020) .

theatres, to cancer care and maternity services. And it is strongly supported by the evidence, which overwhelmingly confirms that many non-GP clinicians can share parts of a GP’s role with equivalent safety and quality of care, as discussed in Section 3.1.

But Australia’s primary care system relies much more than other countries’ on GPs. In Australia, for every 10 GPs there are less than three nurses or other clinicians to support them (Figure 3.1). By comparison in England, for example, for every 10 GPs there are about 10 supporting clinicians.⁹⁹ In the United States, nurse practitioners and physician assistants provide about 11 per cent of all medical services delivered outside hospitals.¹⁰⁰ In Australia, the number would be close to 0 per cent (see Section 3.2.2).

A lack of support staff prevents GPs from delegating tasks that do not require medical training. For example, Figure 3.2 on the next page shows that only about 60-to-70 per cent of surveyed Australian GPs have a nurse or an assistant to do tasks such as checks on chronic disease patients and health promotion.¹⁰¹ In many other wealthy countries, almost 100 per cent of GPs do.¹⁰²

Even where support staff are in place, they can be under-utilised. For example, the number of nurses working in general practices has grown

99. As discussed in Box 12 on page 36, the UK has far fewer GPs per capita than Australia, with 55 GPs per 100,000 people, compared to 120 per 100,000 people in Australia: NHS (2022a) and Department of Health and Aged Care (2022b). This report proposes support staff as *additional* to existing GP numbers (i.e. not a substitute for them) to reduce pressures on GPs and enable more services for high-need patients.

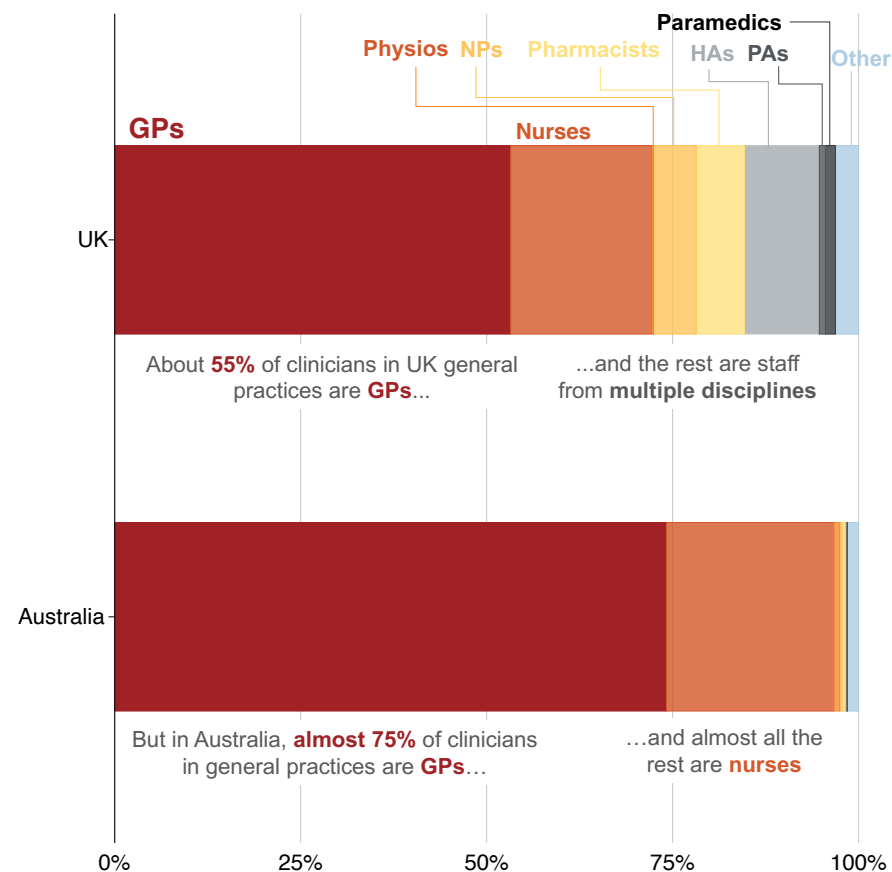
100. Hooker and Everett (2012).

101. Note these data are from an article that has been retracted, due to a problem with analyses presented elsewhere in the article. The retraction notice confirms that the supplementary tables used here are not affected and remain correct: Groenewegen et al (2021).

102. For example, England, Sweden, New Zealand, Estonia, Spain, Finland, Netherlands, Portugal.

Figure 3.1: Australia makes far less use than the UK of non-GP workforces

Proportion of the clinical workforce in general practice, by occupation



Notes: NPs = nurse practitioners; HAs = healthcare assistants; PAs = physician assistants. All proportions are calculated by full-time equivalent workers. Because data on healthcare assistants are not provided in Australia, we assume that all people listed under the ‘Health Professionals nfd’ occupation are medical assistants. This is likely to overstate the number of medical assistants in the Australian workforce. For UK data, dispensers and pharmacy technicians are included in the pharmacists category. Sources: Grattan analysis of ABS (2022b), Kosari et al (2021) Hooker and Berkowitz (2019), and NHS (2022a).

significantly over the past few decades,¹⁰³ but surveys show that three quarters of these nurses face one or more barriers to using all of their skills, with one quarter facing 6 to 10 barriers (see Figure 3.3 on the following page).

3.2 New ways of working

Of all of the changes envisioned as part of the transformation to improved and more patient-centered primary care, perhaps none is more promising and more challenging than the transition to team-based delivery of care

– US National Centre for Excellence in Primary Care Research¹⁰⁴

Moving towards team-based care is not easy. Patients still need continuity of care. And GPs need to be able to share care efficiently, without double-handling or fragmentation of care that leads to problems falling through the cracks.

High-performing practices address this by creating two kinds of team members:

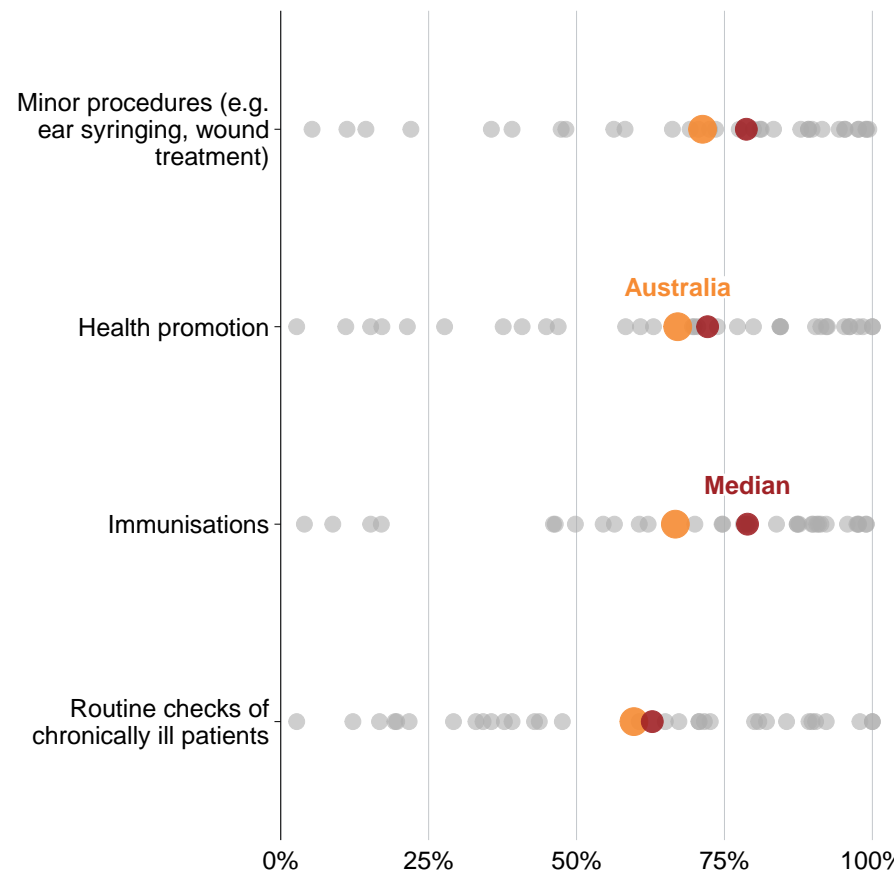
- First, they create small ‘teamlets’ (a GP and one or more supporting clinicians), that provide the patient with most of their care. This enables the patient to have an ongoing relationship with clinicians who will serve as their ‘advisor, advocate, and friend’ throughout their healthcare journey, as discussed in Chapter 2.¹⁰⁵
- Second, they create a broader multidisciplinary pool of clinicians who support the teamlet with more specialised and time-limited services, always returning the patient to the teamlet’s overarching care.

103. Heywood and Laurence (2018).

104. Schottenfeld et al (2016).

105. Farlex (2012).

Figure 3.2: GPs overseas are much more likely to delegate simple care
Proportion of surveyed GPs who said their nurse or assistant independently provides the following services, by country



Note: Includes 34 OECD countries.

Source: Groenewegen et al (2021).

These groups, and the clinicians who staff them, are discussed in the next sections.

3.2.1 Dream teamlets

During the 15-minute visit, GPs cannot provide acute, chronic, and preventive care while building meaningful relationships with their patients and managing multiple diagnoses according to a host of evidence-based guidelines. The 15-minute GP visit must be eliminated as the central institution of primary care. The teamlet model is offered as a replacement.

– Thomas Bodenheimer and Brian Laing¹⁰⁶

‘Teamlets’ are usually made up of a GP¹⁰⁷ and at least one supporting clinician¹⁰⁸ who work together every day. Each patient is assigned to one teamlet, which has the ongoing relationship with and responsibility for that patient.

Teamlets are at the core of a team-based multidisciplinary practice. As Table 3.2 on the following page shows, the supporting clinician or clinicians in the teamlet take on almost all of their GP’s administrative work, along with clinical tasks within their scope of practice, and documentation.¹⁰⁹ They are also able to do work the GP often does not have time to do, such as preventive services, reviewing patient files before and between visits to see where patients are overdue for tests and check ups, and regularly coaching patients on their self-management.

106. Bodenheimer and Laing (2007).

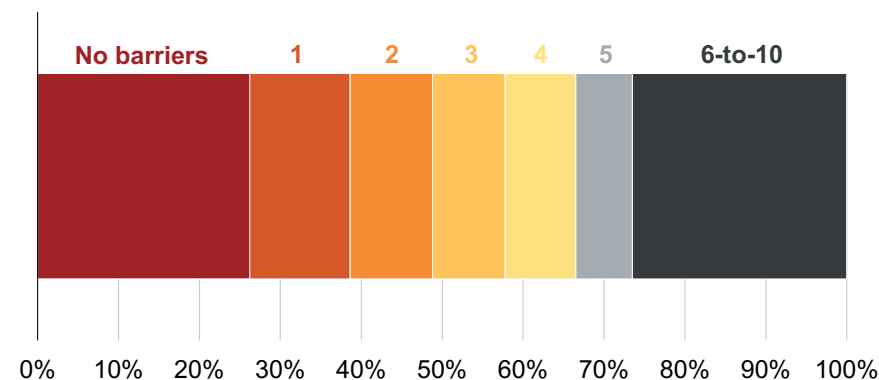
107. Around the world, there are different models for staffing teamlets. In countries with far fewer GPs than Australia, the lead clinician in a teamlet may be a physician assistant or nurse practitioner (discussed later in this chapter). In Australia this will often be a necessary model in rural areas with GP shortages.

108. Some models have two or three supporting clinicians, including the Nuka model featured in Box 8 on page 26 which has three.

109. Bodenheimer and Laing (2007).

Figure 3.3: Most nurses face barriers to using all of their skills

Number of barriers reported by primary care nurses which prevent them using all their skills



Notes: Among nurse respondents with primary employment in general practice. The 10 factors are: communication and co-ordination of processes; access to resources; time for collaboration; role clarity; goal clarity; leadership; training; working conditions; workplace policies and procedures; and team support. Geography and funding model were excluded because these are relatively hard for individual clinics to influence.

Source: 2020 survey by the Australian Primary Health Care Nurses Association (APNA).

As Table 3.2 shows, delegating all of this work frees up a lot of GP time. This gives GPs more time to see patients, and to listen, think deeply, and develop relationships with them. And this happens without fragmenting care or compromising continuity, since enrolled patients see the same GP and supporting clinician at every visit.

Three different kinds of clinicians can typically support the lead: practice nurses, medical assistants, and Indigenous Health Workers.¹¹⁰ As Box 9 on the following page shows, evidence strongly supports the safety, quality, and efficiency of the care they provide.

3.2.2 A deeper bench

Most of a patient's care would be provided through the GP-led teamlet. But GPs cannot – and do not need to – provide all care. A broader team of multidisciplinary clinicians should support the teamlet by providing specialised care and support.¹¹¹

This section describes three kinds of these clinicians: those who can substitute for GPs; allied health workers; and mental and behavioural health workers.¹¹² Ways to coordinate this larger workforce, through a combination of infrastructure change, virtual teamwork, and shared staffing arrangements, are discussed at the end of this chapter.¹¹³

Clinicians who work on behalf of GPs

Two kinds of clinicians can perform much of a GP's role, taking on virtually all the non-complex care: nurse practitioners and physician

110. Known more generally around the world as community health workers, but in Australia Indigenous Health Workers are the most common example.

111. Bodenheimer et al (2014); and Saint-Pierre et al (2018).

112. Bodenheimer et al (2014).

113. Under current settings it would be impractical for primary care teams to manage a large volume of staff in the supporting pool, because most in the supporting pool will work across multiple practices.

Table 3.2: Redesigning chronic disease care: an example workflow

Phases	GP	Teamlet member
<i>Pre-visit</i>		<ul style="list-style-type: none"> • agrees on agenda with the patient • takes a basic history • checks medication use • performs indicated tests based on standing orders
<i>GP visit</i>	<ul style="list-style-type: none"> • checks patient's history • engages with the patient • provides diagnosis and care 	<ul style="list-style-type: none"> • documents GP findings • fills out forms • drafts prescriptions, specialist referral letters, and test orders • assists with procedures
<i>Post-visit</i>	<ul style="list-style-type: none"> • checks support staff member's work and signs prepared forms 	<ul style="list-style-type: none"> • closes loop on visit with the patient (confirms next steps, checks for questions) • coaches on lifestyle / self-management actions
<i>Between visits</i>		<ul style="list-style-type: none"> • checks in with patients • trouble-shoots difficulties • reinforces the care plan • relays questions to the GP

Source: Adapted from Bodenheimer and Laing (2007).

Box 9: A practice nurse, medical assistant, or Indigenous Health Worker can support the GP in a teamlet

Practice nurses are usually registered nurses with bachelor's degrees, while some are diploma-qualified enrolled nurses.^a They play a key role in facilitating and coordinating care via triage, follow-up, outreach, and coaching. Most can do routine and chronic disease prevention and management, health promotion, and sexual healthcare, and, when qualified through additional training, specialised tasks such as immunisations and chronic disease management education.^b

Evidence strongly supports the effectiveness of practice nursing.^c It can improve patient adherence to treatment recommendations, satisfaction, and quality of life, largely due to nurses having more time and better communication than doctor-led care. But almost half of Australia's practice nurses say that often or most of the time their skills are not fully used.^d More than half have asked to do more, but only 43 per cent of the requests were approved.^e

Medical assistants are diploma-qualified staff with hybrid clinical and administrative roles. In many countries they are the biggest non-GP workforce in general practices.^f In addition to administrative work (such as billing and scheduling), with training they can perform a range of clinical tasks. For example, they can take measurements (such as blood pressure) and check physical health status; facilitate coordination

of care; manage emergency cases and challenging patient behaviour; handle specimens; clean re-usable instruments and equipment; and maintain medication stocks.^g

In some countries they can also train in health coaching, using structured checklists to counsel patients and help them manage their symptoms. Two randomised control trials have found they improve patients' health and quality of life at less cost than usual care.^h

Indigenous Health Workers (IHWs)ⁱ have vocational qualifications and deep cultural knowledge of and links with the communities they serve. Their job is to help patients manage their own health, while reducing cultural and communication barriers in care. Many do immunisations, health checks, home visits, and help with chronic disease and skin problems. Some also specialise, for example in care for drug and alcohol addiction, mental health, or diabetes.

Evidence shows IHWs improve access and adherence to medical advice.^j Early evidence also suggests there is potential for them to improve access and quality of care for diabetes, palliative care, and maternal and infant care. However, low retention rates mean Australia now has system-wide shortages.^k

a. Endacott et al (2018).

b. Working to their skill level is determined by their qualifications, nursing experience, and clinical specialisation: Nursing and Midwifery Board of Australia (2007).

c. Lukewich et al (2022). The evidence of their cost-effectiveness is more mixed, although the economic evaluations of these roles has also been challenged: Lopatina et al (2017).

d. DHAC (2022a).

e. Of those not approved, 23 per cent were rejected, and 33 per cent were under consideration: 2020 survey by the Australian Primary Health Care Nurses Association (APNA).

f. Josi and Pietro (2019).

g. RACGP (2022c).

h. Willard-Grace et al (2015); and Freund et al (2016).

i. Also known as Aboriginal and Torres Strait Islander Health Workers; ATSIHWs must be of Aboriginal or Torres Strait Islander descent, and generally also have a Certificate II or higher in Aboriginal and Torres Strait Islander primary healthcare. Abbott et al (2008).

j. Gwynne and Lincoln (2017).

k. Lai et al (2018); and Jongen et al (2019).

assistants. Box 10 provides a brief overview of these clinicians and their skills. As it shows, there is clear evidence that their care is as good as GPs', and costs less.

In other countries, these clinicians also head up teamlets,¹¹⁴ working alongside GPs or under their supervision. This model is an excellent way to improve community access to primary care, and to ease GP workloads, in towns struggling to recruit GPs.¹¹⁵ Some jurisdictions also have clinics run by nurse practitioners in metropolitan areas.¹¹⁶

Practices that prefer for their teamlets to be GP-led can still make good use of these workforces. Standing orders and triage systems (discussed in Section 3.4 on page 36) can enable a receptionist to direct patients to the practice's physician assistant or nurse practitioner, if the patient wants an appointment as soon as possible rather than wait to see their usual GP.¹¹⁷ Nurse practitioners can also specialise in caring for common conditions such as diabetes,¹¹⁸ cardiovascular disease,¹¹⁹ and mental ill-health,¹²⁰ providing rapid and efficient access.

Allied health team members

Many allied health workers provide important contributions to patient care, particularly for patients with chronic disease.¹²¹ This report is not able to cover all of these different roles and contributions.

114. Bodenheimer and Laing (2007).

115. Duckett and Breadon (2013).

116. Parker et al (2011).

117. High-quality evidence finds that nurse practitioners, for example, provide comparable quality of care, with longer consultations but higher patient satisfaction, for patients seeking same-day appointments: Kinnersley et al (2000).

118. Conlon (2010); and Richardson (2014).

119. Smigorowsky et al (2020).

120. See, for example, Chapman et al (2018).

121. For example, people living with complicated diabetes will often need to see, at least annually, a podiatrist, optometrist, dietician, and physiotherapist, in addition to their teamlet, and often specialists too.

Box 10: Nurse practitioners and physician assistants

Nurse practitioners (NPs) are registered nurses with a further two years of advanced nursing experience and a Master's degree. They can do many tasks traditionally done by GPs, such as assessing patients, diagnosing conditions, prescribing some medicines, ordering and interpreting tests, and referring patients to other clinicians.^a The American College of Physicians notes that NPs can provide care for at least 60 per cent of patients.^b Systematic reviews find the quality and results of NP care are at least as good as GPs', and that NPs can increase access to care, and can reduce hospital referrals and overall cost.^c However, Australia has few NPs compared to other countries.^d

Physician assistants (PAs) are experienced clinicians with at least four years of prior experience (typically in allied health or nursing) and a two-year Master's degree based on a medical curriculum. They work under the direct supervision of GPs, who set their work parameters and can delegate tasks to them. These include taking patient histories, examining patients, making specialist referrals, diagnosing conditions, or prescribing drugs.^e A systematic review of 39 studies found their care has the same or better health outcomes, at the same or lower cost, as care provided by doctors alone.^f More than 2,000 PAs are employed in the UK and more than 120,000 in the US. Australia has just 30.^g

a. Smith et al (2019); and Nursing and Midwifery Board of Australia (2022).

b. American College of Physicians (2009).

c. Martin-Misener et al (2015).

d. Maier et al (2016). For every 100 doctors, Australia has just 1 NP, while the US has more than 6. Fewer than one in every 200 (not FTE-adjusted) of Australia's NPs work in general practices: Department of Health and Aged Care (2022e).

e. HPRAC (2011).

f. Brink et al (2021).

g. Hooker and Berkowitz (2019).

Instead, we highlight just three allied health workforce groups: practice pharmacists, physiotherapists, and community paramedics. For these clinicians there is a very significant gap between the contribution they are *able* to make (see Box 11 on the next page), and what funding and policy let them do in Australia.

International evidence shows that these clinicians are able to take on expansive roles within general practice, working within their own domains of expertise (for example on medication management for a pharmacist, or treating musculoskeletal conditions, for physiotherapists).

In addition, they can contribute more broadly to health promotion, prevention, and chronic disease care, such as through coaching and self-management support. But in Australia, funding and regulation prevent these groups from doing so.

Dismantling these barriers as recommended in Section 3.1 would greatly improve access to healthcare. For example, in Australia:

- at least four million GP visits a year involve issuing a repeat for a medication that a patient is already taking. Pharmacists could be doing much of this work for GPs (as they often do overseas).¹²²
- almost one in six GP visits are for a musculoskeletal issue, which evidence shows physiotherapists can provide expert diagnosis and treatment for without requiring a GP referral, as is now the model in the UK.¹²³
- most people aged 80 and older live in private homes, rather than in residential aged care,¹²⁴ and can have difficulty attending a general practice. Fewer and fewer GPs are making home visits

122. Duckett and Breadon (2013).

123. Britt et al (2015).

124. AIHW (2021c).

to their regular patients,¹²⁵ but paramedics could do these visits expertly, with virtual support from the patient's regular GP.

Meeting demand for integrated mental health and social supports

As Chapter 1 showed, Australian general practices are grappling with enormous growth in demand for mental health care, especially in poorer communities (see Section 1.3). Around the world, health systems are experimenting with workforce models that enable GPs to share some of this load.

A major experiment in the UK has been social prescribers: a lay workforce trained to improve physical and mental wellbeing by connecting patients with local community groups and services.¹²⁶ As Appendix A shows, the evidence for these roles is very limited, so they should be trialled in Australia before they are adopted at scale.

For patients suffering mental ill-health and addiction, an increasingly popular model overseas is the hybrid behavioural health worker role, where masters-qualified clinicians (such as social workers, psychologists, or nurses) are embedded in general practices to provide mental health and addiction support services, as well as chronic disease management and prevention services. While promising, this model also requires further testing prior to expansion (see Appendix A).

The model best supported by evidence is the collaborative care model, where care is shared between a GP, a care manager (usually a social worker or psychologist), and a psychiatrist.¹²⁷ Our recommendations

125. Note this excludes visits by after-hours home doctor services, which do not have regular patients: Joyce and Piterman (2008).

126. For example, community groups that provide social connection or exercise, or services such as parenting support and legal and financial advice.

127. Many high-quality studies show this model is highly effective for depression and anxiety: Archer et al (2012). It may also be effective for severe mental illness, but evidence is limited: Archer et al (ibid).

Box 11: Pharmacists, physiotherapists, and paramedics can take on much bigger roles in general practice

Pharmacists train for four years. In Australia they can prepare and dispense medications, administer vaccinations, and review prescriptions to reduce the side effects of medications and improve their effectiveness. They can also educate people about health promotion, disease prevention, and proper use of medications.

In many other countries, pharmacists can also write new prescriptions and reissue prescriptions for long-term conditions. They can implement chronic disease care plans developed by GPs; treat minor ailments (such as fever, gastro, and sore throat); screen patients for common chronic conditions such as osteoporosis; order lab tests; and provide home visits, palliative care, and prenatal care.

Some of these expanded roles are in community pharmacies, but in the US, Canada, and the UK, pharmacists have also been integrated into general practice^a – the model that we recommend.

The evidence for pharmacists doing this work is overwhelmingly positive, confirming their safety, efficacy, and cost-effectiveness. But Australia is behind other countries in expanding the scope of pharmacists, and has fewer than 100 working in general practice, compared with thousands in the UK.^b

Physiotherapists train for four years and are experts in musculoskeletal conditions. In the UK, patients with these conditions see physiotherapists directly for diagnosis and care without a GP referral.

a. Dolovich (2012); and Sudeshika et al (2021).

b. NHS Digital (2022); Greer et al (2016); and Kosari et al (2021).

c. Stynes et al (2021); Halls et al (2020); and NHS England (2022b).

d. Rethorn and Pettitt (2019).

e. Andrew et al (2019); and Eaton et al (2020).

f. Agarwal et al (2015); Guo et al (2019); and Eaton et al (2020).

g. Eaton et al (2020); Guo et al (2019); Elden et al (2020); Pang et al (2019); and Australasian College of Paramedicine (2022).

This model ('first-contact physiotherapy') has been welcomed, with good health outcomes for patients and better work experience for GPs.^c

Physiotherapists are also skilled at health coaching, where they support patients to make lifestyle changes through motivational interviewing, goal setting, problem solving, physical therapy, and self-management support. A systematic review of randomised controlled trials found that this significantly improved physical activity and health and wellbeing.^d

Paramedics in Australia train for three years. While they are skilled in emergency care, few of their cases are life-threatening. Most are for exacerbations of chronic disease, social issues, mental health or substance abuse crises, and injuries such as sprains and fractures. Paramedics safely manage these cases independently, providing clinical assessment, triage, treatment, and referral. These skills are well-suited to primary care.^e

Overseas, paramedics play growing roles in primary care, with support and supervision from GPs or regional Ambulance Services. They run minor injury and illness clinics, do home visits (video-conferencing GPs in as needed), carry out GP-approved care plans, and deliver health screening and prevention services in the community.^f

Evidence shows they improve primary prevention and health, and reduce hospital demand and costs. But although Australia has an oversupply of paramedics, we rarely use them in primary care.^g

support this approach, with funding to employ psychologists and social workers in general practices (see Section 3.6), and with psychiatrists providing advice to the team (see Section 3.2.3).¹²⁸

3.2.3 Other specialist doctors

When patients' conditions are more complex and severe,¹²⁹ it helps if GPs consult other specialists (such as endocrinologists, for diabetes).¹³⁰ Patients remain under GP care, while specialists provide training and education, mentoring, group learning, clinical guidance,¹³¹ case consultation, and informal discussion.¹³²

Specialist-supported GP care works. For example, randomised controlled trials in Australia and overseas found it helps patients with diabetes achieve better control of their conditions.¹³³ Positive outcomes have also been found for many other chronic conditions.¹³⁴

Specialist-supported GP care happens in parts of Australia but inconsistently. For example, some Primary Health Networks commission secondary consultation and other training and support

128. Our recommendations also enable employment of nurse navigators to support people with serious mental illness to access the complex services and systems that provide mental health care, physical health care, and social support, as recently recommended in the national 'Being equally well' policy roadmap for tackling the 20-year life expectancy gap for people with serious mental illness: Calder and Dunbar (2022).

129. Tomaschek et al (2022).

130. Gurung et al (2020) Note specialists can also provide outreach consultations in primary care settings. Hoof et al (2019).

131. Screening tools, guidelines, treatment protocols, standardised discharge processes, and defined referral procedures.

132. Tomaschek et al (2022).

133. Zarora et al (2022).

134. For example, in randomised control trials of specialist supported care for kidney disease, heart failure, chronic obstructive pulmonary disease, and for people living in aged care: Tomaschek et al (2022).

from mental health specialist doctors to GPs.¹³⁵ Some hospitals provide advice to GPs upon request. But this is ad hoc and mostly lacks a dedicated funding source. We recommend new funding to fill this gap, discussed in Section 3.6.

3.3 Team-based care can have a big payoff

Team care can have big payoffs. It requires less time from the GP and yet results in more care for patients who need it. More time is spent with patients on understanding their goals and experience, building their capability and confidence to implement a care plan, and ensuring they get the care they need. Studies suggest team care can improve quality of care,¹³⁶ patient safety,¹³⁷ and health outcomes,¹³⁸ reducing demand on hospitals.¹³⁹

As Chapter 1 showed, GP roles are becoming ever more challenging. In the right team, they will have more time to manage complex cases properly, rather than rushing them through with declining pay per minute (as chapter 4 shows) and little support. They will have team leadership to break up complex case work, and they will spend much less time on administration.¹⁴⁰ Workloads will be more sustainable

135. For example, the South Eastern Melbourne Primary Health Network: SEMPHN (2022).

136. O'Leary et al (2012); and Li et al (2022).

137. Manser (2009).

138. Körner et al (2016).

139. Ibid.

140. Assistants performing scribe roles significantly reduces after-hours administrative work for the GP, increasing GP satisfaction (and enabling more patients to be seen) without reducing patient satisfaction with care. It also results in a better consultation, with the GP spending much more time facing the patient and less facing a computer: Zallman et al (2018), Mishra et al (2018), Danak et al (2019) and Pozdnyakova et al (2018).

for them and other team members,¹⁴¹ with higher role satisfaction, well-being, and retention, and less turnover¹⁴² and burnout.¹⁴³

Moving to team-based care has risks, and there are many cautionary tales, as Box 12 shows. New roles must be additive – not a Band-Aid for under-funding and GP shortages, as the UK's experience shows. And widespread introduction should not wait until GP shortages reach a crisis point, as happened in Ontario in Canada.

The quality of implementation is also critical. Poorly designed and implemented teams are less efficient and less effective. When funding, regulatory, and cultural barriers prevent staff from working to their full skill level, care is double handled – increasing costs and wasting time. And when teams do not have effective models of collaboration, with robust ways to clarify roles, share information, and manage risk, care becomes fragmented and quality suffers, with continuity compromised and problems falling through the cracks.

The rest of this chapter shows how to avoid these risks through extensive redesign of general practices, and reform of workforce and funding rules. Chapter 4 shows that a new funding model is needed to enable and encourage team-based care. Chapter 5 sets out the supports and accountabilities that practices would need under the new model. And Chapter 6 focuses on change management support during implementation.

3.4 What general practices need to do

This section shows how general practices can implement team-based care, through new roles for GPs and new collaboration models for staff.

141. Collaborative teams with strong team cultures are associated with lower levels of clinician burnout: Willard-Grace et al (2014).

142. Körner et al (2016).

143. Willard-Grace et al (2014).

Box 12: Cautionary tales in workforce reform

This report draws on examples from the UK and Canada to demonstrate how workforce and funding reforms can improve general practice. These countries also offer useful examples of what *not* to do.

Even before the pandemic, the **UK** health system was in crisis – primarily due to under-funding.^a The UK's spending on healthcare was just half the OECD average,^b and it had half as many GPs as Australia, per head of population.^c

This is a very challenging context in which to introduce team-based care, and not one Australia should replicate. This report recommends team-based care as a support for GPs – *not* as a substitute for them.

Ontario in Canada also has GP shortages.^d This has led to declines in childhood vaccinations, cancer screening, diabetes monitoring, and other care.

Some doctors advocate rapid expansion of team-based care to help GPs with mounting workloads.^e Ontario began introducing team-based care more than a decade ago, but had to stop after poor design of the funding model led to maldistribution and cost blowouts (see Box 15 on page 52). We discuss how to avoid these pitfalls in Chapter 4.

a. Ham (2017).

b. The Health Foundation (2019).

c. There are 5.5 GPs (FTE) for every 10,000 people in the UK, compared with 12 here: see Appendix B. This ratio was also falling, rather than climbing as it is in Australia: Palmer (2019).

d. Duong (2022).

e. Busing and Rourke (2022).

3.4.1 New roles for GPs

Multidisciplinary team care requires a lot of change from GPs. Currently GPs spend most of their day working alone and provide most of their patients' care. In a multidisciplinary team, they spend most of their day working collaboratively and only provide some of their patients' care. The rest of the time, they are working with other team members on care planning, quality improvement, and team supervision and mentoring.

To ensure high-quality care, GPs must have the funding, time, and skills to lead their teams, overseeing clinical governance, supporting staff with supervision, and promoting quality improvement. At the same time, they have to delegate enough work to motivate staff, maximise efficiency and reduce double-handling, and achieve shared ownership of patient outcomes.¹⁴⁴ This is a difficult balancing act and GPs may not have been trained in leadership and management,¹⁴⁵ so will benefit from change support as set out in Chapter 6.

Team leadership roles will be rewarding for GPs who choose them. Under current system settings, GPs have limited opportunities to delegate administrative and basic clinical work to spend more time working to the top of their skill level. Team-based care will change this, and the funding reforms we propose in Chapter 4 will financially reward GPs for using this time to work on the most challenging cases.¹⁴⁶

144. Ghorob and Bodenheimer (2012); and Sifaki-Pistolla et al (2020).

145. Spehar et al (2017); and O'Riordan and McDermont (2012).

146. Current funding policy penalises GPs who do this work, as Chapter 4 shows.

Table 3.3: Different community needs require different teams

Community need	Priority workforce
Many aged care residents or elderly people	<ul style="list-style-type: none"> • Paramedics (home visits) • Physiotherapists (mobility issues) • Pharmacists (complex medication regimes)
High rates of entrenched disadvantage	<ul style="list-style-type: none"> • Community health workers • Trial of new roles – see Appendix A – such as behavioural support workers (mental health and addiction needs) and social prescribers (linking patients to social and economic supports)

3.4.2 Working together

The makeup of teams varies based on who can be recruited, what work GPs in the practice want to share, and what services their community needs (see Table 3.3).¹⁴⁷

Teams must be structured with clear roles, all team members using all of their skills, and effective clinical governance to manage risk and support collaboration. Effective team culture and collaboration are also critical, as this section shows.

The way that workplaces are set up matters. Practices can encourage collaboration through:

147. For example, rates of mental health and behavioural conditions and chronic diseases are roughly double in more disadvantaged communities, as Chapter 1 showed.

- **workspace design:** for example, by co-locating teamlet members in common work areas rather than having each staff member always alone in their appointment room
- **record sharing:** all staff with shared responsibility for patient care can both view and update patient records
- **standing orders:** these are written by the GP and give team members pre-approval to do specific clinical tasks following the clinic's approved protocol and without a doctor's approval¹⁴⁸
- **daily 'huddles':** these are 3-to-5-minute team meetings to plan for the day, anticipate and solve problems, and collectively make adjustments to keep everyone on the same page¹⁴⁹
- **warm 'handovers':** to ensure patients are comfortable with multidisciplinary team care, there needs to be visible and direct communication between team members – not impersonal referrals. This can be as simple as a GP walking a patient down the hallway to meet the practice pharmacist, rather than pointing them in their direction.

3.5 Making teams work: what governments need to do

For multidisciplinary team care to succeed in Australia, reform to funding and regulation are needed, as well as investment in new roles and in change support.

-
148. For example, medical assistants to identify people due for colorectal cancer screening and provide them with a home testing kit before their medical visit; registered nurses to treat uncomplicated urinary tract infections; pharmacists to titrate medications: UCSF (2022) and Nemeth et al (2012).
149. A large national trial found that practice transformation is more successful in practices that have healthy relationships, communication, and a shared commitment to protect a regular time for reflection: Noël et al (2015).

3.5.1 Australia's funding model blocks team care

International reviews have found that the funding model Australia uses for primary care ('fee-for-service', or appointment-based funding) is a profound barrier to multidisciplinary care.¹⁵⁰ General practices make minimal progress towards team-oriented care when funded under this model.¹⁵¹

MBS rules heavily restrict the care clinicians can provide

Under Australian funding rules, practice pharmacists, physiotherapists, practice nurses,¹⁵² nurse practitioners,¹⁵³ and Indigenous Health Workers¹⁵⁴ are not funded to work to their full skill level. Physician assistants, paramedics, and medical assistants are not funded to provide primary care at all.

In many cases where evidence shows a clinician can safely provide care, there is either no Medicare Benefits Schedule (MBS) fee for them to do it,¹⁵⁵ the volume of care they can provide per patient is artificially capped irrespective of need (see Box 13 on the next page), the payment is too low to cover reasonable costs, or the funding rules require excessive GP involvement, leading to double-handling and inefficiency.

150. G. M. Russell et al (2017).

151. Ibid.

152. Afzali et al (2014).

153. DHAC (2019).

154. NACCHO (2021). Current Medicare rules limit multidisciplinary care with hospital-based teams. For example, under the telehealth MBS model, because specialised publicly funded health services in most jurisdictions do not bill Medicare, Aboriginal Community Controlled Health Services cannot bill Medicare when they provide/facilitate some team-based services (e.g. patient-end specialist telehealth support services).

155. Meaning the task can only be delivered at a higher cost to the patient, or not at all.

Appointment-based funding discourages team-based care

Even when it does pay, the MBS does not encourage care to be delivered by the clinician that can deliver the best result at the lowest cost. This is because items are usually tied to a particular kind of clinician, with more and better-paying items for GPs.¹⁵⁶ A clinic has only so much space, and its revenue depends on staff billing. So it will earn much more revenue filling a vacant consultation room with another GP than a nurse or pharmacist, for example.¹⁵⁷

Remuneration for individual GPs is also a barrier. Very few are salaried employees of clinics; almost all get paid based on the activity they do.¹⁵⁸ They lose income if another clinician sees their patient instead of them, even if that clinician is working in their team under their supervision. They also forego income when they coordinate care which is not directly funded. This includes arranging tests and referrals and following up results, consulting other clinicians, renewing prescriptions, training, mentoring, or other work to improve care quality.¹⁵⁹

Australia needs wholesale funding reform, not tweaks to existing rules

These factors mean that little change will be achieved by simply loosening the MBS and PBS rules to allow a broader range of clinicians

156. Medical specialists are often paid more than GPs to deliver the same service, GPs are paid more than nurse practitioners, and so on.

157. Kosaria et al (2021).

158. 86 per cent of GPs in 2017 were remunerated via a proportion of billings: Brown et al (2021a).

159. Some GPs do a lot of this work anyway, but it varies a lot by practitioner. The Medicine in Australia: Balancing Employment and Life (MABEL) study found that GPs were generally more likely than other physicians (specialists, hospital non-specialists, specialists-in-training) to report that they did not undertake non-clinical work, such as education (teaching, research, continuing medical education) and management and administration. The notional average annual value per GP of this unremunerated work has been estimated at \$11,527 to \$25,197: Henderson et al (2016).

Box 13: Allied health funding policy creates unmet need

While there is no limit on the number of GP visits a patient can have, access to MBS-funded allied health services is heavily restricted.^a

To be eligible, patients must have a chronic condition and complex care needs. Even then, these patients can have only five allied health services a year: in 2019-20, patients spent \$1.3 billion on additional non-subsidised services.^b Clinicians have argued that five allied health services is likely to be too few for patients who have complex or multimorbid conditions.^c

A higher cap of 10 services per year was once trialled (among other changes)^d for patients with very high-risk diabetes. This led to big improvements in health for this group.^e Before the trial, presumably due to the five-item cap, these patients had the lion's share of hospitalisations and yet were getting no more allied health care than healthier patients.^f This pattern of underutilisation by higher-need patients persists today, as Figure 1.3 on page 11 in Chapter 1 showed.

a. M. L. Barr et al (2019).

b. Duckett et al (2022, fn. 106, p. 25).

c. Foster et al (2008).

d. Also care coordination funding and fewer restrictions on format of the visits.

e. An almost 20 per cent reduction in the share of patients with dangerously high blood glucose by the end of the trial, along with broader improvements in physical and mental health: Department of Health and Aged Care (2015).

f. Hospital costs were unevenly distributed, with 5 per cent of participants accounting for about 50 per cent of hospital costs, and 20 per cent of participants accounting for more than 80 per cent of hospital costs. Despite this, people who were hospitalised more frequently did not receive a significantly greater allocation of chronic disease management and allied health funding than people in better health: Fountaine and Bennett (2016).

to bill for a broader range of primary care services. Practices will still have disincentives to hire non-GP staff, and GPs will still have disincentives to share their work.

To encourage workforce innovation, Australia needs wholesale funding reform in primary care – as set out in the next chapter.

3.5.2 Regulatory changes

Unnecessarily restrictive regulation has a double cost. First, it limits the usefulness of clinicians who could otherwise be seeing patients. Second, it wastes the time of GPs by requiring them to supervise or double-handle care that other clinicians could deliver independently.

Healthcare regulations severely limit the practice of non-GP staff in Australian primary care, compared with other countries. As Table 3.5 on the next page shows, most Australian primary care workforce groups are working well short of what evidence shows they can safely and cost-effectively do.

Regulatory restrictions are often arbitrary and inconsistent – varying immensely across Australia. For example, states have conflicting rules about the vaccinations that pharmacists can provide (see Table 3.4). And federal funding rules often mean clinicians work to a lower skill level than state regulations permit.¹⁶⁰ These inconsistencies reflect the influence of vested interests: workforce roles at risk of losing income if the current funding model is reformed.

Table 3.4: States have conflicting rules on pharmacist vaccination

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Influenza	✓	✓	✓	✓	✓	✓	✓	✓
COVID-19	✓	✓	✓	✓	✓	✓	✓	✓
dTpa	✓	✓	✓	✓	✓	✓	✓	✓
dTpa-IPV			✓					
HPV	✓							
MMR	✓	✓	✓	✓	✓	✓	✓	✓
MenACWY	✓	✓	✓	✓				
Hepatitis A			✓					
Poliomyelitis			✓					

Notes: dTpa = Diphtheria, tetanus, and pertussis; dTpa-IPV = Diphtheria, tetanus, pertussis, and poliomyelitis; HPV = Human papillomavirus; MMR = Measles, mumps, and rubella; MenACWY = Meningococcal ACWY.

Sources: NSW Government. 2022. *Pharmacist Vaccination Standards*. Victorian Government. 2020. *Secretary Approval: Pharmacist Immuniser*. Queensland Government. 2022. *Extended Practice Authority, Pharmacists*. WA Government. 2022. *Structured Administration and Supply Arrangements*. SA Government. 2022. *Vaccine Administration Code*. Tasmania Government. 2021. *Immunisation Providers*. ACT Government. 2022. *Pharmacist Vaccinations*. NT Government. 2020. *Qualifications Prescribed for Pharmacist to Supply and Administer Schedule 4 Vaccine*.

160. For example, nurse practitioners cannot get MBS funding for long-term and primary care management, despite AHPRA recognising they are capable of providing it: DHAC (2019).

Table 3.5: Regulation and funding rules block many non-GP workforces from working in general practice to the top of their skill level

Primary care workforce	Tasks supported by evidence, but outside current permitted scope	Key barriers
<i>Practice pharmacists</i>	<ul style="list-style-type: none"> Administering certain vaccinations (Table 3.4), prescribing, treating minor ailments, health screening, health coaching, and laboratory test ordering and review of results 	<ul style="list-style-type: none"> Legislative restrictions on scope of practice (state) Limited access to MBS and PBS (federal)
<i>Physician assistants</i>	<ul style="list-style-type: none"> Effectively their entire scope (because they are not allowed to practice) which includes: taking medical histories, examining patients, ordering laboratory tests and interpreting results, diagnosing diseases with screening aids, developing and implementing treatment plans, prescribing medications, and assisting GPs with procedures 	<ul style="list-style-type: none"> Not allowed to practice (all states except Queensland) No access to MBS and PBS (federal)
<i>Physiotherapists</i>	<ul style="list-style-type: none"> First-contact care (including diagnosis and treatment) of appropriate patients without GP referral Care for conditions that are not both chronic and complex 	<ul style="list-style-type: none"> Restrictive MBS rules (federal)
<i>Nurse practitioners</i>	<ul style="list-style-type: none"> Ordering tests and making referrals (within scope, but effectively precluded because it does not attract an MBS subsidy) 	<ul style="list-style-type: none"> Limited access to MBS and PBS (federal)¹⁶¹
<i>Practice nurses</i>	<ul style="list-style-type: none"> International evidence supports a broad scope for practice nurses, but in Australia many nurses do not use all of their skills 	<ul style="list-style-type: none"> Absence of a standardised national scope of practice Limited access to MBS and PBS (federal)
<i>Practice assistants</i>	<ul style="list-style-type: none"> Assisting with clinical documentation, including My Health Record 	<ul style="list-style-type: none"> Not allowed to access My Health Record (federal)

Note: Despite their broad training and skillset, MBS funding for enrolled nurses and registered nurses in primary care is limited to chronic disease monitoring and support between 'structured reviews of the care plan by the patient's usual medical practitioner', such as checking on clinical progress, monitoring pharmaceutical compliance, providing self-management advice, and collecting information to support the review of a care plan.

Source: AAPA (2019), Department of Health and Aged Care (2022f), Scanlon et al (2016), Birks et al (2016b) and Services Australia (2022c).

New scopes of practice need to be concise and visible

For a GP to comfortably delegate tasks, they need to know which tasks different staff are legally and safely able to do, and who holds the clinical governance risk for the care they provide.

Current scopes of practice do not make this easy. For most healthcare workforces, they are the product of overlapping documentation created by multiple professional bodies.¹⁶² For example, despite calls for a national scope of practice,¹⁶³ nurses still rely on a bundle of vague and complex documents for guidance. This includes practice standards issued by the national regulator¹⁶⁴ and state regulations (such as for prescribing) that can lack consistency with other policies and standards on scope of practice.

It is not reasonable for a GP to be across multiple conflicting and regularly changing scope documents, for multiple workforces. And it undermines their team members, who cannot easily show they can do a task and therefore end up working at below their skill level.¹⁶⁵

3.6 Australia needs a combination of funding reform, regulatory reform, and direct investment

This chapter has shown that far-reaching reform is needed for Australian general practices to deliver the best practice model described in Chapter 2.

Coordinated regulatory and funding reform

Given the complexity involved, we recommend that regulatory reform be coordinated across the states and the federal government, and

aligned with wholesale funding reform by the federal government (see Chapter 4). The aim of both should be to enable all primary healthcare workers to fully use their skills by removing barriers to team-based care.

To be effective, these reforms will need new clinical scope of practice documentation that is clear, concise, and enables work at the maximum skill level that is supported by evidence.¹⁶⁶ We recommend this task be given to an independent commission (for example, the Australian Commission on Safety and Quality in Health Care, or a new commission). That commission should consult extensively with, but not be staffed by, health workforce groups.

New investment to turbo-charge change

Funding and regulatory reform will make multi-disciplinary work possible, but that won't be enough. Other countries without funding and legal constraints have found that they also need direct investment to subsidise new roles, clear guidance on those roles, and support to change.

In the UK, 26,000 new salaried roles are being rolled out into general practices, ranging from physician assistants to health and wellbeing coaches.¹⁶⁷ New Zealand is taking a similar approach, with funding for new roles in its highest-need areas.¹⁶⁸

Learning from these examples, we recommend investment to drive workforce change and make rapid gains in closing the health outcome and access gaps highlighted in Chapter 1. We recommend that \$319

162. Birks et al (2016a).

163. National Nursing & Nursing Education Taskforce (2005).

164. Nursing and Midwifery Board of Australia (2016).

165. Jacob et al (2013); Duffield et al (2011); and Lowe et al (2012).

166. While consistency would also be desirable, it would probably compromise the ambition of scope reform and so is a lesser priority.

167. NHS England (2022a). More senior nursing roles are not a focus of the investment because they are considered to be better established.

168. Advice from New Zealand Ministry of Health.

million of the Strengthening Medicare funding should be allocated for this purpose in total over the next four years.¹⁶⁹

Of this total funding, \$31 million should be invested in medical specialist support for GPs to manage complex cases without referring on to public outpatients waiting lists. This funding should be commissioned by Primary Health Networks (Chapter 5) and concentrated in areas where reliance on public specialist care is higher and waiting lists are longer.

The remaining \$288 million over the four years should be invested in 1,000 new multidisciplinary workforce roles in general practices across Australia's highest-need areas. PHNs would also commission this funding, including by selecting eligible practices and coordinating shared workforces (see Box 14). PHNs would also provide support to practices to implement the change (see Chapter 6).

3.6.1 Bringing it all together

Figure 3.4 on page 45 provides an illustrative example of how this future model could work in a future general practice, bringing together the teamlets, multidisciplinary pool, and specialist support. This model involves:

- More access, with general practices seeing more patients, sustainably, with the support of one or more assisting clinicians
- More sustainable workloads for GPs, with them working at their own pace, and selecting a caseload that suits their skill level, working hours, and preferred teamlet structure and size
- More support for GPs, with assisting clinicians taking on clinical administration and non-complex tasks, and specialists providing advice and training on complex cases

169. See Appendix D.6 on page 84 for a more detailed breakdown of costs.

Box 14: Employment models for multidisciplinary pools

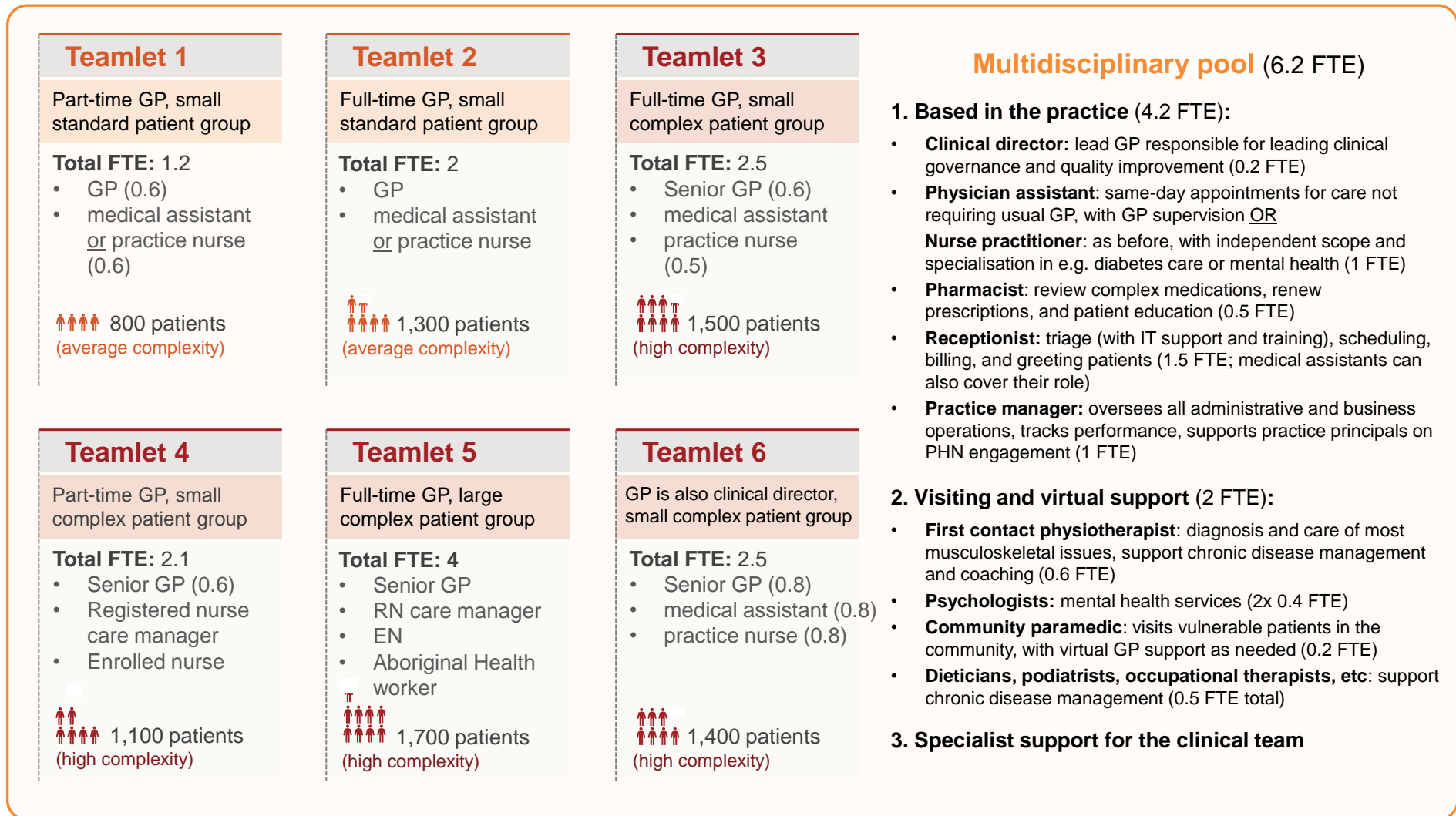
Multidisciplinary care has big benefits for patients, but few (if any) general practices would be able to employ a large pool of staff full-time. Most of those staff would be part-time, working across multiple practices. While many already do this, it can be challenging to coordinate their hours across employers, and professionally isolating for the staff themselves.

In the UK, which is expanding multidisciplinary roles, different models are being used to overcome these challenges. In England, general practices within areas have formed networks of about three to five general practices that share the new staff, along with clinical leadership. In Scotland, these staff are employed through regional health boards.

The best model for different communities will differ depending on local need, workforce supply, and relationships, so we recommend that Primary Health Networks develop locally-appropriate commissioning plans for government approval. These may include building relationships between general practices; building up teams in local hospitals, hospital networks, or community health providers; or contracting third parties such as regional ambulance services or private or not-for-profit home-care providers.

- Greater continuity of care for patients, with their teamlet responsible for their health and actively supporting them between – not just during – appointments
- More comprehensive care for patients, who get more self-management support, proactive outreach, and preventive care from the assisting clinicians, and more time with their GP for diagnosis, treatment, and complex care
- More access in under-served areas, with patients able to get fee-free and integrated nursing, allied health, and mental health services funded through the Primary Health Network in participating practices.

Figure 3.4: An example of a future multidisciplinary general practice: one team with many teamlets, caring for 7,800 patients in a high-need community



Notes: FTE = full-time equivalent. RN = registered nurse. EN = enrolled nurse.

Source: Grattan Institute.

4 Fixing funding

This chapter shows how Australia's primary care funding model works well for episodic care, but not chronic disease care.

The model maximises the volume of care, not its impact. It limits multidisciplinary care and care coordination. And it micro-manages clinicians, putting arbitrary restrictions on the care they can give. The solution to these problems is not more tweaks to the system, but real funding reform.

4.1 Australia has the wrong funding model for primary care

Australia is one of a small and shrinking list of countries that still mostly funds primary care based on appointment fees (a model known as fee-for-service) (Figure 4.3 on page 50). General practices are paid for the volume of services they provide, based on a price schedule (the Medicare Benefits Schedule or MBS).¹⁷⁰ There are payments to make care plans, and to expand access,¹⁷¹ but the vast bulk are paid for individual GP consultations.

4.1.1 Australia's model drives throughput, not necessarily outcomes

Australia's funding model drives throughput: the more visits a GP receives, the more money they earn. Evidence shows this has benefits. Compared with models where clinician income doesn't depend on services, it is associated with greater access,¹⁷² patients seeing the

same GP more,¹⁷³ and GPs making fewer referrals to specialists and hospitals.¹⁷⁴

However, there is good evidence that patient satisfaction under this funding model is lower,¹⁷⁵ and that more inappropriate services may be provided.¹⁷⁶

Australia's funding model does not align resources with need

The MBS encourages GPs to see more patients, faster, by paying more per minute for shorter visits (Figure 4.1 on the next page). This promotes a focus on speed over need. As Figure 4.2 on the following page shows, visits for patients with chronic disease, social issues, and mental health needs take longer, pushing fees into the lower-paying categories. As a result, the practices serving the highest-need patients are likely to be funded the least.¹⁷⁷

170. Practices can also collect out-of-pocket payments, which are equally volume-based.

171. For example, for care after hours, in rural areas, and in aged care facilities: Services Australia (2022d).

172. Far more appointments and higher compliance with their recommended amount.

173. These findings are based on a Cochrane Review of high-quality studies: Gosden et al (2000). More recent studies, albeit of lower quality and with higher risk of bias, have corroborated the relationship between fee-for-service funding and service volume (see for example Sørensen and Grytten (2003) in Norway; Devlin and Sarma (2008); and Sarma et al (2010) in Canada.

174. Liddy et al (2014); and Sarma et al (2014).

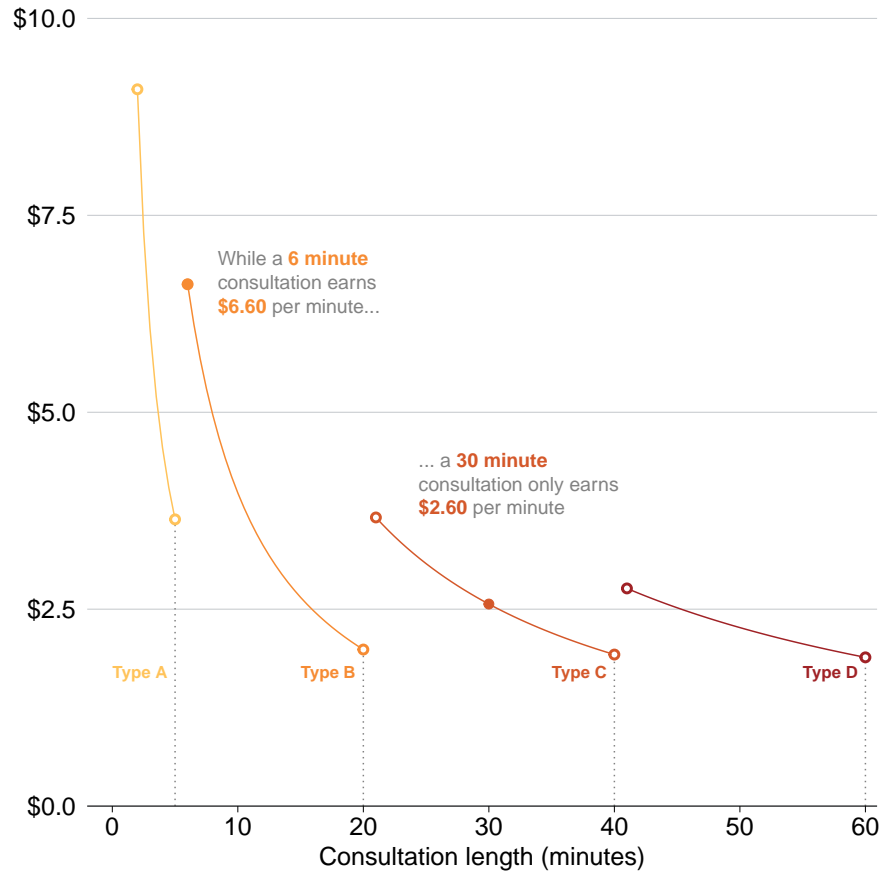
175. Gosden et al (2000).

176. Jia et al (2021).

177. Incentive payments for bulk-billed concession patients can help with this, but many higher-need patients are not concession card-holders: Duckett et al (2022, p. 23)

Figure 4.1: The GP payment model promotes shorter consultations

Revenue per minute earned by GPs, by consultation type and length

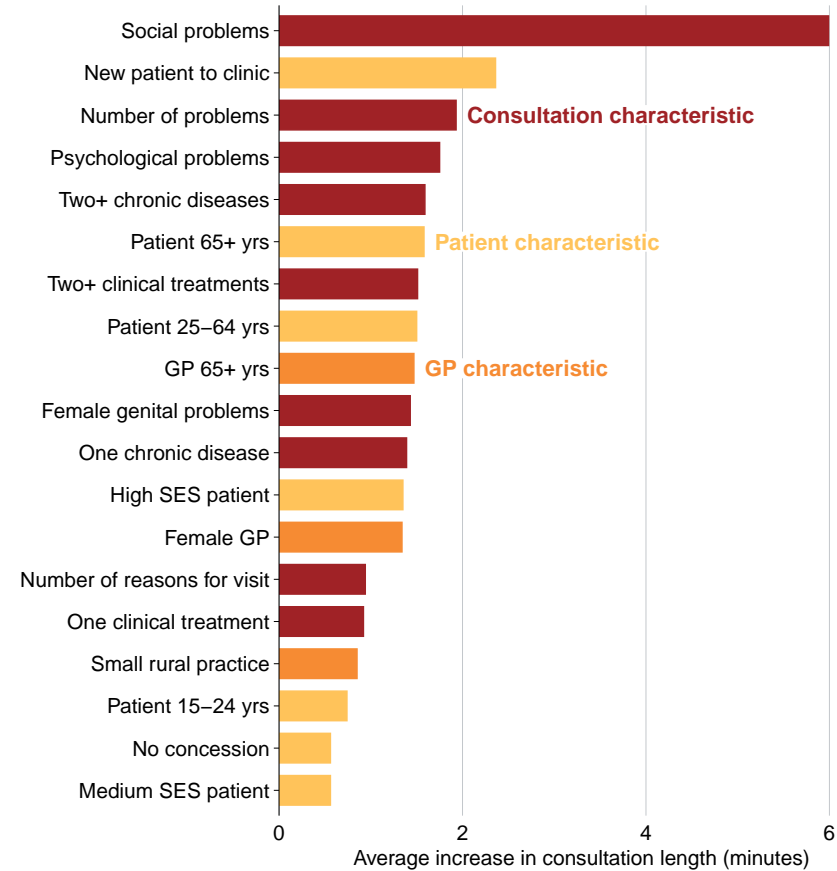


Source: Grattan analysis of Department of Health and Aged Care (2022f).

Notes: Only MBS funded payments based on item numbers are included. This underestimates the payment discrepancy between short and long consultations, because it does not include fees such as co-payments and the bulk-billing incentive.

Figure 4.2: Clinical and social needs aren't reflected in Australia's funding model

Average increase to consultation length (minutes) by consultation characteristic



Source: Britt et al (2005).

Note: Patient ages are relative to patients under 15 years old. SES is relative to low SES status, calculate by patient postcode. Practice location is relative to metropolitan practice.

Australia does not pay for critical elements of chronic disease care

Australia's funding model does not pay for many elements of good chronic disease care and coordination. This includes:

- ordering tests and specialist referrals, which many patients with chronic disease need regularly to check their conditions are stable
- medication renewals, regularly needed for the long-term medications used to manage chronic diseases
- education to keep GPs up to date with rapidly evolving evidence on the many diseases they treat
- getting advice from specialists and allied health professionals on difficult cases.

The cost of doing this work is high: GPs who skip it or do it poorly can earn at least \$11,500 a year more.¹⁷⁸

4.1.2 Tweaks to the MBS have not worked

Over time, the MBS has been tweaked in an attempt to adapt it to chronic disease care. These tweaks have not done enough.

Australia has not been able to adapt the MBS to chronic disease

To pay for chronic disease assessment, planning, coordination, and review, new items have been grafted onto the MBS. The rules are administratively complex and overlapping.¹⁷⁹ Studies consistently show that GPs are discouraged from using these items,¹⁸⁰ and say the rules

178. Value has been inflated from 2016: Henderson et al (2016); almost one in 10 surveyed GPs report spending no time on non-billable work. GPs are much less likely to do non-billable work in lower socioeconomic areas: Brown et al (2021b).

179. Taylor and Swerissen (2010).

180. Because of time constraints and the complexity of rules governing their use: Holden et al (2012).

force them to focus on an individual problem a patient has presented with, not their overall health.¹⁸¹ The complex system often leads to confusion and accidental incorrect billing, or in some cases fraud.¹⁸² Audits to police this leave many GPs worried about billing in line with patient needs. One GP in a Grattan Institute focus group in August 2022 told us:

'It's good care to listen to your patient the way they want, but if you bill accordingly, you have the potential to be flagged.'

Another said:

'GPs are forced to constantly under-bill because of fear that Medicare will come knocking on your door.'

Incentives for quality care have largely been abandoned

The first program to provide incentives for quality primary care commenced in 1994.¹⁸³ Through the scheme, now known as the Practice Incentives Program (PIP), clinics could receive bonus payments for completing steps associated with good care of asthma and diabetes.¹⁸⁴ Although quality of care improved,¹⁸⁵ payments were only claimed for about 10-to-25 per cent of eligible patients,¹⁸⁶ suggesting waning patient participation rates or low claiming among GPs. These incentives were discontinued in 2019.¹⁸⁷ Remaining PIP payments focus on improving access to care among elderly,

181. Hopkins and Speed (2005a).

182. Faux et al (2022).

183. Harris and Zwar (2014a).

184. Such as registering patients onto long-term management plans and taking periodic measurements of important disease markers.

185. The probability of an HbA1c test being ordered increased by 20 percentage points – 35 percentage points for Aboriginal and Torres Strait Islander patients: Scott et al (2009).

186. Swerissen and Duckett (2016, p. 11).

187. Department of Health (2019a).

Indigenous, and rurally-located Australians, upskilling GPs in clinical procedures and eHealth, and teaching medical students.

Australia's funding model makes it hard to deliver multidisciplinary care

As Chapter 3 showed, the funding model also makes it hard to deliver multidisciplinary team care. To address this, the Workforce Incentives Program was introduced. It effectively pays salaries to multidisciplinary team members, rather than paying them based on appointments. Clinics can claim up to \$125,000 a year for practice nurses, and, more recently, a broader range of allied health workers.¹⁸⁸

This is a step in the right direction, but it is not enough. It encourages clinics to only share work that GPs cannot bill for – not to share all work based on who can do it most efficiently. As Chapter 3 showed, this has resulted in more practice nurses being employed, but often to do administrative work and only basic care, not working to the full extent of their clinical capabilities.

4.1.3 The way forward

Many people have called for new funding models to tackle chronic disease, and many countries have moved faster than Australia, providing us with valuable lessons.¹⁸⁹ But we shouldn't throw the baby out with the bath water. We need to keep the aspects of our model that

188. For allied health workers, Aboriginal and Torres Strait Islander health workers, and health practitioners: Department of Health and Aged Care (2022g).

189. For example, RACGP has identified the need for a blended funding model in aged care (Woodley (2021)); and both the Final Report of the National Health and Hospitals Reform Commission (National Health and Hospitals Reform Commission (2009, p. 135)) and the Report on Primary Care Reform in Australia (Health and Ageing (2009, p. 141)) recommended consideration of other funding mechanisms in primary care to address this and other challenges. The Australian Association of Practice Management has also called for a shift of funding models towards consumer-focused health outcomes, rather than patient volumes: AAPM (2022).

are working, while increasing flexibility to let clinics improve the equity and impact of their care. The rest of this chapter shows how.

4.2 Designing a new funding model

There are four principles for designing a better funding model:

- **Blended:** giving clinics more flexible funding to support enrolled patients to manage chronic disease over time, while keeping appointment fees to encourage throughput
- **Needs-based:** making funding proportional to patient need, so that resources are concentrated where their impact will be greatest
- **Accessible:** ensuring universal access to care
- **Rewarding what matters:** sustained and carefully designed incentives for what matters most – improving health outcomes

4.2.1 Principle 1: Blending payments for access and flexibility

Since the 1990s, many countries have moved away from appointment fee-based funding models such as Australia's towards 'blended' funding models (see Figure 4.3 on the next page). They combine different kinds of payments for different kinds of service:

- flexible budgets for some care (such as chronic disease management) that varies based on patient need
- smaller appointment fees to supplement the above and give clinics a continuing incentive to keep seeing patients
- regular service payments for care that is the same for everyone who gets it (for example, immunisations)
- bonus payments for access, quality, or outcomes of care.

In blended payment models, patients need to enrol with a single practice for their ongoing care.¹⁹⁰

The *Lancet Global Health Commission on financing primary healthcare* recommends these blended models, with flexible patient budgets at their core.¹⁹¹

Empirical evidence about the impact of blended funding models is limited, because they have varied designs, providers generally self-select into them, and their introduction is usually accompanied by a number of other system reforms which make disentangling their impact difficult.

However, blended models have the benefit of balancing out the downsides of any ‘pure’ model, which is why it is recommended by many experts, and why most wealthy countries have taken this approach.

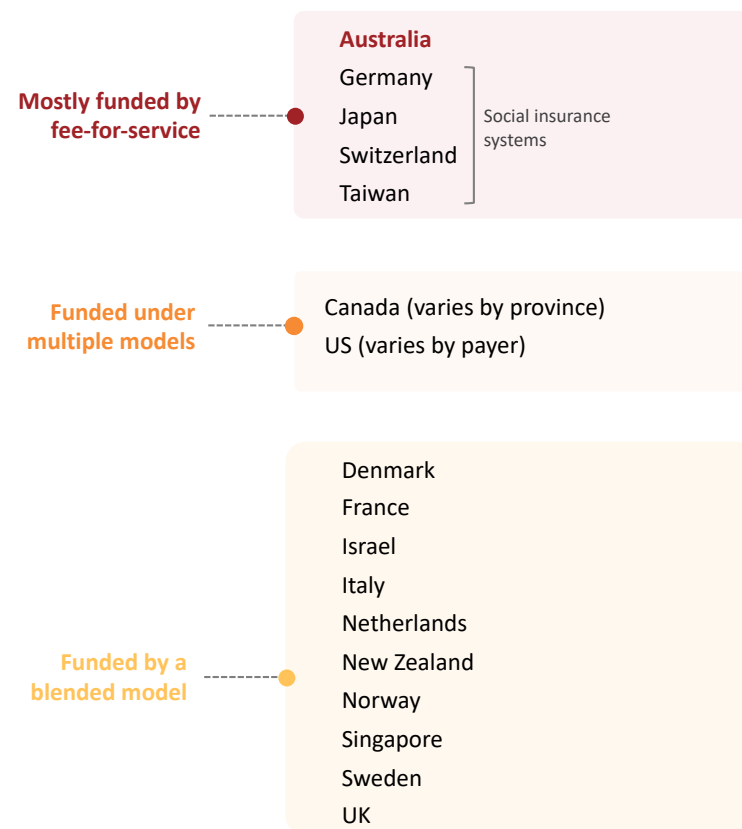
Flexible annual patient budgets

Flexible budgets let clinics be innovative in how they meet patient need. Unlike appointment fees, these budgets are not tied to a specific kind of service, workforce, or way of delivering care. They can be used to supplement GP appointments or for entirely new services delivered by other team members. For example:

190. Almost all wealthy countries base their health systems on enrolment; Australia is one of the only countries without it, and primary care reviews have been calling for it to be introduced for years: Department of Health and Aged Care (2020) and NACCHO (2021). Enrolment incentives for patients, and accountabilities for clinics, are discussed in Appendix C.

191. Hanson et al (2022). This recommendation is based on a logical inference about the ability of blended models to combine the evidenced strengths of fee-for-service and other funding models, and particularly by combining incentives to be cost-conscious as well as maintain and improve quality: Jia et al (2021).

Figure 4.3: Most countries similar to Australia have left fee-for-service behind



Source: *The Commonwealth Fund (2022)*.

- Physiotherapists or dietitians can run group sessions to teach people about healthy eating or recovering from injuries¹⁹²
- Health coaches can work with patients between appointments, via email and through SMS, to help them improve their disease self-management and follow through on lifestyle changes
- GPs can take time out to call other medical specialists to get expert advice on care for a particularly complex condition
- Medical practice assistants can join long appointments to help the GP with paperwork, prescriptions, and referrals, saving the GP time that can be spent with other patients
- Paramedics can help a GP deliver virtual appointments in aged care facilities, by being onsite to liaise with staff, physically examine patients, and do tests (e.g. blood pressure).

Flexible budgets have many benefits. They liberate GPs from the financial micro-management of the MBS. They cover the costs of activities that improve health and prevent disease, but which are not currently funded. They encourage more care for the highest-need patients (see Section 1.3). And they increase access through multidisciplinary team care.¹⁹³

Under a new, blended funding model, practices would need to agree with staff about how they wish to distribute their flexible budgets, which will need to cover the costs of the multidisciplinary team, as well as the costs of the GP's time for team leadership.¹⁹⁴

192. MBS-funded group services are restricted to mental health and diabetes care: DHAC (2022b) and DHAC (2022c).

193. Under the model, GPs are encouraged to delegate as much work as possible so that they can do more appointments and earn fees. While some of the funding can and should be used to cover the costs of GP work (such as secondary consultations and education), most should be used for team care.

194. Under current settings, GPs and practices generally split appointment fees on, for example, a 60:40 basis. In a previous trial of funding reform, Health Care

Appointment fees

In addition to their flexible budget for each patient, a practice would continue to get MBS payments for individual visits. Fees for one-off services that are the same for everyone, such as immunisations and cancer screening, would be unchanged. Appointment fees would be smaller than they are now, and fees for chronic disease management plans¹⁹⁵ would be cashed out entirely. These funds would be fully redirected into the new flexible patient budgets (see Appendix D for further detail).

We also recommend changes to who can get MBS payments, for general practices that are using the new funding model. Clinicians who can work on behalf of GPs (nurse practitioners and physician assistants, see Section 3.2.2 on page 30) should have full access to the MBS, with their fees set at a flat proportion (for example, 70 per cent) of the GP rate. No patient fees should be allowed for these services.

Choosing the blend

The exact blend of payments varies a lot. Visit fees make up the bulk of payments in some jurisdictions and a minority of payments in others.¹⁹⁶

Homes, most revenue was through flexible patient budgets (for chronic care), with some through appointment fees (for acute care), and it was left to practices to determine how to manage these funds internally: Department of Health (2019b, p. 22). While we recommend this flexibility continue, it will be critical that practices generally mirror the incentives inherent in the funding model through their payments to staff. If GPs continue to be paid based on how many appointments they do, the strong disincentives to share care will persist.

195. Including plan reviews, team care arrangements, and multidisciplinary case conferences.

196. For example, 70-to-80 per cent of primary care clinic funding in Quebec, British Columbia, and Denmark, and 15-to-35 per cent in the UK, New Zealand, Italy, Norway, and Sweden: Tikkanen et al (2020). The blend can also vary a lot *within* jurisdictions, with practices able to choose from a menu of opt-in models. For example, in Ontario clinics can choose between a menu of models where fee-

As this chapter and other research has shown, funding models based on visit fees create profound barriers to team-based care. It would be very challenging for practices to achieve significant change in a model where these fees continue to make up the majority of practice revenue.

For this reason, we recommend that the majority of funding in a new blended model be flexible. Further detail on how the model should be designed is provided in Appendix C. The model should be opt-in and adapted over time (see Chapter 6).

4.2.2 Principle 2: Aligning resources with need

General practice in Australia is market-based. A problem with market-based health systems is the Inverse Care Law: the supply of services tends to be greatest where the need for them is lowest.¹⁹⁷

Flexible patient budgets are a way to fix this. Weighting each patient's budget based on their expected demand for care better aligns resources with need. This section shows how.

Getting the weights right

Many factors influence patient need. Patients who are elderly or have chronic illnesses (including mental ill-health) tend to need more care, as do patients who are homeless or on very low incomes. Populations with complex, multi-generational disadvantage, such as Aboriginal and Torres Strait Islanders, tend to need the most.

Patient budgets need to take these demographic, clinical, and social factors into account. International experience shows that doing this well is crucial (see Box 15). When budgets are weighted crudely, based

for-service payments range from 20 to 100 per cent of their funding (Sweetman and Buckley (2016) and Marchildon and Hutchison (2016)); over time, most have gravitated away from the pure fee-for-service model.

197. Hart (1971).

Box 15: The case for weighting: international experience

For a decade from the mid-2000s, Ontario introduced new funding options for primary care practices, moving away from the fee-for-service model. Practices could opt into new blended models, which included a reduced fee-for-service component and a set payment for each enrolled payment.^a

The set payments were weighted for the age and gender of patients. But age and gender are poor predictors of how much care a patient will need.^b Inadequate weighting meant that set payments would 'overpay' practices for less-complex patients, and 'underpay' for more complex patients.

Unsurprisingly, practices with less complex patients were far more likely to opt into the new funding model. This significantly increased costs to government, for little improvement in the care of those who need it most.^c

By contrast, between 2001 and 2011, the National Health Service (NHS) in England aimed to reduce health inequalities by weighting funding to primary health commissioners at a regional level, based on socio-economic deprivation. The approach worked: each additional £10m of funding in more deprived areas led to a reduction of 35 deaths for men and 16 deaths for women respectively per 100,000 residents.^d

a. Rudoler et al (2015).

b. M.Sibley and Glazier (2012).

c. Rudoler et al (2015).

d. B. Barr et al (2014).

only on patient age and gender, high-need patients are under-funded and outcome gaps (including for life expectancy) widen. Workloads for clinics looking after high-need patients are unmanageable, with higher stress and burnout.¹⁹⁸ And attempts at reform fail, because only the clinics servicing healthier and wealthier populations opt into the new funding model.

It is also important that weights are set based on the levels of care that patients *need*, not necessarily the amounts and kinds of care they get now.¹⁹⁹ This is because at present, higher-needs patients tend to be underserved, and lower-need patients tend to be overserved.²⁰⁰

Box 16 provides an indicative list of the factors that should be taken into account in blended funding models. Their relative weights would need to be statistically calculated using Australian data.

4.2.3 Principle 3: Accessible for all

In 2021, Australians spent almost \$1 billion on out-of-pocket fees for GP services.²⁰¹ Evidence shows that these fees do not discourage wealthier people from seeking care, but they do discourage poorer people.²⁰²

Australia's universal health insurance scheme, Medicare, is designed to make healthcare available to all, no matter how wealthy or poor. Primary care is free to a patient when it is bulk-billed.²⁰³ Medicare uses financial incentives to encourage practices to bulk-bill children and

198. Watt (2012).

199. Conventional vs optimal risk adjustment: Cid et al (2016).

200. For example, Aboriginal patients on average have greater need but lower utilisation of Medicare-funded services: Teng et al (2018).

201. The total patient contributions to non-referred GP attendances was \$924 million in the 2021-22 financial year. Department of Health and Aged Care (2022c).

202. Newhouse (1993); and Kiil and Houlberg (2014).

203. This means a clinic has waived co-payments and charged government directly for the MBS schedule fee.

Box 16: Worth the weight: how to adjust the funding model

Four types of factors should be taken into account when adjusting funding to match patient need:

- **demographic** factors, such as age, gender, and Indigenous status
- **clinical** factors, such as having multiple chronic diseases or serious mental illness
- **service use**, such as hospitalisations, emergency department presentations, polypharmacy, and being an aged care resident
- **socio-economic** factors, such as income, homelessness, and the life expectancy of similar people.^a

Models that have too few tiers for patient complexity are unlikely to adequately fund more complex work.^b

a. Penno et al (2013); Wallace et al (2014); and Girwar et al (2021).

b. Khanna et al (2019).

concession card-holders. The incentives are higher in rural areas.²⁰⁴ General practices are more likely to bulk-bill when their revenue covers their costs,²⁰⁵ competition for patients is strong,²⁰⁶ and patients are unwilling or unable to pay fees.²⁰⁷

Our recommendations would support bulk-billing where it is most needed: for vulnerable people and the clinics that serve them. Needs-based patient budgets would increase revenue for practices caring for vulnerable patients, making it easier to bulk-bill. The workforce reforms proposed in Chapter 3 would also help by expanding supply in high-need areas, strengthening competition and therefore encouraging bulk-billing.

There are parts of Australia that have too little care to go around, which will need a different solution that is discussed below (Section 4.4).

204. Biggs (2016).

205. A clinic plainly cannot remain open if its revenue does not cover its expenses. Total revenue can include MBS rebates, bulk-billing and other incentives, and other revenue a clinic may collect (for example, cosmetic medicine). There is often cross-subsidisation. When revenue falls, clinics may work to reduce their expenses – this appears to have occurred during the MBS freeze where average GP earnings rose in real terms even as revenue did not.

206. The bulk-billing rate increases by 6 percentage points for every additional GP (full workload equivalent) per 10,000 population: Savage and Jones (2004). Within areas, GPs with more distant competitors charge higher prices and bulk-bill fewer of their patients: Gravelle et al (2016).

207. This is known as price discrimination: the practice of charging different consumers different prices for identical goods and services. Price discrimination can be observed in differential bulk-billing rates for high and low SES metropolitan areas, with bulk-billing much lower in wealthier areas even where GP supply is higher. The electorate average bulk-billing rate falls by 1.1 percent for each additional \$1,000 of average electorate wage and salary income. Price discrimination can also be seen within clinics: higher-income patients are much more likely to be charged co-payments.

4.2.4 Principle 4: Rewarding what matters

Many countries, including Australia, have experimented with performance payments. These reward practices for meeting specified care standards, such as performing all the different tests recommended for a diabetic patient.²⁰⁸ They are part of a broader attempt to shift health funding towards paying for value. And they can reduce the risk that practices keep these flexible funds as profit, rather than spending them on improving patient care.

Performance payments are easier to get wrong than right

A 2019 systematic review found performance payments for measures such as immunisations, screening, or tests probably caused clinics to provide more of those services (particularly immunisations).²⁰⁹ It found that such payments may also lead to better-quality care, including better use of medications.

However, these improvements can be lost when the performance payments end.²¹⁰ The payments for specific processes can also skew care too much, leading to neglect of other actions and no overall improvement. Poorly designed measures tend to penalise providers looking after sicker and poorer patients, which can lead them to exclude these patients from care.²¹¹ Overall, the effects of performance payments on patient health have been mixed.²¹²

208. As previously encouraged in Australia: Department of Health and Aged Care (2022f).

209. Jia et al (2021).

210. Meier et al (2021). However this is not always the case: Benzer et al (2014) and Kontopantelis et al (2014).

211. Mendelson et al (2017).

212. We are uncertain about the effect on healthcare providers' work morale or workload, or on cost, because the evidence is missing or of very low certainty: Jia et al (2021).

Because of these risks, performance payments need to be designed carefully or not used at all. Good design is analytically complex, and requires high-quality data.

We recommend introducing blended, needs-based funding now, but taking time to design performance payments, ideally based on outcome measures that are not yet systematically collected.

4.3 Applying the principles

Drawing on international experience and Australian trials, this section has shown that a new funding model is needed with:

- A blend of flexible patient budgets and appointment fees
- Bigger patient budgets for patients with greater needs
- A plan to develop and test payments that reward good care.

4.4 Some rural areas will need tailored solutions

The new funding model we recommend would work in most of Australia, but not everywhere. Some rural areas have too few patients for a blended funding model to work (see Box 17) or for a competitive number of providers to be viable.²¹³

And while the needs-based funding model we propose would increase revenue for rural GPs, financial incentives would not be enough to solve rural GP shortages.²¹⁴

213. Evidence shows that the number of GPs in an area has a strong effect on bulk-billing. For example, the bulk-billing rate increases by 6 percentage points for every additional full-workload-equivalent GP per 10,000 population: Savage and Jones (2004).

214. Modelling shows that it would cost between \$261,700 and \$511,830 to convince the average GP to go rural. And 65 per cent of GPs will never relocate to a rural area, no matter the salary: Scott (2021a) and Scott et al (2013). In areas

Box 17: Blended funding models will not work in some rural areas

Blended funding models predict how much funding it will take to care for specific types of patients, such as a 70-year-old concession card-holder with three chronic diseases.

The predictions don't need to be perfectly accurate, because in practice patients who are sicker than expected will tend to be balanced out by other, similar patients, who are in better health than the model predicts. This group of patients is known as a 'risk pool'.

But when risk pools become too small, it becomes more likely that there will not be enough patients to balance out the risk.^a For each clinician who is lucky, with unexpectedly healthy patients, another will be unlucky, and this can persist over a long time.^b Unlucky clinicians will lose income, by no fault of their own.

In Australia, small risk pools are likely in some rural areas. Because they create financial risks for clinicians, and could create incentives to avoid enrolling high-risk patients, blended funding models may not be the best approach in these areas.

a. Howell (2008).

b. Ibid.

Supply solutions will differ across communities depending on local need, as the examples in Table 4.1 show. In areas where the market won't work, Primary Health Networks (PHNs) should be funded to ensure access to care. They should plan and fund their investments jointly with state governments. That way, scarce workforce can be shared across the local health system, including between general practices and public hospitals.

As Chapter 5 describes, this funding for PHNs must be needs-based and come with accountabilities.

There are other important factors besides funding to help ensure rural Australians can get good healthcare. These include the workforce reforms set out in Chapter 3, and a stronger role for PHNs in managing the system, as set out in Chapter 5. There are also critical factors outside the scope of this report, such as importing overseas clinicians, coordinating locum support, and ensuring relevant and sufficient training is available.²¹⁵

4.5 Funding reform is not enough

While new ways of funding care are crucial, they will not be enough. The next chapter identifies governance reforms needed to support practices and hold them to account for their funding. The final chapter describes how to roll out the new model, and adjust it over time.

with small populations and a lack of affordable access to primary care, tailored solutions will be needed.

215. M. McGrail et al (2017).

Table 4.1: There is no one-size-fits-all solution to rural supply gaps

Supply problem	PHN response options
<i>Small populations:</i> town has a GP practice, but too few patients to cover costs	<ul style="list-style-type: none"> Working with states, employ the GP part- or full-time in a RACCHO or rural hospital Link the practice to others in the region that need support to meet excess demand
<i>GP shortages:</i> town has one GP who is overwhelmed with patient demand and is unable to recruit another GP	<ul style="list-style-type: none"> Assist the practice to develop a business plan for employment of multidisciplinary staff (e.g. a nurse practitioner) Link the practice with others to share staff
<i>Viability risks:</i> town has adequate demand and supply, but the clinic is struggling with high costs	<ul style="list-style-type: none"> Commission a review of the practice to confirm viability risks cannot be resolved through business improvements Underwrite the practice with a standing grant
<i>No bulk-billing:</i> town has one GP practice, which does not bulk-bill	<ul style="list-style-type: none"> If there is sufficient patient demand, increase price competition by commissioning a GP or nurse practitioner / physician assistant to provide a regular low- or no-cost visiting session at the local hospital If there is insufficient patient demand for the above, underwrite bulk-billed appointments for concession patients at the practice

Note: RACCHO = Rural Area Community Controlled Health Organisation.

Box 18: Overcoming market failure in rural areas

Rural Area Community Controlled Health Organisations^a

Rural Area Community Controlled Health Organisations (RACCHOs) are a new idea for improving the viability of GP services in places with small populations. RACCHOs would employ GPs in multidisciplinary teams to deliver a range of services, including chronic disease management, aged, veteran and disability care. Based on the Aboriginal Community Controlled Health Organisation model, RACCHOs are intended to be block-funded, and this would enable them to attract GPs through favourable employment conditions, including better leave entitlements and a guaranteed salary. This addresses a major obstacle to GP recruitment in rural areas, which is the risk and stress for GPs of purchasing and running a practice in a town with few patients.

Murrumbidgee rural generalist training model^b

The Murrumbidgee Model in NSW similarly involves employing GPs in settings where a range of services beyond general practice care are provided. In this model, the employer is a rural hospital. They recruit rural generalist trainees (GPs with extra skills such as obstetrics and emergency care) to deliver free care for the community in both hospital and primary care settings. The Murrumbidgee Model offers doctors similar favourable employment conditions as the RACCHO model. The model is being trialled in Murrumbidgee, and is set to be expanded.

a. National Rural Health Alliance (2022).

b. P. Davey (2020).

5 Improving the system

This report has shown that there are structural gaps in access to healthcare in Australia, and that general practice could provide more and better chronic disease care if it had more diverse teams.

With the right workforce and a new funding model, general practices could do a lot to fix those problems. But we can't expect these changes to succeed in a vacuum.

General practice is perhaps the most important part of the healthcare system and a \$10 billion-a-year taxpayer investment.²¹⁶ It should have at least the same level of planning, measurement, and improvement support as other major public service systems, such as public hospitals or schools. But general practice has historically developed with limited guidance, support, or accountability, and this has contributed to current challenges.

To make the necessary changes, Australia needs to complete the transition from simply paying for care to 'commissioning' care: setting out where the system is going, paying for care, measuring the results, and making sure those results keep improving.

Primary Health Networks were established seven years ago to do this. They have made a start, but now they need a roadmap for the system, a bigger role in purchasing care, and better data to help practices improve.

5.1 A 'system' in name only

Most funding for general practice in Australia comes from the federal government, but most practices operate as small businesses

216. Estimates of spending on general practice in 2021 varied between \$7.8 billion and \$12.4 billion, depending on the classification used: Wright et al (2021). \$10 billion represents an approximate midpoint of these estimates.

independent of government, with almost all GPs working in private practices (Figure 5.1 on the following page).

Although general practices have been getting bigger,²¹⁷ the sector remains fragmented. About 38,000 GPs work in Australia, across more than 8,000 practices.²¹⁸ Although the size of practices has grown over time, many remain very small.²¹⁹ Almost one in five GPs work in a clinic with just one or two other GPs.²²⁰ One in 20 GPs are the only one in their clinic.

There is another layer of fragmentation in the broader system. Our health landscape is more complex than those in many other countries, due to a mix of federal, state, public, and private services, each with their own funding, policies, and providers.²²¹

In this context, it is little wonder that GPs struggle to connect with the rest of the system. Compared to other countries, Australian GPs are much more likely to report difficulty coordinating with specialists and hospitals (section 1.4).

Australia's funding approach leads to practices clustering where business conditions are better, meaning many people in lower-income suburbs and rural areas face long waits, or long trips, to get care (section 1.3).

General practices can't tackle these systemic issues of disconnected care and access gaps on their own. Australia's response to this has been to introduce a commissioner to manage the system.

217. Scott (2017) and Department of Health and Aged Care (2022h).

218. Department of Health and Aged Care (2022h).

219. Scott (2022).

220. RACGP (2021, Section 2.2).

221. Bates et al (2022).

5.2 What is commissioning?

In 2015, the federal government established Primary Health Networks (PHNs).²²² These 31 independent regional bodies are charged with improving the efficiency and effectiveness of care, especially for those at risk of poor health outcomes, and improving care coordination.²²³

Their role is to ‘commission’ primary care, which refers to planning, purchasing, and monitoring services.²²⁴ The goal of commissioning is to shape and manage a service system to get the best outcomes for the money spent.

Commissioning at a regional level means that local solutions can be developed, using local knowledge, and drawing on trusting relationships.²²⁵ Regional commissioning has been recommended as the best way to manage aged care and mental healthcare in Australia by multiple Royal Commissions and Productivity Commission reports.²²⁶ A review of Medicare Locals, which triggered the creation of PHNs, recommended that PHNs be regional commissioners of primary care.²²⁷ Regional commissioning is also used overseas to manage

222. PHNs are the successors of Medicare Locals, themselves successors of Divisions of General Practice.

223. Department of Health and Aged Care (2018).

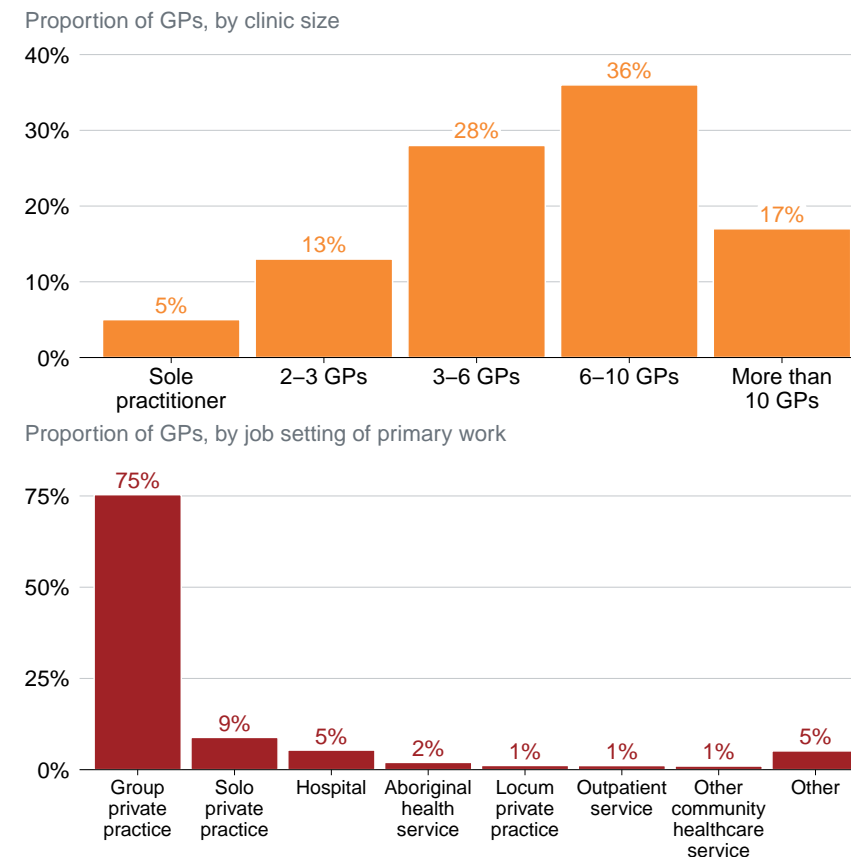
224. There is no fully consistent and formal definition, but this broad definition aligns with international approaches: Sax Institute (2015).

225. Dickinson (2015).

226. The model was proposed for mental health by the Productivity Commission and the Royal Commission into Victoria’s Mental Health System, and for aged care by the Royal Commission into Aged Care Quality and Safety: Productivity Commission (2020), Royal Commission into Victoria’s Mental Health System (2021) and Royal Commission into Aged Care Quality and Safety (2021, Chapter 3).

227. Horvath (2014).

Figure 5.1: There are still many GPs working in small clinics



Note: The ‘Other’ category includes community mental health, drug and alcohol services, other community healthcare, outpatient services, residential mental health and aged care facilities, commercial business and services, education facilities, correctional services, the defence force, and other government departments or agencies.

Sources: Proportion of GPs by clinic size: RACGP (2021); Proportion of GPs by job setting: Department of Health and Aged Care (2022e).

primary care systems, including in England and Wales, New Zealand, and Canada.²²⁸

Particularly in Australia’s fragmented and diverse primary care landscape, it makes sense for regional bodies to tailor national policies to increase their impact. Using local knowledge and ongoing relationships with providers, PHNs can encourage them to work as a system and continually improve care.

Using commissioning to help general practice improve chronic disease management and reduce health inequity is what PHNs were set up to do. But each stage of commissioning requires the right policy settings from the Department of Health, as Figure 5.2 shows.

This chapter discusses the three stages of commissioning – planning care, purchasing care, and monitoring care. It shows that PHNs lack essential tools and resources. It is time for them to get the right resources and accountability to live up to their role of managing primary care systems, including general practice.

5.3 Planning care

The first stage of a PHN commissioning role is planning: mapping the needs of the local area and developing a strategic plan to guide investment.

Good commissioning designs the range of services required, rather than passively buying whatever is on offer. This requires reviewing current provision of services, identifying gaps, assessing market capacity, and specifying the services required, including quality standards.²²⁹

228. Although New Zealand has disbanded its previous 20 regional commissioning bodies, the new national commissioning body essentially works as four regional commissioners: Health New Zealand (2022).

229. Dickinson (2015).

Figure 5.2: How the commissioning system should work



Sources: Grattan Institute analysis. Operational commissioning from Sax Institute (2015).

While planning should respond to local conditions and needs, it also requires guardrails that push primary care in the right direction, in a broadly consistent way across the country.

A 2018 evaluation of Primary Health Networks noted a lack of public documents that clearly outline the intent of PHNs and how they should operate.²³⁰ The evaluation recommended a new Program Framework to guide the work of PHNs, set within a long-term national strategy for primary care. However, the current Framework doesn't provide a clear set of directions for general practice.

The government must specify a clear, long-term strategy for primary care and how it fits into the broader health system. This vision should incorporate the five directions we outlined in Chapter 1, as well as core models of delivery, such as the multi-disciplinary teams discussed in Chapter 3. Some other countries, such as Wales, have good examples.²³¹

5.4 Purchasing care

Once planning is complete, PHNs move to the next stage of the commissioning cycle: buying services. This can be a powerful tool to improve care. Contracts can specify models of care, models of delivery, and the outcomes that providers need to achieve.

Purchasing can also go beyond contracting and 'shape the market'. This refers to building up the capacity to provide specified services. It might mean anything ranging from providing training to proposing a merger. It might mean establishing a new provider in a town where all the general practices have closed (see Section 4.4), but supporting unsustainable business models should only be a last resort.

230. Department of Health and Aged Care (2018).

231. Primary Care One Wales (2019).

PHNs can use purchasing to get hospitals and general practices to join up care for patients. PHNs can broker this kind of arrangement much more easily than individual general practices.²³²

But PHNs have limited purchasing power. One in three respondents to a survey of PHNs said their funding didn't reflect the full range of PHN responsibilities.²³³ This is not surprising: while PHN budgets have grown over time, they still only amount to 2 per cent of primary care spending.²³⁴

And PHN funding needs to stretch much further than general practice. Almost half of their commissioning budget is for mental healthcare, most of which is for specialised services outside general practice. While PHNs do have some flexible funding, much of it is for specific services or programs, such as GP respiratory clinics for COVID, or Headspace clinics for adolescent mental health.

PHNs roll out new services funded through the federal budget, launch pilots in partnership with state governments, and provide education and training for general practices. But they don't have the funding required to have a big influence on the physical distribution of services, or to drive wide uptake of new models of care and workforce roles.

PHNs should get more funding, and with it more accountability, based on revamped measures, targets, and data for monitoring system performance.

5.5 Monitoring care

Monitoring performance is the final stage in the commissioning cycle. It assesses whether goals for access to care, quality of care, population

232. One example is NSW's collaborative commissioning model, where the Department of Health works with PHNs and local hospital networks to pilot new models of care: Koff et al (2021).

233. PWC (2021).

234. Based on Grattan Institute analysis of PHN annual reports and AIHW (2021b)

health, and equity are being achieved. When goals aren't being met, PHNs should inform providers and help them improve.

This last stage of commissioning may be the most important. It determines how well the system is working and who is getting left behind. But unfortunately, PHNs and general practices are largely flying blind. The current measures that PHNs must monitor and report on provide little real insight on how general practice is performing.

Three big changes are needed to make monitoring meaningful.

First, some crucial data are not available to PHNs. Australia's health data are much more fragmented and siloed than in many other countries. Hospital data are collected and managed by the states, while general practice data collection are managed by the federal government and are limited in scope.

In most of Australia, general practices don't have data about their patients' visits to hospital. This results in many wasted hours trying to chase this information over the phone. It also means that PHNs cannot analyse linked hospital and general practice data. By doing this, they could find signs of problems in the system. Examples might be an absence of after-hours care resulting in people visiting emergency departments, or poorly managed chronic disease leading to avoidable hospital admissions.

The Lumos system in NSW has shown how linking up data across the system can provide valuable insights and support improvement (see Box 19). The federal government should ensure that PHNs across the country have access to this kind of linked data.

Second, patient outcomes and experiences should be measured routinely.

Box 19: The Lumos data program

Lumos is a collaboration between the NSW Department of Health and the 10 PHNs in NSW. It links up primary and hospital care data. More than 600 practices across NSW are participating, with almost half of NSW included in the most recent linkage.

Lumos provides general practices with automated reports about their patients, showing, for example, how often they go to hospital and how much of this was preventable. Practices can use the information to improve care and guide investment.

Because general practice patients covered in Lumos are representative of the NSW population, it can reliably be used to identify at-risk regions and groups, to guide the planning and design of health services, and to monitor their impact.^a

a. Correll et al (2021).

Patient-reported outcome measures capture what matters most to patients, such their level of pain and mobility. Patient-reported experience measures capture their views of care, such as whether they were listened to and whether they understood their clinician's instructions.²³⁵

These measures will help make sure that care is continually improving and that taxpayers are getting the best possible impact from their investment in general practice.

235. For examples, see Murphy et al (2018).

Finally, measurement of health inequity is too limited. There is no regular assessment of variation in performance across different neighbourhoods in a PHN catchment, or across different groups in the community, such as Aboriginal people, or people from culturally and linguistically diverse backgrounds. With the unacceptably large gaps in health outcomes outlined in Chapter 1, this should be a top priority for monitoring and improving performance.

There is no agreed, comprehensive set of indicators to measure general practice quality to solve these problems,²³⁶ but the Department of Health is working with PHNs on a new outcome framework. This is an opportunity to vastly improve how performance is measured. A new set of indicators should be developed and rolled out, starting in practices that adopt the new funding model described in Chapter 4.

Those measures should cover patient and staff experiences of care, population health, cost, and equity.²³⁷ Western Sydney University and PHNs in western Sydney are currently working with general practices to develop this kind of measurement approach, which is summarised in Table 5.1.

Table 5.1: Potential indicators of high-quality general practice

General practice attributes	Example measures
<p>Patient accountability: Evidence-based, person-centred and comprehensive care (chronic, preventive, and acute), with patient-care team partnerships as a key aim</p>	<ul style="list-style-type: none"> ● Patient-reported experience measures ● Patient outcome measures ● Patient activation measures ● Preventive care quality measures ● Chronic care quality measures
<p>Professional accountability: High-functioning multi-disciplinary teams provide continuing care that is coordinated and integrated with other services. Clinical governance, staff training, and data all support quality improvement</p>	<ul style="list-style-type: none"> ● Staff satisfaction ● Team-based care practices ● Care planning ● Data sharing with other providers ● Patient follow-up after hospital attendance
<p>Community accountability: Accessible, responsive to population health needs, and focused on providing equitable care</p>	<ul style="list-style-type: none"> ● Waiting times ● Community engagement practises ● Cultural safety ● Access for low socioeconomic patients
<p>Social accountability: Efficient stewardship of health resources</p>	<ul style="list-style-type: none"> ● Avoidable hospital care ● Duplication of care

Source: Adapted from Lau et al (2022).

236. Lau et al (2022).

237. Aiming for improvement in these five goals is known as the 'Quintuple Aim': Nundy et al (2022).

6 Making change happen

It is not a lack of ideas or evidence that is stopping change to Australia's primary healthcare system. In fact, Australia has been trying to make similar reforms to the recommendations in this report for decades. Previous trials and tests have yielded many lessons, and some successes. But none have led to a sustained, system-wide model.

Australia cannot afford to stay on a merry-go-round of trials and tests that go nowhere, while chronic disease rates get worse. The next reform needs to stick, and that will require a multi-term strategy that brings together the changes to funding, regulation, and governance detailed in this report. This chapter shows the steps needed to succeed:

- first, a compelling **vision** of what general practice should look like, that is backed by evidence and has workforce support
- second, **sufficient planning and communication** to get the details right and build support
- third, **implementation support** for the front line to turn the vision into reality, starting with general practices that are ready for change
- finally, a **long-term commitment** to expand that vision from early adopters into widespread practice, with a credible pathway and multiple checkpoints to evaluate and adjust the model.

6.1 A shared vision for a new Medicare

Australia's last primary care reform trial, Health Care Homes (HCH), has recently ended. As Figure 6.1 on the next page shows, HCH had major problems attracting general practices to participate. It

also suffered huge attrition, with a third of patients, more than half of practices, and many PHN support staff leaving the trial.²³⁸

The HCH evaluation found a key barrier for GPs was the lack of a compelling case for change.²³⁹ General practice staff also struggled to clearly explain the model and the benefits to patients.

Future reforms need to invest much more time upfront in engaging clinicians and the community in a shared vision. This must include partnering with people outside government to make the case for change, co-design the new model, and clearly show how patients, practices, and primary care workers will benefit.

Government then needs to support general practices to engage both staff and patients. This will include giving them practical guidance on how to clearly communicate the benefits of an initiative and address concerns for different audiences, such as patients, carers and families, and practice staff.²⁴⁰

238. Many of the practices that dropped out had enrolled few or no patients, hence the discrepancy between these numbers: Department of Health and Aged Care (2022a, p. 9).

239. Ibid (p. 26).

240. Ibid.

Figure 6.1: More pilots than Qantas – what we have learned from three decades of primary care reform trials

Trial	Funding model	Results	Implementation lessons
Coordinated Care Trials I (1997 to 1999) <ul style="list-style-type: none"> Randomised controlled trial (RCT) 16,000 patients Many trial sites ran for only 1 year Tried models of care coordination, care planning, and funds pooling 	<ul style="list-style-type: none"> Fully flexible funding, drawn from Commonwealth and state health funding streams, and pooled Care coordinators submit patient care plans to an area health authority who disburses funds 	<ul style="list-style-type: none"> No impact on health-related quality of life No reductions in hospital use Increased cost High patient satisfaction 	<ul style="list-style-type: none"> Over-funding patients with only mild need increases cost, with no benefit Rushed timelines for design and implementation reduce impact Funding reform alone is not enough to drive behaviour change
Coordinated Care Trials II (2002 to 2005) <ul style="list-style-type: none"> RCT design at some sites 1,175 patients Trial sites ran from 21 to 29 months Tried models of care coordination, care planning, and funds pooling 	<ul style="list-style-type: none"> As above, with new risk-weighted funding approach A true pooling of funds was not achieved, because states were unable to fully commit funds due to their cost exposure risk 	<ul style="list-style-type: none"> Increased primary care access while reducing hospital use Improved patient self-management capability Improved self-reported health High patient satisfaction Promising decline in cost trend 	<ul style="list-style-type: none"> Implementation is very difficult at both a system and practice level Poor systems and management do not self-correct, they deteriorate Funding reform and workforce recruitment are critical to encourage and enable care coordination
Diabetes Care Project (2011 to 2014) <ul style="list-style-type: none"> RCT (1 control, 2 intervention groups) 5,651 patients completed (all diabetics) Minimal participant attrition (16%) Trial sites ran for 18-to-22 months 	<ul style="list-style-type: none"> Blended funding model, comprising MBS visit fees, risk-weighted flexible funds, and performance payments Salaries were provided for Care Facilitators, and access to some MBS items (allied health services) was expanded 	<ul style="list-style-type: none"> Better physical health Better mental health Reduced health risks Improved quality of care Very promising decline in cost trend (but not yet statistically significant) 	<ul style="list-style-type: none"> Practices will use new tools and supports if they are given incentives to do so Funding reform is essential, and blended models with well-designed performance payments can work Addressing unmet need may improve outcomes but cost more
Health Care Homes (2017 to 2021) <ul style="list-style-type: none"> Non-experimental (lower quality) design 9,000 patients Very high attrition (53% of practices) Trial sites were to run for 2 years, but were extended after enrolment delays 	<ul style="list-style-type: none"> Blended model (with flexible funding for chronic disease care and MBS fees for other care) Only 3 tiers of funding for all chronic disease patients (compared with 5 for diabetes alone in the Diabetes project) 	<ul style="list-style-type: none"> No change in patient satisfaction No change in health outcomes No change in avoidable healthcare or hospital use No improvement in costs Improved access Improved care planning 	<ul style="list-style-type: none"> GPs need a clear vision with compelling evidence to buy in to the model Practices need clear guidance and sufficient implementation support Staged implementation is needed to close practice capability gaps Simplistic funding models expose practices to excessive costs

Notes: The Health Care Homes trial featured a non-experimental design: while propensity score matching was used to adjust for differences between participating and non-participating practices (for example, difference in patient health status), the lack of randomisation in practice enrolment means there is still a high risk of bias in the results. Aboriginal Coordinated Care trials excluded, because they had distinct aims and outcomes.

Sources: Esterman and Ben-Tovim (2002), Department of Health and Ageing (2007), Department of Health and Aged Care (2015), Fountaine and Bennett (2016) and Department of Health and Aged Care (2022a).

6.2 Planning and engagement are vital

It takes time to get the detail of reform right, and the cost of getting it wrong is high. For example, if Commonwealth and state regulations do not fully enable clinicians to work to the extent of their professional capabilities, as described in Chapter 3, there will be expensive double-handling of patients rather than true team care.

Poor design was a recurring theme in the HCH evaluation, which details a multitude of failings – from a crude funding model that did not cover the costs of caring for patients who have complex or comorbid conditions, to an onerous enrolment process that took time away from implementation, to training that was too time-consuming.²⁴¹

Many previous reform trials have suffered from design problems and underestimated the time required for implementation, as Figure 6.1 on the preceding page shows. However, these trials steadily improved over time, with each heeding many of the lessons of the trial that came before it. By the third trial (the Diabetes Care Project), very promising patient outcomes were starting to emerge. It is sobering that the HCH trial not only failed to lock in these gains and build upon them, but instead had a poorer design, with less uptake and worse outcomes, than most of the trials that preceded it.

The last public capability review of the federal Department of Health found a deep-seated commitment among staff. But the review also found poor governance arrangements and delivery frameworks, and reported concerns about stakeholder capture.²⁴² This poses risks to design and delivery of a complex reform program, particularly one requiring challenging change.

To manage these risks, government should start design, planning, and consultation now, with implementation from 2024 (Figure 6.4

241. Ibid.

242. Australian Public Service Commission (2021).

on page 70). Government should also establish an independent, expert steering committee to oversee design. While consultation with workforce groups should be extensive, the steering committee should be composed of implementation experts and healthcare consumers who do not have vested interests.

6.3 Practices need to be ready for change and well supported

Overall, there were variable capacities amongst practices to undertake and manage significant change. This reflects that practices are busy places with little ‘absorptive capacity’ for innovation, mostly due to their small size. Also, practices operate in a culture of fee-for-service as the main payment mechanism and, therefore, a large shift in mental models was required... Many practices were not ready for this scale of change.

– Evaluation of the Health Care Homes trial²⁴³

It is easy to underestimate how hard change is for general practices, many of which already report high levels of stress and burnout. Most change is hard, and new models of care go beyond simple tweaks to processes. They involve new ways of thinking about roles, responsibilities, and relationships.

A series of trials has shown that choosing clinics that are ready for change, and then providing the right support, is essential for success.

Not all practices want to change and can change. Adapting to a blended funding model will not be straightforward, because it involves general practices managing new risks.²⁴⁴ Working with a more diverse care team will also require a lot of change in work practices, with more

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

244. Under our recommended model, if a patient deteriorates, requiring many unplanned GP visits, some of the cost of those extra visits will fall on the practice, unlike under the current funding model. This is by design, because it creates a stronger incentive to keep people healthy. But it does mean that practices will need the sophistication to weigh up, monitor, and plan for risk.

collaboration and more oversight and support of others from GPs (Chapter 3).

But in the HCH trial, some practices saw no need to change and did not want to expand their care team. In participating practices, only half of GPs signed up for the initiative, signalling a lack of commitment.

Government should require practices to commit to four foundational building blocks of high-performance general practice (Figure 6.2). All GPs should agree to participate and help lead change, data must be collected and shared, patients should be enrolled, and team-based care should be in place or planned.

Government should also set clear expectations of general practices, specifying the model they will need to implement and the core operational practices required to support it.

Practices must also have enough support. Quality improvement is often well-funded in hospitals, with staff trained in evidence-based improvement methodologies, internal roles for this work, and support from dedicated government agencies to do it.²⁴⁵ This is not the case in general practices.

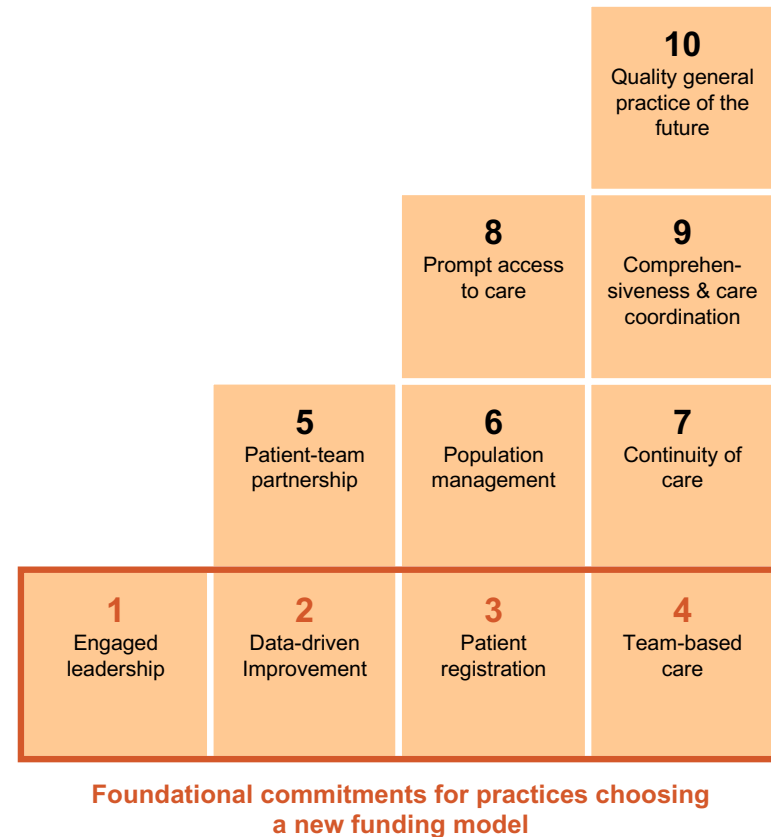
The \$10,000 provided to each practice in HCH was inadequate. It initially attracted practices, but it quickly became clear that money did not cover participation costs. We recommend an average of \$25,000, with more for bigger practices, in change-support funding. We also recommend a 5 per cent boost in funding for participating practices to help cover data capture and change costs.

Practices participating in the new funding model should also have priority access to the \$220 million of general practice infrastructure grants announced by the Federal Government.²⁴⁶ This will help fund

245. For example, ACI in NSW, Safer Care Victoria, Clinical Excellence Queensland.

246. Woodley (2022).

Figure 6.2: Clinics in new funding models should commit to four key building blocks



Sources: Bodenheimer et al (2014) and Saint-Pierre et al (2018).

bigger teams, and reconfiguration of practices to makes spaces for team collaboration, group sessions, or other new workflows.²⁴⁷

On top of financial support, expertise and time are essential. There should be leaders in each participating practice who have protected time to plan and manage change. They should be supported by expert facilitators in Primary Health Networks, and at a regional or national level.²⁴⁸

The broader health system also needs to help. The Department of Health and professional colleges, including the Royal Australian College of General Practice, can provide important leadership and guidance, as can patient advocates and leading clinicians. This multi-level approach to supporting change is shown in Figure 6.3.

6.4 Expanding the vision into sustained, system-wide change

To date, no major reform of primary healthcare in Australia has moved from trial to sustained, system-wide change.²⁴⁹

To achieve system-wide reform, there needs to be long-term commitment, not just a trial lasting just a few years. The aim should be to roll out the new model for general practice over two terms of government, reaching at least 1,000 clinics over the next five years.

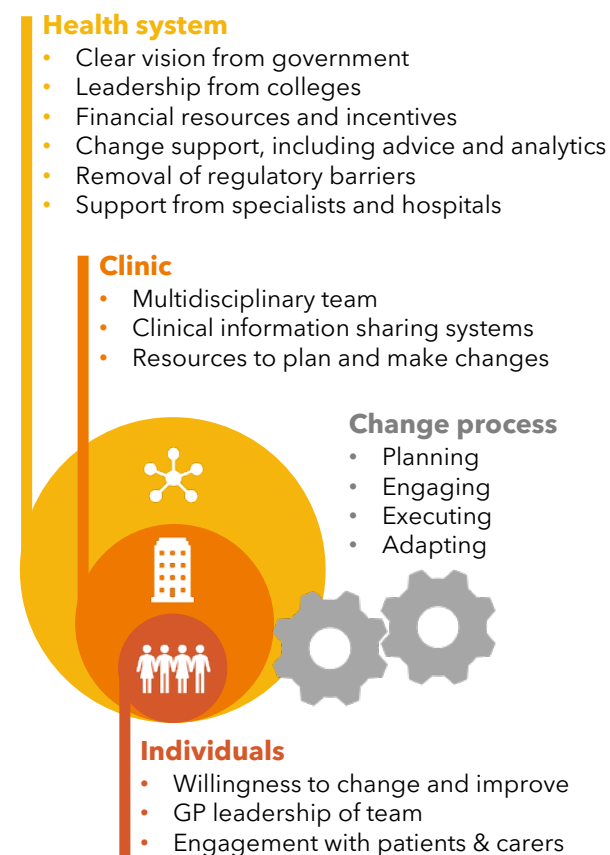
No model will get everything right the first time, so there should be regular review and refinement, particularly of the funding model. Figure 6.3 shows where these stages can be incorporated into the rollout.

247. Including development of virtual team workflows, where appropriate.

248. The HCH evaluation recommended a GP, nurse, and practice manager change team within general practices. It also recommended combining regional or national change facilitators and PHN change facilitators to mix local context and relationships with sufficiently deep change expertise.

249. The coordinated care trials did have a second phase that improved on the design of the first.

Figure 6.3: What each level of the health system will need for this reform to succeed



Source: Adapted from the Consolidated Framework for implementation Research: CFIR (2022).

Not every general practice will have the capability and appetite to implement a new model now, and PHNs will not be able to support all practices at once. Staggering implementation²⁵⁰ could help with refining processes and information systems, and result in more efficient and better use of resources to support general practices.

6.5 Balancing and phasing investments

All of our recommendations can be funded with the \$250 million a year that the Federal Government has set aside for Strengthening Medicare. To fit within this budget, we have prioritised the most important reforms that will make the system more effective, fairer, and sustainable.

Most of the money should be spent on the health workforce, with a 5 per cent increase in funding for GPs under our proposed new funding model, 1,000 new workforce roles, specialist medical advice for GPs, and \$15 million a year to fill rural access gaps.²⁵¹

Because we recommend gradually expanding the new funding model and workforce roles, there would be money available in 2023 for extensive planning and engagement to build a strong foundation for reform. That should include \$32 million for:

- Consultation, co-design, and communication
- Designing the funding model
- Changing workforce regulations
- Developing a digital and data strategy

250. For example, through a stepped-wedge model, where participating practices gradually but randomly move from the control group into the intervention group. This is a pragmatic study design which can reconcile the need for robust evaluations with political or logistical constraints: Hemming et al (2015).

251. The total investment in filling rural access gaps would be \$30 million a year, because we propose funds-matching by the states.

- Planning the Department of Health's approach to strategic commissioning.

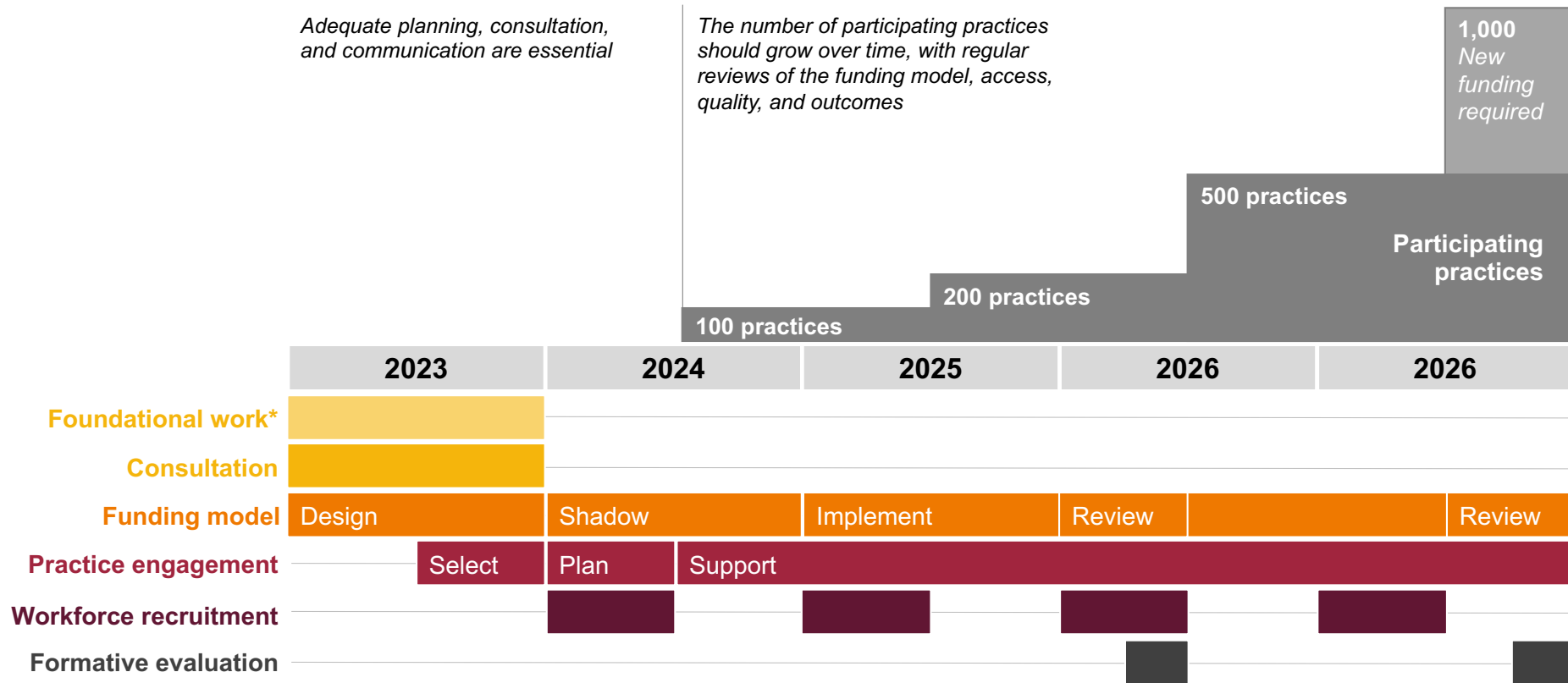
Managing this complex system transformation will be a big challenge for the Department of Health and for Primary Health Networks (PHNs). They should actively support participating practices, while constantly adjusting to the inevitable challenges and lessons as the roll-out progresses. The vast bulk of funding should go towards providing care, but under-investing in designing and supporting change could squander this once-in-a-generation opportunity to improve the system.

We recommend an investment of \$3 million a year for three years for the Department of Health to fund strategic commissioning and project management. PHNs' growing role should be funded through a standard commissioning fee on the investments they manage.

By 2026, 500 practices would be using a better funding model and an expanded workforce team. Based on the results, a future government could further expand them, increasing the number of participating practices to 1,000.

Our proposed phasing of reform is illustrated in Figure 6.4. More information on our costings is in Appendix D.

Figure 6.4: Proposed implementation timeline



Notes: *Changes to workforce regulations, digital and data strategy, developing strategic commissioning approach (see Section 6.5). 'Shadow' indicates a period of shadow billing, where practices continue to be remunerated under the current funding model but also record their activities as they would be billed under the new model.

Source: Grattan analysis.

Appendix A: Trialling new workforces

A.1 Social prescribers ('link workers')

Social and economic problems have a huge impact on people's health, as Chapter 1 showed. And while tackling these problems is often needed to improve health, GPs are not best placed to do this work.

To overcome this, the UK is using a new workforce of social prescribers or 'link workers'.²⁵² They help patients solve social or economic problems that have an impact on their health, for example by connecting patients with local community groups, activities, and services, or helping them seek practical advice on issues such as debt or housing.²⁵³ Link workers are an inexpensive workforce, with valuable skills and experience but minimal formal training.²⁵⁴

The evidence about the value of link workers is mixed.²⁵⁵ There is a great need for strategies to address social determinants of ill health in Australia, and there have been calls for this workforce to be introduced.²⁵⁶ Given the limitations of evidence, we recommend a small trial of the link worker model. The results of the trial should be independently evaluated to determine whether the model should be introduced more widely.²⁵⁷

252. Schemes based on the social prescribing model have been developed in countries including Canada, New Zealand, the Netherlands, and Singapore: Fixsen and Polley (2020).

253. Ranging from health and fitness programs to movie clubs and meditation.

254. NHS (2022b).

255. One randomised control trial found better general health, with less pain and greater ability to perform daily activities, but not improvements in mental health, fitness, or social support and activities: Pescheny et al (2019).

256. RACGP (2019).

257. This approach is consistent with the recommendation of a recent systematic review, which found a lack of evidence for social prescribing and urged evaluation of current programs before they are mainstreamed: Kiely et al (2022).

A.2 Behavioural health consultants

Behavioural health consultants (BHCs) are masters-qualified clinicians who have worked in mental health nursing, psychology, or social work, and trained to apply these skills in primary care.²⁵⁸

BHCs help clinics meet demand in three ways. They provide patients with rapid access to mental health and addiction services. They deliver health coaching. And they upskill other staff in patient collaboration and improve the functioning of multidisciplinary teams.

Millions of patients see BHCs in the US.²⁵⁹ They are now being directly funded in the UK²⁶⁰ and in New Zealand²⁶¹ following successful trials. A 2018 systematic review found robust evidence that the BHC model improves access to care, and emerging evidence that it improves mental health outcomes,²⁶² but the quality of evidence is low and further research is needed.²⁶³

We recommend introducing the BHC model in Australia on a trial basis, with ongoing funding subject to evaluation after three years.

258. Their jobs are part of a broader global shift towards integrating mental health services into primary care: Reiter et al (2018).

259. Hunter et al (2018).

260. NHS-2022-integrating-mental

261. Health Navigator New Zealand (2022).

262. It delivers shorter wait-times for treatment, and increases the likelihood of patients engaging in care and attending more visits: Possemato et al (2018).

263. Ibid.

Appendix B: GP supply and practice sustainability

According to many commentators, general practice in Australia is in crisis. It has been suggested that Australia has too few GPs, who are paid too little to keep their practices afloat.²⁶⁴

There are limits to what data can and cannot tell us about GP shortages and the financial viability of practices. The pandemic has caused major disruptions to the health sector and has changed the care needs of many Australians. New demand, more complex care needs, or pent-up unmet demand from the pandemic could all be putting more pressure on general practices.

But this chapter shows that, on balance, there is little to suggest that a significant decline in GP supply is causing current pressures, or that GP supply is structurally too low. There is also little evidence to suggest that most GP clinics are financially unsustainable.

B.1 There is little to indicate Australia faces a nationwide GP shortage

There are three main types of indicators that can be used to establish whether Australia faces a shortage of GPs: demand for GP services; GP supply; and indicators of the balance between demand and supply, such as waiting times and fees.

It is hard to determine demand for GP services. We do not know the precise health status of each Australian, or the 'right' amount of GP care they need.

The other two measures – GP supply, and indicators of the balance between supply and demand – are the most helpful to establish whether national shortages exist.

264. The Age (2022); and Hooton (2022).

As the following sections explain, neither measure suggests Australia faces an aggregate shortage of GPs. GP supply is higher than historical and international comparisons and will continue to grow.

B.1.1 Australia has more GPs than in the past, and more than many other countries

By historical and international standards, Australia has many GPs. Per 100,000 people, there are about 120 full-time equivalent GPs working in Australia (Figure B.1 on the next page). This is higher than at any point in the past: in 2016 this figure was about 108, and it was as low as 70 in the 1980s. GP supply has also kept pace with the quickly growing number of Australians older than 65, who are more likely to need more care.

GP attendance rates highlight that supply is keeping pace with historical demand. With the exception of children younger than 10, patients in all age groups received more GP care in 2021 than they did five years earlier.²⁶⁵ And there is no evidence that GPs are shortening consultations to fit more in. The average length of a consultation has been steady over time,²⁶⁶ and the proportion of consultations more than 20 minutes long has steadily increased from 10.6 per cent in 2009 to 20.3 per cent in 2021.²⁶⁷ Seventy-six per cent of patients thought their GP spent enough time with them in their consultation or consultations

265. Department of Health and Aged Care (2022b).

266. Irving et al (2022).

267. Grattan analysis of medicare item reports: Services Australia (2022b). However, the increase in the proportion of type C (20-to-40 minute) consultations has been offset by a increase in the proportion of type A (6-minute or shorter) consultations, probably due to deficiencies in the funding model, as explored in Chapter 4.

in 2021, close to the highest point in the past five years.²⁶⁸ There has also been no drastic increase over time in GPs' stated intention to retire: in 2014, 13 per cent of GPs intended to retire in the next five years, compared to 15 per cent in 2020.²⁶⁹

International comparisons are also favourable to Australia. Compared to the OECD average, more Australian doctors are GPs, and we have more GPs relative to our population (Figure B.2 on the following page).²⁷⁰ However, this could also be driven by Australia's deep reliance on GPs and the absence of many broader workforce roles in general practice, as outlined in Chapter 3.

B.1.2 Many more GPs are on the way

Australia's GP supply for the longer-term also looks assured, because governments have made decisions to boost the number of domestic and international graduates.

Domestic graduate numbers have increased

Responding to concerns about medical workforce shortages in the early 2000s, the federal government substantially lifted the number of domestic medical student places over time.²⁷¹ Between 2004 and 2016, the number of placements increased by more than 150 per cent, from 1,300 to 3,300 per year.²⁷²

This has significant flow-on effects for GP supply. Between 2011 and 2016, the number of GPs in training increased by 80 per cent, from

268. ABS (2021).

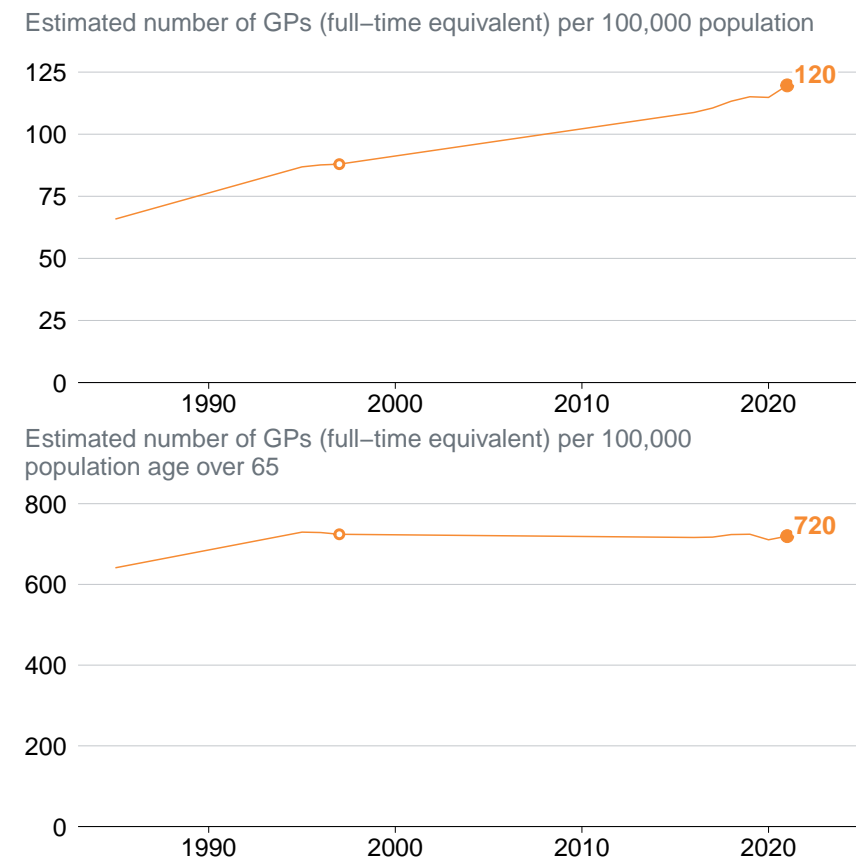
269. Grattan analysis of DHAC-2022-Tool.

270. OECD (2022b).

271. Productivity Commission (2005).

272. O'Sullivan et al (2019).

Figure B.1: The number of GPs per person in Australia has significantly increased over time, and is keeping pace with ageing



Note: ○ represents series breaks.

Sources: Grattan analysis of AIHW (1998) and Department of Health and Aged Care (2022b).

3,156 to 5,689 (Figure B.3 on the next page).²⁷³ The number of training places has remained at or above 5,600 since.

The full benefit of this increase is yet to be felt because many of the graduates are still likely to be in training. A student who began an undergraduate medical course in 2016 probably finished their medical degree in 2020. Their GP training, which can last another four years, is likely to be ongoing.

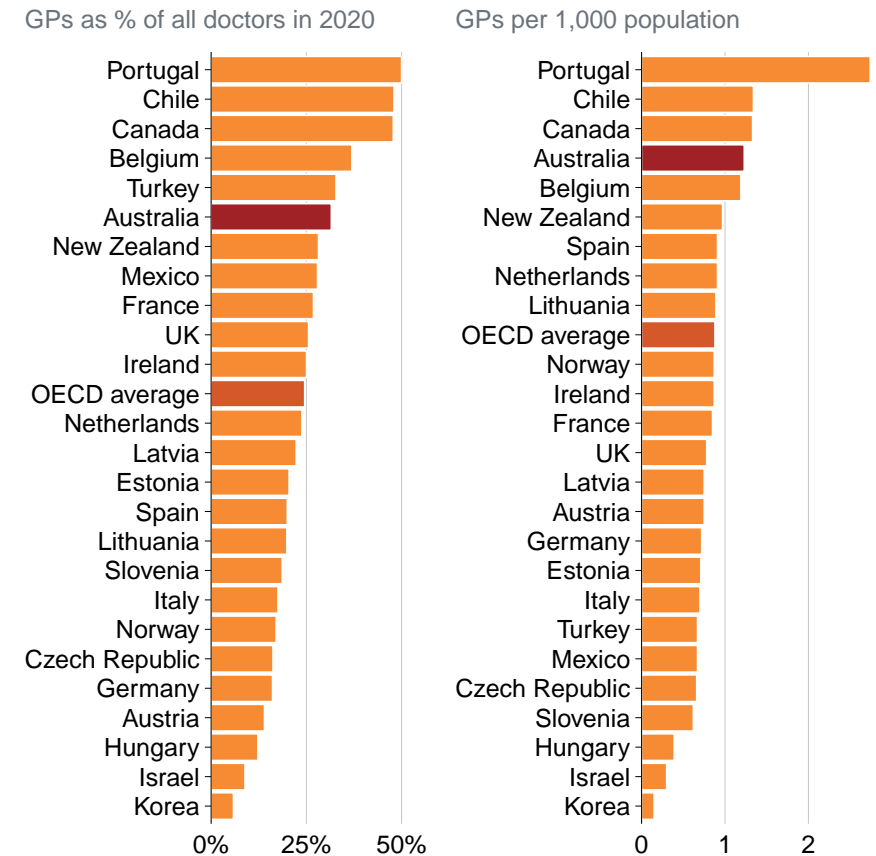
And students who enrolled in medical school between 2004 and 2016 are likely to be young, even if they are already working as GPs. This affects supply, because younger GPs are significantly more likely to work part-time compared to older GPs. There are 0.57 full-time equivalent staff for each GP younger than 39, compared to 0.88 for each GP older than 39.²⁷⁴ As this large, younger cohort ages, they are very likely to increase their hours and this will further boost GP supply.

More international graduates are on the way

In September 2022, the government announced changes to the skilled migration cap.²⁷⁵ The number of visas offered across all skill categories was increased by more than 20 per cent, from 160,000 to 195,000 places.

General practice remains on the priority migration skilled occupation list,²⁷⁶ making it likely that the number of GPs arriving in Australia will also increase. And, because overseas trained doctors must work in rural and remote areas, this will contribute to boosting supply in areas with fewer GPs.

Figure B.2: Australia has lots of GPs



Source: Grattan analysis of OECD (2022b).

273. Data on earlier periods is not available.

274. RACGP (2022a, p. 15).

275. Xing et al (2022).

276. Department of Home Affairs (2022), as of October 2022.

Migrant doctors (‘international medical graduates’, or IMGs) are a vital part of Australia’s GP workforce. When measured as full-time equivalent GPs, IMGs make up more than 50 per cent of the GP workforce.²⁷⁷

B.1.3 Other indicators also do not point to a GP shortage

Waiting times

Before the pandemic, patient-reported waiting times had been steadily improving. In 2020, the proportion of Australians waiting ‘too long’ for a GP appointment was 17 per cent, the lowest figure recorded in a decade, down from 23 per cent in 2014.²⁷⁸ Although this figure increased in 2021, to 23 per cent, this reversal in the long-term trend is probably due to a surge of demand caused by the pandemic, not a deterioration of GP supply.

Fees and bulk-billing rates

Fees and bulk-billing rates give an indication of the balance of supply and demand, because they indicate how much competition there is between GPs. If a market has many GPs and few patients, GPs will need to compete for patients.

There is good empirical evidence to show that GPs often do this by bulk-billing more often.²⁷⁹ Conversely, when supply is too low, GPs can bulk-bill less often without fear of losing patients.

During the late 1990s and early 2000s, a significant fall in bulk-billing rates was partly caused by low GP supply, and poor competition.²⁸⁰

277. Department of Health and Aged Care (2022b).

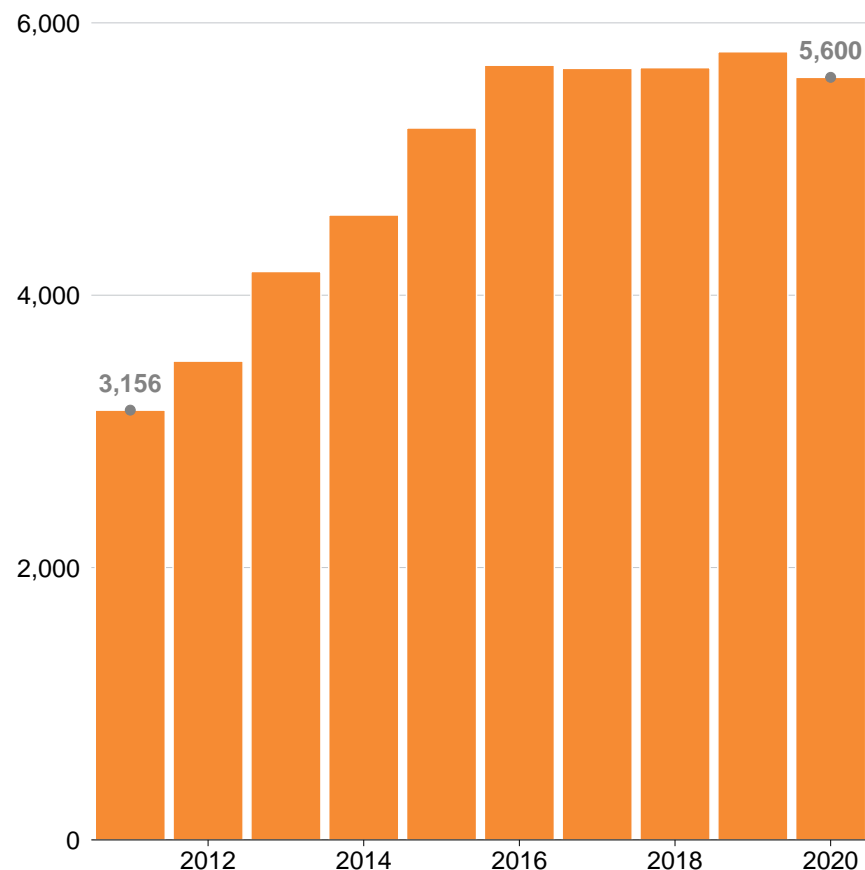
278. However, as noted in Chapter 1, wait times are not consistent everywhere, and rural areas do report longer waiting times compared to inner areas: ABS (2021).

279. Gravelle et al (2016).

280. Hopkins and Speed (2005b); and Department of Parliamentary Library (2002).

Figure B.3: The number of training places for GPs has substantially increased over time

Total number of students on Australian GP-training pathways



Note: Includes GPs in the AGPT (Australia General Practice training) Program, RACGP PEP (PracticeExperience Program) standard stream, ACRRM (Australian College of Rural and Remote Medicine) Independent Pathway, and the Remote Vocational Training Scheme.

Source: RACGP (2021).

Current rates indicate there is still strong competition in the market, despite consolidation of practices over time.²⁸¹

Although there has been recent media speculation about a bulk billing ‘crisis’,²⁸² current bulk billing rates remain high and are in line with the long term average (Figure B.4).²⁸³ Bulk billing rates fell sharply in the most recent quarter, from 87 per cent to 83.4 per cent. Before the most recent result, bulk billing rates were still above the pre-pandemic average. It is too soon to determine whether this is a blip or the start of a trend. Either way, it is a sharp discontinuity, suggesting it is not the result of structural workforce under-supply.

While co-payment fees have risen at a faster rate than inflation over the past decade, there is no evidence to suggest that many GPs have been profiteering from a lack of competition. If competition was poor, profit margins would be expected to rise as GPs raise their prices and as bulk-billing rates fall. But recent analysis from the Melbourne Institute found that GP profit margins have remained relatively steady over the past decade, between about 35 and 38 per cent of turnover.²⁸⁴

Given the strong growth in supply, which will continue, and a lack of other key indicators pointing toward too few GPs, it is difficult to substantiate the argument that there is an aggregate shortage of GPs in Australia.

281. Bulk-billing rates are notably lower in less competitive markets, and there is some evidence of consolidation in the GP sector: Scott (2022). Although data on bulk billing rates are not perfect, because they are reported per service, not per patient, this finding is consistent with other research conducted before the pandemic: Scott (2019).

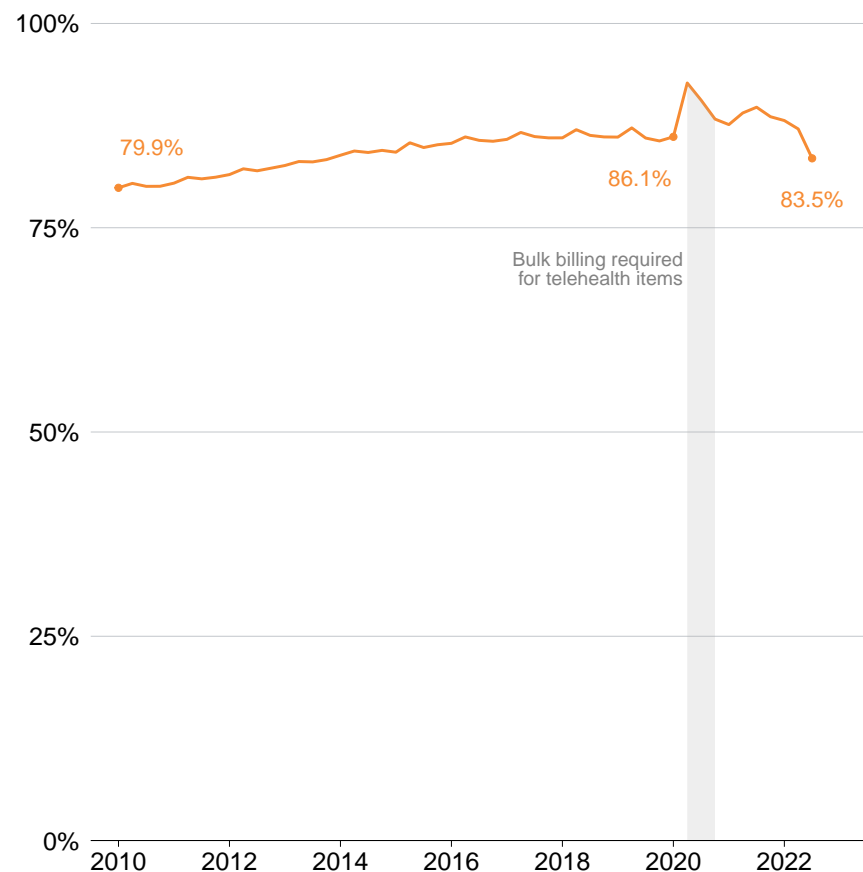
282. the-age-bulk-billing-crisis

283. Bulk billing rates reached an all-time peak in Q1, 2020 as a requirement to bulk-bill all services provided over telehealth was introduced on March 13, 2020. This requirement was lifted in October, 2020, and bulk-billing rates since fallen, and are now closer to the pre-pandemic trend.

284. Scott (2022).

Figure B.4: Bulk billing rates have fallen, but remain in line with the long term average

Proportion of GP services bulk billed, national rate



Source: Department of Health and Aged Care (2022c).

Note: Data is for non-referred GP services. The proportion of services bulk billed is not equivalent to the proportion of patients bulk billed, as some patients may require more than one service.

B.2 There is little evidence to suggest most GP practices are financially unviable

Another key concern about the GP sector is financial viability. In part, these concerns have been stoked by the MBS freeze, as well as impacts from the pandemic.

In a recent survey, 48 per cent of GPs said it was ‘financially unsustainable’ to continue practising as a GP.²⁸⁵ While this is concerning, the available data do not point to a sector that is financially unsustainable.

B.2.1 Many GP clinics are still very profitable

Compared to many other comparable sectors, median GP profit margins are high and have remained steady over time, at about 35 to 38 per cent of turnover (Figure B.5).²⁸⁶ Margins did fall slightly during the pandemic, but this was probably due to higher costs (such as on personal protective equipment and other equipment), and may not be sustained over the long term.

Median practice turnover also continues to grow over time. Profits fell slightly in 2020, but have since rebounded.²⁸⁷ Total profits – which are often GP incomes – remain considerably higher than in many similar professions, and there is no sign these are diving. As of 2021, GP earnings after inflation were growing at about 1.1 per cent per year, roughly in line with broader wage growth.²⁸⁸ This all helps explain why few GP firms are exiting the market.²⁸⁹

The available data on profitability are only for the median general practice, and therefore could exclude a proportion of lower-earning

285. RACGP (2022a).

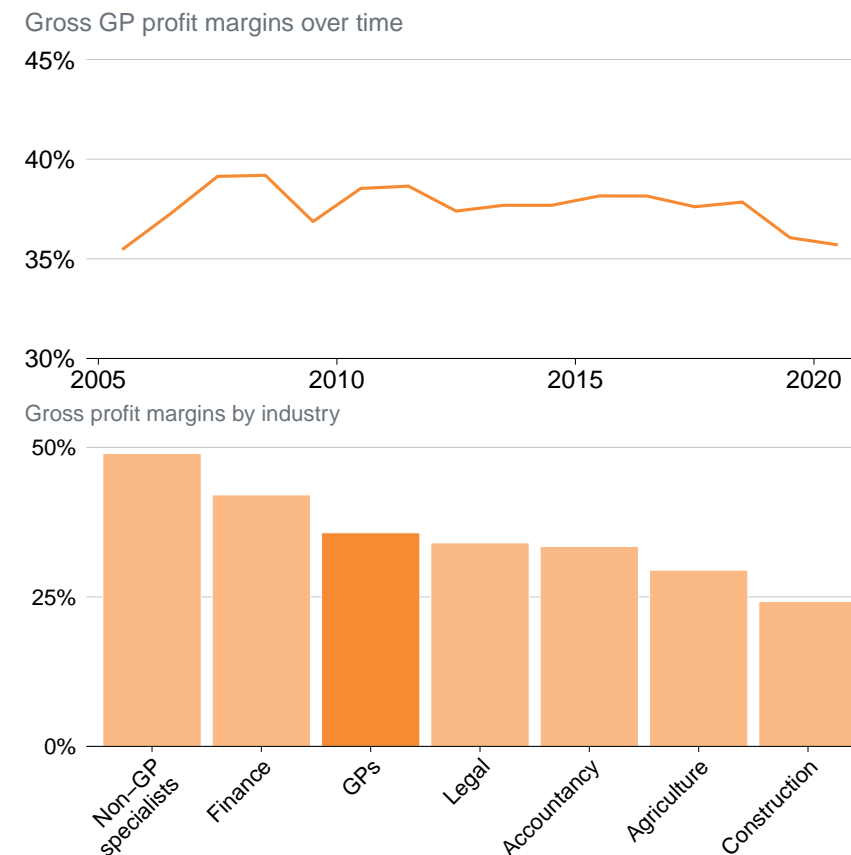
286. Scott (2022).

287. Ibid.

288. Scott (2021b).

289. Scott (2022).

Figure B.5: GP profit margins are steady and high



Source: Scott (2022).

practices that may be facing bigger financial challenges. But the data indicate that many GP firms are still very profitable. Further, the recommendations detailed in this report would be likely to boost earnings for GPs earning below the median, such as bulk-billing clinics in rural or poorer areas that may be under more stress.

Appendix C: Designing a voluntary patient enrolment model

Because enrolment requires patients to give up flexibility about which GP they see, it has to offer things in return. Most countries achieve near-universal voluntary enrolment²⁹⁰ through policy ‘sticks’ (such as higher co-payments for unenrolled patients),²⁹¹ ‘carrots’ (such as faster access),²⁹² and free services (such as screening and preventive care).²⁹³

Under our proposed model, patients would need to visit the practice they are enrolled with to get the flexibly funded aspects of chronic disease care.²⁹⁴ Practices should also have to give priority to their enrolled patients for appointments.

However, we do not recommend penalising patients for visiting other practices, for example by, reducing subsidies or withholding access to telehealth. Patients with chronic conditions who see multiple GPs often do so because waiting times for their clinic are too long.²⁹⁵ Under an enrolment model, this happens when practices enrol more patients (collecting more fees) than they are able to care for. This is something general practices should be penalised for, not patients.

290. Enrolment is mandatory in some areas, such as in the UK and Netherlands:

Kalucy et al (2009). However, it will have to be voluntary in Australia because of our constitution, which grants the Commonwealth Parliament power to legislate with respect to ‘medical and dental services (but not so as to authorise any form of civil conscription)’: Department of Parliamentary Library (2002).

291. This occurs in New Zealand (Kalucy et al (2009)) and also Denmark: Kringos et al (2015).

292. GPs in Norway and Ontario have to give priority to enrolled patients: Kalucy et al (2009)

293. As is offered in Denmark: Kalucy et al (ibid). Healthcare workers are then also motivated to participate when doing so offers clinical benefits for their patients: Baillie et al (2022).

294. This care is less urgent, and it is not practical for flexible budgets to be spread across multiple clinics.

295. Along with other issues such as GP specialisation: Cosgriff et al (2020).

Enrolment also has to be attractive to general practices.²⁹⁶ The blended model will offer increased funding to practices serving high-need patients. And it will give all practices the flexibility to see more patients through multidisciplinary care teams.

Clinics must be accountable for providing timely access to their patients. When their patients go to other practices, or emergency departments for primary care-type services, their usual general practice should have to pay part of the costs, up to a cap. It has to be easy for patients to change the clinic they are enrolled with when theirs is not providing timely access or quality services, or is hiking up co-payments. And in time, clinics need to be accountable for outcomes (Chapter 5).

296. Some countries increase attractiveness by increasing net funding for clinics participating in an enrolment model (for example, Ontario and Germany). However, the primary aim of the new funding has been to improve population health, with enrolment the mechanism for distributing it to where impact is greatest. Uptake of enrolment models has been a secondary benefit only.

Appendix D: How we costed our recommendations

This appendix details the assumptions we used to cost our recommendations. Table D.3 at the end of this appendix gives a summary of costs over time for each recommendation.

D.1 Workforce

We estimated the cost of the additional workforce using publicly available salary estimates of the different workforce roles (Table D.1).

We assume that the new roles will be an even mix of the workforce roles included in Table D.1. Because this table includes some more expensive roles for which there are few currently available staff (such as nurse practitioners and physician assistants), assuming an even mix of staff is likely to produce a conservative estimate.

We assume that on-costs are 18 per cent of salary rates, each worker requires a fixed practice cost of \$30,000 per year, and that Primary Health Network fees to cover administration and costs are 10 per cent of total costs per worker. We assume wages will grow at 3.75 per cent per year.²⁹⁷

Because the new multidisciplinary workforce would be available only to practices which opt into the new funding model, the funded workforce would get larger over time: from 100 practices in 2024, to 500 in 2026 (Figure 6.4 on page 70). We assume that the first wave of 100 clinics in 2024 would each have 2.5 full-time equivalent workers funded on average. Because the first wave would probably include clinics with more complex case-loads, we assume that the funded staff per clinic in the second and third wave of clinic enrollments in 2025 and 2026 would decline by 10 per cent per year.

297. Treasury (2022, p. 63).

Table D.1: Workforce salary estimates

Workforce role	Salary estimate	Total yearly cost (including on-costs, fixed costs, and PHN fees)
Enrolled nurse	\$57,274	\$107,342
Registered nurse	\$73,507	\$128,412
Physiotherapist	\$78,000	\$134,244
Pharmacist	\$100,000	\$173,939
Paramedic	\$85,599	\$134,244
Nurse practitioner	\$92,294	\$152,798
Physician assistant	\$130,170	\$201,961
Dietitian	\$90,492	\$145,830
Podiatrist	\$92,544	\$153,123

Notes: PHN = Primary Health Network. On-costs are assumed to be 18% of the salary estimate. Each worker is assumed to require \$30,000 of fixed costs per year. Fees to PHNs to cover administrative costs are assumed at a rate of 10% of the salary estimate.

Sources: Various sources.

With these assumptions, we estimate that the additional workforce would cost \$40 million in 2024, \$74 million in 2025, and \$174 million in 2026.

D.2 The new funding model

Fee-for-service and patient budgets for participating practices would be funded through Medicare

Under our proposed funding model, participating practices would no longer only receive fee-for-service payments. Instead, about 30 per cent of revenue would be through fee-for-service payments, and 70 per cent would be via ‘capitation’, or per patient, payments.

The fee-for-service component of the new model could be implemented by adding new MBS consultation items, which would be remunerated at 30 per cent of current rates. The capitation payment should be weighted based on patient need, and would be linked to patient enrolment.

Together, the value of these payments would be similar to what practices earn through the MBS today. As a result, both these payments would be funded through Medicare; they would not be ‘new’ funding.

Although there is a risk that Medicare costs could increase under the new model, our assessment is that that risk is small and could be mitigated over time. Costs could increase for three reasons:

- GP billing and consultation patterns change under the new model²⁹⁸
- Enrolled practices receive larger than expected capitation payments, because of the way the funding model is weighted²⁹⁹

298. For example, if GPs made use of the funded nurses at the start and end of their consultations, the average length of the ‘GP’ consultation may change, skewing Medicare billing towards shorter consultations which tend to pay more generously for the time required.

299. For example, if need was weighted very heavily, and high-needs clinics were more likely to enrol, this could increase payments.

- The new model reduces barriers to care and gaps in access, increasing use of general practice services and enrollment

Until the funding model has been designed by the Department of Health in detail, it is difficult to determine whether, and how, these factors may affect costs.

But these cost risks are no different to the normal risks the Medicare system shoulders. And if the new system was designed well, revenue differences between participating and non-participating practices from these core funding components would be relatively small.

For example, even if the risks outlined above led to a 10 per cent increase in revenue to participating practices in 2024, this would only add \$15 million to the Medicare budget. And as more practices enrolled in the new funding model, evaluation points outlined in Appendix A would provide natural points for its adjustment, to ensure cost pressures remained under control.

The cost of encouraging practices into the new model should be funded through Strengthening Medicare funding

Appointment fees and flexible patient budgets paid to practices under the new model should not have a significantly higher cost than payments provided today. However, the new funding model would place additional demands on practices. They would need to enroll patients, and collect data for ongoing evaluation of the model.

Practices would need to be rewarded for these activities. They would also need an incentive to join the new model. For these reasons, an ‘uplift’, weighted at about 5 per cent of total practice revenue, should be applied to funding in the new model. This funding should be applied to the flexible patient budgets paid to practices.

If 100 practices opted into the new funding model in the first year, we estimate that this 5 per cent uplift would cost about \$8 million in

2024. This assumes that participating clinics are averaged-sized group practices,³⁰⁰ and each GP earns average Medicare revenue of about \$308,000.³⁰¹

As the number of participating practices increased, the cost of providing this uplift would also rise: from \$15 million in 2025, to \$39 million in 2026 (Appendix D.6 on page 84).

D.3 Secondary consultations

We assume that the average payment to a specialist for a secondary consultation would be \$65.³⁰² We assume that GPs would not be paid for secondary consultations, because they would receive a flexible patient budget which funded coordination of their patients' care. We also assume that Primary Health Networks would receive 10 per cent of the appointment cost for administration costs (\$6.50 per consultation), and that MBS rates would continue to be indexed in line with wages.

We propose that the secondary consultation scheme would be available for practices participating in the new funding model, and that GPs would have access to two funded secondary consultations per week. Under these assumptions, we estimate the scheme would have a net outlay of \$3.7 million in 2024, increasing to \$19.9m in 2026 as the number of eligible practices increases.

However, secondary consultations may also reduce other government Medicare costs. For example, there is good evidence that secondary

consultations between GPs and specialists reduce specialist referral rates.³⁰³ Estimates of the proportion of referrals avoided varies considerably, from about 20 per cent in some cases to 100 per cent in others.³⁰⁴

Using a conservative assumption that every 10 secondary consultations prevent three specialist appointments, which have an average government rebate of \$89,³⁰⁵ the scheme would provide cost savings of \$1.3 million in 2024, and \$6.4 in 2026. However, instead of being realised, these savings are likely to be absorbed by reducing specialist waiting lists. For this reason, we are not assuming a financial saving to government.

D.4 Rural purchasing and access gaps

We recommend that \$30 million per year is set aside to address market failures in rural areas, as outlined in Chapter 4. This should be jointly funded as a 50:50 split by state and federal government. This funding would probably cover the worst of the access gaps and fund PHNs to remove barriers to access where they are the greatest.

We recommend that state government fund-matching be required to unlock federal government funding. PHNs should also be required to demonstrate that proposed investments would target areas where other commissioning approaches could not ensure a sufficient supply of care.

Although it is unlikely that the funding would be spent only on workforce initiatives, costing the effect on workforce supply is indicative of the what could be achieved. If funds were wholly allocated to workforce, in an even split between GPs and other workforce roles (as detailed in Table D.1 on page 80), the scheme could employ about 115

300. We assume the average practice has about 5 full time equivalent GPs: RACGP (2022a).

301. Grattan analysis of Department of Health and Aged Care (2022c). This value is the estimated revenue earned by per full time GP from MBS funding (therefore excluding co-payments) in financial year 2021-22.

302. Based on MBS Item 104, discounted on the assumption that not all secondary consultations would require written advice: Duckett et al (2022).

303. Blank et al (2014).

304. Mantese et al (2021); Bradi et al (2018); Whited et al (2002); Hockey et al (2004); Jaatinen et al (2002); and Royal Children's Hospital (2021).

305. Duckett et al (2022).

new workers, significantly improving healthcare access in the most under-served areas.

D.5 Change support costs

Opting into a new funding model, with a changed team structure and working arrangements, would be a big change for general practice. Practices would need to be well supported to make it worthwhile, and to ensure that patients reap the benefits.

Funding should be provided for this targeted ‘change support’. Past trials demonstrated that if this is not done well, it can drive practices out of a new model. The Health Care Homes trial provided \$10,000 to practices for change support, which was found to be inadequate. We assume that each practice which opts into our proposed new model will receive a \$25,000 change support grant from the federal government.

Primary Health Networks would also need to provide ongoing change support to practices. We assume that PHNs will be funded to employ change facilitators, and that the number of facilitators will increase over time as more practices opt into the new model, as shown in Table D.2.

We estimate that these change costs would total \$4.4 million in 2024: \$2.5 million for the change support grants, and \$1.9 million for change facilitator staff. We estimate that total cost would rise to \$5 million in 2025, and \$11.4 million in 2026.

D.6 Design and capability building costs

The new funding and workforce models would require significant change, for GPs, and for PHNs and the Department of Health which would be responsible for rolling out the new system. As detailed in this report, we recommend that funding should be set aside to develop and evaluate the new funding model, review and strengthen commissioning

Table D.2: Estimates of ‘change support’ costs

	2024	2025	2026
Number of practices enrolled	100	200	500
Total cost of change support grants (\$25,000 per new practice)	\$2.5m	\$2.5m	\$7.5m
Number of change facilitators per PHN	3	3	3
Number of participating PHNs	8	10	15
Total cost of change facilitators	\$1.9m	\$2.5m	\$3.9m
Total cost	\$4.4m	\$5.0m	\$11.4m

Notes: PHN = Primary Health Network. We assume that PHN facilitators are paid a salary of \$80,000 in 2024, which grows thereafter in line with wage growth.

capability, better determine workforce roles, and develop a data and digital strategy for the healthcare sector.

Our estimates of the cost of each of these recommendations are shown in Table D.6.

Table D.3: Summary of federal government costs

	2023	2024	2025	2026
Workforce costs				
Total workforce costs	-	\$40m	\$74m	\$174m
Secondary consultations				
Total secondary consultation costs	-	\$3.7m	\$7.7m	\$19.9m
Funding uplift				
Total 5% funding uplift cost	-	\$7.7m	\$15.4m	\$38.5m
Change support costs				
Primary Health Network change facilitator staff costs	-	\$1.9m	\$2.5m	\$3.9m
Practice change support grants	-	\$2.5m	\$2.5m	\$7.5m
Rural purchasing scheme				
Total rural purchasing scheme costs	-	\$15m	\$15m	\$15m
Design and other costs				
Designing the Department of Health's strategic commissioning model	\$5m	-	-	-
Strengthening the Department of Health's commissioning capability	\$3m	\$3m	\$3m	-
Designing the new funding model	\$7m	-	\$1m	-
Evaluating the new model	-	-	\$2m	-
Consultation, co-design, and communication	\$5m	-	-	-
Commission on primary care workforce regulation	\$10m	-	-	-
Data and digital strategy for primary care	\$5m	-	-	-
Total cost	\$35m	\$74m	\$123m	\$259m

Notes: Although the rural purchasing scheme has a total cost of \$30 million per year, this is on a 50:50 cost-sharing split with state governments. This table only includes the cost to the federal government, of \$15 million per year.

Bibliography

- AAPA (2019). *PA scope of practice*. American Academy of Physician Associates. https://www.aapa.org/wp-content/uploads/2017/01/Issue-brief_Scope-of-Practice_0117-1.pdf.
- AAPM (2022). *Election statement 2022*. Australian association of practice management. <https://www.aapm.org.au/Portals/1/AAPM%5C%202022%5C%20Election%5C%20Statement%5C%20-%5C%20final.pdf>.
- Abbott et al (2008). Abbott, P., Gordon, E. and Davison, J. “Expanding roles of Aboriginal health workers in the primary care setting: seeking recognition”. *Contemporary nurse* 27 (2), pp. 157–164. <https://pubmed.ncbi.nlm.nih.gov/18457516/>.
- ABS (2018a). *Chronic conditions*. accessed 13 November 2022. Australian Bureau of Statistics. <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/chronic-conditions/latest-release>.
- _____ (2018b). *National Health Survey*. <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release>.
- _____ (2021). *Patient Experiences in Australia: Summary of Findings*. Australian Bureau of Statistics. <https://www.abs.gov.au/statistics/health/health-services/patient-experiences/2020-21>.
- _____ (2022a). *Patient Experiences in Australia: Summary of Findings*. Australian Bureau of Statistics. <https://www.abs.gov.au/statistics/health/health-services/patient-experiences/latest-release>.
- _____ (2022b). *Census Tablebuilder*. <https://www.abs.gov.au/statistics/microdata-tablebuilder/tablebuilder>.
- _____ (2022c). *Health Conditions Prevalence 2020-21*. Australian Bureau of Statistics. <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/health-conditions-prevalence/2020-21>.
- _____ (2022d). *National, state and territory population*. <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>.
- Afzali et al (2014). Afzali, H. H. A., Karnon, J., Beilby, J. J., Holton, C. H., Gray, J. and Banham, D. “Practice nurse involvement in general practice clinical care: Policy and funding issues need resolution”. *Australian health review: a publication of the Australian Hospital Association* 38 (3). <https://doi.org/10.1071/ah13187>.
- Agarwal et al (2015). Agarwal, G., Angeles, R. N., McDonough, B., McLeod, B. B., Marzanek, F., Pirrie, M. and Dolovich, L. “Development of a community health and wellness pilot in a subsidised seniors’ apartment building in Hamilton, Ontario: Community Health Awareness Program delivered by Emergency Medical Services (CHAP-EMS)”. *BMC Res Notes* 8. <https://bmresnotes.biomedcentral.com/articles/10.1186/s13104-015-1061-8>.
- AIHW (1998). *Medical Workforce Supply and Demand in Australia: A Discussion Paper*. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/getmedia/bfbe183a-d2e8-4f42-9cdd-e8117a36388d/mwsda.pdf.aspx?inline=true>.
- _____ (2018a). *Australia’s Health 2018*. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/getmedia/7c42913d-295f-4bc9-9c24-4e44eff4a04a/aihw-aus-221.pdf>.
- _____ (2018b). *Burden of disease*. accessed 31 October 2022. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports-data/health-conditions-disability-deaths/burden-of-disease/overview>.
- _____ (2021a). *Medicare-subsidised GP, allied health and specialist health care across local areas: 2019–20 to 2020–21*. <https://www.aihw.gov.au/reports/primary-health-care/medicare-subsidised-health-local-areas-2020-21/data>.
- _____ (2021b). *Health expenditure Australia 2019-20*. <https://www.aihw.gov.au/reports/health-welfare-expenditure/health-expenditure-australia-2019-20/contents/main-visualisations/overview>.
- _____ (2021c). *Older Australians*. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports/older-people/older-australians/contents/demographic-profile>.
- _____ (2022a). *Australia’s health 2022*. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports-data/australias-health>.

- AIHW (2022b). *Rural and remote health*. accessed 31 October 2022. Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health>.
- Alper et al (2004). Alper, B. S., Hand, J. A., Elliott, S. G., Kinkade, S., Hauan, M. J., Onion, D. K. and Sklar, B. M. "How much effort is needed to keep up with the literature relevant for primary care?" *Journal of the Medical Library Association* 92 (4), pp. 429–437. <https://pubmed.ncbi.nlm.nih.gov/15494758/>.
- Altschuler et al (2012). Altschuler, J., Margolius, D., Bodenheimer, T. and Grumbach, K. "Estimating a reasonable patient panel size for primary care physicians with team-based task delegation". *Annals of family medicine* 10 (5), pp. 396–400. <https://pubmed.ncbi.nlm.nih.gov/22966102/>.
- American College of Physicians (2009). *Nurse practitioners in primary care*. https://www.acponline.org/acp_policy/policies/nursepractitioners_pc_2009.pdf.
- Andrew et al (2019). Andrew, E., Nehme, Z., Cameron, P. and Smith, K. "Drivers of Increasing Emergency Ambulance Demand". *Prehospital Emergency Care* 24. <https://www.tandfonline.com/doi/abs/10.1080/10903127.2019.1635670>.
- Archer et al (2012). Archer, J., Bower, P., Gilbody, S., Lovell, K., Richards, D., Gask, L., Dickens, C. and Coventry, P. *Collaborative care for depression and anxiety problems*. Cochrane Library. <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD006525.pub2/full>.
- Atlay, K. (2021). "MABEL survey axed after losing its \$600,000 research grant". *AusDoc*. <https://www.ausdoc.com.au/news/mabel-survey-axed-after-losing-its-600000-research-grant/>.
- Australasian College of Paramedicine (2022). *Federal Pre-Budget Submission 2022*. https://treasury.gov.au/sites/default/files/2022-03/258735_australasian_college_of_paramedicine.pdf.
- Australian College of Rural and Remote Medicine (2021). *Nurse Practitioners in Rural and Remote Areas*. https://www.acrrm.org.au/docs/default-source/all-files/college-position-statement---nurse-practitioners.pdf?sfvrsn=8744a818_16.
- Australian Public Service Commission (2021). *Capability review: Department of Health*. Australian Government. <https://www.apsc.gov.au/initiatives-and-programs/workforce-information/research-analysis-and-publications/capability-review-program/capability-review-department-health>.
- Baillie et al (2022). Baillie, J., Fortune, N., Gordon, J., Madden, R. C. and Llewellyn, G. "Making everyone count: it is time to improve the visibility of people with disability in primary care". *Medical Journal of Australia*. <https://www.mja.com.au/journal/2022/217/4/making-everyone-count-it-time-improve-visibility-people-disability-primary-care#10>.
- Baird et al (2020). Baird, B., Chauhan, K., Boyle, T., Heller, A. and Price, C. *How to build effective teams in general practice*. The King's Fund. <https://www.kingsfund.org.uk/publications/effective-teams-general-practice>.
- Barer et al (1990). Barer, M., Nicoll, M., Diesendorf, M. and Harvey, R. "From Medibank to Medicare: trends in Australian medical care costs and use from 1976 to 1986". *Community Health Studies* 14 (1), pp. 8–18. <https://doi.org/10.1111/j.1753-6405.1990.tb00015.x>.
- B. Barr et al (2014). Barr, B., Bamba, C., Whitehead, M. and Duncan, W. H. "The impact of NHS resource allocation policy on health inequalities in England 2001-11: longitudinal ecological study". *BMJ* 348. <https://www.bmj.com/content/348/bmj.g3231>.
- M. L. Barr et al (2019). Barr, M. L. et al. "Understanding the use and impact of allied health services for people with chronic health conditions in Central and Eastern Sydney, Australia: a five-year longitudinal analysis". *Primary Health Care Research Development* 20, e141. <https://doi.org/10.1017/S146342361900077X>.
- Bates et al (2022). Bates, S., Wright, M. and Harris-Roxas, B. "Strengths and risks of the Primary Health Network commissioning model". *Australian health review* 46 (5), pp. 586–594. <https://pubmed.ncbi.nlm.nih.gov/35437143/>.
- Baxter et al (2018). Baxter, S., Johnson, M., Chambers, D., Sutton, A., Goyder, E. and Booth, A. "The effects of integrated care: a systematic review of UK and international evidence". *BMC health services research* 18.350. <https://pubmed.ncbi.nlm.nih.gov/29747651/>.
- Bayram et al (2009). Bayram, C., Britt, H., Miller, G. and Valenti, L. *Evidence-practice gap in GP pathology test ordering: a comparison of BEACH pathology data and recommended testing*.
- Benzer et al (2014). Benzer, J. K., Young, G. J., Burgess, J. F., Baker, E., Mohr, D. C., Charns, M. P. and Kaboli, P. J. "Sustainability of Quality Improvement Following Removal of Pay-for-Performance Incentives". *Journal of general internal medicine* 29 (1), pp. 127–132. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3889947/>.

- Biggs, A. (2016). *Medicare: a quick guide*. Parliament of Australia. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1617/Quick_Guides/Medicare.
- Birks et al (2016a). Birks, M., Davis, J., Smithson, J. and Cant, R. "Registered nurse scope of practice in Australia: an integrative review of the literature". *Contemporary Nurse* 52 (5), pp. 522–543. <https://doi.org/10.1080/10376178.2016.1238773>.
- Birks et al (2016b). Birks, M., Davis, J., Smithson, J. and Cant, R. "Registered nurse scope of practice in Australia: an integrative review of the literature". *Contemporary nurse* 52 (5), pp. 522–543. <https://www.tandfonline.com/doi/abs/10.1080/10376178.2016.1238773>.
- Blank et al (2014). Blank, L., Baxter, S., Woods, H. B., Goyder, E., Lee, A., Payne, N. and Rimmer, M. "Referral interventions from primary to specialist care: a systematic review of international evidence". *British Journal of General Practice*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4240149/#b75>.
- Bodenheimer et al (2002a). Bodenheimer, T., Lorig, K., Holman, H. and Grumbach, K. "Patient self-management of chronic disease in primary care". *JAMA* 288 (19), pp. 2469–2475. <https://pubmed.ncbi.nlm.nih.gov/12435261/>.
- Bodenheimer et al (2002b). Bodenheimer, T., Wagner, E. H. and Grumbach, K. "Improving primary care for patients with chronic illness". *JAMA* 288 (14), pp. 1775–1779. <https://pubmed.ncbi.nlm.nih.gov/12365965/>.
- Bodenheimer, T. and Laing, B. Y. (2007). "The Teamlet Model of Primary Care". <https://www.annfammed.org/content/annalsfm/5/5/457.full.pdf>.
- Bodenheimer et al (2014). Bodenheimer, T., Ghorob, A., Willard-Grace, R. and Grumbach, K. "The 10 building blocks of high-performing primary care". *Annals of family medicine* 12 (2), pp. 166–171. <https://pubmed.ncbi.nlm.nih.gov/24615313/>.
- Bradi et al (2018). Bradi, A. C., Sitwell, L., Liddy, C., Afkham, A. and Keely, E. "Ask a neurologist: What primary care providers ask, and reducing referrals through eConsult". *Neurology Clinical Practice*. <https://cp.neurology.org/content/8/3/186>.
- Brink et al (2021). Brink, G. T. W. J. van den, Hooker, R. S., Vught, A. J. V., Vermeulen, H. and Laurant, M. G. H. "The cost-effectiveness of physician assistants/associates: A systematic review of international evidence". *PLoS One* 16.11. <https://pubmed.ncbi.nlm.nih.gov/34723999/>.
- Britt, H. and Valenti, L. (2005). "Determinants of consultation length in Australian general practice". *Medical Journal of Australia* 183 (2), pp. 68–71. <https://onlinelibrary.wiley.com/doi/abs/10.5694/j.1326-5377.2005.tb06924.x>.
- Britt et al (2005). Britt, H., Valenti, L. and Miller, G. C. "Determinants of consultation length in Australian general practice". *The Medical Journal of Australia*. https://onlinelibrary.wiley.com/doi/epdf/10.5694/j.1326-5377.2005.tb06924.x?saml_referrer.
- Britt et al (2011). Britt, H. et al. *A decade of Australian general practice activity: 2001–02 to 2010–11*. The University of Sydney. https://ses.library.usyd.edu.au/bitstream/handle/2123/7773/9781920899875_CDROM.pdf?sequence=4.
- Britt et al (2015). Britt, H. et al. *A decade of Australian general practice activity: 2005–06 to 2014–15*. The University of Sydney. https://ses.library.usyd.edu.au/bitstream/2123/13974/4/9781743324554_ONLINE.pdf.
- Britt et al (2016). Britt, H. et al. *General practice activity in Australia 2015–16*. General practice series number 40. Family Medicine Research Centre. https://ses.library.usyd.edu.au/bitstream/handle/2123/15514/9781743325148_ONLINE.pdf?sequence=5%5C&isAllowed=y.
- Brown et al (2021a). Brown, A., Enticott, J. and Russell, G. "How do Australian general practitioners spend their time? A cross-sectional analysis of Medicine in Australia: Balancing Employment and Life (MABEL) data examining 'non-billable workload'". *Australian Journal of General Practice* 50 (9). <https://www1.racgp.org.au/ajgp/2021/september/mabel-data-examining-workload/>.
- Brown et al (2021b) _____. "How do Australian general practitioners spend their time? A cross-sectional analysis of Medicine in Australia: Balancing Employment and Life (MABEL) data examining 'non-billable workload'". *Australian journal of general practice* 50 (9). <https://www1.racgp.org.au/ajgp/2021/september/mabel-data-examining-workload>.
- Busing, N. and Rourke, J. (2022). "Busing and Rourke: Canada must rapidly shift to team-based health care". *Ottawa Citizen*. <https://ottawacitizen.com/opinion/busing-and-rourke-canada-must-rapidly-shift-to-team-based-health-care>.
- Butler et al (2022). Butler, D. C., Larkins, S., Jorm, L. and Korda, R. "Does individual-socioeconomic variation in quality-of-primary care vary according to area-level service organisation? Multilevel analysis using linked data". *medRxiv*. <https://doi.org/10.1101/2022.07.18.22277786>.

- Calder, R. and Dunbar, J. (2022). "Being Equally Well: Ending the neglect of physical health for people with serious mental illness". *Medical Journal of Australia*. <https://www.mja.com.au/journal/2022/217/7/being-equally-well-ending-neglect-physical-health-people-serious-mental-illness>.
- Canaway et al (2022). Canaway, R., Boyle, D., Manski-Nankervis, J.-A. and Gray, K. "Identifying primary care datasets and perspectives on their secondary use: a survey of Australian data users and custodians". *Health policy* 22.94. <https://link.springer.com/article/10.1186/s12911-022-01830-9>.
- CFIR (2022). *Consolidated Framework for Implementation Research*. accessed 31 October 2022. <https://cfirguide.org/>.
- Chapman et al (2018). Chapman, S. A., Phoenix, B. J., Hahn, T. E. and Strod, D. C. "Utilization and Economic Contribution of Psychiatric Mental Health Nurse Practitioners in Public Behavioral Health Services". *American journal of preventive medicine* 54.6, S243–S249. <https://www.sciencedirect.com/science/article/pii/S0749379718316039/>.
- Charlesworth et al (2016). Charlesworth, K., Jamieson, M., Davey, R. and Butler, C. D. "Transformational change in healthcare: an examination of four case studies". *Australian Health Review* 40, pp. 163–167. <https://pubmed.ncbi.nlm.nih.gov/26188916/>.
- Cid et al (2016). Cid, C., Ellis, R. P., Vargas, V., Wasem, J. and Prieto, L. "Global Risk-Adjusted Payment Models". *World Scientific Handbook of Global Health Economics and Public Policy*, pp. 311–362. https://www.worldscientific.com/doi/abs/10.1142/9789813140493_0006.
- Collins, B. (2015). *Intentional whole health system redesign: Southcentral Foundation's 'Nuka' system of care*. The King's Fund. <https://www.kingsfund.org.uk/publications/intentional-whole-health-system-redesign-nuka-southcentral>.
- Conlon, P. C. (2010). "Diabetes outcomes in primary care: evaluation of the diabetes nurse practitioner compared to the physician". *Primary health care* 20 (5), pp. 26–31. <https://journals.rcni.com/primary-health-care/diabetes-outcomes-in-primary-care-evaluation-of-the-diabetes-nurse-practitioner-compared-to-the-physician-phc2010.06.20.5.26.c7809>.
- Correll et al (2021). Correll, P. et al. "Lumos: a statewide linkage programme in Australia integrating general practice data to guide system redesign". *Integrated healthcare journal* 3 (1). <https://ihj.bmj.com/content/3/1/e000074>.
- Cosgriff et al (2020). Cosgriff, D., Reath, J. and Abbott, P. "Why do people with long-term health needs see more than one GP?: a qualitative study". *Australian Journal of General Practice*. <https://www.publish.csiro.au/py/py20179>.
- Dalzell, S. (2022). "GP shortage focus of roundtable talks between health minister and experts". *ABC News*. <https://www.abc.net.au/news/2022-10-11/roundtable-health-minister-gp-shortages/101522802>.
- Danak et al (2019). Danak, S. U., Guetterman, T. C., Plegue, M. A., Holmstrom, H. L., Kadri, R., Duthler, A., Yoo, A. and Buis, L. R. "Influence of Scribes on Patient-Physician Communication in Primary Care Encounters: Mixed Methods Study". *JMIR medical informatics* 7 (3). <https://medinform.jmir.org/2019/3/e14797>.
- Davey, P. (2020). *New Murrumbidgee model makes rural practice more appealing*. <https://perindavey.com.au/a-new-model-to-boost-access-to-gps-in-the-murrumbidgee-region-and-make-rural-generalist-training-more-attractive-for-young-doctors-begins-today/>.
- Davey, M. and Convery, S. (2022). "'Not honest': new health minister dismisses Coalition election claim that bulk billing had hit 88%". *The Guardian*. <https://www.theguardian.com/australia-news/2022/aug/10/not-honest-new-health-minister-dismisses-coalition-election-claim-that-bulk-billing-had-hit-88>.
- Department of Health (2019a). *Practice Incentives Program Quality Improvement Incentive Frequently Asked Questions*. Australian Government. [https://www1.health.gov.au/internet/main/publishing.nsf/Content/46506AF50A4824B6CA25848600113FFF/\\$File/Practice-Incentives-Program-Quality-Improvement-Incentive-Guidelines.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/46506AF50A4824B6CA25848600113FFF/$File/Practice-Incentives-Program-Quality-Improvement-Incentive-Guidelines.pdf).
- _____ (2019b). *Health Care Homes: Handbook for general practices and Aboriginal Community Controlled Health Services*. Version 1.7. [https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-care-homes-cp/%5C\\$File/HCH-Handbook-Feb-2019.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-care-homes-cp/%5C$File/HCH-Handbook-Feb-2019.pdf).
- Department of Health and Aged Care (2014). *History of key MBS primary care initiatives 1999-2013*. Australian Government. <https://www1.health.gov.au/internet/main/publishing.nsf/Content/mbsprimarycare-History>.

- Department of Health and Aged Care (2015). *Evaluation Report of the Diabetes Care Project*. Australian Government. <https://www.health.gov.au/sites/default/files/documents/2019/09/evaluation-of-the-diabetes-care-project-evaluation-report-of-the-diabetes-care-project.pdf>.
- _____ (2018). *Evaluation of the Primary Health Networks Program*. Australian Government. <https://www.health.gov.au/resources/publications/evaluation-of-the-primary-health-networks-program>.
- _____ (2020). *An MBS for the 21st Century Recommendations, Learnings and Ideas for the Future Medicare Benefits Schedule Review Taskforce Final Report to the Minister for Health*. Australian Government. <https://www.health.gov.au/sites/default/files/documents/2020/12/medicare-benefits-schedule-review-taskforce-final-report-an-mbs-for-the-21st-century-recommendations-learnings-and-ideas-for-the-future.pdf>.
- _____ (2022a). *Evaluation of the Health Care Homes trial – final evaluation report 2022*. Australian Government. <https://www.health.gov.au/resources/publications/evaluation-of-the-health-care-homes-trial-final-evaluation-report-2022>.
- _____ (2022b). *General Practice Workforce providing Primary Care services in Australia*. accessed 31 October 2022. Australian Government. <https://hwd.health.gov.au/resources/data/gp-primarycare.html>.
- _____ (2022c). *Statistics under Medicare*. accessed 31 October 2022. Australian Government. <https://www1.health.gov.au/internet/main/publishing.nsf/Content/Medicare%5C%20Statistics-1>.
- _____ (2022d). *Strengthening Medicare Taskforce*. accessed 31 October 2022. Australian Government. <https://www.health.gov.au/committees-and-groups/strengthening-medicare-taskforce>.
- _____ (2022e). *Health Workforce Data Tool*. accessed 13 November 2022. Australian Government. <https://hwd.health.gov.au/datatool/>.
- _____ (2022f). *MBS Online: Medicare benefits Schedule*. <http://www9.health.gov.au/mbs/search.cfm>.
- _____ (2022g). *Workforce Incentive Program Practice Stream*. accessed 13 November 2022. Australian Government. <https://www.health.gov.au/initiatives-and-programs/workforce-incentive-program/practice-stream>.
- _____ (2022h). *General Practice Workforce providing Primary Care services in Australia*. accessed 13 November 2022. Australian Government. <https://hwd.health.gov.au/resources/data/gp-primarycare.html>.
- Department of Health and Ageing (2007). *The National Evaluation of the Second Round of Coordinated Care Trials: Final report*. Australian Government. <https://apo.org.au/sites/default/files/resource-files/2008-04/apo-nid8664.pdf>.
- Department of Home Affairs (2022). *Skilled occupation list*. <https://immi.homeaffairs.gov.au/visas/working-in-australia/skill-occupation-list>.
- Department of Parliamentary Library (2002). *Decline in Bulk Billing: Explanations and Implications*. <https://www.aph.gov.au/binaries/library/pubs/cib/2002-03/03cib03.pdf>.
- Devlin, R. A. and Sarma, S. (2008). "Do physician remuneration schemes matter? The case of Canadian family physicians". *Journal of Health Economics* 27 (5), pp. 1168–1181. <https://www.sciencedirect.com/science/article/pii/S0167629608000568>.
- DHAC (2019). *Medicare Benefits Schedule Review Taskforce Post Consultation Report from the Nurse Practitioner Reference Group*. Australian Government Department of Health and Aged Care. <https://www.health.gov.au/sites/default/files/documents/2021/06/final-report-from-the-nurse-practitioner-reference-group.pdf>.
- _____ (2022a). *Factsheet: Nurses and Midwives*. <https://public.tableau.com/app/profile/healthworkforcedata/viz/Factsheets20220726/NursingMidwives?FieldLink=All&Factsheet=Employed&ProfgroupLink=NursesMidwives>.
- _____ (2022b). *Group Allied Health Services under Medicare for people with Type 2 diabetes - Information for Providers*. <https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-mbsprimarycareitems-ahgs-diabetes-factsheet>.
- _____ (2022c). *Medicare Benefits Schedule - Item 80170*. <http://www9.health.gov.au/mbs/fullDisplay.cfm?type=item&q=80170&qt=item>.
- Dickinson, H. (2015). *Commissioning public services evidence review: Lessons for Australian public services*. Melbourne School of Government. https://government.unimelb.edu.au/__data/assets/pdf_file/0004/2654428/Commissioning_Public_Services_Evidence_Review.pdf.

- Dolovich, L. (2012). "Ontario pharmacists practicing in family health teams and the patient-centered medical home". *Annals of pharmacotherapy* 46 (4), S33–39. <https://pubmed.ncbi.nlm.nih.gov/22499739/>.
- Duckett, S. and Willcox, S. (2011). *The Australian healthcare system*. 4th edition. Oxford University Press.
- Duckett, S. and Breadon, P. (2013). *Access all areas: new solutions for GP shortages in rural Australia*. Grattan Institute. <https://grattan.edu.au/report/access-all-areas-new-solutions-for-gp-shortages-in-rural-australia/>.
- Duckett, S. and Swerissen, H. (2017). *Building better foundations for primary care*. Grattan Institute. <https://grattan.edu.au/report/building-better-foundations/>.
- Duckett et al (2022). Duckett, S., Stobart, A. and Lin, L. *Not so universal: How to reduce out-of-pocket healthcare payments*. Grattan Institute. <https://grattan.edu.au/report/not-so-universal-how-to-reduce-out-of-pocket-healthcare-payments/>.
- Duffield et al (2011). Duffield, C. M., Gardner, G., Chang, A. M., Fry, M. and Stasa, H. "National regulation in Australia: a time for standardisation in roles and titles". *Collegian* 18 (2), pp. 45–49. <https://pubmed.ncbi.nlm.nih.gov/21706990/>.
- Duong, D. (2022). "Primary care is facing a capacity crisis — can pandemic lessons help chart a path forward?" *CMAJ*. <https://www.cmaj.ca/content/cmaj/194/43/E1488.full.pdf>.
- Eaton et al (2020). Eaton, G., Wong, G., Williams, V., Roberts, N. and Mahtani, K. R. "Contribution of paramedics in primary and urgent care: a systematic review". *British Journal of General Practice* 70. <https://bjgp.org/content/70/695/e421>.
- Elden et al (2020). Elden, O. E., Uleberg, O., Lysne, M. and Haugdahl, H. S. "Community paramedicine—cost benefit analysis and safety with paramedical emergency services in rural areas: scoping review protocol". *BMJ Open* 10 (9). <http://dx.doi.org/10.1136/bmjopen-2020-038651>.
- Endacott et al (2018). Endacott, R., O'Connor, M., Williams, A., Wood, P., McKenna, L., Griffiths, D., Moss, C., Della, P. and Cross, W. "Roles and functions of enrolled nurses in Australia: Perspectives of enrolled nurses and registered nurses". *Journal of clinical nursing* 27 (5-6), e913–e920. <https://pubmed.ncbi.nlm.nih.gov/28771947/>.
- Esterman, A. J. and Ben-Tovim, D. I. (2002). "The Australian coordinated care trials: success or failure?" *Medical Journal of Australia* 177 (9), pp. 469–470. https://onlinelibrary.wiley.com/doi/full/10.5694/j.1326-5377.2002.tb04911.x?saml_referrer.
- Faculty of Medicine and Health (2022). *Bettering the Evaluation and Care of Health (BEACH)*. accessed 13 November 2022. University of Sydney. <https://www.sydney.edu.au/medicine-health/our-research/research-centres/bettering-the-evaluation-and-care-of-health.html>.
- Farlex (2012). *Farlex Partner Medical Dictionary*. accessed 31 October 2022. <https://medical-dictionary.thefreedictionary.com/continuity-of-care>.
- Faux et al (2022). Faux, M., Adams, J., Dahiya, S. and Wardle, J. "Wading through Molasses: A qualitative examination of the experiences, perceptions, attitudes, and knowledge of Australian medical practitioners regarding medical billing". *PLoS One*. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0262211>.
- Fixsen, A. and Polley, M. (2020). "Chapter Ten - Social prescribing for stress related disorders and brain health". *International Review of Neurobiology*. <https://pubmed.ncbi.nlm.nih.gov/29480434/>.
- Foster et al (2008). Foster, M. M., Mitchell, G., Haines, T., Tweedy, S., Cornwell, P. and Fleming, J. "Does Enhanced Primary Care enhance primary care? Policy-induced dilemmas for allied health professionals". *Medical Journal of Australia* 188 (1), pp. 29–32. <https://onlinelibrary.wiley.com/doi/abs/10.5694/j.1326-5377.2008.tb01501.x>.
- Fountaine, T. and Bennett, C. C. (2016). "Health care homes: lessons from the Diabetes Care Project". *Medical Journal of Australia* 205 (9), pp. 389–391. <https://www.mja.com.au/journal/2016/205/9/health-care-homes-lessons-diabetes-care-project>.
- Freund et al (2015). Freund, T., Everett, C., Griffiths, P., Hudon, C., Naccarella, L. and Laurant, M. "Skill mix, roles and remuneration in the primary care workforce: Who are the healthcare professionals in the primary care teams across the world?" *International Journal of Nursing Studies* 52 (3), pp. 727–743. <https://www.sciencedirect.com/science/article/pii/S0020748914003307#bib0250>.
- Freund et al (2016). Freund, T. et al. "Medical Assistant-Based Care Management for High-Risk Patients in Small Primary Care Practices: A Cluster Randomized Clinical Trial". *Annals of internal medicine* 164 (5), pp. 323–330. <https://pubmed.ncbi.nlm.nih.gov/26833209/>.

- Furler et al (2020). Furler, J. S., Chondros, P., Young, D. Y. L., Harris, E., Davies, G. P. and Harris, M. F. "Contribution of paramedics in primary and urgent care: a systematic review". *The Medical Journal of Australia*.
<https://www.mja.com.au/journal/2002/177/2/inverse-care-law-revisited-impact-disadvantaged-location-accessing-longer-gp>.
- Ghorob, A. and Bodenheimer, T. (2012). "Share the Care™: Building Teams in Primary Care Practices". *The Journal of the American Board of Family Medicine* 25 (2). <https://www.jabfm.org/content/25/2/143/tab-references>.
- Girwar et al (2021). Girwar, S.-A. M., Jabroer, R., Fiocco, M., Sutch, S. P., Numans, M. E. and Bruijnzeels, M. A. "A systematic review of risk stratification tools internationally used in primary care settings". *Health science reports* 4 (3), e329.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8299990/>.
- Gosden et al (2000). Gosden, T., Forland, F., Kristiansen, I., Sutton, M., Leese, B., Giuffrida, A., Sergison, M. and Pedersen, L. "Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians". *Cochrane Database of Systematic Reviews* 3.
<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD002215/full?highlight=Abstract=physician%5C%2F%5C%7Cpayment>.
- Gravelle et al (2016). Gravelle, H., Scott, A., Sivey, P. and Yong, J. "Competition, Prices and Quality in the Market for Physician Consultations". *The Journal of Industrial Economics* 64 (1), pp. 135–169.
<https://onlinelibrary.wiley.com/doi/abs/10.1111/joie.12098>.
- Gray et al (2003). Gray, D. P., Evans, P., Sweeney, K., Lings, P., Seamark, D., Seamark, C., Dixon, M. and Bradley, N. "Towards a theory of continuity of care". *Journal of the Royal Society of Medicine* 96.4, pp. 160–166.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC539442/>.
- Gray et al (2018). Gray, D. P., Sidaway-Lee¹, K., White, E., Thorne, A. and Evans, P. H. "Continuity of care with doctors—a matter of life and death? A systematic review of continuity of care and mortality". *BMJ Open* 8 (6).
<https://bmjopen.bmj.com/content/8/6/e021161>.
- Greer et al (2016). Greer, N., Bolduc, J., Geurkink, E., Rector, T., Olson, K., Koeller, E., MacDonald, R. and Wilt, T. J. "Pharmacist-Led Chronic Disease Management: A Systematic Review of Effectiveness and Harms Compared With Usual Care". *Annals of internal medicine* 165 (1), pp. 30–40.
<https://www.acpjournals.org/doi/abs/10.7326/M15-3058>.
- Groenewegen et al (2021). Groenewegen, P. P., Boerma, W. G. W., Spreuwenberg, P., Seifert, B., Schäfer, W., Batenburg, R. and Tuyl, L. van. "Task shifting from general practitioners to practice assistants and nurses in primary care: a cross-sectional survey in 34 countries". *Primary Health Care Research and Development* 22 (e66).
<https://www.cambridge.org/core/journals/primary-health-care-research-and-development/article/task-shifting-from-general-practitioners-to-practice-assistants-and-nurses-in-primary-care-a-cross-sectional-survey-in-34-countries-retracted/DBAE0253ECF705D64AE8B332B9B272EE>.
- Guo et al (2019). Guo, B., Corabian, P., Yan, C. and Tjosvold, L. *Community Paramedicine: Program Characteristics and Evaluation*. Institute of Health Economics. <https://europepmc.org/article/nbk/nbk549096>.
- Gurung et al (2020). Gurung, G., Atmore, C., Gauld, R. and Stokes, T. "Integrated ambulatory care in the New Zealand health system: a scoping review". *Journal of Integrated Care* 28 (3).
<https://doi.org/10.1108/JICA-01-2020-0003>.
- Gwynne, K. and Lincoln, M. (2017). "Developing the rural health workforce to improve Australian Aboriginal and Torres Strait Islander health outcomes: a systematic review". *Australian health review* 41 (2), pp. 234–238.
<https://pubmed.ncbi.nlm.nih.gov/27209274/>.
- Halls et al (2020). Halls, S., Thomas, R., Stott, H., Cupples, M. E., Kersten, P., Cramp, F., Foster, D. and Walsh, N. "Provision of first contact physiotherapy in primary care across the UK: a survey of the service". *Physiotherapy* 108, pp. 2–9.
<https://www.sciencedirect.com/science/article/pii/S0031940620303394>.
- Ham, C. (2017). "Political crisis in the NHS". *BMJ*.
<https://www.bmj.com/content/356/bmj.j218.full>.
- Hanson et al (2022). Hanson, P. K. et al. "The Lancet Global Health Commission on financing primary health care: putting people at the centre". *The Lancet*.
[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(22\)00005-5/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00005-5/fulltext).
- Harris, M. F. and Zwar, N. A. (2014a). "Reflections on the history of general practice in Australia". *Medical Journal of Australia* 2014 (S1), S37–S40.
<https://onlinelibrary.wiley.com/doi/abs/10.5694/mja14.00141>.

- Harris, M. F. and Zwar, N. A. (2014b). "Reflections on the history of general practice in Australia". *Medical Journal of Australia* 201 (1), S37–S40. <https://www.mja.com.au/journal/2014/201/1/reflections-history-general-practice-australia>.
- Hart, J. T. (1971). "The inverse care law". *The Lancet* 297 (7696), pp. 405–412. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(71\)92410-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(71)92410-X/fulltext).
- Health Navigator New Zealand (2022). *Health improvement practitioner*. accessed 13 November 2022. <https://www.healthnavigator.org.nz/healthcare-in-nz/types-of-health-providers/health-improvement-practitioner/>.
- Health New Zealand (2022). *Our health and disability system*. <https://dpmc.govt.nz/sites/default/files/2021-04/htu-factsheet-health-new-zealand-en-apr21.pdf>.
- Health, D. of and Ageing (2009). *Primary Health Care Reform in Australia*. Australian Government. <https://apo.org.au/node/18746>.
- Hemming et al (2015). Hemming, K., Haines, T. P., Chilton, P. J., Girling, A. J. and Lilford, R. J. "The stepped wedge cluster randomised trial: rationale, design, analysis, and reporting". *BMJ*. <https://www.bmj.com/content/350/bmj.h391>.
- Henderson et al (2016). Henderson, J., Valenti, L. A., Britt, H. C., Bayram, C., Wong, C., Harrison, C., Pollack, A. J., Gordon, J. and Miller, G. C. "Estimating non-billable time in Australian general practice". *Medical journal of Australia* 205 (2), pp. 79–83. <https://onlinelibrary.wiley.com/doi/abs/10.5694/mja16.00287>.
- Heywood, T. and Laurence, C. (2018). "The general practice nurse workforce: Estimating future supply". *AJGP*. <https://www1.racgp.org.au/ajgp/2018/november/the-general-practice-nurse-workforce>.
- Hockey et al (2004). Hockey, A. D., Wootton, R. and Casey, T. "Trial of low-cost tele dermatology in primary care". <https://pubmed.ncbi.nlm.nih.gov/15603607/>.
- Holden et al (2012). Holden, L., Williams, I. D., Scuffham, P. A., Cheung, L., Golenko, X. A., Weare, R., Smith, J., Chambers, R. and Patterson, E. "Uptake of Medicare chronic disease management incentives A study into service providers' perspectives". *Australian family physician* 41 (12). <https://www.racgp.org.au/afp/2012/december/medicare-cdm-incentives>.
- Hoof et al (2019). Hoof, S. J. M. van, Quanjel, T. C. C., Kroese, M. E. A. L., Spreuwenberg, M. D. and Ruwaard, D. "Substitution of outpatient hospital care with specialist care in the primary care setting: A systematic review on quality of care, health and costs". *PLoS ONE* 14 (8). <https://doi.org/10.1371/journal.pone.0219957>.
- Hooker, R. S. and Everett, C. M. (2012). "The contributions of physician assistants in primary care systems". *Health and social care in the community* 20 (1), pp. 20–31. <https://pubmed.ncbi.nlm.nih.gov/21851446/>.
- Hooker, R. S. and Berkowitz, O. (2019). "A global census of physician assistants and physician associates". *JAAPA* 33.12, pp. 43–45. <https://pubmed.ncbi.nlm.nih.gov/33234895/>.
- Hooton, A. (2022). "'I'm totally, utterly done': The insider take on our growing GP crisis". *The Age*. <https://www.theage.com.au/national/i-m-totally-utterly-done-the-insider-take-on-our-growing-gp-crisis-20220628-p5axab.html>.
- Hopkins, S. and Speed, N. (2005a). "The decline in 'free' general practitioner care in Australia: reasons and repercussions". *Australian family physician* 73 (3), pp. 316–329. <https://pubmed.ncbi.nlm.nih.gov/16039350/>.
- _____ (2005b). "The decline in 'free' general practitioner care in Australia: reasons and repercussions". *Health Policy*. <https://www.sciencedirect.com/science/article/pii/S0168851004002866>.
- Horvath, J. (2014). *Review of Medicare Locals*. Report to the Minister for Health and Minister for Sport. <https://www.health.gov.au/sites/default/files/documents/2021/06/review-of-medicare-locals.pdf>.
- Howell, B. (2008). "Capitation and Financial Risk Allocation in New Zealand's Primary Health Care Sector: The Perverse Consequences of Neglecting Financial Risk Allocation". *BMJ* 15 (1), pp. 29–48. <https://www.jstor.org/stable/43199504>.
- HPRAC (2011). *Physician Assistants: A Literature Review*. Health Professions Regulatory Advisory Council. https://www.hprac.org/en/projects/resources/LiteratureReview_PhysicianAssistants.pdf.

- Hunter et al (2018). Hunter, C. L., Funderburk, J. S., Polaha, J., Bauman, D., Goodie, J. L. and Hunter, C. M. "Primary Care Behavioral Health (PCBH) Model Research: Current State of the Science and a Call to Action". *Journal of clinical psychology in medical settings* 25 (2), pp. 127–156. <https://pubmed.ncbi.nlm.nih.gov/28975500/>.
- Irving et al (2022). Irving, G., Neves, A. L., Dambha-Miller, H., Oishi, A., Tagashira, H., Verho, A. and Holden, J. "International variations in primary care physician consultation time: a systematic review of 67 countries". *BMJ Open* 7 (10). <https://bmjopen.bmj.com/content/7/10/e017902>.
- Jaatinen et al (2002). Jaatinen, P. T., Aarnio, P., Remes, J., Hannukainen, J. and Köymäri-Seilonen, T. "Teleconsultation as a replacement for referral to an outpatient clinic". *J Telemed Telecare*. <https://pubmed.ncbi.nlm.nih.gov/11972945/>.
- Jacob et al (2013). Jacob, E. R., Barnett, A., Sellick, K. and McKenna, L. "Scope of practice for Australian enrolled nurses: evolution and practice issues". *Contemporary nurse* 45 (2), pp. 155–163. <https://pubmed.ncbi.nlm.nih.gov/24299243/>.
- Jia et al (2021). Jia, L., Meng, Q., Scott, A., Yuan, B. and Zhang, L. "Payment methods for healthcare providers working in outpatient healthcare settings". *Cochrane Database of Systematic Reviews*. <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD011865.pub2/full>.
- John et al (2020). John, J. R., Jani, H., Peters, K., Agho, K. and Tannous, W. K. "The Effectiveness of Patient-Centred Medical Home-Based Models of Care versus Standard Primary Care in Chronic Disease Management: A Systematic Review and Meta-Analysis of Randomised and Non-Randomised Controlled Trials". *International journal of environmental research and public health* 17.18, p. 6886. <https://pubmed.ncbi.nlm.nih.gov/32967161/>.
- Jongen et al (2019). Jongen, C., McCalman, J., Campbell, S. and Fagan, R. "Working well: strategies to strengthen the workforce of the Indigenous primary healthcare sector". *BMC health services research* 19.910. <https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4750-5>.
- Josi, R. and Pietro, C. D. (2019). "Skill mix in Swiss primary care group practices - a nationwide online survey". *BMC family practice* 20.39. <https://bmcpimcare.biomedcentral.com/articles/10.1186/s12875-019-0926-7>.
- Joyce, C. and Piterman, L. (2008). "Trends in GP home visits". *Australian family physician* 37 (12), pp. 1039–1042. <https://pubmed.ncbi.nlm.nih.gov/19142281/>.
- Kalucy et al (2009). Kalucy, L., Katterl, R., Jackson-Bowers, E. and Hordacre, A.-L. *Models of patient enrolment*. <https://core.ac.uk/download/pdf/14947493.pdf>.
- Khanna et al (2019). Khanna, S., Rolls, D. A., Boyle, J., Rajiv Jayasena, Y. X. nd, Hibbert, M. and Georgeff, M. "A risk stratification tool for hospitalisation in Australia using primary care data". *Scientific reports* 9.5011. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6428894/>.
- Kiely et al (2022). Kiely, B., Croke, A., O'Shea1, M., Boland, F., O'Shea, E., Connolly, D. and Smith, S. M. "Effect of social prescribing link workers on health outcomes and costs for adults in primary care and community settings: a systematic review". *BMJ Open* 12 (10). <https://bmjopen.bmj.com/content/12/10/e062951?rss=1>.
- Kiil, A. and Houlberg, K. (2014). "How does copayment for health care services affect demand, health and redistribution? A systematic review of the empirical evidence from 1990 to 2011". *The European Journal of Health Economics* 15, pp. 813–828. <https://doi.org/10.1007/s10198-013-0526-8>.
- Kinnersley et al (2000). Kinnersley, P. et al. "Randomised controlled trial of nurse practitioner versus general practitioner care for patients requesting "same day" consultations in primary care". *BMJ* 320.1043. <https://www.bmj.com/content/320/7241/1043.short>.
- Koff et al (2021). Koff, E., Pearce, S. and Peiris, D. P. "Collaborative Commissioning: regional funding models to support value-based care in New South Wales". *Medical Journal of Australia* 215.7, pp. 297–301. <https://www.mja.com.au/journal/2021/215/7/collaborative-commissioning-regional-funding-models-support-value-based-care-new>.
- Kontopantelis et al (2014). Kontopantelis, E., Springate, D., Reeves, D., Ashcroft, D. M., Valderas, J. M. and Doran, T. "Withdrawing performance indicators: retrospective analysis of general practice performance under UK Quality and Outcomes Framework". *BMJ* 348.g330. <https://www.bmj.com/content/348/bmj.g330>.

- Körner et al (2016). Körner, M., Bütof, S., Müller, C., Zimmermann, L., Becker, S. and Bengel, J. "Interprofessional teamwork and team interventions in chronic care: A systematic review". *Journal of Interprofessional Care* 30 (1), pp. 15–28. <https://www.tandfonline.com/doi/full/10.3109/13561820.2015.1051616?scroll=top%5C&needAccess=true>.
- Kosari et al (2021). Kosari, S., Deeks, L. S., Naunton, M., Dawda, P., Postma, M. J., Tay, G. H. and Peterson, G. M. "Funding pharmacists in general practice: A feasibility study to inform the design of future economic evaluations". *Research in social and administrative pharmacy* 17 (5), pp. 1012–1016. <https://pubmed.ncbi.nlm.nih.gov/32847733/>.
- Kosaria et al (2021). Kosaria, S., S.Deeks, L., MarkNaunton, Dawda, P., Tay, M. J. G. H. and M.Peterson, G. "Funding pharmacists in general practice: A feasibility study to inform the design future economic evaluations". *Research in Social and Administrative Pharmacy* 17 (5), pp. 1012–1016. <https://doi.org/10.1016/j.sapharm.2020.07.030>.
- Kringos et al (2015). Kringos, D. S., Boerma, W. G., Hutchinson, A. and Saltman, R. B. *Building primary care in a changing Europe: case studies*. <https://eurohealthobservatory.who.int/publications/i/building-primary-care-in-a-changing-europe-case-studies-study>.
- Lai et al (2018). Lai, G. C., Taylor, E. V., Haigh, M. M. and Thompson, S. C. "Factors Affecting the Retention of Indigenous Australians in the Health Workforce: A Systematic Review". *International journal of environmental research and public health* 15 (5), p. 914. <https://pubmed.ncbi.nlm.nih.gov/29734679/>.
- Lau et al (2022). Lau, P. et al. "Protocol for a Delphi consensus study to select indicators of high-quality general practice to achieve Quality Equity and Systems Transformation in Primary Health Care (QUEST-PHC) in Australia". *PLoS One* 17 (5). <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0268096>.
- Li et al (2022). Li, M., Tang, H. and Liu, X. *Primary Care Team and its Association with Quality of Care for People with Multimorbidity: A Systematic Review*. <https://www.researchsquare.com/article/rs-1916492/v1>.
- Liddy et al (2014). Liddy, C., Singh, J., Kelly, R., Dahrouge, S., Taljaard, M. and Younger, J. "What is the impact of primary care model type on specialist referral rates? A cross-sectional study". *BNC family practice* 15.22. <https://link.springer.com/article/10.1186/1471-2296-15-22>.
- Lopatina et al (2017). Lopatina, E., Donald, F., Censo, A. D., Martin-Misener, R., Kilpatrick, K., Bryant-Lukosius, D., Carter, N. and Marshall, K. R. D. A. "Economic evaluation of nurse practitioner and clinical nurse specialist roles: A methodological review". *International Journal of Nursing Studies* 72, pp. 71–82. <https://www.sciencedirect.com/science/article/pii/S0020748917300986>.
- Lourenco et al (2015). Lourenco, R. D. A., Kenny, P., Haas, M. R. and Hall, J. P. "Factors affecting general practitioner charges and Medicare bulk-billing: results of a survey of Australians". *Medical Journal of Australia* 202 (2), pp. 87–90. <https://doi.org/10.5694/mja14.00697>.
- Lowe et al (2012). Lowe, G., Plummer, V., O'Brien, A. P. and Boyd, L. "Time to clarify – the value of advanced practice nursing roles in health care". *Journal of advanced nursing* 68 (3), pp. 677–685. <https://pubmed.ncbi.nlm.nih.gov/21790738/>.
- Lukewich et al (2022). Lukewich, J. et al. "Effectiveness of registered nurses on system outcomes in primary care: a systematic review". *BMC Health Services Research* 22 (440). <https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-022-07662-7>.
- Magliano et al (2009). Magliano, D. J., Peeters, A., Vos, T., Sicree, R., Shaw, J., Sindall, C., Haby, M., Begg, S. J. and Zimmet, P. Z. "Projecting the burden of diabetes in Australia – what is the size of the matter?" *Australian and New Zealand Journal of Public Health* 33 (6), pp. 540–543. <https://onlinelibrary.wiley.com/doi/10.1111/j.1753-6405.2009.00450.x>.
- Maier et al (2016). Maier, C., Barnes, H., Aiken, L. and Busse, R. "Descriptive, cross-country analysis of the nurse practitioner workforce in six countries: size, growth, physician substitution potential". *Nursing Research*. <https://bmjopen.bmj.com/content/6/9/e011901#xref-ref-31-1>.
- Manser, T. (2009). "Teamwork and patient safety in dynamic domains of healthcare: a review of the literature". *Acta anaesthesiologica Scandinavica* 53 (2), pp. 143–151. <https://pubmed.ncbi.nlm.nih.gov/22042511/>.
- Mantese et al (2021). Mantese, C. E., Silva, E. R. da, Figuiera, A. M. D., Rodrigues, L., Basso, J. and Rosa, P. R. da. "Telemedicine as support for primary care referrals to neurologists: decision-making between different specialists when guiding the case over the phone". <https://www.scielo.br/j/anp/a/CFcM5JvZxvmk4nTly6vYTXF/>.

- Marchildon, G. P. and Hutchison, B. (2016). "Primary care in Ontario, Canada: New proposals after 15 years of reform". *Health policy* 120 (7), pp. 732–738. <https://www.sciencedirect.com/science/article/pii/S0168851016300872?via%5C%3Dihub%5C#bib0185>.
- Marquina et al (2022). Marquina, C. et al. "Future burden of cardiovascular disease in Australia: impact on health and economic outcomes between 2020 and 2029". *European Journal of Preventive Cardiology* 29 (8), pp. 1212–1219. <https://pubmed.ncbi.nlm.nih.gov/33686414/>.
- Martin-Misener et al (2015). Martin-Misener, R. et al. "Cost-effectiveness of nurse practitioners in primary and specialised ambulatory care: systematic review". *BMJ Open* 5. <https://bmjopen.bmj.com/content/5/6/e007167.short>.
- M. R. McGrail et al (2011). McGrail, M. R., Humphreys, J. S., Joyce, C. M., Scott, A. and Kalb, G. "How do rural GPs' workloads and work activities differ with community size compared with metropolitan practice?" *Australian Journal of Primary Health* 18 (3), pp. 228–233. <https://www.publish.csiro.au/py/py11063>.
- M. McGrail et al (2017). McGrail, M., O'Sullivan, B., Russell, D. and Scott, A. *Solving Australia's rural medical workforce shortage*. Centre for Research Excellence in Medical Workforce Dynamics. https://mabel.org.au/_data/assets/pdf_file/0010/2294578/MABEL-policy-brief-no-3.pdf.
- McRae et al (2011). McRae, I., Yen, L., Gillespie, J. and Douglas, K. "Patient affiliation with GPs in Australia—who is and who is not and does it matter?" *Health Policy* 103 (1), pp. 16–23. <https://pubmed.ncbi.nlm.nih.gov/20888058/>.
- Meier et al (2021). Meier, R., Chmiel, C., Valeri, F., Muheim, L., Senn, O. and Rosemann, T. "Long-Term Effects of Financial Incentives for General Practitioners on Quality Indicators in the Treatment of Patients With Diabetes Mellitus in Primary Care—A Follow-Up Analysis of a Cluster Randomized Parallel Controlled Trial". *Frontiers in medicine* 8.664510. <https://www.frontiersin.org/articles/10.3389/fmed.2021.664510/full>.
- Melbourne Institute (2022). *Medicine in Australia: Balancing Employment and Life*. accessed 13 November 2022. University of Melbourne. <https://melbourneinstitute.unimelb.edu.au/mabel/home>.
- Mendelson et al (2017). Mendelson, A., Kondo, K., Damberg, C., Low, A., Motúapuaka, M., Freeman, M., O'Neil, M., Relevo, R. and Kansagara, D. "The Effects of Pay-for-Performance Programs on Health, Health Care Use, and Processes of Care". *Annals of internal medicine*. <https://www.acpjournals.org/doi/full/10.7326/M16-1881?journalCode=aim>.
- Mesquita, R. C. de and Edwards, I. (2020). "Systematic literature review of My Health Record system". *Asia-Pacific Journal of Health management*. <https://journal.achsm.org.au/index.php/achsm/article/view/311/267>.
- Mishra et al (2018). Mishra, P., Kiang, J. C. and Grant, R. W. "Association of Medical Scribes in Primary Care With Physician Workflow and Patient Experience". *JAMA Internal Medicine* 178 (11), pp. 1467–1472. <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2701617>.
- Monash University (2022). *Medical Science and Medicine*. <https://www.monash.edu/study/courses/find-a-course/2023/medical-science-and-medicine-m6011>.
- M.Sibley, L. and Glazier, R. H. (2012). "Evaluation of the equity of age–sex adjusted primary care capitation payments in Ontario, Canada". *Health Policy* 104 (2), pp. 186–192. <https://www.sciencedirect.com/science/article/pii/S0168851011002211>.
- Murphy et al (2018). Murphy, M., Hollinghurst, S., Cowlshaw, S. and Salisbury, C. "Primary Care Outcomes Questionnaire: psychometric testing of a new instrument". *British journal of general practice* 68 (671), e433–e440. <https://pubmed.ncbi.nlm.nih.gov/29581130/>.
- NACCHO (2021). *Primary Health Care 10 Year Plan Consultation Submission to the Department of Health*. National Aboriginal Community Controlled Health Organisation. <https://www.health.gov.au/sites/default/files/documents/2021/06/final-report-from-the-nurse-practitioner-reference-group.pdf>.
- National Health and Hospitals Reform Commission (2009). *A healthier future for all Australians: final report*. Australian Government. <https://apo.org.au/node/17921>.
- National Nursing & Nursing Education Taskforce (2005). *Scopes of practice commentary paper*. <http://docplayer.net/12753536-National-nursing-nursing-education-taskforce-n3et-scopes-of-practice-commentary-paper.html>.

- National Rural Health Alliance (2022). *2022–23 Pre-Budget Submission*. https://treasury.gov.au/sites/default/files/2022-03/258735_national_rural_health_alliance.pdf.
- Nemeth et al (2012). Nemeth, L., Ornstein, S., Jenkins, R. G., Wessell, A. M. and Nietert, P. J. "Implementing and Evaluating Electronic Standing Orders in Primary Care Practice: A PPRNet Study". <https://www.jabfm.org/content/25/5/594.short>.
- Newhouse, J. P. (1993). *Free for All? Lessons from the RAND Health Insurance Experiment*. Insurance Experiment Group. https://www.rand.org/pubs/commercial_books/CB199.html.
- NHMRC (2014). *2014 Annual Report on Australian clinical practice guidelines*. National Health and Medical Research Council. <https://www.nhmrc.gov.au/about-us/publications/report-australian-clinical-practice-guidelines-2014>.
- NHS (2022a). *General Practice Workforce, 30 September 2022*. <https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/30-september-2022>.
- _____ (2022b). *Social prescribing link worker*. accessed 13 November 2022. <https://www.healthcareers.nhs.uk/explore-roles/wider-healthcare-team/roles-wider-healthcare-team/clinical-support-staff/social-prescribing-link-worker/social-prescribing-link-worker>.
- NHS Digital (2022). *Primary Care Network Workforce, 30 June 2022*. accessed 13 November 2022. <https://digital.nhs.uk/data-and-information/publications/statistical/primary-care-network-workforce/30-june-2022>.
- NHS England (2022a). *Expanding our workforce*. accessed 13 November 2022. <https://www.england.nhs.uk/gp/expanding-our-workforce/>.
- _____ (2022b). *First contact physiotherapists*. accessed 13 November 2022. <https://www.england.nhs.uk/gp/expanding-our-workforce/first-contact-physiotherapists/>.
- Noël et al (2015). Noël, P. H., Romero, R. L., Robertson, M. and Parchman, M. L. "Key Activities Used by Community based Primary Care Practices to Improve the Quality of Diabetes Care in Response to Practice Facilitation". *Quality Primary Care* 22 (4), pp. 211–219. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4326068/>.
- Nundy et al (2022). Nundy, S., Cooper, L. A. and Mate, K. S. "The Quintuple Aim for Health Care Improvement: A New Imperative to Advance Health Equity". *JAMA network* 327 (6), pp. 521–522. <https://jamanetwork.com/journals/jama/article-abstract/2788483>.
- Nursing and Midwifery Board of Australia (2007). *A national framework for the development of decision-making tools for nursing and midwifery practice*. <https://agedcare.royalcommission.gov.au/system/files/2020-10/AHP.0002.0001.0151.pdf>.
- _____ (2016). *Enrolled nurse standards for practice*. <https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards/enrolled-nurse-standards-for-practice.aspx>.
- _____ (2022). *Fact sheet: Scope of practice and capabilities of nurses and midwives*. <https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Fact-sheet-scope-of-practice-and-capabilities-of-nurses-and-midwives.aspx>.
- Nutting et al (2003). Nutting, P. A., Goodwin, M. A., Flocke, S. A., Zyzanski, S. J. and Stange, K. C. "Continuity of primary care: to whom does it matter and when?" *Annals of family medicine* 1 (3), pp. 149–155. <https://pubmed.ncbi.nlm.nih.gov/15043376/>.
- OECD (2022a). *OECD Health Statistics 2022*. accessed 31 October 2022. Organisation for Economic Co-operation and Development. <https://www.oecd.org/els/health-systems/health-data.htm>.
- _____ (2022b). *OECD.Stat*. accessed 31 October 2022. Organisation for Economic Co-operation and Development. <https://stats.oecd.org/>.
- O'Leary et al (2012). O'Leary, K. J., Sehgal, N. L., Terrell, G., Williams, M. V., High Performance Teams and Hospital of the Future Project Team. "Interdisciplinary teamwork in hospitals: a review and practical recommendations for improvement". *Journal of hospital medicine* 7 (1), pp. 48–54. <https://pubmed.ncbi.nlm.nih.gov/22042511/>.
- O'Riordan, C. and McDermont, A. (2012). "Clinical managers in the primary care sector: do the benefits stack up?" *Journal of Health Organisation and Management* 26 (5). <https://www.emerald.com/insight/content/doi/10.1108/14777261211256945/full/html>.

- O'Sullivan et al (2019). O'Sullivan, B., Russell, D. J., McGrail, M. R. and Scott, A. "Reviewing reliance on overseas-trained doctors in rural Australia and planning for self-sufficiency: applying 10 years' MABEL evidence". *Human Resources for Health*. <https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-018-0339-z>.
- Palmer, B. (2019). "Is the number of GPs falling across the UK?" *Nuffield trust*. <https://www.nuffieldtrust.org.uk/news-item/is-the-number-of-gps-falling-across-the-uk#key-points>.
- Pang et al (2019). Pang, P. S., Litzau, M., Liao, M., Herron, J., Weinstein, E., Weaver, C., Daniel, D. and Miramonti, C. "Limited data to support improved outcomes after community paramedicine intervention: A systematic review". *The American Journal of Emergency Medicine* 37 (5), pp. 960–964. <https://www.sciencedirect.com/science/article/pii/S0735675719301238?via%5C%3Dihub>.
- Parker et al (2011). Parker, R., Forrest, L., Desborough, J., McRae, I. and Boyland, T. *Independent evaluation of the nurse-led ACT Health Walk-in Centre*. Australian Primary Health Care Research Institute. https://nceph.anu.edu.au/files/ACTHealthWalk-inCentreReport_0.pdf.
- Penno et al (2013). Penno, E., Gauld, R. and Audas, R. "How are population-based funding formulae for healthcare composed? A comparative analysis of seven models". *BMC Health Services Research* 13.470. <https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-13-470>.
- Pescheny et al (2019). Pescheny, J. V., Randhawa, G. and Pappas, Y. "The impact of social prescribing services on service users: a systematic review of the evidence". *European Journal of Public Health* 30 (4), pp. 664–673. <https://academic.oup.com/eurpub/article/30/4/664/5519001#206854769>.
- Possemato et al (2018). Possemato, K., Johnson, E. M., Beehler, G. P., Shepardson, R. L., King, P., Vair, C. L., Funderburk, J. S., Maisto, S. A. and Wray, L. O. "Patient outcomes associated with primary care behavioral health services: A systematic review". *General hospital psychiatry* 53, pp. 1–11. <https://pubmed.ncbi.nlm.nih.gov/29698902/>.
- Pozdnyakova et al (2018). Pozdnyakova, A., Laiteerapong, N., Volerman, A., Feld, L. D., Wan, W., Burnet, D. L. and Lee, W. W. "Impact of Medical Scribes on Physician and Patient Satisfaction in Primary Care". *Journal of General Internal Medicine* 33, pp. 1109–1115. <https://doi.org/10.1007/s11606-018-4434-6>.
- Primary Care One Wales (2019). *Strategic Programme for Primary Care: A handbook for people working in primary and community care*. <https://primarycareone.nhs.wales/topics1/strategic-programme/>.
- Productivity Commission (2005). *Australia's Health Workforce*. <https://www.pc.gov.au/inquiries/completed/health-workforce/report/healthworkforce.pdf>.
- _____ (2020). *Mental Health*. Inquiry Report No. 95. Australian Government. <https://www.pc.gov.au/inquiries/completed/mental-health/report/mental-health.pdf>.
- PWC (2021). *Survey of strategic pressures and opportunities for Primary Health Networks*. <https://www.pwc.com.au/pdf/pwc-phn-reflection-survey-20-21.pdf>.
- RACGP (2016). *Guidelines for preventive activities in general practice*. 9th edition. Royal Australian College of General Practitioners. <https://www.racgp.org.au/download/Documents/Guidelines/Redbook9/17048-Red-Book-9th-Edition.pdf>.
- _____ (2019). *Social prescribing roundtable: November 2019*. The Royal Australian College of general Practitioners. <https://www.racgp.org.au/FSDEDEV/media/documents/RACGP/Advocacy/Social-prescribing-report-and-recommendation.pdf>.
- _____ (2020). *Management of type 2 diabetes: A handbook for general practice*. Royal Australian College of General Practitioners. <https://www.racgp.org.au/getattachment/41fee8dc-7f97-4f87-9d90-b7af337af778/Management-of-type-2-diabetes-A-handbook-for-general-practice.aspx>.
- _____ (2021). *General Practice Health of the Nation 2021*. Royal Australian College of General Practitioners. <https://www.racgp.org.au/health-of-the-nation/>.
- _____ (2022a). *General Practice Health of the Nation 2022*. Royal Australian College of General Practitioners. <https://www.racgp.org.au/getmedia/80c8bdc9-8886-4055-8a8d-ea793b088e5a/Health-of-the-Nation.pdf.aspx>.
- _____ (2022b). *RACGP Pre-budget Submission*. The Royal Australian College of General Practitioners. <https://www.racgp.org.au/getmedia/6f53caaa-e694-42f5-90b1-90edd6aacd73/RACGP-Pre-Budget-Submission-2022-23-October.pdf.aspx>.

- RACGP (2022c). *Medical assistants in Australian general practice*. accessed 13 November 2022. Royal Australian College of General Practitioners. <https://www.racgp.org.au/download/Documents/PracticeSupport/informationSheet-medicalassistants.pdf>.
- Reiter et al (2018). Reiter, J. T., Dobmeyer, A. C. and Hunter, C. L. "The Primary Care Behavioral Health (PCBH) Model: An Overview and Operational Definition". *Journal of clinical psychology in medical settings* 25 (2), pp. 109–126. <https://pubmed.ncbi.nlm.nih.gov/29480434/>.
- Rethorn, Z. D. and Pettitt, C. D. (2019). "What Is the Effect of Health Coaching Delivered by Physical Therapists? A Systematic Review of Randomized Controlled Trials". *Physical therapy* 99 (10), pp. 1354–1370. <https://pubmed.ncbi.nlm.nih.gov/31309976/>.
- Reynolds et al (2018). Reynolds, R., Dennis, S., Hasan, I., Slewa, J., Chen, W., Tian, D., Bobba, S. and Zwar, N. "A systematic review of chronic disease management interventions in primary care". *BMC family practice* 19.11 (1). <https://pubmed.ncbi.nlm.nih.gov/29316889/>.
- Richardson, G. C. (2014). "Nurse Practitioner Management of Type 2 Diabetes". *Primary health care* 18 (2), e134–e140. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4022572/>.
- Rosen et al (2010). Rosen, A., Gurr, R. and Fanning, P. "The future of community-centred health services in Australia: lessons from the mental health sector". *Australian Health Review* 34 (1), pp. 106–115. <https://www.publish.csiro.au/ah/Fulltext/AH09741>.
- Routledge, R. (2020). "Integrating specialty care into primary care: The Nuka approach". *BC medical journal* 62 (1), pp. 26–28. <https://bcmj.org/premise/integrating-specialty-care-primary-care-nuka-approach>.
- Royal Children's Hospital (2021). *COMPASS: COnnecting Mental-health Paediatric Specialists and community Services: Project report November 2021*.
- Royal Commission into Aged Care Quality and Safety (2021). *Final Report: Care, dignity and respect*. <https://agedcare.royalcommission.gov.au/publications/final-report>.
- Royal Commission into Victoria's Mental Health System (2021). *Final Report: Summary and recommendations*. https://finalreport.rcvmhs.vic.gov.au/wp-content/uploads/2021/02/RCVMHS_FinalReport_ExecSummary_Accessible.pdf.
- Rudoler et al (2015). Rudoler, D., Deber, R., Barnsley, J., Glazier, R. H., Dass, A. R. and Laporte, A. "Paying for Primary Care: The Factors Associated with Physician Self-selection into Payment Models". *Health economics* 24 (9), pp. 1229–1242. <https://pubmed.ncbi.nlm.nih.gov/26190516/>.
- A. W. Russell et al (2013). Russell, A. W., Baxter, K. A., Askew, D. A., Tsai, J., Ware, R. S. and Jackson, C. L. "Model of care for the management of complex Type 2 diabetes managed in the community by primary care physicians with specialist support: an open controlled trial". *Diabetic medicine* 30 (9), pp. 1112–1121. <https://pubmed.ncbi.nlm.nih.gov/23758279/>.
- G. M. Russell et al (2017). Russell, G. M. et al. "Contextual levers for team-based primary care: lessons from reform interventions in five jurisdictions in three countries". *Family Practice* 35 (3), pp. 276–284. <https://doi.org/10.1093/fampra/cmz095>.
- Saint-Pierre et al (2018). Saint-Pierre, C., Herskovic, V. and Sepúlveda, M. "Multidisciplinary collaboration in primary care: a systematic review". *Family practice* 35 (2), pp. 132–141. <https://pubmed.ncbi.nlm.nih.gov/28973173/>.
- Sarma et al (2010). Sarma, S., Devlin, R. A. and Hogg, W. "Physician's production of primary care in Ontario, Canada". *Health Economics* 19 (1), pp. 14–30. <https://onlinelibrary.wiley.com/doi/abs/10.1002/hec.1447>.
- Sarma et al (2014). Sarma, S., Mehta, N., Devlin, R. A., Kpelitse, K. A. and Li, L. "Family physician remuneration schemes and specialist referrals: Quasi-experimental evidence from Ontario, Canada". *Health economics* 27 (10), pp. 1533–1549. <https://onlinelibrary.wiley.com/doi/abs/10.1002/hec.3783>.
- Savage, E. and Jones, G. (2004). "An Analysis of the General Practice Access Scheme on GP Incomes, Bulk Billing and Consumer Copayments". *Australian economic review* 37 (1), pp. 31–40. <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-8462.2004.00306.x>.
- Savira et al (2021). Savira, F., Ademi, Z., Wang, B. H., Kompa, A. R., Owen, A. J., Liew, D. and Zomer, E. "The Preventable Productivity Burden of Kidney Disease in Australia". *Journal of the American Society of Nephrology* 32 (4), pp. 938–949. <https://jasn.asnjournals.org/content/32/4/938>.
- Sax Institute (2015). *Commissioning primary health care*. NSW Health. <https://www.saxinstitute.org.au/wp-content/uploads/Commissioning-primary-health-care.pdf>.

- Scanlon et al (2016). Scanlon, A., Cashin, A., Bryce, J., G.Kelly, J. and Buckely, T. "The complexities of defining nurse practitioner scope of practice in the Australian context". *Collegian* 23 (1), pp. 129–142. <https://www.sciencedirect.com/science/article/pii/S1322769614000912>.
- Schofield et al (2016). Schofield, D., Shrestha, R. N., Cunich, M. M., Tanton, R., Veerman, L., Kelly, S. J. and Passey, M. E. "Economic costs of chronic disease through lost productive life years (PLYs) among Australians aged 45–64 years from 2015 to 2030: results from a microsimulation model". *BMJ Open*. <https://bmjopen.bmj.com/content/6/9/e011151>.
- Schottenfeld et al (2016). Schottenfeld, L., Petersen, D., Peikes, D., Ricciardi, R., Burak, H., McNellis, R. and Genevero, J. *Creating Patient-Centred Team-Based Primary Care*. Agency for Healthcare Research and Quality. <https://www.ahrq.gov/sites/default/files/wysiwyg/ncepctr/tools/PCMH/creating-patient-centered-team-based-primary-care-white-paper.pdf>.
- Scott, A. (2017). *General practice trends*. ANZ – Melbourne Institute. https://mabel.org.au/__data/assets/pdf_file/0005/2334551/ANZ-MI-Health-Sector-Report.pdf.
- _____ (2019). *The future of the medical workforce*. https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0008/3069548/ANZ-MI-Health-Sector-Report-Future.pdf.
- _____ (2021a). "It's more than the money: Getting GPs to go to rural areas". *Inside Business*. <https://pursuit.unimelb.edu.au/articles/it-s-more-than-the-money-getting-gps-to-go-to-rural-areas>.
- _____ (2021b). *The evolution of the medical workforce*. ANZ and Melbourne Institute. https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0011/3809963/ANZ-Health-Sector-Report-2021.pdf.
- _____ (2022). *Trends in the structure and financial health of private medical practices in Australia*. ANZ and Melbourne Institute. <https://www.anz.com.au/content/dam/anzcomau/documents/pdf/ANZ-Melbourne-Institute-Health-Sector-Report.pdf>.
- Scott et al (2009). Scott, A., Schurer, S., Jensen, P. H. and Sivey, P. "The effects of an incentive program on quality of care in diabetes management". *Health economics* 18 (9), pp. 1091–1108. https://onlinelibrary.wiley.com/doi/epdf/10.1002/hec.1536?saml%5C_referrer.
- Scott et al (2013). Scott, A., Witt, J., Humphreys, J., Joyce, C., GuyonneKalb, Jeon, S.-H. and McGrail, M. "Getting doctors into the bush: General Practitioners' preferences for rural location". *Social Science and medicine*. <https://www.sciencedirect.com/science/article/pii/S0277953613003882>.
- Scott et al (2022). Scott, A., Li, J., Gravelle, H. and McGrail, M. "Physician Competition and Low-Value Health Care". *American Journal of Health Economics* 8 (2). <https://doi.org/10.1086/718509>.
- SEMPHN (2022). <https://www.semphn.org.au/free-access-to-psychiatric-secondary-consultations-for-gps>.
- Servellen et al (2006). Servellen, G. van, Fongwa, M. and D'Errico, E. M. "Continuity of care and quality care outcomes for people experiencing chronic conditions: A literature review". *Nursing and health sciences* 8 (3), pp. 185–195. <https://pubmed.ncbi.nlm.nih.gov/16911180/>.
- Services Australia (2022a). *Medicare Item Reports*. http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp.
- _____ (2022b). *Medicare Item Reports*. accessed 31 October 2022. Australian Government. http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp.
- _____ (2022c). *Practice nurse items*. accessed 13 November 2022. <https://www.servicesaustralia.gov.au/practice-nurse-items?context=20>.
- _____ (2022d). *Practice Incentives Program (PIP): Types of payments*. accessed 13 November 2022. <https://www.servicesaustralia.gov.au/types-practice-incentives-program-payments?context=23046>.
- Shaw et al (2011). Shaw, S., Rosen, R. and Rumbold, B. *What is integrated care?* Nuffield Trust. <https://www.nuffieldtrust.org.uk/research/what-is-integrated-care>.
- Sifaki-Pistolla et al (2020). Sifaki-Pistolla, D., Melidoniotis, E., Dey, N. and Chatzea, V.-E. "How trust affects performance of interprofessional health-care teams". *Journal of Interprofessional Care* 34 (2). <https://doi.org/10.1080/13561820.2019.1631763>.

- Smigorowsky et al (2020). Smigorowsky, M. J., Sebastiani, M., McMurtry, M. S., Tsuyuki, R. T. and Norris, C. M. "Outcomes of nurse practitioner-led care in patients with cardiovascular disease: A systematic review and meta-analysis". *Journal of advanced nursing* 76 (1), pp. 81–95. <https://pubmed.ncbi.nlm.nih.gov/31588598/>.
- Smith et al (2019). Smith, T., McNeil, K., Mitchell, R., Boyle, B. and Ries, N. "A study of macro-, meso- and micro-barriers and enablers affecting extended scopes of practice: the case of rural nurse practitioners in Australia". *BMC nursing* 18.14. <https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-019-0337-z>.
- Sørensen, R. J. and Grytten, J. (2003). "Service production and contract choice in primary physician services". *Health policy* 66 (1), pp. 73–93. <https://www.sciencedirect.com/science/article/pii/S0168851003000265>.
- Spehar et al (2017). Spehar, I., Sjøvik, H., Karevold, K. I., Rosvold, E. O. and Frich, J. C. "General practitioners' views on leadership roles and challenges in primary health care: a qualitative study". *Scandinavian Journal of Primary Health Care* 35 (1). <https://doi.org/10.1080/02813432.2017.1288819>.
- Starfield, B. (1998). *Primary care: balancing health needs, services and technology*. Oxford University Press.
- Starfield et al (2005). Starfield, B., Shi, L. and Macinko, J. "Contribution of primary care to health systems and health". *The Milbank Quarterly* 83 (3), pp. 457–502. <https://onlinelibrary.wiley.com/doi/10.1111/j.1468-0009.2005.00409.x>.
- Stewart, M. (2001). "Towards a global definition of patient centred care". *BMJ* 322.7284, pp. 444–445. <https://www.bmj.com/content/322/7284/444>.
- Strazdins et al (2021). Strazdins, E., Dwan, K., Pescud, M. and Strazdins, L. "Part-time in general practice—a remedy to a time-based problem?" *Family Practice*. <https://academic.oup.com/fampra/article/36/4/511/5222752>.
- Stynes et al (2021). Stynes, S., Goodwin, R. and Bishop, A. *National Evaluation of First Contact Practitioner (FCP) model of primary care*. https://apcp.csp.org.uk/system/files/documents/2020-11/final_fcp_phase_3_national_evaluation_report.pdf.
- Sudeshika et al (2021). Sudeshika, T., Naunton, M., Deeks, L. S., Thomas, J., Peterson, G. M. and Kosari, S. "General practice pharmacists in Australia: A systematic review". *PLoS One* 16 (10). <https://pubmed.ncbi.nlm.nih.gov/34648595/>.
- Swannell, C. (2016). "BEACH, PHCRIS defunding "a tragedy"". *InSight*. <https://insightplus.mja.com.au/2016/14/beach-phcris-defunding-tragedy/>.
- Sweetman, A. and Buckley, G. (2016). *Payment Innovations for General Practice Physicians in Ontario, Canada*. Organisation for Economic Co-operation and Development. <https://www.oecd.org/els/health-systems/Better-Ways-to-Pay-for-Health-Care-Background-Note-Canada.pdf>.
- Swerissen, H. and Duckett, S. (2016). "Chronic failure in primary care". *Community Health Studies*. <https://doi.org/10.1111/j.1753-6405.1990.tb00015.x>.
- Taylor, M. J. and Swerissen, H. (2010). "Medicare and chronic disease management: integrated care as an exceptional circumstance?" *Australian health review* 34 (2), pp. 152–161. <https://pubmed.ncbi.nlm.nih.gov/20497727/>.
- Teng et al (2018). Teng, T.-H. K. et al. "Patterns of Medicare-funded primary health and specialist consultations in Aboriginal and non-Aboriginal Australians in the two years before hospitalisation for ischaemic heart disease". *International journal for equity in health* 17.111 (1). <https://pubmed.ncbi.nlm.nih.gov/30068346/>.
- The Age (2022). "It will take more than money to fix the GP crisis". <https://www.theage.com.au/politics/federal/it-will-take-more-than-money-to-fix-the-gp-crisis-20220819-p5bb5f.html>.
- The Commonwealth Fund (2019). *International Health Policy Survey of Primary Care Physicians*. <https://www.commonwealthfund.org/publications/surveys/2019/dec/2019-commonwealth-fund-international-health-policy-survey-primary>.
- (2022). *International Health Care System Profiles*. <https://www.commonwealthfund.org/international-health-policy-center/system-profiles>.
- The Health Foundation (2019). "The UK spends less on capital in health care than other comparable countries". <https://www.health.org.uk/news-and-comment/charts-and-infographics/the-uk-spends-less-on-capital-in-health-care-than-other-comp>.
- The University of Melbourne (2022). *Doctor of Medicine*. <https://study.unimelb.edu.au/find/courses/graduate/doctor-of-medicine/entry-requirements/>.

- Tikkanen et al (2020). Tikkanen, R., Osborn, R., Mossialos, E., Djordjevic, A. and Wharton, G. *International Profiles of Health Care Systems*. The Commonwealth Fund. https://www.commonwealthfund.org/sites/default/files/2020-12/International_Profiles_of_Health_Care_Systems_Dec2020.pdf.
- Tomaschek et al (2022). Tomaschek, R., Lampart, P., Scheel-Sailer, A., Gemperli, A., Merlo, C. and Essig, S. "Improvement Strategies for the Challenging Collaboration of General Practitioners and Specialists for Patients with Complex Chronic Conditions: A Scoping Review". *International Journal of Integrated Care* 22 (3). <http://doi.org/10.5334/ijic.5970>.
- Torrens University (2022). *Monitoring inequality in Australia: Data by Quintile of Socioeconomic Disadvantage*. https://phidu.torrens.edu.au/current/data/sha-aust/quintiles/phidu_data_quintiles_aust.xlsx.
- Treasury (2010). *Australia to 2050: future challenges*. 2010 intergenerational report overview. Australian Government. https://treasury.gov.au/sites/default/files/2019-03/IGR_2010_Overview.pdf.
- _____ (2021). *2021 Intergenerational Report*. <https://treasury.gov.au/publication/2021-intergenerational-report>.
- _____ (2022). *Budget 2022-23: Budget Paper 1*. https://budget.gov.au/2022-23-october/content/bp1/download/bp1_2022-23.pdf.
- UCSF (2022). *Standing orders*. <https://cepc.ucsf.edu/standing-orders>.
- Varela et al (2021). Varela, S., Hays, C., Knight, S. and Hays, R. "Models of remote professional supervision for psychologists in rural and remote locations: A systematic review". *The Australian Journal of Rural Health*. <https://onlinelibrary.wiley.com/doi/10.1111/ajr.12740>.
- Wallace et al (2014). Wallace, E., Stuart, E., Vaughan, N., Bennett, K., Fahey, T. and Smith, S. M. "Risk Prediction Models to Predict Emergency Hospital Admission in Community-dwelling Adults". *Medical care* 52 (8), pp. 751–765. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4219489/>.
- Watt, G. (2012). "General Practitioners at the Deep End". *Occasional Papers of the Royal College General Practitioners* 89, pp. 1–40. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3627459/>.
- Whited et al (2002). Whited, J. D., Hall, R. P., Foy, M. E., Marbrey, L. E., Grambow, S. C., Dudley, T. K., Datta, S., Simel, D. L. and Oddone, E. Z. "Tele dermatology's impact on time to intervention among referrals to a dermatology consult service". <https://pubmed.ncbi.nlm.nih.gov/12419025/>.
- Willard-Grace et al (2014). Willard-Grace, R., Hessler, D., Rogers, E., Dubé, K., Bodenheimer, T. and Grumbach, K. "Team Structure and Culture Are Associated With Lower Burnout in Primary Care". *The Journal of the American Board of Family Medicine* 27 (2). <https://doi.org/10.3122/jabfm.2014.02.130215>.
- Willard-Grace et al (2015). Willard-Grace, R., Chen, E. H., Hessler, D., DeVore, D., Prado, C., Bodenheimer, T. and Thom, D. H. "Health Coaching by Medical Assistants to Improve Control of Diabetes, Hypertension, and Hyperlipidemia in Low-Income Patients: A Randomized Controlled Trial". *Annals of family medicine* 13 (2), pp. 130–138. <https://www.annfammed.org/content/13/2/130>.
- Woodley, M. (2021). "RACGP calls for 'blended' aged care funding model". *newsGP*. <https://www1.racgp.org.au/newsgp/professional/racgp-calls-for-blended-aged-care-funding-model>.
- _____ (2022). "Labor promises nearly \$1 billion in general practice funding". *newsGP*. <https://www1.racgp.org.au/newsgp/professional/labor-promises-nearly-1-billion-in-general-practic>.
- Wright et al (2018). Wright, M., Hall, J., Gool, K. van and Haas, M. "How common is multiple general practice attendance in Australia?" *Nursing and health sciences* 47 (5), pp. 289–296. <https://www1.racgp.org.au/ajgp/2018/may/how-common-is-multiple-general-practice>.
- Wright et al (2021). Wright, M., Versteeg, R. and Gool, K. van. "How much of Australia's health expenditure is allocated to general practice and primary healthcare?" *Australian Journal of General Practice*. <https://www1.racgp.org.au/ajgp/2021/september/general-practice-and-primary-healthcare-health-exp>.
- Xing et al (2022). Xing, D., Renaldi, E. and Mann, T. "The government has increased the skilled migrant cap to 195,000. So what do those who want or hold a visa think about it?" *ABC News*. <https://www.abc.net.au/news/2022-09-03/skilled-migration-cap-increase-visa-backlog-exploitation-concerns/101400178>.

Zallman et al (2018). Zallman, L., Finnegan, K., Roll, D., Todaro, M., Oneiz, R. and Sayah, A. "Impact of Medical Scribes in Primary Care on Productivity, Face-to-Face Time, and Patient Comfort". *Journal of the American Board of Family Medicine* 31 (4), pp. 612–619.
<https://www.jabfm.org/content/31/4/612.short>.

Zarora et al (2022). Zarora, R., Immanuel, J., Chivese, T., MacMillan, F. and Simmons, D. "Effectiveness of Integrated Diabetes Care Interventions Involving Diabetes Specialists Working in Primary and Community Care Settings: A Systematic Review and Meta-Analysis". *International Journal of Integrated Care* 22 (2). <http://doi.org/10.5334/ijic.6025>.