

A fair shot

How to close the vaccination gap

Peter Breadon and Ingrid Burfurd

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Overview

Each year, vaccines save thousands of lives and prevent countless sick days. But millions of older Australians at high risk of serious illness are missing out.

The pandemic has left many of us sick of vaccination, confused about which jabs we need, misled by misinformation, or complacent about the risks of not being vaccinated.

COVID vaccination rates have plunged. At the start of winter 2023, 2.5 million people over 65 weren't up-to-date with their vaccinations – two million more than a year earlier. The consequences are serious: COVID is still causing more deaths and hospitalisations than flu.

It's not just COVID. Uptake of other adult vaccines is also far too low. Less than half of people in their 70s are vaccinated for shingles. Only one in five are vaccinated for pneumococcal disease.

Vaccination rates should be much higher, but they also need to be fairer. Year after year, the same groups miss out. If you don't speak English at home, you are only half as likely to get recommended COVID vaccinations. If you are Indigenous, you are a third less likely. Many people in rural areas miss out, and there are even big differences within cities. In different parts of Brisbane, for example, rates of flu vaccination vary by nearly 30 per cent.

We must do better, and we can. The building blocks for success are already in place. Child vaccination and pandemic programs showed us what works. Vaccinations are widely available in pharmacies, vaccination data are better than ever, and an Australian Centre for Disease Control (ACDC) is being set up. The time is ripe for an adult vaccination reset.

First, governments must get their house in order. Strategies are out-of-date and responsibilities are unclear. Adult vaccination policy

lacks the goals and incentives that drove increased child vaccination in recent decades. A new National Vaccination Agreement should set adult vaccination targets, to mobilise effort and clarify the roles and responsibilities of federal and state governments.

Second, vaccinations should be easy to understand and easy to get. Simpler rules would allow more high-risk people to get vaccinated during 'surges' ahead of winter. There should be clear guidance and communication from the ACDC, advertising to boost awareness, and SMS reminders for people at high risk of serious illness.

Third, each Primary Health Network should be responsible for increasing vaccination in their area. They should get data and funding to help pharmacies and GP clinics reach more people, including cultural groups that are missing out, and people in aged care.

Fourth, Aboriginal Community Controlled Health Organisations should get ongoing funding to increase vaccination among Indigenous people.

But these improvements won't ensure that everyone has the same opportunity to get vaccinated. People with profound challenges, such as people in poverty, or those who deeply distrust the healthcare system, will need more support. The pandemic showed how to help them, using tailored programs developed with local communities.

There should be ongoing funding for state governments to deliver these programs, along with guardrails that make sure they use the best evidence and achieve the biggest impact.

Australia can learn from past wins and dismantle the barriers to adult vaccination. A new system can make getting a jab easier for everyone, make care more welcoming to people from different backgrounds, and reach out to people who need it the most.

Recommendations

Set clear goals and responsibilities

A new National Vaccines Partnership Agreement should set ambitious goals and clarify the roles of federal and state governments by:

- Setting national targets for adult vaccines.
- Requiring Primary Health Networks (PHNs) to make continual progress towards national targets, and to achieve them for aged care residents within two years.
- Making states responsible for increasing vaccination in groups with extremely low vaccination.
- Committing to transparency, with public reporting of progress and detailed data for PHNs, states, and Aboriginal-controlled services.

Increase awareness and make vaccination easier

The federal government should introduce vaccination ‘surges’, resetting community attitudes and making seasonal vaccination easier by:

- Making vaccination intervals flexible for high-risk people, so more people are eligible for vaccination during surges.
- Running advertising based on expert advice from the Australian Centre for Disease Control (ACDC).
- Sending SMS vaccination reminders to all high-risk people.

Boost funding to promote vaccination in mainstream primary care

Primary Health Networks should have new funding to promote vaccination in mainstream health services:

- Supporting GP clinics, pharmacies, and aged care providers to improve, with \$10 million a year, for five years.
- Piloting Community Health Workers across six PHNs, with \$750,000 a year, for five years.

Tailor solutions for people the mainstream system can’t reach

States should develop tailored local initiatives with communities that face the biggest barriers to vaccination. Federal and state governments should contribute equally to \$20 million a year, for five years. To unlock federal funding, states should be required to:

- Identify groups with very low rates of vaccination, and commit to increasing vaccination for those groups.
- Use evidence-based interventions identified by the ACDC.
- Work with communities to design and deliver best-practice initiatives.

Funding for Aboriginal Community Controlled Health Organisation vaccination programs should be increased by \$10 million a year.

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1 Vaccines work

Vaccines reduce the risk of serious illness, hospitalisation, and death from a range of viruses and bacteria. The risks from vaccines are low. Vaccines are highly cost-effective and have made a huge contribution to Australians' health.

1.1 What are vaccines?

Vaccines are one of the safest and most effective types of healthcare.¹ A vaccine primes the immune system to recognise and fight a virus or bacteria so that it can react quickly to an infection, reducing the risk of severe illness, hospitalisation, and death. Sometimes vaccines mean people can avoid sickness and infecting other people altogether.



Vaccines have eliminated deadly diseases,² and today a range of vaccines are recommended throughout people's lives as part of Australia's National Immunisation Program (Figure 1.1).

1.2 Adult vaccines target serious diseases

This report refers to the flu, COVID, pneumococcal, and shingles vaccines as 'adult' vaccines, to distinguish them from vaccines that are only in the standard childhood and adolescent vaccine schedules (Figure 1.1).³

1. WHO (n.d.).
 2. Smallpox has been globally eradicated since 1980: WHO (2023a). Polio has been eliminated in Australia since 2000: DHAC (2022a).
 3. This report refers to influenza as 'flu' and COVID-19 as 'COVID'. Flu and pneumococcal vaccines are also recommended for children and adolescents. This report does not cover adult vaccination rates for the pertussis (whooping cough) vaccine, which is recommended during pregnancy: ATAGI (2023a).

Figure 1.1: Different vaccines are recommended at different stages of life

NIP Schedule	Age	Diseases vaccinated against
Childhood and adolescent schedule 	Vaccines administered at multiple ages	<ul style="list-style-type: none"> Hepatitis B Diphtheria Tetanus Pertussis (whooping cough) Polio Haemophilus influenzae type b (Hib) Rotavirus Pneumococcal (all children and adolescents with medical risks) Meningococcal ACWY Measles Mumps Rubella Varicella (Chickenpox) Meningococcal B (Indigenous children) Hepatitis A (Indigenous children) Influenza (Under 5 years; 5 years and older for Indigenous children, and children with specified medical risks) Human Papillomavirus (HPV)
Adult schedule 	All ages	<ul style="list-style-type: none"> Influenza (annual) (Indigenous adults; adults with medical risks) Pneumococcal (Adults with medical risks) Shingles (Adults with medical risks)
	50+	<ul style="list-style-type: none"> Pneumococcal (Indigenous adults) Shingles (Indigenous adults)
	65+	<ul style="list-style-type: none"> Influenza (annual; non-Indigenous adults) Shingles (non-Indigenous adults)
	70+	<ul style="list-style-type: none"> Pneumococcal (non-Indigenous adults)

Notes: NIP = National Immunisation Program. The schedule also includes vaccination against pertussis (whooping cough) and influenza for pregnant women, and additional vaccinations for people with medical risk conditions.

Source: DHAC (2023a).

The diseases that these vaccines target are dangerous. They can result in painful symptoms, days in hospital, long-term health problems, and death.

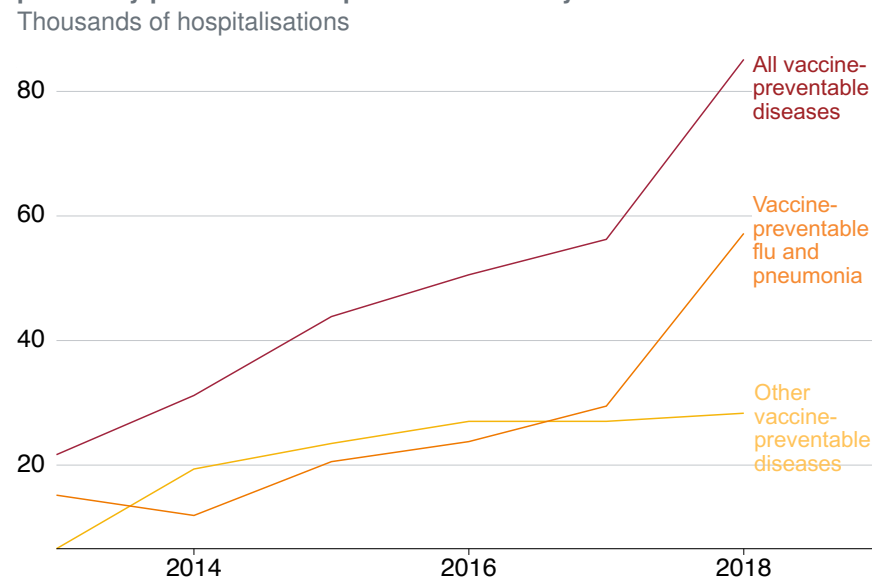
The number of flu deaths varies each year, but on average about 600 Australians die from flu each year.⁴ Pneumococcal disease may kill hundreds of people a year.⁵ COVID is less dangerous than it was at the peak of the pandemic, but is still killing thousands of Australians a year. Since pandemic measures ended in October 2022,⁶ over 5,000 Australians have died from COVID, making it a leading cause of death.⁷

Alongside the hundreds, and sometimes thousands, of people who are killed by vaccine-preventable diseases each year, tens of thousands more need hospital treatment for severe and distressing symptoms.

At the end of October there were more than 1,200 people in hospital with severe COVID, and more than 30 in intensive care.⁸ In the lead-up to the pandemic, flu and pneumococcal disease were responsible for tens of thousands of potentially preventable hospitalisations each year – nearly 60,000 in 2018 (Figure 1.2).

Even when people avoid hospitalisation and death, vaccine-preventable diseases can damage their long-term health. Between 5 and 10 per cent of people who get COVID suffer from ‘long COVID’, which commonly causes long-term shortness of breath, chest pain, muscle pain, cognitive problems, and fatigue.⁹

Figure 1.2: Vaccine-preventable diseases cause tens of thousands of potentially preventable hospitalisations each year



Source: Grattan analysis of AIHW (2020a, National Data Table).

4. Doherty Institute (2021).

5. 622 deaths between 1997 and 2016 (AIHW 2018) and 159 between 2016 and 2018 (C. Patel et al 2023, p. 33) but deaths may be five to six times higher than reported. AIHW (2019a, p. 18).

6. J. Evans (2022).

7. ABS (2023a) and ABS (2023b).

8. ABC (2023).

9. AIHW (2022a).

There is also emerging evidence that COVID might lead to chronic health problems including diabetes, heart, or nervous system conditions,¹⁰ and COVID is associated with an increased risk of Alzheimer’s disease.¹¹ Flu can lead to heart inflammation,¹² while shingles can cause painful, long-term nerve damage and – in rare cases – blindness.¹³

1.3 Adult vaccines reduce illness, hospitalisation, and death

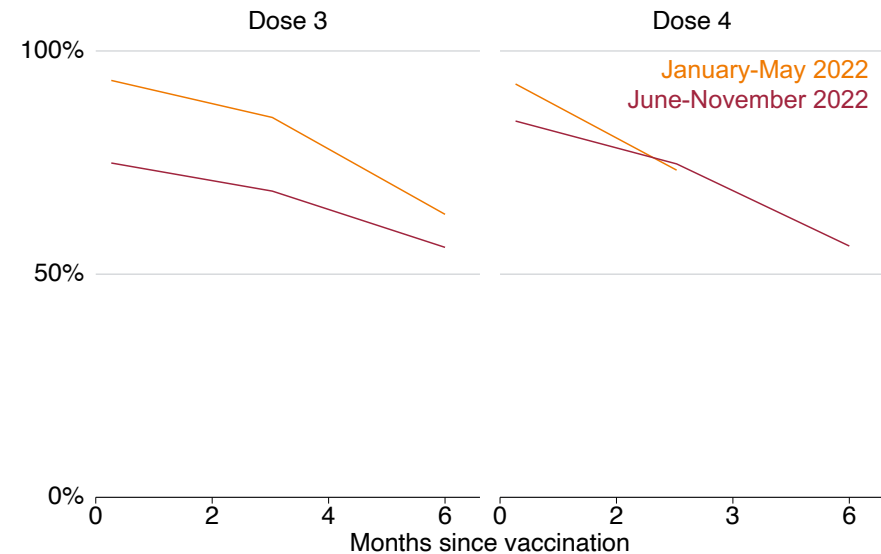
Adult vaccinations slash the risk of illness, hospitalisation, and death, often by more than half.

Flu vaccines typically prevent almost 60 per cent of illness.¹⁴ For people hospitalised with severe flu,¹⁵ vaccines reduce the risk of requiring intensive care by about 25 per cent,¹⁶ and vaccines reduce the risk of death by about 30 per cent.¹⁷

Each COVID shot initially provides about 70-to-85 per cent protection against hospitalisation and death, even for high-risk people aged 65 and older.¹⁸ As with flu, effectiveness decreases over time, which is why regular vaccination is needed to maximise protection as flu and

Figure 1.3: Regular COVID vaccinations reduce the risk of hospitalisation

COVID vaccine effectiveness in people aged 65 and older



Notes: Vaccine effectiveness from an additional dose of COVID vaccine. Data from Australia for people aged 65 and older. Data was not available for vaccine effectiveness beyond three months for Dose 4 in the January-May period of 2022. See Liu et al (2023) for confidence intervals.

Source: Liu et al (ibid).

COVID viruses evolve (Figure 1.3). There is also emerging evidence that vaccinations reduce the risk of long COVID.¹⁹

The pneumococcal vaccine is estimated to have about 45 per cent effectiveness, and about 75 per cent against the most severe forms

10. Mayo Clinic (2022).

11. Potter (2022).

12. UCLA Health (2021).

13. About one in five people experience post-herpetic neuralgia, which causes pain after a shingles infection: NHS (2021). Regarding blindness: Barshak (2021).

14. Among vaccinated people; effectiveness varies each year: NCIRS (2021). Effectiveness wanes over time: Tokars et al (2020). The immune response in older people is weaker: A. Cheng (2018).

15. The national flu immunisation program is estimated to reduce hospital admissions by about 45 per cent, and higher vaccination rates could reduce admissions by as much as 14 per cent: A. C. Cheng et al (2016).

16. US CDC (2023a).

17. Nation et al (2021).

18. Liu et al (2023).

19. Byambasuren et al (2023), Tran et al (2023) and Vanichkachorn et al (2023).

of pneumococcal disease.²⁰ And vaccines reduce the risk of getting shingles by at least 90 per cent for most adults.²¹

Vaccination doesn't just benefit the individual. People who are vaccinated are less likely to pass a disease on to their family, friends, and colleagues, which further reduces sickness, hospital visits, and deaths.²²

1.4 Adult vaccines are good value for money

Vaccines aren't just good for people's health – they're also good value for taxpayers.

To be included in the the National Immunisation Program (NIP), vaccines must first be recommended by the Australian Technical Advisory Group on Immunisation (ATAGI). Then the Pharmaceutical Benefits Advisory Committee (PBAC) must find that they are cost-effective, based on costs and savings to the health system.²³

There is strong evidence that COVID vaccines are cost-effective.²⁴ Most studies find that adult flu and pneumococcal vaccines are very

good value, achieving health gains at a much lower cost than many other health interventions that governments fund.²⁵

1.5 The risks from vaccination are low

For most people, vaccines are extremely safe. While some people can't get particular vaccines for medical reasons,²⁶ for most people the risks are small. Serious reactions are extremely rare, and the benefits of vaccination clearly outweigh the risks.²⁷

To take COVID as an example, about 45 per cent of vaccinations result in short-term, mild side-effects, including local pain in the spot where a person was vaccinated, headaches, muscle aches, and nausea. Less than 1 per cent of reports noted a follow-up visit to a doctor or emergency department.²⁸

In very rare instances, reactions can be serious. COVID vaccines have been associated with an estimated 14 deaths in Australia, but 13 of these occurred after a vaccine that is no longer in use.²⁹ Almost 70 million vaccinations have been given,³⁰ and they are estimated to have saved tens of thousands of lives.³¹

20. US CDC (2023b). Invasive pneumococcal disease occurs when the pneumococcal bacteria enters the bloodstream or spinal fluid, and it can cause meningitis: ATAGI (2023b).

21. US CDC (2023c).

22. Tan et al (2023) and US DHHS (2021).

23. PBS (n.d.) and PBAC (2016). PBAC is more likely to approve drugs below a threshold of \$50,000 per quality-adjusted life year, which is often used as a threshold of cost-effectiveness: Taylor and Jan (2017). Some vaccines are found to be cost-effective only for some groups with greater risks from vaccine-preventable diseases. For example, ATAGI recommends that all people older than six months get an annual flu vaccine, but it is only available on the NIP for certain age groups, Indigenous people, pregnant people, and people with high-risk medical conditions: ATAGI (2023c).

24. Utami et al (2023).

25. In a recent meta-analysis of adult vaccination, most flu and pneumococcal studies found costs well below widely-used thresholds for assessing cost-effectiveness: Leidner et al (2019). Peasah et al (2013) and Ting et al (2017) report similar results in their meta-analyses of flu vaccines.

26. For example, some people have an anaphylactic response to components of some vaccines, e.g. polyethylene glycol in Cominarty and Spikevax COVID vaccines: ATAGI (2023d). And some vaccines are not recommended during pregnancy: ATAGI (2023a).

27. K. Macartney et al (2022).

28. TGA (2023a) and TGA (2023b).

29. TGA (2022) and DHAC (2023b).

30. DHAC (2023c).

31. For example, Watson et al (2022, Supplementary materials, Table 4) estimated that vaccines saved between 90,630 and 186,700 lives in the first year of COVID in Australia.

2 Too many high-risk adults are missing out

Vaccination rates for high-risk adults are too low, and for some vaccines they are falling. Only one in five people in their 70s have had their recommended vaccination against pneumococcal disease. Less than four in ten people had their recommended 2023 pre-winter COVID booster.

And some groups are far more likely to miss out. High-risk people who aren't proficient in English are nearly 60 per cent less likely to have had a recent vaccination against COVID, compared to the average high-risk person. Recent vaccination for the most disadvantaged people is nearly 40 per cent lower than it is for the most advantaged, and the most disadvantaged people are nearly 20 per cent less likely to be vaccinated against flu.

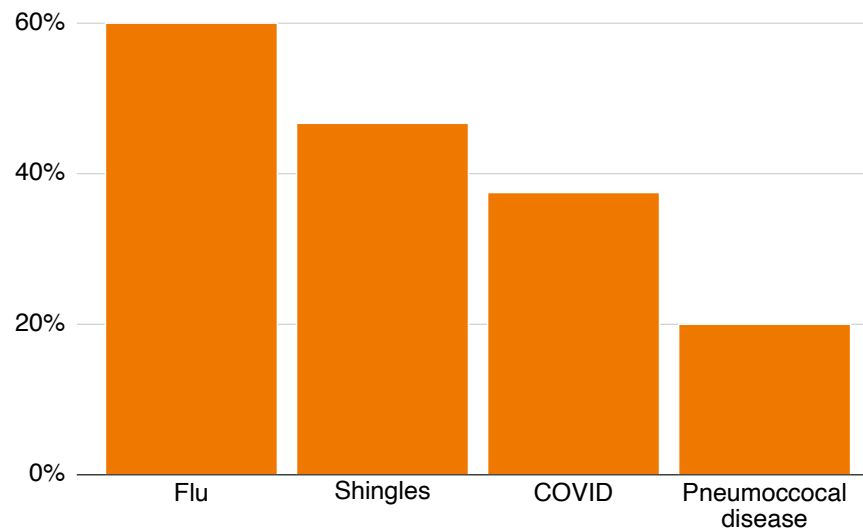
Low and uneven vaccination rates for high-risk adults have big consequences. They make Australia sicker overall, and entrench unfair gaps in health outcomes between different neighbourhoods and communities.

There are lots of reasons for low vaccine uptake, but many are not about individual choice, and most can be overcome. That means there is no excuse for the vast vaccination gaps in Australia.

2.1 Adult vaccination rates are low, and some are falling

This report focuses on 'high-risk' adults – the people who are advised by medical experts to get vaccinations. Definitions of people at high risk for different vaccine-preventable conditions are in Box 2 on page 21. Nearly everyone in these high-risk groups would be safer if they received recommended vaccinations, but millions are currently missing out.

Figure 2.1: High-risk adults are missing out on vaccines
Vaccination rates



Notes: For COVID and flu vaccination definitions and information, see Box 2. Shingles and pneumococcal disease vaccination rates are for 70-79 year-olds in 2021. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Sources: Grattan analysis of ABS MADIP (2023) and NCIRS (2022a).

Vaccination rates are low even when only one or two doses are needed

Adult shingles and pneumococcal vaccinations are usually only needed once or twice, not every year.³² That should make it easy to achieve high rates of vaccination, but most high-risk adults haven't had these vaccines.

Less than half of people in their 70s are vaccinated against shingles. Rates for pneumococcal disease are even worse, with only about one in five people in their 70s vaccinated (Figure 2.1 on the previous page).³³

COVID vaccination has plummeted

In December 2021, more than nine in 10 high-risk adults had been vaccinated for COVID in the previous six months.³⁴ At that time, a range of vaccine mandates and restrictions were in place.³⁵ By the end of February 2023, the share of high-risk people who were vaccinated in the last six months had crashed to below one in 10 (Figure 2.2).³⁶

32. Non-Indigenous adults are recommended to get a single vaccination against pneumococcal disease at age 70; Indigenous adults are recommended to get three, from the age of 50: ATAGI (2023b). Doses for shingles vaccines vary by brand. Zostavax requires one dose; Shingrix requires two doses: ATAGI (2023e). Shingrix became the National Immunisation Program shingles vaccine in November 2023: DHAC (2023d).

33. NCIRS (2022a).

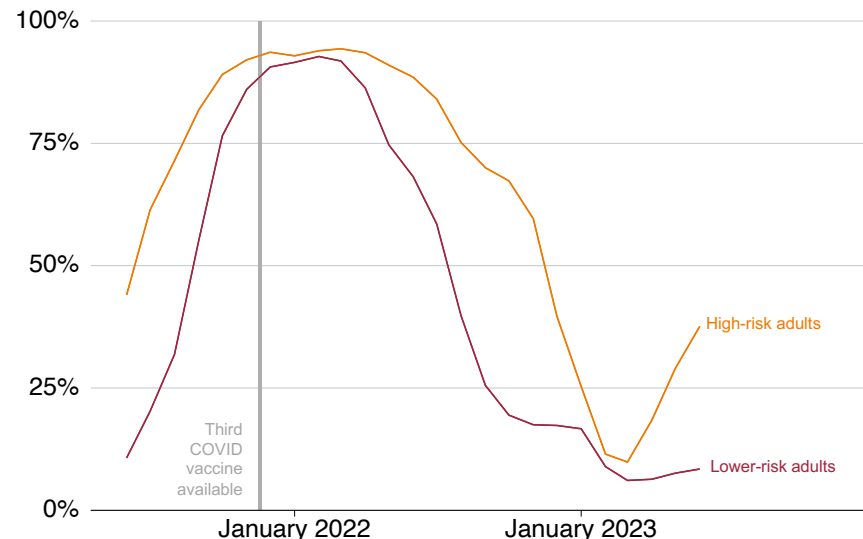
34. 94 per cent. Total population coverage was also very high, at about 90 per cent: Grattan analysis of ABS MADIP (2023). Using the measures in use at the time, double-vaccination rates peaked at more than 95 per cent for people older than 16: ANAO (2023, p. 19).

35. These included double-vaccination requirements for many workers, and for travel and access to venues: Visontay (2021), Nine News (2021a), Nine News (2021b) and Glaetzer (2021).

36. Vaccination rates in the lower-risk population peaked at nearly 93 per cent at the end of January 2022, and fell to 6 per cent at the end of February 2023: Grattan analysis of ABS MADIP (2023).

Figure 2.2: Despite a pre-winter lift, COVID vaccine coverage has fallen dramatically

Vaccination rates for COVID



Notes: For COVID vaccination definitions and information see Box 2. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Despite the government encouraging all high-risk people to get a '2023 booster',³⁷ pre-winter coverage in 2023 only climbed back up to 38 per cent. That was less than half of the rate a year earlier. Compared to 2022, in 2023 two million more high-risk people went into winter without a recent vaccination. (Figure 2.2).

Vaccination rates for high-risk, older Australians haven't improved since then. Only about a quarter of Australians aged over 75 have been

37. Within six months of their previous dose or infection: see DHAC (2023e).

vaccinated in the six months to November, and less than four in 10 people in residential aged care.³⁸

It is probably unrealistic to hope to repeat the high vaccination rates achieved during the worst of the pandemic. Those levels of vaccination were supported by vaccine mandates and unprecedented public health restrictions, and came in the context of surges of hospitalisations and deaths from COVID, and constant media coverage.

But, as Chapter 1 showed, recent vaccination significantly cuts the risk of serious illness, hospitalisation, and death. Many more than 40 per cent of high-risk people should be getting this protection from COVID.

Flu vaccination rates should be higher

Medical experts recommend that everyone older than six months get an annual flu vaccine before winter.³⁹ But across the population, only 27 per cent of people were vaccinated in the three months before winter in 2023.⁴⁰

Even in high-risk groups that get free vaccines, flu vaccination rates are low or inconsistent. The vaccination rate for Indigenous people was only about 16 per cent in the three months before June 2023.⁴¹

High-risk adults, aged 65 and older or with two or more comorbidities, had higher flu vaccination rates. In the three months before June 2023, 60 per cent were vaccinated.⁴² At the end of winter, only 63 per cent of people aged 65 and older had received a 2023 flu vaccination.⁴³ But rates are inconsistent, and vary between about 60 and 75 per cent each year – a difference of about half a million people.⁴⁴

Vaccination rates are likely to fall further

In the wake of the pandemic, there are risks that vaccine uptake will get even worse. There are reports of ‘vaccination fatigue’,⁴⁵ confusion about which vaccinations are needed,⁴⁶ and a rising tide of vaccine misinformation.⁴⁷ Surveys suggest that confidence in vaccines is falling around the world, including in Australia.⁴⁸

These effects may even be reversing hard-won progress on childhood and adolescent vaccines.⁴⁹ After steady improvement in vaccination rates up to 2020, vaccination for childhood diseases including measles, mumps, and rubella has declined slightly over the past few years.⁵⁰

Even before the pandemic, too many adults weren’t getting potentially life-saving vaccines. Without a national agenda to reset vaccination,

38. DHAC (2023c).

39. This report focuses on vaccinations for adults. About 1.5 million children aged six months to five years are also at high risk of severe flu symptoms, including hospitalisation and death: DHAC (2023f). Flu vaccination rates for young children are consistently low – between 25 and 46 per cent each year: NCIRS (2023a). At least 700,000 are unprotected each winter, and at least two children have died of the flu in NSW this winter. Young Indigenous children are particularly likely not to be vaccinated against flu: NCIRS (2023b).

40. In the 12 months before June 2023, 37 per cent of people were vaccinated against flu: Grattan analysis of ABS MADIP (2023).

41. In the 12 months before June 2023, flu vaccination rates for Indigenous people were 26 per cent: Grattan analysis of ABS MADIP (ibid).

42. 67 per cent were vaccinated in the 12 months before June 2023: Grattan analysis of ABS MADIP (ibid).

43. NCIRS (2023b).

44. NCIRS (2023a).

45. Dr Anthony Marinucci, Chair of RACGP Specific Interests Aged Care, cited in Attwooll (2023).

46. For COVID, Dow and Cook (2023) and Bahr (2023), and for children: Anderson (2023).

47. Park et al (2022), RMIT ABC Factcheck (2022), Young (2022) and Kelly (2021). On the relationship between exposure to misinformation and willingness to get vaccinated: Loomba et al (2021).

48. Vaccine Confidence Project (2023).

49. UNICEF (2023) and Thomson (2023).

50. DHAC (2023g).

adult vaccination is likely to remain stuck in a rut or even decline, causing needless suffering, death, and healthcare spending.

2.2 Some neighbourhoods and communities are missing out

Among high-risk adults, the likelihood that you are vaccinated depends on factors such as where you live, where you were born, what language you speak at home, and how much you earn.

In each case, high-risk people facing disadvantage have lower vaccination rates than the average high-risk person, especially for COVID (Figure 2.3).⁵¹ It is typically groups at highest risk of severe illness and death that are missing out.

Since vaccination rates peaked, COVID vaccination rates have fallen for everyone, but they have fallen further for people who are disadvantaged (Figure 2.4 on the following page).

Where people live affects their likelihood of being vaccinated

High-risk adults living in outer regional and remote areas are less likely to be up to date with their vaccinations. Those living in very remote areas are about 35 per cent less likely to have had a recent COVID vaccine compared to those in inner-regional areas.⁵² For flu, they are about 20 per cent less likely to have had a vaccination in the three months before winter (Figure 2.5 on the next page).⁵³

But even within urban or regional areas, location matters. There are large differences between the lowest and highest COVID and flu vaccination rates within Australia's major cities.

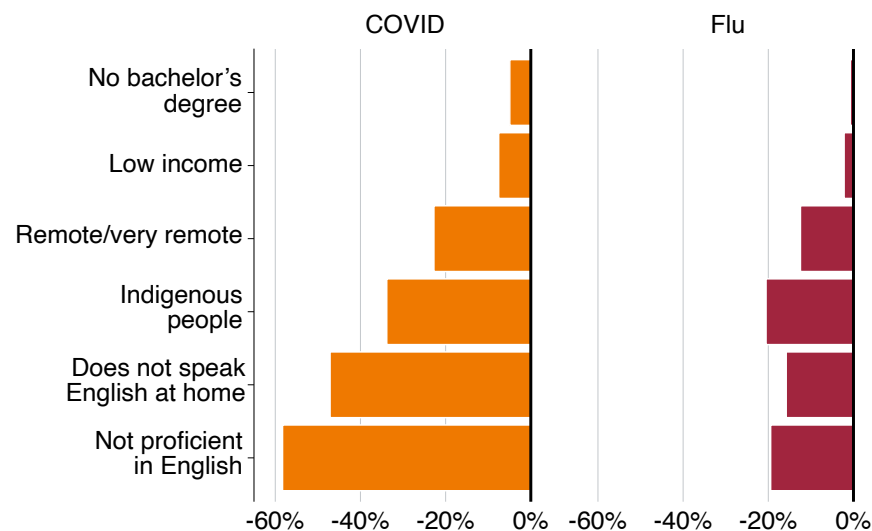
51. Types of disadvantage are not independent and are often related.

52. Based on June 2023. Vaccination rates are about 40 per cent in inner-regional areas, and about 26 per cent in very remote areas: Grattan analysis of ABS MADIP (2023).

53. Rates are about 60 per cent in inner-regional areas, versus about 48 per cent in very remote areas: Grattan analysis of ABS MADIP (ibid).

Figure 2.3: High-risk adults in disadvantaged groups have lower vaccination rates

Difference in COVID and flu vaccination rates compared to average

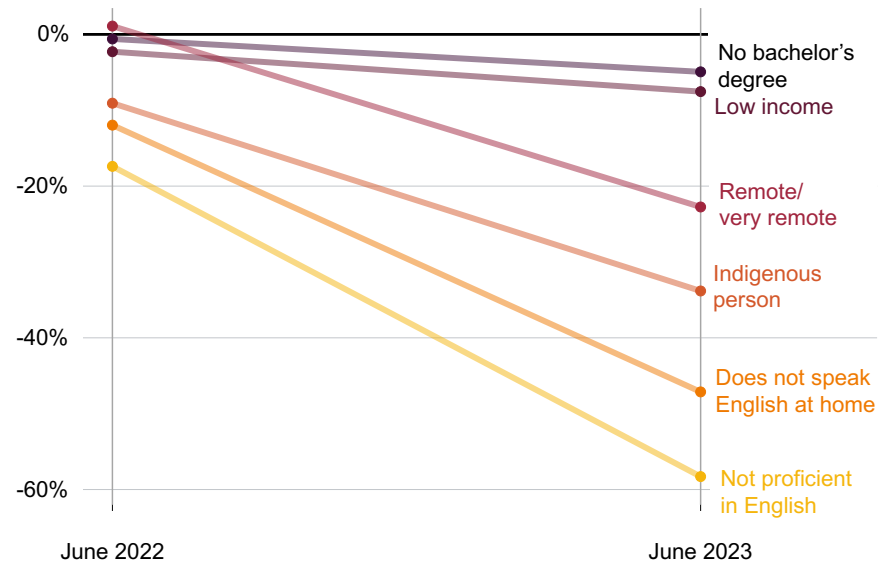


Notes: For flu vaccination definitions and information see Box 2. For further information on group definitions see Appendix. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Figure 2.4: Vaccination rates for high-risk adults in disadvantaged groups are getting worse

Difference in COVID vaccination rates compared to average

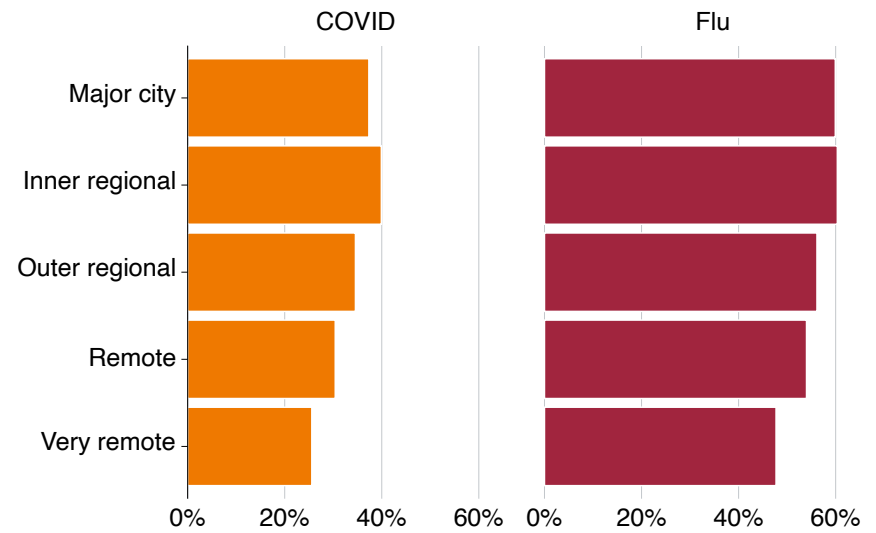


Notes: For COVID vaccination definitions and information see Box 2. For further detail on group definitions see Appendix A. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Figure 2.5: High-risk adults living in remote and very remote areas are less likely to be vaccinated

Vaccination rates for COVID and flu



Notes: For COVID and flu vaccination definitions and information see Box 2. Geographic descriptions are based on ABS regional area classifications. For further detail see Appendix A. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (ibid).

For example, in Sydney, high-risk people living in Mosman are three times more likely to be vaccinated against COVID than high-risk people living in Fairfield. And high-risk people living in inner-west Brisbane are 26 per cent more likely to be vaccinated against flu than high-risk people living in the Gold Coast’s Mudgeeraba area (Figure 2.6).⁵⁴

Vaccine uptake varies depending on cultural background

Indigenous Australians, and migrants from non-English speaking countries, are more likely to die from COVID than other Australians.⁵⁵ Part of the reason is that they are less likely to be vaccinated.

By the beginning of June 2023, high-risk Indigenous adults had vaccination rates of about 25 per cent, making them about a third less likely to be vaccinated against COVID than the average high-risk person (Figure 2.4 on the preceding page).

The gaps in vaccination between different language groups are even more extreme. At the start of winter in 2023, high-risk people who speak a language other than English at home had average vaccination rates of less than 20 per cent, making them about half as likely to have had a recent COVID vaccination as the average high-risk adult. This group includes more than 750,000 people.

Within this group, adults who aren’t proficient in English were at even greater risk – the gap widened to 58 per cent.⁵⁶ This group includes about 255,000 people.⁵⁷

54. These are relatively large areas with more than 100,000 residents, and disparities would be much more pronounced comparing smaller areas.

55. ABS (2023c).

56. Compared to the average high-risk adult.

57. There are about 475,000 high-risk people who speak English proficiently and who use a different language at home. There are another 250,000 high-risk people who are not proficient in English: Grattan analysis of ABS MADIP (2023). Analysis is limited to languages with at least 100 speakers.

Figure 2.6: Vaccination rates vary dramatically within cities

Vaccination rates for COVID and flu

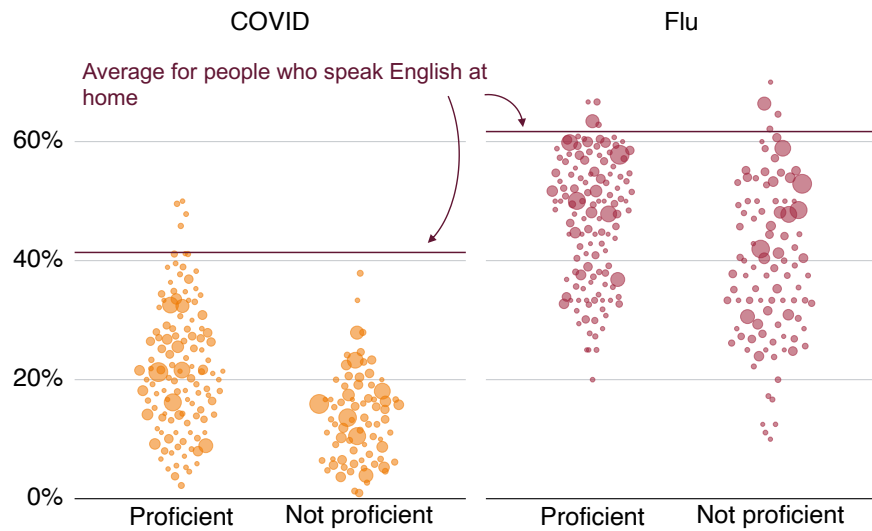


Notes: For COVID and flu vaccination definitions and information see Box 2. For all cities except Hobart, ‘cities’ include all SA3s that are mainly located within ABS ‘Major Cities of Australia’ geographies. SA3s in Hobart are classified as inner-regional. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Figure 2.7: People who do not speak English at home are less likely to be vaccinated

Vaccination rates for COVID and flu

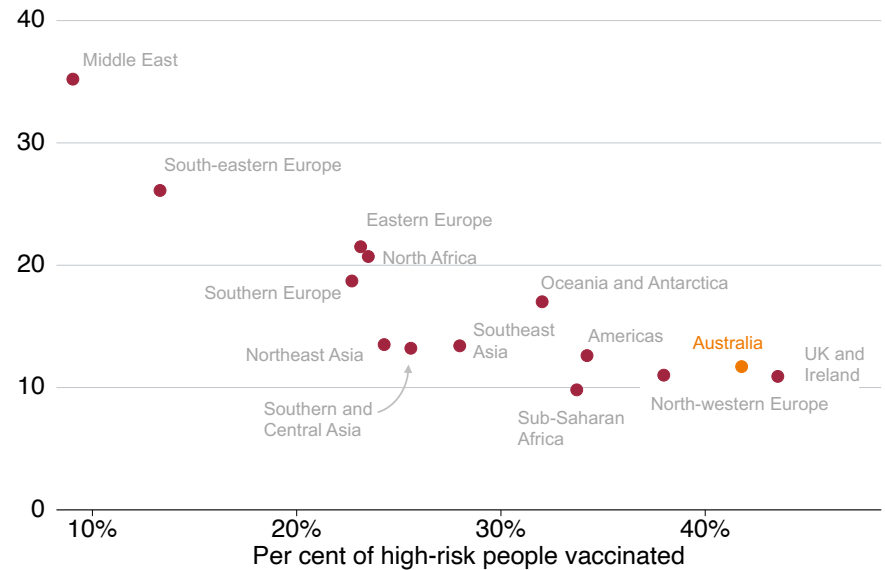


Notes: Each circle represents a language and circle size represents number of speakers. People are classified as 'proficient' in English if they self-report that they speak only English, or speak another language and speak English very well or well. People are defined as being 'not proficient' in English if they speak another language and self-report that they do not speak English well, or at all. See Appendix A for more information. For COVID and flu vaccination definitions and information, see Box 2. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Figure 2.8: People born overseas usually have lower COVID vaccination rates and higher death rates than people born in Australia

Death rates per 100,000 people (age-adjusted)



Notes: Death rates include all certified COVID-19 deaths registered by 31 July 2023. For COVID and flu vaccination definitions and information, see Box 2. For further information on region of birth classifications see Appendix A. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Sources: Grattan analysis of ABS MADIP (ibid) and ABS (2023c).

Some language groups have extremely low vaccination rates. More than 25,000 adults from 11 language groups have a COVID vaccination rate that is less than a fifth of people who speak English at home.

And although average vaccination rates are higher for flu, people's cultural background still has a big impact on their likelihood of being vaccinated.

High-risk adults who speak English at home have a flu vaccination rate of 62 per cent.⁵⁸ But those who are not proficient in English have a vaccination rate of only 48 per cent. For nearly 45,000 high-risk adults, from 36 language groups, the vaccination rate is less than 31 per cent – half the vaccination rate of people who speak English at home (Figure 2.7 on the previous page).

COVID vaccinations significantly reduce the risk of severe illness and death for older people (Chapter 1). So it is not surprising that people born overseas, who tend to have much lower rates of COVID vaccination, also have higher rates of death from COVID (Figure 2.8 on the preceding page).⁵⁹

Compared to high-risk people born in Australia, those born in the Middle East had less than a quarter of the COVID vaccination rate, and more than triple the COVID death rate. People born in South-eastern Europe had less than a third of the vaccination rate, and more than twice the death rate of their Australian-born peers.⁶⁰ While it is difficult to make comparisons between countries, Australia's gaps between native-born and foreign-born people appear higher than those than in similar countries.⁶¹

58. Based on flu vaccinations in the three months before June 2023: Grattan analysis of ABS MADIP (2023).

59. Other risks also contribute to these disparities.

60. ABS (2023c).

61. Rate ratios compiled by the OECD have different methodologies and timeframes of observation, so should not be directly compared. But it is still concerning that

Disadvantaged people are less likely to be vaccinated

The least disadvantaged high-risk adults are 62 per cent more likely to be up-to-date with COVID vaccinations than the most disadvantaged.⁶² The risk of not being up-to-date increases steadily with disadvantage. The same pattern holds for flu, but is less extreme, with a gap of 20 per cent (Figure 2.9 on the next page).

People who have a bachelor or postgraduate degree are 37 per cent more likely to be vaccinated against COVID than people who didn't finish high school. The effects of education are not as pronounced for flu: people with a university degree are only 7 per cent more more likely to be vaccinated against flu than adults who didn't finish high school.

While the difference in vaccination across levels of disadvantage is smaller than it is between language groups, it is still a problem. Disadvantaged people tend to have a higher risk of infection, severe illness, and death, so it is particularly important that they are vaccinated.

Different types of disadvantage add up

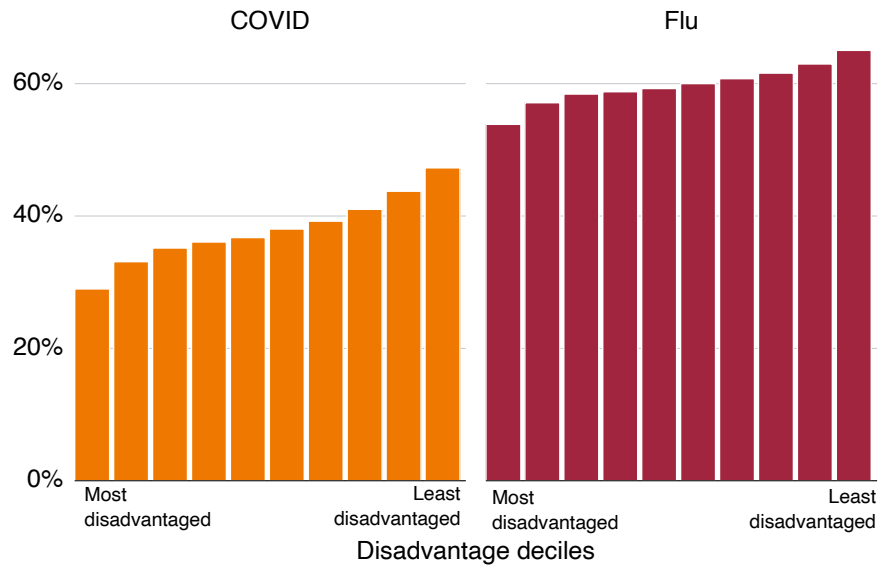
Many people have more than one characteristic that is a risk to vaccine access. For example, they may have a low income, and also live in a remote area. With each additional access risk, the likelihood of someone being vaccinated drops further.

More than half a million adults who are recommended to get COVID vaccines have no major risks of missing out – they have high incomes, high levels of education, live in a city or large town, aren't Indigenous, and speak English at home. More than half of them (54 per cent) had been recently vaccinated at the start of winter in 2023.

Australian disparities are higher than those calculated for other countries. Berchet et al (2022).

62. Comparing the top and bottom 10 per cent of the ABS Index of Relative Social Disadvantage: ABS (2023d).

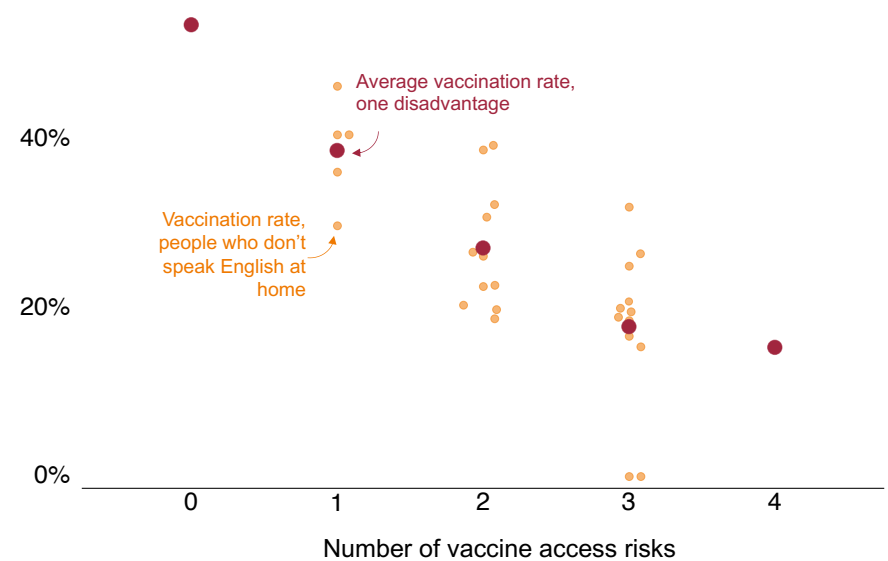
Figure 2.9: Disadvantaged people are less likely to be vaccinated
Vaccination rates for COVID and flu



Notes: For COVID and flu vaccination definitions and information, see Box 2. Disadvantage deciles are from the ABS Census – see Appendix A for more information. Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Figure 2.10: Each additional access risk pushes vaccination rates down
Vaccination rates for COVID



Notes: Ranges are based on specific combinations of access risk factors: for example, a data point for two access risk factors is the vaccination rate for being low-income and speaking a language other than English at home. No range is included for four or more access risk factors because many small sample sizes were suppressed. Risk factors include speaking a language other than English at home, not being proficient in English, being an Aboriginal or Torres Strait Islander, having a low income, and not having a bachelor's degree. There are 4,041,980 high-risk adults included in this sample: 524,960 with no risk factors; 1,925,100 with one risk factor; 1,193,940 with two; 297,510 with three; and 100,470 with four or more. For COVID and flu vaccination definitions and information, see Box 2. Results vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (ibid).

But the average vaccination rate drops to 39 per cent for the 1.9 million adults who were recommended to get vaccinated, and had a single risk factor for vaccine access. It falls further to 27 per cent for the 1.1 million with a second risk factor.

There are nearly 300,000 people with three types of risks to vaccine access, and that group has an average vaccination rate of only 18 per cent. And more than 100,000 had four or more types of access risk, and an average vaccination rate of only 15 per cent (Figure 2.10 on the preceding page).

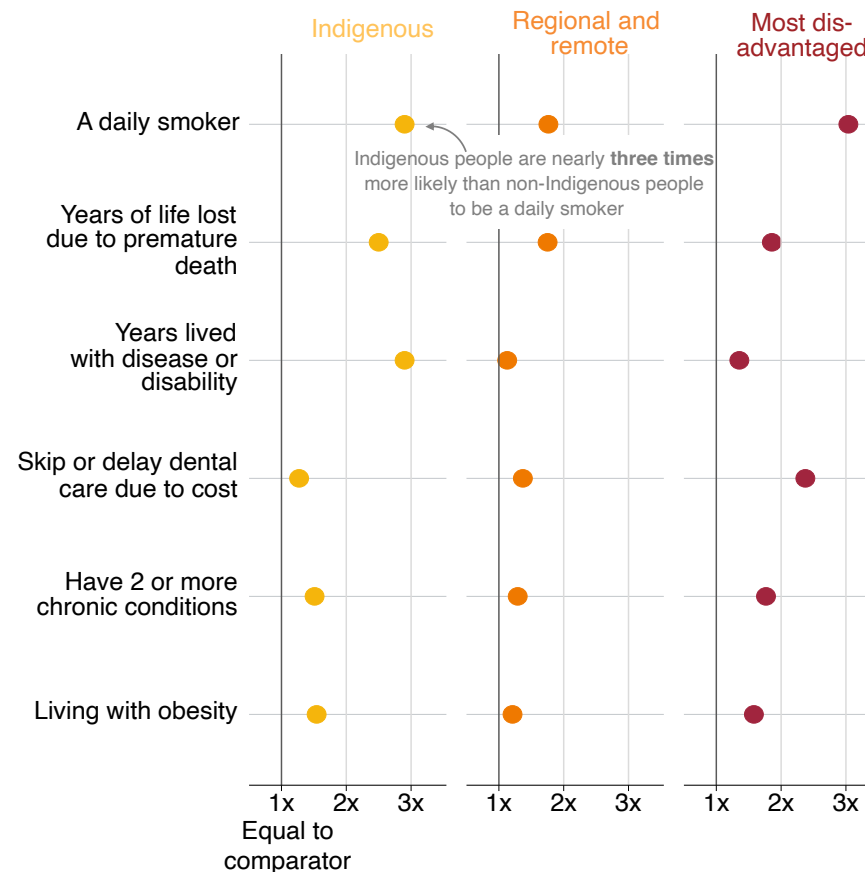
2.3 Why aren't people getting vaccinated?

There are many reasons people don't get vaccinated. Barriers can be trivial (forgetfulness), logistical (convenience), financial (not being paid for any time off work from side-effects), or even ideological (misinformation and conspiracy theories). These barriers to voluntary vaccination have been summarised as the 'Five A's' shown in Box 1.

Many of these barriers aren't about individual attitudes towards vaccines, or even individual choice. The same groups that are less likely to be vaccinated are also less likely to get other types of healthcare, and more likely to be exposed to health risks (Figure 2.11). This points to underlying issues that go well beyond vaccination.

For some, barriers to vaccination are easily overcome, while others face complex challenges and require intensive support. There is evidence that vaccination can be increased for people with low and high barriers alike, but different solutions are needed (Figure 2.12 on the following page).

Figure 2.11: Low-vaccination groups often face other health challenges
Rate ratio of disease risk factors and health outcomes



Notes: 'Years of life lost due to premature death' and 'years lived with disease or disability' rates are derived by comparing years. All other rates are derived by comparing proportion of people.

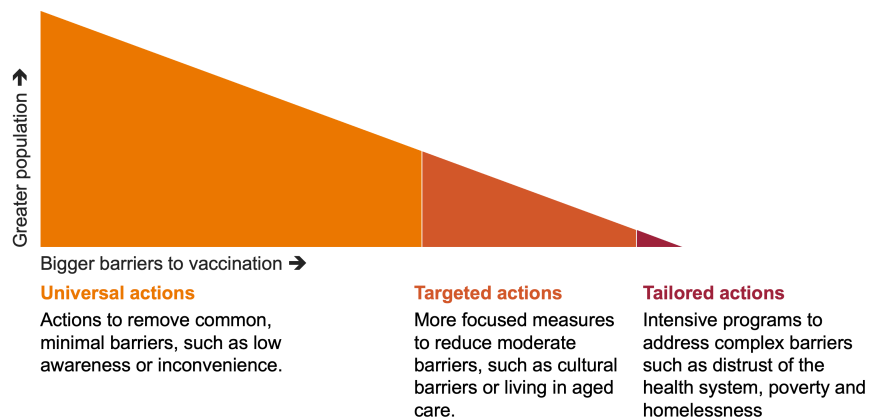
Sources: Grattan analysis of ABS (2022a), AIHW (2020b), AIHW (2023a), AIHW (2023b), AIHW (2023c), ABS (2022b), AIHW (2023d), ABS (2022c), ABS (2020), AIHW (2021a), AIHW (2021b) and AIHW (2022b).

Those solutions fit into three tiers.⁶³

- **Universal** measures for people with common, low barriers to vaccination (Chapter 4)
- **Targeted** policies for people who face more significant challenges, such as cultural barriers to care, or living in aged care (Chapter 5)
- **Tailored** and intensive programs for people who face the most complex barriers (Chapter 6).

These solutions are discussed later in this report, but before they can be put in place, a national agreement is needed to lay the groundwork.

Figure 2.12: A new national vaccination system should include universal, targeted, and tailored approaches



Source: Grattan Institute.

Box 1: The ‘Five A’s’ of vaccination

The ‘Five A’s’ of vaccination are a framework for understanding why some people voluntarily get vaccinated, while others do not.^a

Awareness – Whether people know about vaccines, where to get them, and their benefits and risks.

Acceptance – Whether people want to get vaccinated, subject to access and affordability.

Affordability – Whether people can afford the price of getting vaccinated and other costs of getting vaccinated, such as time off work if they have an adverse reaction to the vaccine.

Access – Whether people can safely and easily get vaccines, including physical and psychological safety.

Activation – Whether people who are aware of and accepting of vaccines are motivated to get the vaccine.

a. Thomson et al (2016), Seale et al (2020) and Seale et al (2022).

63. The WHO uses ‘Population health management’: identifying communities with similar characteristics and needs so providers can move from one-size-fits-all to targeted and tailored interventions: WHO (2023b). ‘Proportionate universalism’ distinguishes between ‘universal’ and ‘proportionately targeted’ policies: Marmot (2010). Evidence for each tier of intervention is in the following chapters.

Box 2: Who is 'high-risk', and how do we measure vaccination rates?

Our definitions for high-risk groups and vaccination windows are based on ATAGI advice and are summarised here (see Appendix A for detail).

Influenza

An annual flu vaccine is recommended for people aged over 6 months. It is free for higher-risk people, including adults aged 65 and older, people with high-risk conditions, Indigenous people, children aged 6 months to 5 years, and pregnant people.

We define 'high-risk' for flu as people aged 65 and older, and people with two or more high-risk conditions, including heart disease, diabetes, and chronic respiratory conditions. Someone is 'up to date' if they had a vaccination in the three months before June 2023.

COVID

For the period we analysed, ATAGI described high-risk people as people aged 65 and older, people with relevant health conditions, and people with disabilities or complex health needs.^a High-risk people are advised to get vaccinated if they haven't had a dose or infection in the past six months.

We define 'high-risk' as people aged 65 and older, and people with two or more high-risk conditions, including heart disease, diabetes, and chronic respiratory conditions. We describe someone as 'up to date' if they were vaccinated in the six months before June 2023.

Shingles

For the period we analysed, a single dose of the Zostervax vaccine was recommended and free for people aged 70-79. Additional doses are

a. DHAC (2023e).

b. ATAGI (2023f).

recommended and free for adults with particular medical conditions. We define 'high-risk' as people aged 70-79 (we do not analyse differences between Indigenous and non-Indigenous uptake).

Pneumococcal disease

The vaccine is recommended and free for adults aged 70 and older. Additional doses are recommended and free for Indigenous people aged 50 and older, and based on medical conditions. We define 'high-risk' as people aged 70-79 (we do not analyse differences between Indigenous and non-Indigenous uptake).

Our findings are robust to different definitions

We checked whether tighter definitions of 'high-risk' and longer vaccination windows to define 'up to date' changed our findings. As discussed in detail in Appendix B, they didn't.

COVID vaccination advice changed after the period we analysed (up to winter 2023). In September, the age threshold for recommended vaccines was raised to 75.^b Retrospectively applying this new definition still shows COVID coverage for high-risk people falling to just 42 per cent before winter 2023. The gaps in coverage between different groups also remain stark.

We tested a nine-month window between COVID vaccinations to take account of delays from infections (up from six months). We also tested an annual window for flu vaccination (up from three months prior to winter). As shown in Appendix B, coverage rates remain similar and the gaps between groups remain large.

3 Make a national plan

There is a governance gap for adult vaccines: it's not clear who is in charge, or what governments are aiming for. This chapter explains why federal and state governments need an ambitious and robust national agreement on adult vaccination, along the lines of existing arrangements for childhood vaccines.

Better governance is needed to drive reforms to lift overall adult vaccine coverage (Chapter 4), and to make sure that nobody is left behind (Chapters 5 and 6).

And the time is right for a new national agreement: recent improvements in the data for adult vaccination mean progress towards targets can be measured.

3.1 There is a governance gap for adult vaccines

Vaccines sit at the intersection of primary healthcare – mostly a federal government responsibility – and public health, which is mainly a state and territory responsibility. As a result, federal, state, and local governments all play a role in delivering National Immunisation Program (NIP) and COVID vaccines. In areas of shared responsibility like vaccines, national agreements between governments help set shared goals and the framework for cooperation.

Agreed priorities on NIP vaccines are described in the National Immunisation Strategy, while National Partnership Agreements formalise responsibilities and funding relationships, including state performance benchmarks, milestones, and reporting obligations (Box 3 on the next page).

But these roles are not cleanly partitioned. States are currently responsible for achieving coverage and equity vaccination targets for childhood and adolescent vaccines, for example, but it's the federal

government that funds vaccination through GPs and pharmacists. States have their own immunisation strategies, too, and sometimes provide free vaccines to people who are not covered by the NIP.

COVID vaccines have been managed separately under the National COVID Vaccine Program, further complicating vaccine governance. Supply logistics for COVID vaccines are different, too, with some providers contracted by the federal government, while states manage the logistics for NIP vaccines.

Despite shared responsibility, and the importance of vaccines for people's health, key intergovernmental arrangements are either out-of-date or piecemeal.

The National Partnership on COVID-19 Response was extended to the end of 2022,⁶⁴ but no national agreement has taken its place.⁶⁵ There is a National Immunisation Strategy in place until 2024,⁶⁶ but it was written in a different era – before the pandemic, and before good data was available on adult vaccination rates.⁶⁷

This governance gap makes it hard to hold governments accountable for poor adult vaccination coverage and vaccine inequity. This is bad for people's health and, ultimately, for government budgets and taxpayers too.

64. Australian Governments (2023).

65. The COVID 2023 Health Management Plan promised a new National Partnership to protect priority groups: (Australian Government [2023, p. 6]). New South Wales, Queensland, the ACT, and the Northern Territory signed bilateral agreements with the federal government in the second half of 2023: AIHW (2023e).

66. DHAC (2019a).

67. It was not mandatory to record adult vaccinations in the Australian Immunisation Register until July 2021: DHAC (2021a).

At some point, COVID and NIP vaccines will need to be managed under the same arrangements. While there has been a natural post-pandemic watch-and-wait period, the lack of a coherent framework creates uncertainty and planning difficulties for government departments, general practice clinics, and pharmacies.⁶⁸

3.2 Getting governance right for adult vaccines

A new national vaccination agreement must do two things: clarify post-pandemic roles and responsibilities for governments, and set ambitious targets.

3.2.1 Clear roles and responsibilities

Vaccination, including for adults, has traditionally been a state responsibility. We recommend that this change, with the federal government taking responsibility for overall adult vaccine coverage. States would keep an important role vaccinating the hardest-to-reach adults. These default roles could be changed if the federal government and a state government agreed.

Federal government responsibility for overall adult vaccination uptake makes sense, because most adult vaccines are delivered through the primary healthcare system, including GPs and pharmacies.⁶⁹

The federal government should require its 31 Primary Health Networks (PHNs) to lift adult vaccine coverage in their catchments (policies to help them do this are described in the following chapters). This would

68. Pandemic arrangements also led to duplicated vaccination logistics and delivery channels. This duplication needs to be resolved. The Australian Centre for Disease Control (ACDC) is well placed to help coordinate cross-jurisdiction plans for urgent vaccination roll-outs.

69. About 60 per cent in 2021: about 53 per cent through GPs, and about 7 per cent through pharmacies; 27 per cent were through local councils: Hull et al (2022, p. 68). The share of pharmacy vaccination has increased significantly since then.

Box 3: Key responsibilities under the most recent National Partnership Agreement

Key federal government responsibilities for National Immunisation Program vaccines:

- financial contributions to support implementation;
- monitoring and assessing performance;
- procuring vaccines;
- payments if states and territories meet reporting milestones and performance benchmarks;
- leadership of national consumer and professional communication activities; and
- coordinating national monitoring and surveillance of adverse events.

Key state and territory responsibilities:

- delivering on Agreement outcomes and outputs;
- reporting on the delivery of outcomes and outputs;
- ordering vaccines from the contracted suppliers;
- delivering vaccines to immunisation providers;
- delivering school immunisation programs; and
- supporting individuals' access to immunisation services.

sit neatly with PHNs' responsibility for improving primary care access, quality, and outcomes.

States should be responsible for increasing vaccination in communities with the lowest vaccination rates, drawing on expertise and the local relationships developed during the pandemic. In the pandemic, states have led many intensive, local outreach, and engagement programs, which are described in Chapter 6. They also have experience in engaging with communities to contain localised outbreaks of infectious diseases, and transmission within certain groups.⁷⁰

Around Australia, PHNs and state public health teams have variable resources, expertise, and experience in the roles we propose for them. For that reason, states and PHNs should be able to change their default roles. For example, they might agree that PHNs will take on responsibility for raising vaccination in communities with the lowest levels of vaccination, or that the state and PHNs to do this jointly, pooling budgets, planning, and accountability for progress.

If federal and state governments agree on different default responsibilities to those we propose, it will still be essential for the national Agreement to make their roles and responsibilities clear, including accountability for progress.⁷¹

The Agreement should also establish a Vaccine Implementation Committee, to coordinate effort, troubleshoot problems, and evaluate progress. This committee should be made up of experts, and representatives from federal and state governments and the Australian Centre for Disease Control (ACDC).

70. For example, recent measures to combat Japanese Encephalitis outbreaks around the NSW-Victoria border (Victorian Department of Health 2023a; Ovens Murray LPHU 2023), strategies targeting groups at higher risk of contracting sexually transmitted and blood-borne disease (ACON Health 2023; Grampians Public Health Unit 2023) and flu in regional areas (Eastwood et al 2006).

71. For example, states retaining overall responsibility for adult vaccination accountability, or all responsibility shifting to the federal government.

3.2.2 Targets to boost ambition and accountability

Targets are the bedrock of accountable vaccination policy. Targets aren't new – coverage and equity targets were introduced for childhood vaccines in 1997, and coverage targets were introduced for adolescent vaccines in 2009. They have helped achieve impressive gains (Box 4 on the following page).

While targets alone do not achieve vaccine coverage and equity, they complement and motivate policies that do.⁷² Despite the deaths and hospitalisations that would be avoided by lifting coverage and improving equity, there are no coverage or equity targets for adult vaccines (Figure 3.2 on page 26).⁷³ That is partly because of data limitations that have recently been overcome, making now the right time to set adult vaccination targets.⁷⁴

Those vaccination targets should be ambitious, but also achievable and cost-effective.

The expert advisory group on vaccination should advise governments on specific targets,⁷⁵ but rates of flu vaccination offer a good guide to what is achievable. In 2022, flu vaccine coverage climbed above 70 per cent for high-risk people aged 65 and older.⁷⁶ We know this rate of vaccination is achievable, even for a vaccination that is required

72. Childhood vaccination targets, for example, are supported by policies including vaccination incentives for parents and doctors, education campaigns, and school entry requirements.

73. The Department of Health and Aged Care does not regularly report on adult immunisation coverage: ANAO (2021, p. 6).

74. Data improvements include greatly increased completeness. Recording adult vaccinations in the Australian Immunisation Registry became mandatory in 2021 (DHAC (2021a)), and new capabilities in vaccine data linkage and analysis were forged during the pandemic.

75. The Australian Technical Advisory Group on Immunisations.

76. NCIRS (2023a).

regularly. A target could lift it higher, so 70 per cent should be a reasonable initial goal for adult vaccine coverage for high-risk people.⁷⁷

Governments should commit to targets for both the general high-risk population and for people living in aged care. Almost all aged care residents are at high risk, but only half had a COVID vaccination in the six months before the 2023 winter, and by November the rate had fallen below 40 per cent.⁷⁸

But targets won't be enough to achieve more equal vaccination across Australia. The Agreement should set a target for continual increases in vaccination rates for Indigenous people.⁷⁹ The same goal of continual improvement should be set for geographic areas with the lowest levels of adult vaccination.⁸⁰

These targets to reduce vaccination gaps are similar to ones that have worked for child vaccination. And, as is the case with childhood and adolescent vaccines, the Agreement should include federal payments to states for reporting against adult vaccine milestones and benchmarks.⁸¹

Vaccination targets should be assessed each year, based on advice from the expert advisory group on vaccination,⁸² with a view to raising them over time.

77. Targets should be set at levels that achieve cost-effectiveness, based on Pharmaceutical Benefits Advisory Committee evaluation of vaccines for inclusion in the NIP. The European Council previously identified a target of 75 per cent flu vaccine coverage for 'older age groups' by 2015. ECDC (n.d.).

78. DHAC (2023i) and DHAC (2023c).

79. Given disparate starting points, these targets could be at regional level, for example Statistical Area Level 4 in the ABS Statistical Classification of Geography.

80. Statistical Area Level 3 in the ABS Statistical Classification of Geography, as is currently used for child vaccination equity targets.

81. Federal, state and territory health ministers (2017).

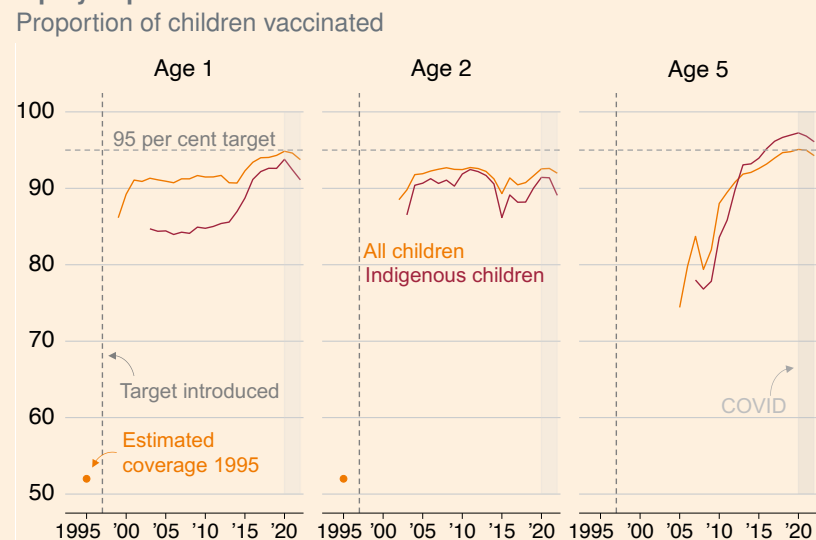
82. The Australian Technical Advisory Group on Immunisation.

Box 4: Child vaccination is a model for adult vaccination

In 1995, an estimated 52 per cent of 1- and 2-year-old children were fully vaccinated.^a In 1997, the National Immunisation Program was introduced, initially targeting 90 per cent coverage of 2-year-olds,^b and 'near universal' coverage of school-age children, with the target later formalised at 95 per cent.^c

Until the COVID pandemic, coverage and equity improved: coverage approached 95 per cent for Indigenous and non-Indigenous children, and exceeded 95 per cent for Indigenous 5-year-olds.

Figure 3.1: Until the pandemic, childhood vaccination coverage and equity improved or remained stable



Notes: DHAC (2023h), DHAC (2023g) and Lister et al (1999).

a. Lister et al (1999).

b. ABS and ACIR (2001).

c. McIntyre et al (2000).

3.2.3 Transparency to drive progress

The Agreement should commit to two types of transparency that would help boost vaccination rates: providing more information for the general public, and sharing detailed data with governments, Primary Health Networks, and healthcare providers.

Public accountability and informed choice

To hold governments to account, progress towards adult vaccination targets should be published each year, as already happens for child and adolescent vaccination targets.⁸³ People should also be confident that vaccine investments are good value, based on public cost-benefit assessments.⁸⁴

Transparency is particularly important for people living in residential aged care. Almost all residents are recommended to get adult vaccinations.⁸⁵ They are at higher risk of infection because they live in communal settings, and many need help arranging vaccination. To make sure that residents and their families know the level of protection in different aged care facilities, each facility's vaccination rate should be published twice a year.⁸⁶

Primary Health Networks should also publish vaccination rates for the 30,000 people who live in supported disability accommodation,









83. See, for example: AIHW (2023f). Public vaccination dashboards with regular updates help track progress. National Centre for Immunisation Research and Surveillance dashboards should be expanded to cover vaccines on the National Immunisation Program and adult vaccines. For example: NCIRS (2023b).

84. Assessments should be for each vaccine on the NIP and specify uptake required to achieve assessed benefits. The ACDC should also evaluate vaccine impact.

85. Due to age; many residents also have health conditions that further increase risks.

86. Vaccination rates should be reported for the full range of adult vaccines, and based on federal government analysis of data from Services Australia and the Australian Immunisation Register (AIR).

Figure 3.2: There are no coverage or equity targets for adult vaccines

Schedule	Coverage targets	Equity targets
NIP childhood schedule	 <p>Maintained or increased vaccination coverage rates for 60 ≤ 63 month olds.</p>	 <p>An increase in vaccination coverage rates for 60 ≤ 63 month olds in four of the ten lowest vaccination coverage SA3 geographical areas.</p> <p>Maintained or increased vaccination coverage rates for Aboriginal and Torres Strait Islander children in two of the following three cohorts: 12 ≤ 15 month olds; 24 ≤ 27 month olds; or 60 ≤ 63 month olds.</p>
NIP adolescent schedule	 <p>An increase in the vaccination coverage rate for both adolescent boys and adolescent girls for HPV.</p>	
NIP adult schedule		
COVID vaccine		

Note: NIP = National Immunisation Program.

Source: Grattan analysis of intergovernmental vaccine arrangements.

since many cannot get vaccinated independently and rely on services arranged by their accommodation provider.⁸⁷

Data to help manage and deliver care

A lot of progress has been made during the pandemic in sharing timely, detailed vaccination data. This should continue and be taken further, so that states and PHNs can identify who is missing out. The federal government should provide timely data on vaccination in small local areas, using the same approach to identifying vaccination gaps as we demonstrated in Chapter 2.⁸⁸

GP clinics and pharmacies should get data on the proportion of their patients who are up-to-date with recommended vaccines. This information should go to PHNs too, so they can help clinics and pharmacies with low vaccination rates to improve.

3.2.4 Collaboration is key

The National Vaccination Agreement we propose should formalise roles and responsibilities, vaccination targets, and commitments to transparency. But for the agreement to succeed, governments and healthcare providers need to collaborate.

The Agreement should be guided by a new National Vaccination Strategy, agreed to by all governments. The Strategy should be developed in time for universal, targeted, and tailored interventions to lift flu and COVID vaccination rates before winter in 2024.

87. This should be PHN catchment-level data, based on linked data across the NDIS, AIR, and Census. The federal government should make this data available to PHNs, to drive outreach efforts.

88. Data would be from AIR-MADIP and: confidential, to protect privacy; include key variables, such as language spoken at home. Results should be provided at SA Level 1 in the ABS Statistical Geography, provided at least quarterly.

The following chapters lay out the cornerstones of a comprehensive vaccination strategy to make vaccination easier, break down barriers to vaccination, and reach out to the people who need it (Figure 3.3).

Figure 3.3: A new National Vaccination Agreement can lay the foundations for success

	Federal & PHN	States
Targets	Targets for population vaccination coverage	Targets for specified low-vaccination communities
Actions	Universal measures for people with low barriers Targeted measures to increase vaccination in primary care <small>Can be shared or shifted by agreement</small>	Tailored programs for groups with the lowest vaccination
Enablers	National Vaccination Strategy outlining risks, priorities, and actions Joint funding for tailored programs Data sharing with PHNs, states, GP clinics and pharmacies Public reporting on progress towards targets and vaccination rates in aged care facilities Implementation group to share information and coordinate action	

Note: PHN = Primary Health Network.

Source: Grattan Institute.

4 Make vaccination easy

To increase overall levels of vaccination, vaccination has to be made easier to access and simpler to understand.

Public health campaigns can raise awareness, understanding, and acceptance of adult vaccines. Vaccine reminders can convert a vague intention to get a vaccine into action. And vaccination surges can make it clearer when people need to get their jabs, and help governments plan vaccine promotions and delivery.

As well as these universal measures, targeted policies will be needed to help some cultural groups, and people in residential care, who consistently miss out on vaccination. There should be stronger oversight and more support to ensure that everyone can get vaccinated.

4.1 Overcoming the barriers to vaccination

To improve adult vaccine coverage, the federal government needs to help millions of high-risk people overcome five recognised barriers to vaccination: Awareness, Acceptance, Affordability, Access, and Activation (Box 1 on page 20).

The easiest way to lift adult vaccine coverage is with ‘universal’ policies that break down small, common barriers to vaccination: policies aimed at reaching, for example, people who are comfortable using health services, but who simply haven’t got around to making an appointment.

‘Targeted’ policies can break down moderate, well-understood barriers to vaccination, often by improving access to mainstream health services.

This chapter focuses on ‘universal’ steps to remove friction and promote vaccination. Chapter 5 proposes ‘targeted’ policies for people

facing higher barriers to vaccination, while Chapter 6 covers ‘tailored’ policies that help the lowest-vaccination communities overcome the highest and most complex barriers.

4.2 Raising awareness and acceptance of adult vaccines

As shown in Chapter 2, people are confused about vaccination, misinformation has increased, and trust in vaccination is falling. To tackle these problems, the federal government needs to improve its communication with high-risk people.⁸⁹

Public health communication campaigns, when done well, can inform people, promote healthy behaviour, and achieve a good return on investment.⁹⁰ During the pandemic, information was delivered through frequent media conferences, as well as several state and federal social marketing campaigns.

But governments didn’t always use best-practice communication strategies, which are summarised in Box 5 on the following page. Reflecting on the need to use evidence-based communication strategies, the founding chair of the Collaboration on Social Science and Immunisation, Professor Julie Leask, noted:⁹¹

89. It is also important that the federal government builds public trust by transparently reporting any adverse vaccination events. The *AusVaxSafety* initiative, led by the National Centre for Immunisation Research and Surveillance, is an example of this work: K. Macartney et al (2022).

90. Large-scale evaluations show campaigns can affect behaviour (Roger et al 2023), typically achieving a small effect across large groups (Athey et al 2023; W. D. Evans 2006). Hyland-Wood et al (2021) emphasise that successful communication is not just about messaging, but involves ongoing engagement with communities.

91. Landis-Hanley (2021).

We have this network of researchers who do vaccine acceptance research, and I'm not seeing evidence that that expertise is being used, expertise that taxpayers have invested in.

Despite low and uneven rates of adult vaccination – and declining confidence in vaccination generally – government communication has reduced significantly since the height of the pandemic, and is now minimal.⁹²

Governments should immediately step up their communication efforts. And after it is established next year, the Australian Centre for Disease Control (ACDC) should support intensive, evidence-based, well-coordinated communications efforts ahead of winter. As a new institution, it will be well placed to build credibility as a trusted source of information.⁹³ And as a national body, it can foster close collaboration between federal and state governments.

The ACDC should develop evidence-based guidance for universal and targeted vaccination information campaigns, informed by international evidence and evaluation of Australian campaigns.

A budget of \$22 million for two years should be used to raise adult vaccine awareness and acceptance, and to re-set the adult vaccine narrative.⁹⁴ Social marketing should be deployed across traditional media and social media, with messages and messengers chosen to target different audiences.

92. See, for example: Dow (2023).

93. Some people are more likely to trust advice from independent organisations; wariness about governments can undermine trust in government advice: Edwards et al (2021). Australians' trust in government is declining: Edelman (2023).

94. See Appendix C for costings.

Box 5: Best-practice vaccination communication

Evidence suggests vaccine communication campaigns should:

- Use clear messages
- Be delivered by a trusted organisation or spokesperson
- Build trust by acknowledging risk and uncertainty
- Target distinct groups
- Use target groups' preferred medium (e.g. a specific social media platform)
- Be tailored to different groups, but not contradictory or inconsistent
- Be tested with target groups.^a

a. These are common themes; different authors sometimes use different terms or emphasise different dimensions of communication. See, for example: Hyland-Wood et al (2021), OECD (2021), OECD (2022), Dubé et al (2020), Ryan et al (2021), Williams et al (2023) and RHNQ (2021).

4.3 Increasing affordability and access

COVID vaccines and National Immunisation Program (NIP) vaccines are free.⁹⁵ But vaccines also need to be readily accessible. People are more likely to get vaccinated if it's convenient, and if they feel safe and comfortable with the vaccination provider.⁹⁶

Pharmacy vaccination should be continued, with red tape removed

The federal government has recently committed to four years of funding support for pharmacists who deliver free COVID and NIP vaccines to eligible people.⁹⁷

This makes it much easier to organise adult vaccines, increasing the number of locations where people can get vaccines by about 60 per cent.⁹⁸ Increasing the pool of vaccinators also means people can more easily get vaccinated by someone who speaks their language, or who they already trust. By the end of 2022 nearly half of all COVID vaccinations were delivered in pharmacies.⁹⁹

The federal government should make this arrangement ongoing under the 8th Community Pharmacy Agreement, which is currently under negotiation.

And to further improve access to vaccines, the federal government should work with state governments to make pharmacy vaccination regulations consistent across Australia. State regulations determine

95. Vaccines on the NIP are free, but some providers charge a service delivery fee.

96. Enticott et al (2022).

97. Butler (2023). Pharmacists cannot deliver vaccines to people younger than 5: NCIRS (2023c).

98. More than 5,700 GPs and more than 3,500 pharmacies: DHAC (2023j). In capital cities, 97 per cent of people live within 2.5 kilometres of at least one pharmacy, and in regional, rural, and remote Australia, two thirds of people live within 2.5 kilometres of a pharmacy: see Pharmacy Guild (2022).

99. Ibid.

whether pharmacists can deliver particular vaccines, who can get particular vaccines from pharmacists, and whether a pharmacist vaccination is free.¹⁰⁰ The federal government's independent Scope of Practice Review should harmonise these regulations by removing state-specific restrictions. The Review should also investigate opportunities to remove restrictions on the scope of practice of Aboriginal Health Workers and Aboriginal Health Practitioners.¹⁰¹

Public insurance could cover other vaccination costs

Although vaccines on the National Immunisation Program are free up-front, people might worry about the cost of adverse reactions. The government should evaluate whether Australia needs a vaccine injury compensation scheme, like 24 other countries already have.¹⁰² These schemes help cover costs if someone has a moderate or severe reaction to a vaccine.¹⁰³

4.4 Reminders convert vaccination intent into vaccinations

Most high-risk adults are willing to get vaccines.¹⁰⁴ Higher vaccination coverage can be achieved if willing people can be 'activated' to get their jabs.

100. NCIRS (2023d), NCIRS (2022b) and NCIRS (2023c).

101. The federal government has funded an independent Scope of Practice Review for primary care, endorsed by National Cabinet. Pharmacists, Aboriginal Health Workers, and Aboriginal Health Practitioners are within scope of the review, and final recommendations are due in the second half of 2024: DHAC (2023k).

102. Halabi et al (2020). A compensation scheme has also been introduced in Quebec, Canada.

103. The alternative is for people to pursue compensation through a complex legal process. The WHO also has an injury compensation scheme for COVID vaccines: OECD (2021, p. 9). The federal government introduced a COVID-19 Vaccine Claims Scheme, but it lapses in April 2024: (DHAC 2023l).

104. Barnes and Colagiuri (2022).

Evidence shows that reminders can activate vaccinations, are relatively low-cost, and can use existing data.¹⁰⁵ In one study, text-based vaccination reminders linked to appointment services increased vaccinations by about 3 percentage points – equivalent to an increase of more than 25 per cent in the study group. A second reminder text lifted vaccination rates further.¹⁰⁶

Vaccination reminders have been deployed many times in Australia, and have often worked to increase vaccination.¹⁰⁷ In Western Australia, flu vaccination reminder texts increased vaccination rates in high-risk groups by 3 percentage points, from 9 per cent to 12 per cent – an increase of more than 30 per cent.¹⁰⁸ These might not sound like large gains, but across Australia’s high-risk populations, even small increases in coverage yields tens of thousands of additional vaccinations.

The federal government should text vaccination reminders to all high-risk adults, based on the date of their most recent vaccination. The federal government should also investigate other digital avenues for reminding high-risk people about vaccinations.¹⁰⁹

105. Batteux et al (2022), Thomas and Lorenzetti (2018), Milkman et al (2021) and Yokum et al (2018). The Health Minister has already canvassed the possibility of SMS reminders for COVID antiviral medications: Attwooll (2022).

106. Dai et al (2021) Research from Israel also finds that reminders lift COVID vaccination rates: Berliner Senderey et al (2021).

107. Examples include South Australian COVID vaccination reminders (Government of South Australia 2022); federal government COVID vaccination reminders for disability pension recipients (DSS 2022); and Queensland childhood vaccination reminders: Manderson et al (2023).

108. Regan et al (2017).

109. For example, existing digital platforms such as MyHealth Record could potentially be used for automated reminders.

4.5 Vaccination surges would tie together policies that lift coverage

By focusing effort for a short period, vaccination ‘surges’ knit together policies that improve access, awareness, acceptance, and activation. Surges are an opportunity for governments to provide and promote clear guidance on who should get vaccinated, and when.¹¹⁰

European countries run autumn and spring COVID vaccination campaigns targeting high-risk populations, and many achieve high pre-winter vaccination rates.¹¹¹ For example, in November 2022, at the end of the most recent northern-hemisphere autumn campaign, the UK achieved coverage of more than 80 per cent in aged care, and 65 per cent for people aged 50 and older.¹¹² In comparison, at the end of autumn in 2023, Australian vaccination rates for high-risk people aged 65 and older were below 40 per cent (Figure 4.1 on the next page).

To facilitate surges, governments should allow more flexible intervals between people’s COVID vaccinations.

Australians have to wait six months after a COVID vaccination or infection before they can get a new vaccination. But some countries have shorter minimum periods between vaccinations. For example, in the UK, France, and Norway, the minimum is three months.¹¹³ France,

110. The US has used a different approach to simplify its most recent COVID vaccination advice, recommending that ‘everyone aged 5 years and older’ should get the latest vaccine: US CDC (2023d).

111. Most countries have two surges a year. Denmark and Finland target a single dose for high-risk people: see Danish Health Authority (2023). Some European countries’ success may be partly due to policies that are not right for Australia – for example, the UK restricts vaccination outside the seasonal vaccination campaign, and a surge in vaccinations in the final week of the campaign suggests the deadline is effective. But restrictions run the risk of exacerbating vaccine inequity, and we do not recommend them for Australia.

112. UK NHS (2022).

113. UK Health Security Agency (2023), Thompson (2023) and Oslo Municipality (2023).

Norway, and Ireland maintain a three-month delay between infection and vaccination,¹¹⁴ while the UK simply requires people to be free of any COVID symptoms.¹¹⁵ The US advises that people ‘may’ wait three months for a vaccine after infection, but authorities emphasise that people can get vaccinated sooner.¹¹⁶

Australia’s relatively long, inflexible vaccination interval means people have to keep track of their vaccination and infection history. It also makes it harder to coordinate vaccinations in aged care facilities and supported-living homes.¹¹⁷

Shorter, more flexible vaccination intervals do have some downsides. They mean some people will get less benefit from their vaccination because they already have strong immunity from a recent infection or vaccination. Surges also require planning, and may create temporary workforce challenges because they concentrate more vaccinations in a shorter time.

But these challenges are outweighed by the benefits of getting more high-risk people vaccinated, and doing it more efficiently.¹¹⁸ Since surges could lift vaccination coverage more than social marketing campaigns and text-based reminders alone, the federal government should ask the Australian Technical Advisory Group on Immunisation (ATAGI) to review the safety of flexible vaccination intervals. Subject to ATAGI’s advice, the COVID vaccination schedule should be updated.

114. Public Service France (2022) and Oslo Municipality (2023); in Ireland the 3-month window applies to high-risk people: Health Service Executive (2023).

115. UK Health Security Agency (2023).

116. US CDC (2023d).

117. Surges might help coordinate the process of securing medical consent in aged-care and supported-living residences. The process of seeking vaccination consent is time-consuming and ad-hoc: see Attwooll (2023).

118. For example, because most aged care residents would be eligible during one vaccination session, and there would be more vaccinations per hour in pharmacies.

Figure 4.1: Pre-winter surges have helped maintain vaccination rates in Europe

Country	High-risk age group	Proportion vaccinated before winter
Wales	65+	78%
Northern Ireland	50+	70%
England	50+	65%
Norway	65+	60%
Sweden	65+	Not reported
Ireland	60	57%
Australia	65+	89% (2022) 38% (2023)
Canada	70+	20%
US	65+	14%






Notes: European, UK, US and Canadian vaccination rates are for autumn campaigns before winter in 2022-23; vaccination rates for Australia are for the three months before winter in 2022 and 2023. European vaccination rates for lower-risk populations were much lower or not reported; vaccines were not available to lower-risk groups. Policy detail was not available for Sweden.

Sources: UK data on vaccination rates and vaccine eligibility: UK NHS (2023) and UK Office for National Statistics (2023). Canada: Health Database (2022) and Health Database (2023). Norway: Institute of Public Health (2022a) and Institute of Public Health (2022b). Ireland: COVID-19 Ireland (2023), Health Service Executive (2022) and O’Keefe (2022). US: US CDC (2023e). Northern Ireland: Health and Social Care Ireland (2023). Wales: BBC (2022). Sweden: Public Health Agency (2023a) and Public Health Agency (2023b).

The number and timing of vaccination surges each year should be based on ATAGI advice. And because COVID hasn't settled into seasonal patterns, a surge strategy will have to be reviewed as new evidence emerges. ATAGI should also advise whether surges need to be expanded to include lower-risk people.

But in the short term, at least one annual flu and COVID 'surge' – and probably a second COVID surge – would be consistent with current recommendations for high-risk people. Surges should be timed to minimise the burden on hospitals over winter, when there is a surge of demand (Figure 4.2).

Figure 4.2: Targeted flu and COVID vaccination surges could reduce pressure on the healthcare system

Pressure on hospitals	Lower	Lower	Peak	Lower
	Summer	Autumn	Winter	Spring
 Reminders based on date of previous COVID vaccination	✓	✓	✓	✓
 Communication campaign		✓		*
 SMS reminder to get vaccinated		✓		*
 Follow-up SMS reminder if still not vaccinated at end of surge		✓		*
 Allow flexible vaccination interval for high-risk people		✓		*

Note: * indicates actions that may be needed at that time of year.

Source: Grattan Institute.

5 Break down the barriers

Chapter 4 proposed universal measures to increase vaccination. They will work for most people, but not everyone.

In line with their broader role, Primary Health Networks (PHNs) should make sure that as many people as possible can access vaccination in mainstream primary care, using ‘targeted’ efforts to improve services for different groups that are more likely to miss out.

Over the longer-term, reforms to general practice funding should provide more resources to clinics that work with communities with low rates of vaccination. This extra funding should help general practice teams put more time and effort into dismantling barriers to vaccination.

5.1 Targeted efforts to increase vaccination are core PHN work

Primary Health Networks are responsible for improving primary health care, which is where most vaccination happens. Their role includes closing gaps in access to care, improving services, and integrating services.¹¹⁹ All these roles relate to improving vaccination rates for under-served groups.

Chapter 2 showed that many groups are missing out on recommended vaccinations, such as people who were born overseas, who have lower incomes, or who live in small towns.

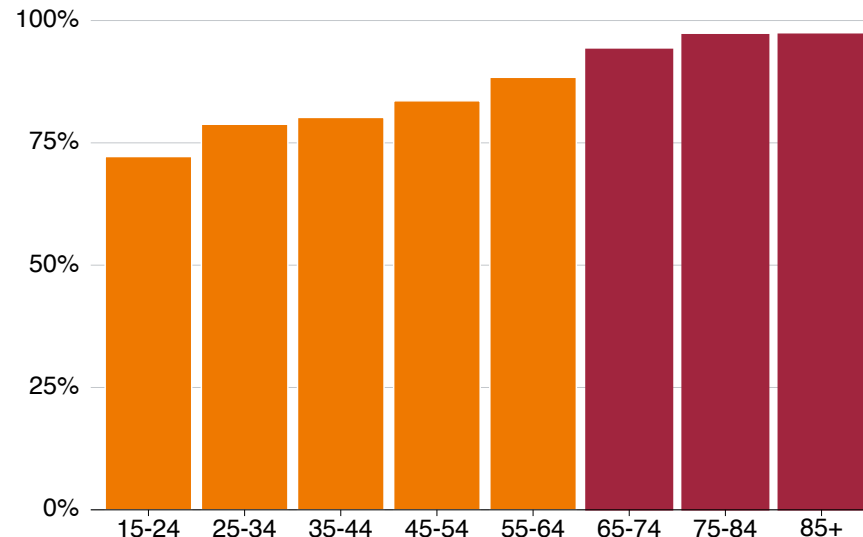
But almost all people in these groups go to the GP, and many visit the pharmacy. In 2022, 84 per cent of Australians went to the GP at least once. And 95 per cent of people aged 65 and older saw a GP, and can get recommended adult vaccines for free when they visit (Figure 5.1).¹²⁰

119. DHAC (2022b).

120. In the 2021-22 financial year. 94 per cent of people aged 65-74; 97 per cent of people aged 75 and older: ABS (2022d).

Figure 5.1: Nearly all high-risk people see a GP

Proportion of people who visited a GP in 2021-22



Note: At least one visit in the 2021-22 financial year.

Source: ABS (2022d).

PHNs can help service providers lift vaccination rates, by suggesting recommended vaccinations, informing and educating patients, providing vaccines in settings patients can access, and doing this in a culturally appropriate way.

These efforts should target groups that are missing out on vaccination, based on detailed data provided by the federal government. Those groups will vary in different parts of Australia, but based on our findings in Chapter 2, people from migrant backgrounds, people living in remote areas, and Indigenous people should be a focus for most PHNs, as should people in residential aged care.

Promoting culturally appropriate care

One PHN responsibility is finding out what stops people getting primary care and removing those barriers.¹²¹ That includes barriers for people from different cultural backgrounds,¹²² such as language barriers, or low vaccine awareness and acceptance.

While the evidence on what works best is limited, PHNs should consider providing shared access to professional interpreters across multiple clinics and pharmacies,¹²³ and offering training about different cultural groups' beliefs about vaccines,¹²⁴ and how to work with patients from different backgrounds.¹²⁵ PHNs might also develop culturally

121. DHAC (2019b).

122. This is reflected in recent investments, with the May 2023 Budget funding PHNs to improve access to after-hours care for people from culturally and linguistically diverse backgrounds: DHAC (2023m).

123. Hoppe and Eckert (2011). See also the Guide for Clinicians Working with Interpreters in Healthcare Settings: Migrant & Refugee Women's Health Partnership (2019).

124. Greenfield et al (2015) and Carlson et al (2022).

125. For example, while evidence is limited and the impact on patients has not been established, cultural competence training seems to increase clinician confidence and skills in serving people from different backgrounds: Renzaho et al (2013), Truong et al (2014), Chae et al (2020) and L. Govere and E. M. Govere (2016).

tailored public health messaging, including translated posters and videos to be displayed in GP practices.¹²⁶

Where Indigenous people are not getting access to care, cultural safety training and practices may be needed, and in some cases it may be appropriate to employ Indigenous clinicians or liaison workers.¹²⁷ Indigenous-run services will also have a key role to play, as discussed in Section 6.4 on page 41.

Supporting aged care providers

PHNs should also work with aged care and supported-living facilities to meet the government's vaccination targets for high-risk people.

Many residents rely on 'in-reach' vaccination services – where GPs, registered nurses, or pharmacists visit the care home. PHNs can help initiate and coordinate these services.¹²⁸

Meeting vaccination targets for aged care residents within two years should be a key performance indicator for PHNs.

Funding for targeted interventions

Improving adult vaccine coverage sits neatly within existing PHN responsibilities, and PHNs should use their existing resources and relationships with providers to work towards this goal. But some additional funding will be required to make the rapid progress Australia needs. The federal government should provide \$10 million each year, distributed to PHNs based on vaccination rates and service delivery costs in their region.¹²⁹

126. This could also extend to other community settings, such as bus stops, language schools, and restaurants: Dickson et al (2023).

127. APHRA (2020) and DHAC (2021b).

128. Vally (2023).

129. This would mean higher per capita funding for PHNs in rural and remote Australia, where vaccination is typically lower, and more costly, than in cities.

The federal government should also fund trials of Community Health Workers in PHNs.¹³⁰ Community Health Workers would connect people who aren't getting care with GP clinics and other services, improve their health literacy, give advice on how to stay healthy, and seek to increase their trust in the health system.

The international evidence for Community Health Workers is promising,¹³¹ as are some models that have been tried in Australia,¹³² but it is not yet strong enough to justify a large investment. Instead, the federal government should provide \$750,000 a year to fund trials in three PHNs in cities, and three in rural areas, for five years.

5.2 Fairer funding for GP patients will support vaccination

In our 2022 report, *A new Medicare*, we proposed a new funding model for general practice care.¹³³ It would include a flexible patient budget, with bigger budgets for patients with complex health needs and disadvantage.

Disadvantage is associated with lower vaccination rates (Chapter 2). That means clinics with more unvaccinated patients would get more

funding. This would give general practice teams more time to work with patients who might have low health literacy, believe in misinformation, or face other barriers to vaccination.

The federal government has announced that it will introduce a blended funding model for some patients.¹³⁴ Blended funding should be expanded to all patients over time, and should include loadings that ensure adequate access to high-quality primary care, including vaccination.¹³⁵

The targeted efforts proposed in this chapter would increase vaccination among people who visit mainstream primary care services. They would not, however, overcome barriers such as entrenched distrust of the healthcare system, trauma, or extreme disadvantage. Tailored policies to tackle these higher barriers to vaccination are discussed in the following chapter.

130. Community Health Workers (CHW) are sometimes called Multicultural, Bicultural, or Lay Cultural health workers; Multicultural liaison officers; Bilingual, Peer, or Community health educators; Indigenous Health Workers; personal care workers; and community navigators (see Javanparast et al (2018)). The role of Indigenous healthcare workers in Aboriginal Community Controlled Health Organisations is already well established and is distinct from the more general CHW role we propose.

131. A WHO review of systematic reviews concluded that Community Health Worker programs 'have strong potential to deliver a wide range of cost-effective primary health care services in a variety of contexts': WHO (2020, p. 50). A systematic review of CHW programs in OECD countries found positive impacts, including improvements in clinical disease indicators and screening rates: Sharma et al (2019).

132. See, for example, Henderson and Kendall (2011), Mistry et al (2023) and Power et al (2022).

133. Breadon et al (2022).

134. As part of reforms called 'My Medicare'. The blended funding model seems to apply only to people in residential aged care and people who attend hospital frequently: DHAC (2023n).

135. These loadings should be based on appropriate levels of care for different cohorts, not on current levels of care: Breadon et al (2022).

6 Reach out to people who need it

Even with policies in place that make vaccination easier for everyone and help services respond to the needs of people from different backgrounds, some people will still be left behind.

Some low-vaccination communities face complex and entrenched barriers to vaccination. Overcoming these barriers will require vaccination initiatives designed in collaboration with these communities.

Initiatives must be adapted to local conditions, but should use a rigorous approach and be accountable for results. And to succeed, they must be based on good data and evidence, and have consistent and flexible funding.

6.1 Barriers to vaccination can be complex and diverse

Many communities have persistent and extremely low rates of vaccination. These communities include some language and migrant groups, people in some remote areas, homeless people, and some Indigenous communities. Some language groups, and some communities with layers of disadvantage, have less than a tenth of the vaccination rate of the average high-risk Australian.¹³⁶

This suggests that people in these communities encounter significant barriers to vaccination.¹³⁷ Advertising, reminders, and more accessible and culturally welcoming services will help for some, but we can't expect those things to work for everyone.

136. Grattan analysis of ABS MADIP (2023).

137. Many barriers to vaccination are difficult to measure, such as a deep distrust of the health system, or low levels of health literacy. Measurable types of disadvantage, such as formal education, are often but not always indicators of these underlying barriers.

Some people will need more intensive, tailored support to get vaccinated, because standard models of care cannot overcome severe disadvantage or deep skepticism about healthcare providers or vaccines.¹³⁸

The challenges low-vaccination groups face can be quite different, which means a one-size-fits-all approach won't work.¹³⁹ For some, poverty might mean they have too little time and money, or they are too stressed, to get vaccinated. Others have suffered racism and discrimination which has caused them to distrust health services.¹⁴⁰

138. Regarding the framework of universal, targeted and tailored approaches to healthcare, see, for example: WHO (2023b) and Marmot (2010). In Australia the Australian Institute of Health and Welfare identifies priority populations for tailored programs as: Aboriginal and Torres Strait Islander people; Culturally and Linguistically Diverse people; people who are lesbian, gay, bisexual, queer, intersex or gender diverse; people with mental health conditions; people in low socio-economic groups; people in remote areas; people with disabilities (AIHW 2022c) and people who inject drugs: AIHW (2019b, Chapter 8). Many states also recognise that tailored health services are also needed for people experiencing homelessness and asylum seekers; see, for example: Victorian Department of Health (2023b).

139. Analyses of child vaccination inequity in Australia and COVID vaccination inequity in the UK and US have found varied barriers and proposed tailored responses; for example: Kamal et al (2021) and Savoia et al (2021).

140. As well as being a determinant of health (Paradies et al 2015; Victorian DHHS 2017), being subjected to racism is associated with barriers to healthcare (Bastos et al 2018), and COVID vaccine hesitancy and health system mistrust (Savoia et al 2021; Paul et al 2022). In some communities, misinformation about vaccination is widely believed: Razai et al (2021).

6.2 Tailored solutions can work

The need for more intensive, tailored vaccination promotion in low-vaccination communities has long been recognised,¹⁴¹ and many such initiatives have been developed during the COVID pandemic.

One common approach is to train and support ‘community champions’ – people who are trusted in their community, workplace, or faith organisation – who can promote vaccination and counter misinformation (Box 6). Another common approach is working with communities to provide vaccinations in community settings, or in people’s homes (Box 7 on the next page).

While tailored vaccine initiatives cannot fix entrenched inequality, they can help overcome challenges such as poor healthcare literacy, distrust, and cultural barriers to care.

Tailored vaccination initiatives can look very different, because low-vaccination communities are diverse. But successful initiatives usually share common features. A key feature is ‘co-designed’ or ‘community-led’ program delivery. The result is often a ‘place-based’ or ‘hyper-local’ approach (Box 8 on page 40).¹⁴²

Co-design emphasises a two-way exchange of information between participants who meet as equals. Service providers share their professional expertise, while community members share their lived experience and their community’s priorities and challenges. The aim is to identify shared goals and opportunities to deliver co-designed, tailored services that have the best chance of succeeding.¹⁴³

Box 6: The Vaccine Champions training program

In 2021, the Vaccine Uptake group partnered with the Victorian Department of Health to deliver 91 online training sessions for potential Vaccine Champions and Ambassadors. More than 80 people went on to become formal Vaccine Champions.

Vaccine Champions presented more than 100 locally tailored information sessions,^a and worked with community members one-on-one and in small groups.^b Many Vaccine Champions developed tailored communications for their communities, often using social media to share videos and respond to questions.^c

Vaccine Champions frequently encountered widespread misinformation in their communities, largely circulated via social media.^d They challenged misinformation with evidence and credible information, delivered in an accessible way and on social media platforms that were popular within the champion’s community.^e

a. Kaufman et al (2022).

b. Dinham (2021).

c. Independent Pandemic Management Advisory Committee (2022).

d. See, for example, Dinham (2021).

e. Independent Pandemic Management Advisory Committee (2022).

141. WHO (2019), WHO (2018) and Dubé et al (2018).

142. See, for example: Faherty et al (2022), Ham and Alderwick (2015), Timmins and Baird (2022) and Rockefeller Foundation Equity Advisory Council (2022).

143. NCOSS (2017).

While these approaches are often successful, and are supported by experts,¹⁴⁴ the evidence on what works remains limited.¹⁴⁵ That is because tailored interventions are, by definition, varied. They are also typically small-scale, and the organisations leading them often lack the capacity to conduct rigorous evaluation.¹⁴⁶

6.3 Australia needs a system to ensure tailored vaccination initiatives are set up for success

Despite limited evidence, tailored programs remain the most promising way to dismantle the highest barriers to vaccination. And there are best practices that will maximise the chance of success. Strong guardrails should be in place to make sure they are used.

There should be accountability for achieving progress, using approaches backed by evidence, and evaluating results. And tailored initiatives must be adequately funded.

This approach is consistent with the World Health Organisation's 'Tailored Immunisation Programme' (TIP), which recommends that tailored initiatives should be supported by data, funding, and systems that support ongoing evaluation and improvement.¹⁴⁷

Accountability for results

As recommended in Section 3.2, states should be responsible for lifting vaccination rates in communities with persistent and distinctive barriers to vaccination.

144. Seale et al (2020), WHO and UNICEF (2022), Independent Pandemic Management Advisory Committee (2022) and Faherty et al (2022). Case studies and qualitative reviews of Australian initiatives support the approach: Zachariah et al (2022) and Kaufman et al (2022).

145. Grindell et al (2022).

146. Public Health England (2021).

147. WHO (2019).

Box 7: Vaccinations in community settings: the Auburn Gallipoli Mosque

A large share of the Western Sydney Local Health District (WSLHD) population is made up of potentially low-vaccination communities. When COVID vaccines became available, the WSLHD put 'community at the centre' of its response.^a

WSLHD created a database of local community leaders, religious leaders, culturally and linguistically diverse service providers, ethnic media, language schools, adult education services, and community colleges, to establish two-way relationships with members of potentially low-vaccination communities.^b WSLHD noted that in different communities there were different stigmas, fears, and myths that needed to be addressed.^c

After the Australian National Imams Council confirmed that COVID vaccines were permissible,^d the WSLHD collaborated closely with the Auburn Gallipoli Mosque to put on a vaccination event at the mosque, with health interpreters provided for the Turkish and Arabic community. More than 80 people were vaccinated.^e

Active outreach increased vaccination above the levels otherwise expected for this diverse community.^f

a. Health Protection NSW (2021).

b. Zachariah et al (2022).

c. Health Protection NSW (2021).

d. Australian Fatwa Council (2021).

e. The Pulse (2021).

f. Zachariah et al (2022).

To unlock co-funding under the proposed National Vaccination Agreement, states should identify specific priority low-vaccination communities, and commit to lifting vaccination rates. The goal should be to progressively close the gap between low-vaccination communities and the average vaccination rate in a state.

Tailored programs should typically target a specific cultural, economic, or other group located in a specific area.¹⁴⁸

Using evidence on what works

Funding should also be conditional on states developing vaccine equity strategies guided by advice from the Australian Centre for Disease Control (ACDC).

The ACDC should provide states with evidence on the types of initiatives that work well in low-vaccination communities. Then states should adapt them to the needs of local communities. The ACDC should also provide evidence on processes that ensure meaningful community participation as initiatives are designed and delivered.

While informed by ACDC guidance, state strategies should be developed in partnership with organisations that have existing resources and expertise, including Primary Health Networks, state healthcare organisations, and relevant community organisations.

Tailored initiatives should be evaluated individually and collectively. When evidence emerges supporting new interventions, the ACDC should update its menu of initiatives and advice (Figure 6.1 on the next page).

148. Groups should be identifiable in linked vaccination data so that progress can be measured.

Box 8: What are place-based approaches?

Governments around the world have had to rethink how to design and deliver services in areas of entrenched disadvantage. Place-based approaches (PBAs) represent a radical change in approach, shifting focus from portfolios, policies, and programs, to place.

PBAs help local communities develop and implement initiatives to address their challenges. PBAs share power and accountability with communities and service providers, and are increasingly being used to tackle health inequities.

Traditional siloed, top-down approaches can overlook local challenges and strengths. In contrast, PBAs draw on local knowledge and work flexibly across portfolios and levels of government to develop tailored initiatives.

There is a growing evidence base demonstrating the effectiveness of PBAs in overcoming inequity and improving health outcomes.^a Successful PBAs typically include:^b

- meaningful community engagement
- effective collaboration across groups and sectors
- strong leadership and governance
- adequate capacity and skills to implement place-based approaches
- use of data and evidence to inform initiatives.

a. Geatches et al (2023).

b. Van Dyke and Craike (2021) and DPMC (2012).

Predictable and flexible funding

Predictable, flexible funding will be needed to sustain tailored initiatives long enough to achieve change.

People running tailored programs have reported that staffing, momentum, and community trust were all put at risk by uncertain, short-term funding.¹⁴⁹ A recent survey of peak bodies and community service providers, including organisations providing healthcare outreach, found that short-term contracts undermined relationships with communities.¹⁵⁰

Short-term funding was understandable during the pandemic, given unpredictable changes in vaccines and patterns of infection. But to improve adult vaccine equity, healthcare organisations will need consistent funding to maintain relationships with low-vaccination communities, and flexible funding to deliver tailored initiatives.

As part of our proposed National Vaccination Agreement, \$20 million a year should be dedicated to local, tailored vaccination initiatives, for the next five years. States and the federal government should contribute equally to this funding. States should make detailed proposals about who they would help, and how, in order to unlock the federal government’s contribution.

6.4 The role of Aboriginal Community Controlled Health Organisations

Aboriginal Community Controlled Health Organisations (ACCHOs) are healthcare providers that are deeply embedded in the communities they serve. There are 144 across Australia, often located in areas with high levels of social and economic disadvantage.¹⁵¹

149. NACCHO (2022, p. 40); ACOSS (2020, pp. 55–56).

150. ACOSS (2021). Community organisations included health, disability, domestic violence, and education providers.

151. NACCHO (2022).

Figure 6.1: Flexible, tailored vaccine interventions can be delivered within guardrails

Task	Accountability for outcome	Support and resources
Identify low-vaccination communities Commit to increasing the vaccination rate in low-vaccination communities	State and territory governments	Data provided by the Australian Centre for Disease Control (ACDC)
Develop and deliver tailored vaccination initiatives: • Healthcare providers to commission and codesign with low-vaccination communities	State and territory governments	Funding provided by federal and state governments Evidence on types of interventions and processes provided by the ACDC
Evaluate tailored vaccination initiatives		Evaluation by the ACDC

ACDC: Use evaluations to update evidence on what works

Source: Grattan Institute.

High-risk Indigenous Australians have persistently lower COVID vaccination rates than other high-risk Australians, and dedicated community outreach and engagement was required to reduce community distrust of the COVID vaccine during the pandemic (Box 9).

Indigenous Australians have lower flu vaccination rates than other high-risk Australians, and the health burden of vaccine-preventable diseases is four times higher for Indigenous people than other Australians.¹⁵²

Because ACCHOs deliver culturally safe healthcare to low-vaccination communities,¹⁵³ and because ACCHOs already face workforce shortages, the federal government should provide an extra \$10 million a year in ongoing, flexible funding for ACCHO-led vaccination programs. This funding could be used to hire Aboriginal and Torres Strait Islander health workers, or to train existing members of the workforce.¹⁵⁴

152. AIHW (2019c).

153. NACCHO (2022, p. 8) and Naren et al (2021).

154. ACCHOs face challenges finding and retaining specialised healthcare workers. Up-skilling and retraining existing workers is a priority: NACCHO (2023a, p. 9). This funding should be additional to ACCHOs' annual budgets and outside National Partnership arrangements. See Appendix C for costings.

Box 9: Gurriny Yealamucka Health Service

Yarrabah is Australia's largest discrete Indigenous community, with about 4,000 residents and a heavy burden of chronic diseases.^a The Gurriny Yealamucka Health Service (Gurriny) is deeply enmeshed in the community.

The Gurriny team had to work hard to build community trust in the COVID vaccine. People were concerned about blood clots, and social media misinformation was widespread. Some community members believed the vaccine was intended to harm Aboriginal people, and existing health problems heightened people's concerns about vaccine safety.

When double-dose vaccination rates cleared 70 per cent in Sydney, they were lower than 30 per cent in Yarrabah.

Doctors and nurses from Gurriny went door-knocking with information pamphlets, taking time to answer questions about the vaccine and to reassure people. They often brought along an esky of vaccines in the hope of delivering vaccines on the spot.

Time to reassure people was also crucial at community vaccination events. Of the 186 community members who attended a vaccination event, four got vaccinated on the spot, but 178 needed a 20-minute conversation with a nurse or doctor before they were comfortable receiving a vaccination.^b

Intensive work by Gurriny staff meant that by February 2022, more than 83 per cent of the community was double-vaccinated.^c

a. McCalman et al (2021).

b. Clark (2021).

c. Gurriny Yealamucka (2022).

7 Conclusion

This report has shown that better vaccination policy isn't just about making it easier for everyone to get a jab. That is part of the solution. But we also need new systems to identify who is missing out, and then reach out to them.

Giving everyone the chance to get vaccinated should be easy. Vaccination is relatively quick, cheap, and for adults it doesn't need to happen more than once or twice a year. It doesn't require sustained behaviour change, like a healthier diet or quitting smoking. It doesn't require equipment or clinicians that are specialised, scarce, or costly.

But even when COVID vaccination was at its peak during the pandemic – with an unprecedented push for vaccination through media conferences, government advertising, vaccination clinics, and regulation – the same groups that are missing out today had lower levels of vaccination than the rest of the community.

That suggests that we need real change to ensure vaccination programs can reach everyone. This report shows what changes are needed. But a new and better approach to providing fairer access to care shouldn't end there. It should be applied much more broadly.

Australia's health system has many strengths, but often suffers from two key weaknesses that contribute to gaping gaps in access to care and in life expectancy. Those weaknesses are, first, expecting people to take the initiative and seek care, and second, not adapting to the barriers people face in seeking care.¹⁵⁵

The approach we recommend to overcome these weaknesses can be boiled down to four steps:

155. This is a generalisation and it is important to note that many services don't fall into these traps. For example, they are often avoided by ACCHOs, as discussed in Section 6.4 on page 41.

- Make it easier for everyone to access care
- Adapt healthcare services to meet the needs of people from different backgrounds
- Use data to find the people who are still missing out
- Create new programs to reach those people, in partnership with their communities, supported by evidence and accountability.

As this report shows, it doesn't have to be expensive. The first two steps should leverage existing service systems. Tailored local programs will then only be needed as a last resort. They can be tightly targeted, and required to demonstrate their cost-effectiveness.

This playbook should be applied to many other areas where the health system isn't caring for everyone. For example, it could be applied to cancer screening, or continuity of general practice care for people with chronic disease. It should become the new business-as-usual in healthcare.

Finally, it is important to acknowledge that healthcare can't do it all. Many of the groups who are missing out face deep disadvantage or prejudice. Fairer access to care must also be supported by broader policy and social changes aimed at reducing poverty,¹⁵⁶ racism and discrimination,¹⁵⁷ and restoring self-determination to Aboriginal people.¹⁵⁸

156. For example, increases to JobSeeker payments of at least \$100 a week, 40 per cent increases to rent assistance, and policies to increase the supply of social housing: Daley et al (2020) and Coates (2023).

157. Duckett (2018).

158. Lancet Editorial (2023).

Appendix A: How we calculated our results

Findings in this report are based, in part, on Multi-Agency Data Integration Project (MADIP) data supplied by the ABS (ABS MADIP (2023)).

A.1 Vaccination coverage analysis

Our vaccination analysis used the following unit-record data from MADIP:

- the 2021 Census ('the Census')
- the Australian Immunisation Registry ('the AIR')
- data linkage between the Census and the AIR.

People identified as visitors in the Census were excluded from our analysis, and all calculations were based on the subset of the Census that could be linked to the AIR. This ensures that our findings on inequities are conservative, because data linkage tends to be lower for disadvantaged groups.

Age-based definitions were derived from people's age in August 2023, based on their reported age in the Census.

How we measure whether someone is 'up-to-date' with their vaccinations

The denominator in our vaccination coverage rate is based on non-visitor Census records that can be linked to the AIR. The denominator for our core 'high-risk' groups was adjusted to reflect deaths since August 2021 for people aged 65 and older. For our population-based measure of flu vaccine coverage, the denominator was adjusted to reflect deaths across all age groups.

The numerator in our vaccination coverage rate is based on vaccination events within a specified number of months. When AIR records match with more than one Census record, vaccination events are apportioned equally across Census records.

Our core measure of COVID vaccination coverage is based on a vaccination within the previous six months.

We checked the robustness of our results based on vaccination within the previous nine months, to capture people who may have delayed vaccination due to COVID infection (see Appendix B).

Our core measure of flu vaccination coverage is based on the three-month period before June, because people are advised to get a pre-winter flu vaccination each year, and the 2023 National Immunisation Program (NIP) flu vaccine became available at the start of April:¹⁵⁹

We checked the robustness of our results based on vaccination within the 12 months before June (see Appendix B).

Definitions of high-risk groups

Until September 2023, the Australian Technical Advisory Group on Immunisation (ATAGI) defined people as high-risk for COVID if they were aged 65 or older, or had medical comorbidities that increased their risk of severe COVID.

Because medical conditions are self-reported in the Census, and because the indicator for cancer includes cancer in remission, there is a risk that Census health indicators will over-state the number of people with medical risks for severe COVID. Our measure of people

159. DHAC (2023o).

with ‘high-risk’ conditions for COVID therefore requires people to have two or more self-reported high-risk medical conditions. This is likely to be a conservative estimate of the size of the group.

For analysis in the main text, our core definition of people who are ‘high-risk’ for COVID includes:

- people aged 65 or older in August 2023; *or*
- people who self-report in the Census having two or more of the following conditions: asthma, cancer, dementia, diabetes, heart disease, kidney disease, lung condition, and whether they have had a stroke (see Section A.2).

These estimates are based on a six-month vaccination window.

We checked the robustness of our results using a more conservative definition of being considered high-risk for COVID:

- ‘High-risk 75’: we tightened our high-risk group to people aged 75 or older in August 2023. This is a conservative, retrospective implementation of ATAGI’s September 2023 decision to recommend a six-month vaccination interval for people aged 75 or older and ‘people at higher risk of severe illness’, including people aged 65-74 and people with medical risks.¹⁶⁰

While ATAGI recommends that everyone aged six months or older gets an annual flu vaccine,¹⁶¹ people with the greatest risks from flu receive the vaccine for free under the National Immunisation Program schedule. This includes children aged six months to five years, people aged 65 and older, Indigenous people, pregnant people, and people with high-risk medical conditions.¹⁶²

160. See DHAC (2023e) for advice in February 2023, and ATAGI (2023f) for advice in September 2023.

161. ATAGI (2023g).

162. DHAC (2023a).

For analysis in the main text, our core definition of being considered high-risk for flu included people:

- aged 65 or older; *or*
- with two or more high-risk conditions (as per high-risk COVID conditions).

As with our definition of the high-risk group for COVID, the requirement to have two self-reported high-risk medical conditions yields a conservative estimate of group size.

Our estimates are based on a three-month vaccination window before June 2023.

We checked the robustness of our results by expanding our sample to the full population, capturing the full cohort recommended to get the flu vaccine.

While children should be vaccinated from six months, our estimated vaccination rates for children aged six months to five years are limited to children aged two years to five years. This is because we measure groups based on age in August 2023; we do not have linked vaccination data on children born since the 2021 Census.

A.2 Definitions of variables and groups

The variables and groups used in our analysis are defined as follows:

Indigenous – We defined a person as Indigenous if they identified in the Census as Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander; and not Indigenous if they identified as non-Indigenous.¹⁶³

Age – We used AGEP from the Census data.

163. For more detail see: ABS (2021a).

Health conditions – We used the following self-reported long-term health conditions from the Census:¹⁶⁴

- asthma (HASTP code 021)
- cancer (HCANP code 031)
- dementia (HDEMP code 041)
- diabetes (HDIAP code 051)
- heart disease (HHEDP code 061)
- kidney disease (HKIDP code 071)
- lung condition (HLUNP code 081)
- whether has had a stroke (HSTRP code 101).

Country of birth – The regions and corresponding BPLP codes are:¹⁶⁵

- Australia: 1; 1100 to 1199
- Oceania and Antarctica (excluding Australia): 1000; 1201 to 1607
- North-western Europe: any code in the 2000s
- UK and Ireland: 2100 to 2201
- Other north-west Europe: 2000; 2300 to 2408
- Southern and Eastern Europe: any code in the 3000s
- Southern Europe: 3100 to 3108
- South-eastern Europe: 3200 to 3216

164. Based on high-risk conditions listed in the Australian Immunisation Handbook: ATAGI (2023h)

165. For more detail see: ABS (2021b).

- Eastern Europe: any code in the 3300s
- North Africa and the Middle East: any code in the 4000s
- North Africa: 4100 to 4111
- Middle East: 4200 to 4217
- Southeast Asia: any code in the 5000s
- Northeast Asia: any code in the 6000s
- Southern and Central Asia: any code in the 7000s
- Americas: any code in the 8000s
- Sub-Saharan Africa: any code in the 9000s.

Education – We defined a person as having a bachelor's degree or higher if their highest level of education attainment, known as their HEAP, is in the 100s, 200s, or 300s, except for 314.¹⁶⁶

English proficiency – We defined a person as being proficient in English if they speak English only, or use another language and speak English well/very well; and not proficient if they use another language and speak English not well/not well at all.¹⁶⁷

Index of Relative Social Disadvantage (IRSD) – We used each person's SA1-level IRSD decile where available, and SA2-level IRSD decile otherwise.¹⁶⁸

Low income – We defined a person as having low income if their Census-reported equivalised household income is below \$500 per week, or, where unavailable, if their individual income is below \$500 per week.

166. For more detail see: ABS (2021c).

167. For more detail see: ABS (2021d).

168. For more detail see: ABS (2023d).

Remoteness area – We used the remoteness area classification of a person's usual residence from the Census. For figures showing SA3s by remoteness, we used the modal remoteness classification in that SA3 by population.

Appendix B: Robustness checks

B.1 COVID vaccination analysis

Our key findings are that COVID vaccination rates are low, and that there are persistent and often large disparities between the average high-risk person and high-risk people in disadvantaged groups. These findings are robust to our checks.

We report someone as up-to-date with their COVID vaccination if they have received a vaccination in the previous six months. Our core definition of 'high-risk' includes people aged 65 or older, or with two or more conditions that are high-risk for COVID.

We checked the robustness of COVID vaccination rates for:

- High-risk people vaccinated in a nine-month interval before June 2023
- People aged 75 and older.

Average vaccination rates

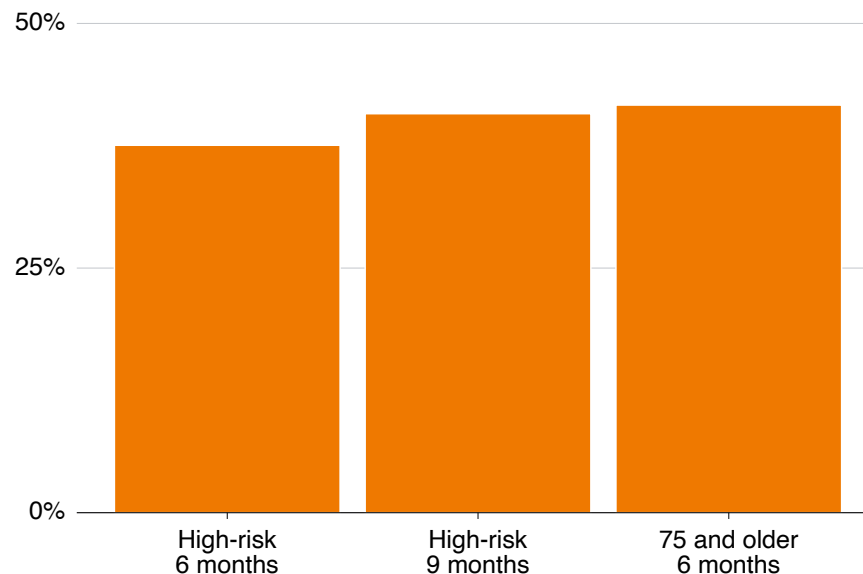
Expanding the vaccination window lifts average high-risk vaccination rates by about 3 percentage points, from 37.5 per cent to about 41 per cent.

Limiting the sample to people aged 75 and older lifts the average vaccination rate by about 4 percentage points relative to the standard 'high-risk' definition, to about 42 per cent (Figure B.1).

Differences between groups

Patterns of differences between groups are robust to a nine-month vaccination window, and the 75-and-older sample.

Figure B.1: Expanding the definition of the COVID vaccination window and restricting the sample lifts vaccination rates by about 4 percentage points



Notes: People are considered 'vaccinated' if they received a COVID vaccine in the stipulated window before the beginning of June 2023. The definition of 'high-risk' people is as reported in-text, including people aged 65 and older, people with two or more self-reported medical conditions that are high-risk for flu and COVID, and children aged under 5 (aged 2-to-5 in this sample). Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Expanding the vaccination window slightly reduces differences between some groups – for example, people who are not proficient in English were 58 per cent less likely to be vaccinated than the average high-risk person based on a six-month vaccination interval, and 53 per cent less likely based on a nine-month interval.

Restricting the sample to people aged 75 and older leads to relatively better vaccination rates for Indigenous people and people who live in remote and very remote areas. For example, Indigenous people aged 75 and older are about 22 per cent less likely to have been vaccinated in the previous six months, compared to the average high-risk person, rather than the 34 per cent discussed in text.

This may reflect ‘survivor bias’: the median age of death for Indigenous people is much lower than other Australians, at 61 years in 2020.¹⁶⁹ Indigenous people aged 75 and older have lived much longer than most Indigenous people, and may not be representative of Indigenous people more generally; our results suggest they may have better access to primary healthcare (Figure B.2).

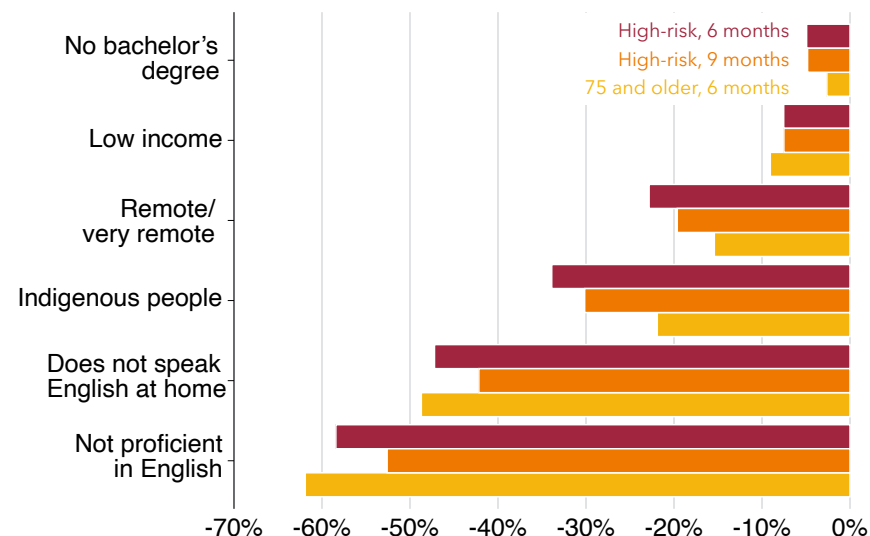
B.2 Flu vaccination analysis

Our key findings are that flu vaccination rates are higher than COVID vaccination rates, with smaller disparities between groups but similar patterns.

We refer to someone as ‘up-to-date’ with their flu vaccination if they have received a vaccination in the three months before winter, 2023.

Our core definition of high-risk adults included people aged 65 and older, or with two or more comorbidities that are high-risk for COVID and flu. We also reported differences between Indigenous people and the population average.

Figure B.2: Our analysis of disadvantaged groups is robust to longer COVID vaccination intervals and restricting analysis to people aged 75+



Notes: People are considered ‘vaccinated’ if they received a COVID vaccine in the stipulated window before the beginning of June 2023. The definition of ‘high-risk’ people is as reported in-text, including people aged 65 and older, people with two or more self-reported medical conditions that are high-risk for flu and COVID, and children aged under 5 (aged 2-to-5 in this sample). Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

169. AIHW (2022d).

We checked the robustness of flu vaccination rates for:

- High-risk adults vaccinated in a 12-month interval before June 2023
- The population, reflecting ATAGI's advice that everyone aged six months and older should be vaccinated against flu.

Average vaccination rates

Expanding the vaccination interval lifts the vaccination rate seven percentage points from 60 per cent to 67 per cent – about 10 per cent.¹⁷⁰

About 27 per cent of the population was vaccinated in the three months before June 2023, and 37 per cent across 12 months (Figure B.3).

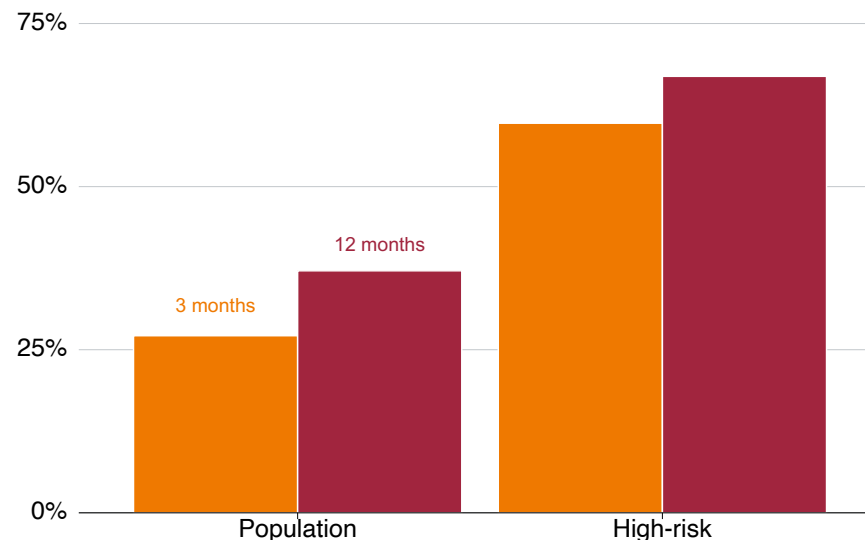
Differences between groups

Expanding the vaccination interval from three to 12 months does not change overall patterns when comparing disadvantaged groups to the average person, but does reduce estimated disparities.

Expanding the sample from high-risk adults to the population yields quite different vaccination patterns.

Disparities between the vaccination rate for Indigenous people and the average vaccination rate are more pronounced. Despite being able to get free flu vaccines, Indigenous people are more than 40 per cent less likely to have received a flu vaccine in the three months before the 2023 winter. Disparities are also more pronounced for people living in remote

Figure B.3: Expanding the definition of the flu vaccination window lifts vaccination rates by between 7 and 10 percentage points



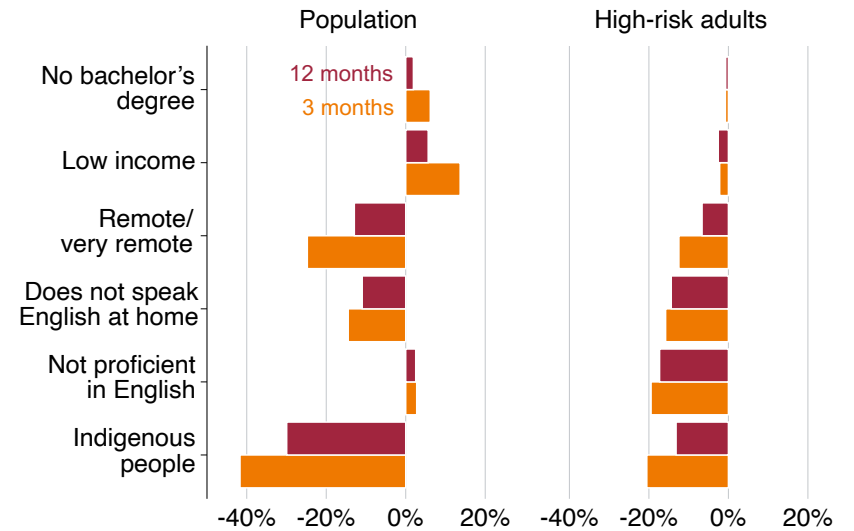
Notes: People are considered 'vaccinated' if they received a flu vaccine in the stipulated window before the beginning of June 2023. The definition of 'high-risk' people is as reported in-text, including people aged 65 and older, people with two or more self-reported medical conditions that are high-risk for flu and COVID, and children aged under 5 (aged 2-to-5 in this sample). Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

¹⁷⁰. Our 12-month interval includes vaccinations since June 2022 but not the length of the 2023 flu season; however, our rates are consistent with National Centre for Immunisation Research and Surveillance (NCIRS) data, which show that 63 per cent of people aged 65 and older were vaccinated between March 1 and October 3, 2023: DHAC (2023p).

and very remote areas, with vaccination rates about 25 per cent lower than the average in the three months before winter (Figure B.4).

Figure B.4: Our analysis of disadvantaged groups is robust to longer flu vaccination intervals and definitions of ‘high risk’



Notes: People are considered ‘vaccinated’ if they received a flu vaccine in the stipulated window before the beginning of June 2023. The definition of ‘high-risk’ people is as reported in-text, including people aged 65 and older, people with two or more self-reported medical conditions that are high-risk for flu and COVID, and children aged under 5 (aged 2-to-5 in this sample). Data may vary slightly from results reported elsewhere due to data permutations and data-matching methods.

Source: Grattan analysis of ABS MADIP (2023).

Appendix C: How we costed our recommendations

Funding for Primary Health Networks

We recommend that PHNs should be accountable for lifting vaccination coverage in their catchment and improving access to vaccines, with targets included in KPIs. PHNs would be expected to leverage their existing workforce, programs, and provider relationships to help achieve the new vaccination goals. But new KPIs should also be accompanied by new consistent, flexible funding.

During the pandemic, flexible funding for COVID vaccines was delivered through the Vulnerable Vaccination Program (VVP). The VVP provided an average of just over \$500,000 per year, per PHN. A small selection of publicly available PHN budgets suggests that 2023-24 VVP funding falls between about \$100,000 and \$200,000.¹⁷¹

We propose a budget of \$10 million per year for PHNs, for five years. That is just above \$320,000 per year for each PHN on average. But payments should be adjusted based on population, baseline PHN vaccination levels, and on remoteness. These adjustments would reflect the amount of extra vaccinations needed to reach national targets, and higher delivery costs in rural and remote areas. Our proposed funding reflects a focus on targeted, rather than tailored, vaccination initiatives, compared to tailored initiatives during the pandemic; it also reflects the broader task of lifting vaccination rates across multiple adult vaccines.

Flexible funding could be used for training and initiatives to improve access to GPs and pharmacies, and to target communities in the PHN's catchment with low and well-understood barriers to accessing

171. See: Brisbane North PHN (2023, p. 4), WAPHA (2023a, p. 50), WAPHA (2023b, p. 45), WAPHA (2023c, p. 43).

primary healthcare. Funding could also be used for outreach to aged-care and disability accommodation.

Funding for states

There is strong qualitative and case-study evidence that tailored programs can increase vaccination rates in the hardest-to-reach groups. But tailored initiatives are diverse, and more expensive per vaccination. Funding needs to reflect this.

By default, states should be responsible for lifting vaccination coverage in the hardest-to-reach populations, capitalising on the resources and expertise in local public health units, as well as opportunities for vaccination through state-based services, including public dental services. Funding should be flexible enough for states to distribute funding through PHNs.

We propose a budget of \$20 million a year, for five years. Our proposed 50:50 co-funding arrangement reflects joint state and federal responsibility for primary and population health.

All states have low-vaccination populations, including homeless people, and funding for each jurisdiction should be weighted according to the number of people in identified low-vaccination groups.

\$100 million over five years is a modest budget to pursue a tightly-defined goal.

Across the PHNs and the states, our total proposed funding is \$150 million over five years, for improving access to mainstream services and for tailored initiatives to reach persistently low-vaccination communities.

Funding for Aboriginal Community Controlled Health Organisations

ACCHOs use a mix of targeted and tailored strategies to deliver cost-effective healthcare to Aboriginal and Torres Strait Islander people.¹⁷²

During the pandemic, the government provided the National Aboriginal Community Controlled Health Organisation (NACCHO) with almost \$38 million in funding to support the COVID response, with \$30 million of this allocated and spent before the end of 2021.¹⁷³ This level of expenditure reflects the ongoing challenge for ACCHOs to encourage take-up of, and then deliver, COVID vaccinations (see, for example, Box 9).

We propose an ongoing budget of \$10 million dollars per year to augment existing funding for ACCHOs and to continue initiatives that help lift Indigenous people's vaccination rates.

This is less than the \$30 million budgeted in the first year of pandemic vaccination, reflecting the easing of pandemic circumstances. This lower level of funding is balanced against our call for ongoing funding, so that ACCHOs can plan to lift rates across all adult vaccines, in the context of persistently low adult vaccination rates and a disproportionately high burden of vaccine-preventable diseases. Our proposed funding is equivalent to about \$70,000 per ACCHO, or about \$33,000 per clinic, per year.¹⁷⁴

Trial of Community Health Workers

This report has shown that social and economic problems dramatically affect people's health.

172. NACCHO (2022).

173. Ibid (p. 4).

174. Funding estimates are based on 145 ACCHOs, and 300 ACCHO clinics: NACCHO (2023b). If funding is distributed equally across ACCHOs, this would cover an additional part-time role per ACCHO.

Community Health Workers (CHWs) could be a valuable bridge between existing services and people who would benefit from preventive healthcare, but the evidence on the effectiveness of CHWs is mixed. Given the limited evidence, we recommend a small trial of Community Health Workers.

We propose funding of \$750,000 a year, for five years, run through three urban and three rural Primary Health Networks. The five-year funding window is designed to allow adequate time for programs to succeed and to develop the evidence base for evaluation. Funding of \$125,000 per year would give PHNs flexibility to hire at least one full-time Community Health Worker, and to cover additional administrative costs associated with an evaluation program.

Communications campaigns

Well-designed communications campaigns, ideally tested with target audiences, can lift public awareness and acceptance of vaccines. Social marketing campaigns will be important for introducing our proposed shift to COVID and flu vaccination surges for high-risk people.

Our costing is based on a two-month national campaign to promote flu and COVID vaccines before winter in 2024, then a spring campaign, and the same in 2025. This should be accompanied by an out-of-surge campaign to raise awareness of the new Shingrix vaccine, and pneumococcal.

Spending on vaccine and other public health campaigns varies dramatically, from about \$6 million per campaign-month for tobacco, to less than \$250,000 per campaign-month for adolescent vaccines. The federal government's 2017 'Get the facts about vaccs' campaign for childhood vaccinations cost about \$12 million across two years,¹⁷⁵ with

175. DHAC (2019a).

a tightly defined target audience with greater-than-usual engagement with health services.

We therefore recommend a budget of \$3 million per campaign-month for COVID and flu, for three months in each of two years, because the campaign has to reach a wider and potentially less-engaged audience than for childhood vaccines.

To raise awareness of shingles and pneumococcal vaccines, we recommend a budget of \$2 million for two years' worth of a two-month campaigns, equivalent to twice the spending per month on adolescent vaccines, to target a broader audience that is not easily reached through school-based vaccination programs.

These funding measures are comparable to other campaigns, but more tightly targeted and with more easily measured outcomes. For example, the 2023 federal Budget allocates \$16m over four years for a national campaign to increase health assessment uptake, administration, coordination, and linkage, equivalent to \$4 million a year.

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