National
Immunisation
Strategy

For Australia 2025-30

# Acknowledgment of Country

In the spirit of reconciliation, the Department of Health, Disability and Ageing acknowledges the Traditional Custodians of the Country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Contents

[Minister’s Foreword 6](#_Toc189050783)

[Executive Summary 9](#_Toc189050785)

[Guiding Principles 11](#_Toc189050786)

[Equity 12](#_Toc189050787)

[Strengths-based 12](#_Toc189050788)

[Data-driven 13](#_Toc189050789)

[Future-focused 13](#_Toc189050790)

[Co-design 13](#_Toc189050791)

[Introduction 14](#_Toc189050792)

[Background 15](#_Toc189050793)

[Reflections on the COVID-19 pandemic 16](#_Toc189050794)

[Vaccine-preventable diseases and immunisation in Australia 17](#_Toc189050795)

[The global picture of vaccine-preventable diseases and immunisation 19](#_Toc189050796)

[Policy context 20](#_Toc189050797)

[Development of the NIS 2025–2030 21](#_Toc189050798)

[Public consultation 22](#_Toc189050799)

[Expert Advisory Group 22](#_Toc189050800)

[Evidence synthesis 22](#_Toc189050801)

[Vision and mission 22](#_Toc189050802)

[Priority Areas 23](#_Toc189050803)

1. [Improve access to immunisation, with a focus on equity for Aboriginal and Torres Strait Islander people and other priority populations 23](#_Toc189050804)
2. [Build trust, understanding and acceptance of immunisation in communities 25](#_Toc189050805)
3. [Use data more effectively to target immunisation strategies and monitor performance 27](#_Toc189050806)
4. [Strengthen the immunisation workforce 29](#_Toc189050807)
5. [Harness new technologies to respond to the evolving communicable disease and vaccine landscape 31](#_Toc189050808)
6. [Implement sustainable reform in vaccine program governance, program delivery and accountability 33](#_Toc189050809)

[Implementation Plan for NIS 2025–2030 36](#_Toc189050810)

[Acknowledgements 38](#_Toc189050811)

[References 40](#_Toc189050812)

# List of figures

[Figure 1: Priority populations](#_Toc189054100)

[Figure 2: Achievements in immunisation in Australia during 2019–2024](#_Toc189054101)

[Figure 3: Childhood immunisation coverage in Australia](#_Toc189054102)

[Figure 4: Agencies and committees relevant for national vaccine program governance in Australia](#_Toc189054103)

# Minister’s Foreword

****

Immunisation protects Australians from preventable diseases and creates healthy communities. Research led by the World Health Organization (WHO) showed that more than 150 million lives have been saved over the past 50 years through vaccination. In Australia, we can be proud that we achieved 95% coverage for key childhood vaccinations in 2020, yet we must be clear-eyed about the subsequent modest declines in coverage since the COVID-19 pandemic. The uptake of vaccinations in Australia remains high by global standards, but there is more that can be done to increase community trust, understanding and acceptance of immunisation to improve uptake.

Australia’s National Immunisation Strategy 2025–30 (Strategy) provides a roadmap to increase and sustain immunisation rates in Australia over the next 5 years. With a vision of a healthier Australia through immunisation, this Strategy sets a mission to reduce the impact of vaccine-preventable diseases through high uptake of safe, effective, and equitable immunisation across the lifespan of the Australian population. In pursuit of this mission, this Strategy takes a whole-of-system approach to immunisation.

This is evident through:

* a stronger focus on equity and access for priority populations, including Aboriginal and Torres Strait Islander people
* strengthening emergency preparedness for vaccine rollouts
* harnessing vaccine technologies
* a broader focus on immunisation programs across the health system (including programs funded by state and territory governments)
* enhancing community engagement and acceptance of immunisation, in addition to raising community awareness
* a greater focus on strengthening the immunisation workforce
* encouraging better use of data to effectively target immunisation strategies and monitor performance.

The new Strategy was developed collaboratively with states and territories, guided by an Expert Advisory Group, and informed by extensive consultation with stakeholders and the Australian public.

We all have a part to play to make sure Australians continue to benefit from immunisations and as a country, we can look forward to a healthier future.

**The Hon Mark Butler MP**

Minister for Health and Ageing

Minister for Disability and the National Disability Insurance Scheme.

##  Strategy on a Page

8

|  |  |
| --- | --- |
| **Vision** | **A healthier Australia through immunisation**  |
| **Mission** | **To reduce the impact of vaccine-preventable diseases through high uptake of safe, effective and equitable immunisation across the lifespan** |

|  |
| --- |
| **Priority Areas and Strategic Goals** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1. Improve access to immunisation, with a focus on equity for Aboriginal and Torres Strait Islander people and other priority populations** | **2. Build trust, understanding and acceptance of immunisation in communities** | **3. Use data more effectively to target immunisation strategies and monitor performance** | **4. Strengthen the immunisation workforce** | **5. Harness new technologies to respond to the evolving communicable disease and vaccine landscape** | **6. Implement sustainable reform in vaccine program governance, program delivery and accountability** |
| Partner with communities to understand barriers to access and co-design strategies to improve vaccine access. | Engage with communities to build trust and understanding in the value of immunisation, and to combat misinformation. | Improve the completeness, timeliness and transparency of Australian Immunisation Register (AIR) data, ensuring optimal quality and utility for all stakeholders. | Embed immunisation in preventive healthcare across the lifespan. | Strengthen government immunisation program preparedness for new vaccine rollouts, including by leveraging new technologies. | Strengthen collaborative ways of working between the Australian Government and state and territory governments to deliver vaccines under the NIP and emergency programs. |
| Use innovative service delivery models to increase equitable access to immunisation across the lifespan. | Strengthen community partnerships for design, delivery and evaluation of tailored immunisation strategies. | Work towards creation of a whole of life, interactive, real- time dashboard of coverage data for all Australian Government-funded vaccines. | Enable immunisation providers to safely work to their full scope of practice and harmonise relevant workforce policies, training, and accreditation across all states and territories. | Systematise horizon scanning for emerging and newly vaccine-preventable diseases and the vaccine pipeline. | Support policies that improve confidence in vaccine safety and accountability, such as exploring the feasibility of a no-fault vaccine compensation scheme. |
| Ensure vaccine access and uptake to reach agreed national targets and maintain elimination status of measles, rubella and polio. | Track community sentiment, including for priority groups. | Expand data linkage capacity, analysis and reporting for better monitoring of vaccine program coverage, effectiveness, safety and impact. | Support Aboriginal and Torres Strait Islander health workforce development to contribute to immunisation. | Champion vaccine research and development, and support pathways to commercialisation for Australian researchers and biotechnology industries. | Standardise monitoring and evaluation of national, and state and territory vaccine programs to improve outcomes. |
| Consider additional evidence- informed targets. | Strengthen knowledge, confidence, and skills of immunisation providers to support informed vaccination choices. | Integrate and report timely surveillance data on diseases, vaccine coverage, safety, and social and behavioural insights. | Strengthen preparedness for immunisation workforce surge capacity in future health emergencies. | Maintain onshore vaccine manufacturing capacity for increased resilience against pandemics and supply chain threats. | Strengthen Australia’s contribution to supporting regional and global immunisation efforts. |
|  |  | Strengthen vaccine safety surveillance, including for new vaccines, to improve detection of rare or delayed onset adverse events. | Build expertise across the immunisation and vaccine- preventable disease workforce in all areas, including data analytics, disease surveillance and communications. |  |  |

# Executive Summary

Immunisation saves lives and is one of the most important public health achievements of all time. Australia has one of the most comprehensive immunisation programs in the world.1 People in Australia receive most of their vaccines through Australia’s National Immunisation Program (NIP), which provides publicly funded vaccines that protect the health of individuals across the lifespan. The NIP includes vaccines for people at greatest risk of harm from vaccine-preventable diseases (VPDs), including infants and children, Aboriginal and Torres Strait Islander people, older Australians, people with medical risk conditions and pregnant women. Australia’s success in maintaining polio, measles and rubella elimination demonstrates the effectiveness of the NIP and the importance of strong disease surveillance and outbreak response.

Building on the success of the previous National Immunisation Strategy 2019–2024, this Strategy aims to improve vaccination coverage rates. We have seen modest but significant declines in coverage over recent years. High vaccination coverage not only helps protect more people at an individual level but also reduces the transmission of many VPDs through herd immunity. Reducing the impact of VPDs on our community underpins our shared health security.

This Strategy is being launched soon after the COVID-19 pandemic, one of the greatest global public health challenges of recent times. The National COVID-19 Vaccine Program was highly successful and saved lives. While the scale and time pressures involved were challenging, the Program also provided valuable learnings on vaccine procurement and delivery. Importantly, it highlighted pre-existing disparities in vaccine knowledge, access and uptake across Australian communities.

Addressing inequities to achieve disease prevention for all is a critical component of this National Immunisation Strategy 2025–2030. This requires improving our understanding of the barriers to vaccination, and the motivation to vaccinate within diverse communities

and priority groups. This Strategy focuses on co-design, including immunisation strategies that build community vaccine acceptance and improving trust in health and prevention systems.

The COVID-19 pandemic also delivered innovation as more efficient vaccine technologies arose at an historically rapid speed. Under the National Immunisation Strategy 2025–2030, Australia will be positioned to benefit from ongoing developments in vaccine technology if we are prepared and future-focused. Key to the success of this Strategy is strengthening our immunisation workforce and improving evidence-informed decision-making through optimal use of immunisation data.

Delivering the National Immunisation Strategy 2025–2030 is a collaborative effort spanning all levels of government – federal, state and territory, and local. It will be supported by healthcare providers, administrators, researchers and, most importantly, communities.

The National Immunisation Strategy 2025–2030 aligns with the aims of the World Health Organization’s Immunization Agenda 2030.2 Alongside other national efforts, it will help support improved health and immunisation outcomes regionally for greater global health security and pandemic preparedness.

The National Immunisation Strategy 2025–2030 includes six Priority Areas:

1. Improve access to immunisation, with a focus on equity for Aboriginal and Torres Strait Islander people and other priority populations.
2. Build trust, understanding and acceptance of immunisation in communities.
3. Use data more effectively to target immunisation strategies and monitor performance.
4. Strengthen the immunisation workforce.
5. Harness new technologies to respond to the evolving communicable disease and vaccine landscape.
6. Implement sustainable reform in vaccine program governance, program delivery and accountability.

Each Priority Area lays out a set of synergistic strategic goals. These goals will ﬂow into an Implementation Plan to support action, and a monitoring and evaluation plan to measure the outcomes and impact of the Strategy.

This National Immunisation Strategy 2025–2030 is a framework for achieving the vision of a healthier Australia through immunisation.

# Guiding Principles

The following guiding principles underpin the delivery of the National Immunisation Strategy 2025–30 (NIS 2025–30).

## Equity

The principle of equity in immunisation access and outcomes for all people in Australia is fundamental to the development and implementation of the NIS 2025–30. Acknowledging inequities ensures that actions are tailored to the needs of all – and in particular priority populations, while recognising the intersectionality of these groups (Figure 1). ‘Priority populations’ refers both to people with conditions putting them at greater risk of catching, or suffering severe outcomes from vaccine-preventable diseases, and people belonging to a group experiencing systemic inequities.

Figure 1: Priority populations include, but are not limited to:

Aboriginal and Torres Strait Islander people

Older people

Infants and children

Pregnant women

People with clinical risk factors for severe disease or infection

People from culturally and linguistically diverse (CALD) backgrounds

LGBTQIA+ people

People with disability

People with mental illness

People living in aged care and disability facilities

Residents of rural, regional and remote areas

People experiencing harms from substance abuse

People experiencing homelessness

People in correctional facilities

People experiencing socio-economic disadvantage

Refugees, asylum seekers and newly arrived immigrants

People with reduced ability to access vaccination services

## Strengths-based

A strengths-based approach means supporting existing strengths and capacities in populations, enhancing opportunities in existing systems, and capitalising on Australia’s diverse healthcare workforce and expertise.

## Data-driven

The NIS 2025–30 is evidence-informed and calls for improved access to and better use of data to gather insights, improve vaccination programs and drive progress.

## Future-focused

A focus on improving health, today and for future generations, is central to the NIS 2025–30.

## Co-design

The NIS 2025–30 is people-centred and was designed in consultation with key sectoral stakeholders, including state, territory and local governments responsible for immunisation programs and an advisory committee consisting of Australian experts and the Aboriginal community-controlled health sector.

A public consultation process included input from stakeholders and individuals representing community perspectives on public and preventive health.

Implementation will be informed by engagement with community stakeholders, including Aboriginal and Torres Strait Islander organisations.

# Introduction

## Background

Australia’s National Immunisation Program (NIP) is widely acknowledged as one of the world’s most comprehensive national immunisation programs.1 It provides publicly funded vaccines in line with a recommended schedule and is an essential part of how Australia protects public health.

This is Australia’s third National Immunisation Strategy. Two previous five-year National Immunisation Strategies (2013–2018 and 2019–2024) guided efforts to improve health through Australia’s expanding immunisation programs (Figure 2).

Figure 2: Achievements in immunisation in Australia during 2019–2024

Australia responded to the COVID-19 pandemic, and other emerging threats such as mpox and Japanese encephalitis through establishing successful jurisdictional vaccination programs.

From 2020, the NIP expanded inﬂuenza vaccine eligibility to include all children aged 6 months to under 5 years of age.

The inclusion of meningococcal B vaccine for Aboriginal and Torres Strait Islander infants to the NIP in 2020 specifically addressed the increased disease risk in this cohort.

From 2021, additional pneumococcal vaccine doses were made available for Aboriginal and Torres Strait Islander adults and individuals with underlying risk conditions, and changes were made to the older adult vaccine schedule, reﬂecting the commitment to delivering tailored preventative health strategies for priority populations.

Australia moved from a 2-dose to a 1-dose HPV vaccine schedule in 2023 and expanded the eligible catch-up cohort up to age 25 years, demonstrating how the NIP evolves based on the latest evidence.

In 2021, it became mandatory for vaccination providers to report COVID-19, Japanese encephalitis (JEV) and all NIP vaccines across the lifespan to the Australian Immunisation Register (AIR), enhancing data quality for improved surveillance and response capabilities.

The launch of the National Childhood Immunisation Campaign in 2023 aimed to bolster public confidence in routine immunisations, promoting a proactive approach to preventive health.

In 2023, the shingles vaccination program was enhanced and expanded to improve protection against shingles for more people, including those with immunocompromise.

Australia’s success in maintaining polio, measles and rubella elimination has showcased the effectiveness of the NIP and the importance of strong disease surveillance and outbreak response.

A field to record antenatal immunisation was added to the AIR, and work to monitor vaccine uptake in pregnancy via linked data has progressed.

While most Australians receive the majority of their vaccines through the NIP, there are also important state and territory and workplace-based vaccination programs that cater for specific settings. Although the NIS 2025–2030 focuses on the context of the NIP, many of its strategic goals are relevant for these other services, which also contribute to achievement of its vision and mission.

The NIS 2025–30 is an opportunity to identify shared challenges and agree upon areas to focus efforts, building on achievements from previous national strategies. It is a roadmap for everyone – individuals, communities, immunisation service providers, researchers and decision-makers – to collaborate on a shared vision to protect all people in Australia from vaccine-preventable diseases.

The development of this Strategy comes at a challenging time. Modest but continuing declines in childhood vaccination coverage over recent years are concerning. Lower uptake is also an issue among people who stand to benefit most from vaccines, including:

* Aboriginal and Torres Strait Islander people,
* culturally and linguistically diverse (CALD) communities,
* pregnant women,
* older people
* people with disability.

The context for these challenges includes economic and structural barriers to vaccine access for some groups and the inﬂuence of vaccine misinformation. This serious problem was intensified by the COVID-19 pandemic. Improving our understanding of barriers to vaccination and ensuring equitable access to vaccines for priority populations are core undertakings in the NIS 2025–2030.

## Reflections on the COVID-19 pandemic

The National COVID-19 Vaccine Program (NCVP) was one of the most significant achievements in Australia’s public health history. Australia vaccinated over 90% of its population with 2 doses of a COVID-19 vaccine by the end of 2021.3 This was a world- leading effort that was strongly supported by the public. The Australian Government partnered with states and territories to roll out a targeted campaign. Jurisdictions focused on access through a mix of large-scale vaccination centres and over 10,000 primary care sites. Widespread accreditation of pharmacists as COVID-19 vaccination providers has since contributed to expansion in pharmacists administering NIP vaccines.

The urgency of the pandemic inspired new strategies to vaccinate the Australian population rapidly. An unprecedented level of engagement with priority population groups supported co-design of the NCVP for effective reach with diverse population groups. The NCVP included data linkage and analysis work to gain insights into vaccination uptake.

Special advisory committees were convened – and included people with lived experience – to identify issues and tailor responses. Strong community support and engagement through use of such measures should continue to be built upon for future vaccination programs.

Despite the successes of the NCVP, the pandemic highlighted some important learnings. Regional and socio-economic differences in vaccine access gave rise to discrepancies in coverage. This is an equity concern that should be considered during service planning.

There have also been valuable insights into procurement and logistics that could inform future pandemic preparedness.4 Integrating mechanisms for gathering and synthesising data on disease surveillance, coverage, and social and behavioural insights would optimise decision-making in future VPD responses.4

The COVID-19 pandemic accelerated innovation in vaccine design, development and deployment. Through this Strategy, Australia will be positioned to benefit from exciting new developments in vaccine technologies. It is critical to ensure we are future-focused, ﬂexible and prepared.

Capitalising on insights from both the successes and challenges of the COVID-19 pandemic is critical. Supporting all aspects of preparedness for the ever-present threat from epidemics, pandemics and emerging VPDs underpins all priority areas of the NIS 2025–30.

## Vaccine-preventable diseases and immunisation in Australia

The Australian Immunisation Handbook outlines vaccines available in Australia that protect against 27 different diseases.5 Many of these diseases are well-controlled by immunisation and communicable disease response programs and are now rarely seen.6 Australia was verified as polio- free in 2000 by the WHO, has maintained elimination of endemic measles transmission since 2014 and was declared free of endemic rubella transmission in 2018.7,8,9 There are low rates of VPDs such as tetanus, diphtheria, chickenpox, meningitis and other serious diseases such as Haemophilus inﬂuenza type B, Streptococcus pneumoniae and Neisseria meningitidis (meningococcal disease).10 However, regular epidemics of respiratory illnesses occur, including inﬂuenza, COVID-19 and respiratory syncytial virus (RSV), a newly vaccine-preventable disease. Ongoing control of all these infectious diseases is underpinned by maintaining high vaccine coverage, particularly in those at greatest risk for severe outcomes.

After achieving significant milestones in childhood immunisation in Australia – including reaching the aspirational target of 95% coverage for 1- and 5-year-old children in 2020 – a concerning trend of decreasing coverage is being observed. Australia is not alone in this respect. The COVID-19 pandemic affected many aspects of healthcare and had significant implications on vaccine delivery and uptake.

In Australia, downward trends in childhood immunisation coverage have persisted since March 2021. As of June 2024, the national fully vaccinated coverage rates were 93% for all 1-year-olds, 91% for all 2-year-olds and 94% for all 5-year-olds (Figure 3).11 For Aboriginal and Torres Strait Islander children, rates were 90% for 1-year-olds, 89% for 2-year-olds and 95% for 5-year-olds.12 Coverage of 2 doses of measles-mumps-rubella (MMR) vaccine – an important marker for immunisation system performance – was not sufficient in 2024, falling to 93% for all 2-year-olds and 91% for Aboriginal and Torres Strait Islander 2-year-olds.11,12 Vaccine coverage of at least 95% for children at 1, 2 and 5 years of age is essential to prevent transmission of the most infectious diseases, such as measles.11,12

Around a third of local areas (Statistical Areas Level 3)[[1]](#footnote-1) have vaccination rates of less than 90% at the 1, 2 and/or 5 year mark.13

After declining during 2020–2022, human papillomavirus (HPV) vaccination rates in adolescents improved somewhat in 2024, in part due to the NIP changing from a 2-dose to a 1-dose schedule. However, coverage in Aboriginal and Torres Strait Islander adolescents has lagged: in 2024, it was 85% for all females and 82% for Aboriginal and Torres Strait Islander females.14 In males, the gap was wider, with coverage of 82% for all males compared with 75% for Aboriginal and Torres Strait Islander males.14 To achieve targets set by the National Strategy for the Elimination of Cervical Cancer in Australia, Australia needs to extend HPV vaccination coverage to at least 90% in all adolescents aged 15 years by 2030.15

Figure 3: Childhood immunisation coverage in Australia[[2]](#footnote-2)



The NIP takes a life-course approach to vaccination. More vaccines have been funded over time for adolescents and adults, Aboriginal and Torres Strait Islander adults, pregnant women and people of all ages with medical risk conditions. Over recent years, NIP expansion has included a national adolescent meningococcal ACWY vaccination program, an expanded pneumococcal vaccine schedule for adults, and changes to the prevention of shingles (herpes zoster) with a new recombinant non- live vaccine and expansion of eligible cohorts.

Continued efforts are needed to ensure equitable access to all recommended vaccines for people with disability and older people living in aged care homes. Data from June 2024 indicated that only 40% of residents in an aged care home had received a COVID-19 vaccine dose in the previous 6 months.16 Inﬂuenza vaccination coverage rates in these settings vary but are suboptimal17 and focused efforts are needed.

Australia has an excellent track record responding to VPDs through immunisation. Sustaining this success is critical to our shared protection from the impacts of VPDs.

## The global picture of vaccine-preventable diseases and immunisation

Globally, the incidence of many infectious diseases has increased since 2022. While this is partly due to relaxation of pandemic-related restrictions on population mixing, declining childhood immunisation rates during the pandemic were also impacted by a complex mix of factors including wide-scale vaccine program disruptions and reduced vaccine acceptance.18 As children who miss their routine childhood vaccines remain unprotected past their milestone ages, countries are working to prioritise catch-up for these individuals, as well as striving to improve coverage at all immunisation schedule points.19

Globally, the incidence of many infectious diseases has increased since 2022.

Vaccine coverage in lower- and middle-income countries showed some encouraging signs of recovery by the end of 2022.20 Recovery is not consistent worldwide, with some countries yet to return to pre-pandemic coverage levels.20 Although coverage rates for measles vaccines are improving, population- level protection of at least 95% is needed to prevent outbreaks – a level not achieved in most countries.20 As a consequence, the size and number of measles outbreaks across the globe continues to rise.20 While coverage in the WHO Western Pacific Region (of which Australia is a part) for 2 doses of measles vaccine is around 90%, several countries have coverage rates of less than 50%.21 Regional coverage of a single dose of HPV vaccine in girls by age 15 years is only 32% – a long way from the level needed to achieve the WHO’s 2030 target of 90%.22,23 Other serious VPDs including diphtheria and pertussis are also on the rise in a number of countries in our region.24,25

Political focus and will to strengthen pandemic preparedness is lagging worldwide, with a decreasing sense of urgency after the height of the COVID-19 pandemic.26 Weakened health systems, economic challenges, healthcare workforce gaps, distrust in institutions, the rise of misinformation and inequitable vaccine access remain critical risks. Australia must be better prepared for the next pandemic and for periodic outbreaks and incursions of vaccine-preventable diseases, including through support to regional and global health system preparedness.

## Policy context

The NIS 2025–30’s focus on improving immunisation coverage for all children, especially Aboriginal and Torres Strait Islander children and other priority populations, aligns with the 95% coverage targets set by the National Preventive Health Strategy 2021–2030.27 It also reinforces the goal of achieving the HPV vaccine target of 90% for 15-year-olds, as agreed through the National Strategy for the Elimination of Cervical Cancer.15

Importantly, the approach is consistent with the National Aboriginal and Torres Strait Islander Health Plan 2021–203128 and the National Agreement on Closing the Gap to improve the health of Aboriginal and Torres Strait Islander people through community- led partnerships with government.29 In addition to strengthening formal partnerships and shared decision making, Closing the Gap priority reforms are intended to build the Aboriginal and Torres Strait Islander community-controlled sector, transform government organisations so they work better for Aboriginal and Torres Strait Islander people, and improve and share access to data and information to enable communities to make informed decisions.

Building on Australia’s Primary Health Care 10 Year Plan 2022–2032, the Strengthening Medicare Taskforce Report recommendations are relevant to increasing access to vaccination as part of primary care.30 The recommendations encourage new funding models for sustainable rural and remote practice, including investing in Aboriginal Community Controlled Health Organisations (ACCHOs) to commission community-level primary care services.

Finally, the NIS 2025–30 comes at an exciting time for Australia, alongside the establishment of an Australian Centre for Disease Control (CDC).31 This NIS 2025–30 will support the intended remit of a future Australian CDC in strengthening disease control and prevention in Australia.

# Development of the NIS 2025–2030

The NIS 2025–30 was developed through an iterative process of stakeholder and expert engagement, including a public consultation process, the establishment of an Expert Advisory Group and consultation with the Australian Health Protection Committee.

## Public consultation

A 4 week public consultation was run on the Australian Government Citizen Space platform, which included a survey and free text feedback. The public consultation received over 2,000 submissions from a range of stakeholders, including private individuals, not-for- profit organisations, Aboriginal and Torres Strait Islander organisations, government agencies and academia. The data from the public consultation were analysed and synthesised into a report, with the results informing development of the Priority Areas and Strategic Goals of the NIS 2025–30.

|  |  |
| --- | --- |
| Over2,000 | submissions were received through the public consultation. |

## Expert Advisory Group

An Expert Advisory Group was convened at the invitation of Australia’s Chief Medical Officer. The Group comprised experts from across immunisation spheres, including vaccinology, vaccine programs and delivery, jurisdictional immunisation coordination, epidemiology, public health, social and communication science, and Aboriginal and Torres Strait Islander health. The Group provided advice on key contextual factors, including challenges and opportunities in the current immunisation landscape, and guided development of all areas of the NIS, including the need for evidence-based targets.

## Evidence synthesis

Additional evidence syntheses undertaken by the National Centre for Immunisation Research and Surveillance (NCIRS) supported the development of the NIS, and included review of international, national, and state and territory immunisation strategic plans and the broader immunisation literature, as well as examination of evidence on targets and indicators.

# Vision and mission

**Vision:** A healthier Australia through immunisation

**Mission:** To reduce the impact of vaccine-preventable diseases through high uptake of safe, effective and equitable immunisation across the lifespan

## Priority Areas

The NIS 2025–2030 sets out 6 interdependent Priority Areas. The achievement of Strategic Goals in any given Priority Area will be synergistic in achieving impacts in other Priority Areas.

Achieving and maintaining optimal vaccine coverage across the lifespan and for all people in Australia underpins the success of the vision and mission of the NIS 2025–2030.

### Improve access to immunisation, with a focus on equity for Aboriginal and Torres Strait Islander people and other priority populations

#### Strategic goals

##### Partner with communities to understand barriers to access and co-design strategies to improve vaccine access.

Partnering with communities and priority groups to understand specific access barriers is critical, so that targeted strategies for improving vaccine uptake can be co-designed and implemented. Groups prioritised by government-funded immunisation programs are usually people most at risk of severe outcomes from vaccine-preventable diseases. Despite this targeted approach, vaccination rates among priority groups require improvement, particularly among adults with clinical risk factors.

Partnerships and shared decision-making are central to these efforts. For example, in 2021, Hunter New England Area Health Service activated an Aboriginal Vaccination Steering Committee to implement locally informed and determined strategies to boost COVID-19 vaccine uptake in Aboriginal residents. This approach demonstrated a model for embedding culturally and community- responsive insights to improve access to COVID-19 vaccines. It served as a powerful example of the need to harness First Nations’ leadership and self-governance to increase access to vaccinations through community-based and culturally appropriate programs.32

The urgency of the COVID-19 pandemic stimulated rapid research on coverage gaps among key priority groups. It highlighted clear needs for more equitable access to vaccination, particularly for individuals with disability, Aboriginal and Torres Strait Islander people, rural and remote Australians, disadvantaged communities and CALD communities.33,34,35,36,37 Low COVID-19 vaccine coverage rates among older people living in aged care homes was a particular area of concern during the pandemic. Access to recommended vaccines in this setting must continue to improve under the period of NIS 2025–2030.38 Research on the barriers to access for many other priority groups requires further attention.

##### Use innovative service delivery models to increase equitable access to immunisation across the lifespan.

Using innovative, ﬂexible vaccine delivery and funding models can promote more equitable access to immunisation. For example, the Royal Flying Doctor Service delivered COVID-19 vaccines to rural and remote regions of Australia during the pandemic,39 and workplace and drive-through vaccination facilities and pop-up clinics were established. Taking vaccines to communities overcame many access barriers. ACCHOs responded to the unique needs and contexts of their communities using mixed models of COVID-19 vaccine delivery in diverse settings and in-depth, community led education and awareness activities.

Community pharmacists were also integral to the success of the COVID-19 vaccination program, especially for people who needed to access vaccination outside business hours. Building on this model, community pharmacists who participate in the National Immunisation Program Vaccines in Pharmacy are now funded to administer NIP vaccines at no cost to individuals. States and territories have expanded regulations permitting more vaccines to be delivered from pharmacies. This initiative aims to eliminate costs for eligible consumers, a measure that helps under-vaccinated populations.

Insights from these ﬂexible delivery and funding models should be integrated into relevant strategies to improve access to NIP and other vaccines among priority groups. Embedding opportunities for vaccination into all aspects of primary care, as recommended by the Strengthening Medicare Taskforce Report, can contribute to improved access and vaccine coverage.40 An important element to maximise uptake is ensuring targeted communications on which vaccines are available, when they should be received and where to get them.

##### Ensure vaccine access and uptake to reach agreed national targets and maintain elimination status of measles, rubella and polio.

Population-level targets of 95% coverage at the childhood immunisation milestone ages of 1, 2 and 5 years have been in place for some years in Australia, and for HPV vaccine a 90% coverage target has been adopted. These targets are in place for Aboriginal and Torres Strait Islander people and the whole population. These targets align with those set out in the National Preventive Health Strategy 2021–2030 and the National Cervical Cancer Elimination Strategy.15,27 Reaching agreed targets, using key demographic data, would indicate success across all Priority Areas of this Strategy.

Ensuring high vaccine coverage and immunity to infection across Australia’s dynamic population is critical to maintaining WHO elimination targets for measles, rubella and polio. However, this achievement does not go unchallenged. The global resurgence of VPDs, including measles, rubella and diphtheria, as well as ongoing outbreaks of vaccine-derived poliovirus and other diseases, is another reason that achieving equitable high vaccine coverage is necessary.41,42,43

##### Consider additional evidence informed targets.

There is an opportunity for NIS 2025–2030 to improve upon its predecessor by extending the range of vaccination coverage targets beyond those of the NIP in 2024.44 Incorporating specific targets for adult vaccination could drive strategies to improve access, address acceptance barriers and increase uptake in this age group. Working towards evidence- based targets for vaccines, such as inﬂuenza, shingles and meningococcal vaccines, would help to galvanise efforts to protect more people in Australia from VPDs. Targets would also hold governments and their partners accountable to taking a range of steps to improve vaccine coverage Australia-wide. Targets beyond existing childhood vaccines and HPV will be considered through development of the Implementation Plan for the NIS 2025–2030.

### Build trust, understanding and acceptance of immunisation in communities

#### Strategic goals

##### Engage with communities to build trust and understanding in the value of immunisation, and to combat misinformation.

Trust is at the core of vaccine acceptance. As with vaccination access, barriers to vaccine acceptance are specific to communities and individuals. Gaining a deeper understanding of vaccine acceptance requires a better understanding of individual knowledge and beliefs around vaccination. It also requires identification of broader social and cultural determinants, as well as institutional and structural factors.45

During the COVID-19 pandemic, trust in public health providers and governments was a challenge in many settings. Often, this was due to delayed communications or a lack of accessible or multi-lingual resources. Increased media attention on the safety of COVID-19 vaccines and concern over the speed of new vaccine development affected trust and confidence in both COVID-19 and other vaccines. This distrust has contributed to confusion and the spread of misinformation.46 To rebuild trust, the WHO recommends ensuring population resilience against vaccine rumours and ‘scares’ and being well- prepared to respond to events that may decrease confidence in vaccines.47 It is essential for all partners in this NIS 2025–2030 – including communities, healthcare providers, government agencies and academia – to contribute to restoring trust in health systems and vaccines.

##### Strengthen community partnerships for design, delivery and evaluation of tailored immunisation strategies.

Collaboration with communities and priority groups strengthens vaccination programs and improves outcomes.45,48,49,50 Formal partnerships and shared decision-making with Aboriginal and Torres Strait Islander peoples is included as Priority Reform One in the National Agreement on Closing the Gap.29 Specifically, the ACCHO sector is central to community engagement and acceptance of immunisation. The importance of partnering with communities was also demonstrated, from March 2020, through the impact of the Aboriginal and Torres Strait Islander Advisory Group on COVID-19, which provided advice to the then Australian Government Department of Health.51

Improving vaccine acceptance requires effective, transparent communication. Community- informed and led communication strategies involving trusted ‘champions’ are often more effective than large-scale media campaigns. Campaigns that are information-heavy, or which focus on debunking vaccination myths, are likewise not always effective.52,53,54 Collaboration and consultation with other peak bodies and advocacy groups, such as those representing the disability sector, peak professional bodies, consumers and others, can also strengthen strategy and policy to build trust and deliver effective immunisation programs.

##### Track community sentiment, including for priority groups.

Improved monitoring and formal evaluation of community vaccination initiatives will help ensure that engagement with priority groups is effective. Demonstrating the importance of this, in 2021, the Australian National Audit Office audit of vaccine coverage recommended improved measurement of the reach of national vaccine awareness campaigns, and the then Australian Government Department of Health accepted the recommendation to report against performance targets for future campaigns.55

Individual vaccine hesitancy is important but is not the only factor impacting vaccine acceptance and successful vaccination programs.56 A comprehensive understanding of the determinants of vaccine acceptance through programs such as Australia’s National Vaccination Insights project is critical to informing the development of effective strategies.

Social and behavioural data from key studies such as the National Vaccination Insights project can inform our knowledge of both motivation for, and barriers to, vaccination.57 Using the WHO’s Behavioural and Social Drivers of Vaccination Framework and Tailoring Immunization Programmes approaches, which help to customise program design and delivery to community needs, can help to better target vaccination strategies.45,58

Other tools, such as the Vaccine Barriers Assessment Tool – which has been developed to measure both access and acceptance barriers in Australia – may be used to guide tailored strategies.59

##### Strengthen knowledge, confidence, and skills of immunisation providers to support informed vaccination choices.

A positive recommendation by a trusted health professional is one of the key factors in individual vaccination decisions.60 Supporting immunisation providers to confidently discuss individuals’ concerns and recommend vaccination increases the motivation to vaccinate.61 Conversely, negative interactions with healthcare workers or experiences of discrimination diminish trust in health systems.62

Immunisation service providers need more support to counteract misinformation about vaccines. Better support is needed to address public, as well as healthcare workers’ own, questions about immunisation. For example, in Australia, midwives provide a substantial proportion of antenatal care to mothers in public hospitals. However, maternal vaccination rates remain around 80% for pertussis and 60% for inﬂuenza.63,64 A 2019 study of midwives at 2 tertiary public hospitals in Australia revealed that most midwives reported receiving minimal or no training on communication that informed vaccination program delivery by them in antenatal care.65 Other studies found that some surveyed healthcare providers held concerns about additives in vaccines, immune system overload and the number of vaccines given to children at one time.66,67

Healthcare providers want more support to improve their confidence in vaccine-related patient encounters.61 Some resources already exist, such as the Sharing Knowledge About Immunisation (SKAI) resource.68 New strategies could include nationally consistent Vaccine Information Statements shared with patients by providers. Statements could be tailored to specific vaccines and include basic information on the VPDs, schedule information, and risks and management of any side effects.69 Improving vaccine training will help healthcare providers deliver consistent and accurate advice to their patients. Community-led approaches to support vaccine champions and advocates in their vaccine knowledge and communication skills can also improve community acceptance of vaccines.

### Use data more effectively to target immunisation strategies and monitor performance

#### Strategic Goals

##### Improve the completeness, timeliness and transparency of Australian Immunisation Register (AIR) data, ensuring optimal quality and utility for all stakeholders.

Australia uses vaccination coverage and disease surveillance data to monitor the NIP and the National COVID-19 Vaccine Program (NCVP). Increasingly, these data can be used in more powerful ways to build a comprehensive picture of the reach, impact and gaps in vaccination programs. Yet improvements are needed in the quality, timeliness and transparency of data from the AIR and other sources.

Quality coverage data are central to improving equity, engaging communities more effectively and informing program implementation. Coverage data help us to better understand where gaps in vaccine coverage exist and how those gaps correspond to populations with a high vaccine-preventable disease burden. Despite reporting to the AIR across the lifespan becoming mandatory for NIP vaccines in 2021, data quality and under-reporting for some cohorts and vaccine types remain a challenge.70,71,72 Comprehensively evaluating data quality and completeness would help to define the issues and identify solutions. Training more healthcare providers to access and use these data could promote ﬂow-on benefits for vaccination timeliness and coverage. These data, combined with relevant tools and skills, would also support continuous quality improvement by primary healthcare service providers to increase local coverage rates.

##### Work towards creation of a whole of life, interactive, real-time dashboard of coverage data for all Australian Government funded vaccines.

To increase transparency and improve trust, de-identified AIR data could be shared with the public in a real-time, whole-of-life coverage dashboard. The US Centers for Disease Control and Prevention has ‘VaxView’,73 which publishes up-to-date coverage data in graphical and map form, by age group, scheduled vaccines, dose, sociodemographic detail, race and ethnicity, and pregnancy status. Australia could aspire to make its coverage data similarly available, alongside other core program information on vaccine-preventable diseases and social and behavioural insights. One local model is the near real-time inﬂuenza vaccine data published weekly in an interactive format by NCIRS, which shows coverage by age, location and Aboriginal and Torres Strait Islander status.74

##### Expand data linkage capacity, analysis and reporting for better monitoring of vaccine program coverage, effectiveness, safety and impact.

Routine linkage and timely reporting of immunisation data with social, health and disease surveillance and vaccine safety datasets is needed for a more comprehensive understanding of vaccination program effectiveness, safety and impact. This is especially important to tailor strategies for priority populations.

Linked data were used at national and state and territory level during the COVID-19 pandemic to support policy decisions and public communications and to demonstrate the effectiveness of COVID- 19 booster vaccination.75,76 Analysis of linked data has also been used to demonstrate comparable effectiveness of 1 dose versus 2 or 3 doses of HPV vaccine.77 However, the power of evidence generation using data linkage has not yet been used routinely to support program monitoring and evaluation to inform program delivery. Data linkage in Australia is complex because we are a federation of states and territories with differing databases and governance frameworks,78,79 but recent advances in national large-scale repositories have made this more feasible.80,81 This is the right time to strategically enhance and expand our data linkage and analysis capacity.

##### Integrate and report timely surveillance data on diseases, vaccine coverage, safety, and social and behavioural insights.

To prepare for the next pandemic, Australia needs far-reaching capacity to link, analyse and report on integrated disease surveillance, vaccination, hospital, microbiology and genomics data in near real- time. Recent outbreaks of Japanese encephalitis and mpox highlight the need to further integrate a One Health approach and to link animal health, environmental and ecosystem health, climate and human health surveillance data.4 Linking these surveillance data would contribute to a better picture of the impact of antimicrobial resistance (AMR) in Australia. Vaccines are recognised as a critical factor in combatting AMR through infection prevention and reduced need for antibiotics (and thus reduced opportunities for developing resistance).82,83

Future efforts to enhance and integrate national disease and vaccine surveillance systems, including through establishment of an Australian Centre for Disease Control, are critically important. Enhancing data linkage systems will foster capacity for monitoring and evaluation of vaccine programs to further drive improvements. Building enduring, accessible and up-to-date links between datasets and improving capacity for analysis of disease trends and program impacts is essential to support comprehensive preparedness, response and monitoring of vaccine-preventable diseases in Australia.

##### Strengthen vaccine safety surveillance, including for new vaccines, to improve detection of rare or delayed onset adverse events.

Vaccine safety data are critical for maintaining trust in immunisation and ensuring vaccine uptake. Australia has a world-class vaccine safety surveillance system, with well-established passive and active surveillance mechanisms. The COVID-19 pandemic highlighted areas for improvement. Australia’s vaccine safety surveillance capabilities could be improved by developing additional complementary approaches to investigating safety signals in near real time.

Australia’s strengths in vaccine safety surveillance could be further enhanced by defining post- pandemic baseline rates of adverse events of special interest (AESI). This would support the capacity of the Therapeutic Goods Administration (TGA) and its partners to conduct in-depth safety investigations. Establishing routine methods for vaccine-event association studies using linked data, as the US, UK and Nordic countries have done,84,85,86 would improve the quality and understanding of vaccine safety (as well as coverage, effectiveness and overall impact on VPDs). This would promote better communications about vaccine safety.

Global collaborations for the sharing of vaccine safety data are important, particularly for monitoring and investigating rare adverse events.87,88 Australia will continue to foster these collaborations. The pandemic also reinforced the importance of high-quality, tailored vaccine safety communication strategies to share benefit-risk information with the public. Generating high-quality safety data is not enough; it will only bring change if it is communicated effectively.

### Strengthen the immunisation workforce

#### Strategic goals

##### Embed immunisation in preventive healthcare across the lifespan.

Every healthcare provider interaction with an individual or family is an opportunity to discuss vaccination. Taking these opportunities requires systematically integrating vaccination into routine primary care, antenatal care and settings for other priority populations such as older people and those experiencing access barriers. Workforce pressures mean that making effective use of our existing health workforce is critical. Australia should develop strategies to better integrate immunisation across a range of relevant settings, while simultaneously addressing workforce gaps more holistically.

##### Enable immunisation providers to safely work to their full scope of practice and harmonise relevant workforce policies, training, and accreditation across all states and territories.

Strategies to safely enable health professionals to work to their full scope of practice should be considered. Community pharmacies can improve access to vaccination and are an important delivery option, especially where access to general practice or other immunisation services is limited. Trained pharmacists could also better deliver a wider range of NIP vaccines, if the scope of vaccines nationally were consistent, to help ensure equitable access.

As well as expanding technical skills, health workers should be trained and supported to confidently provide immunisation services to diverse multilingual communities. This includes having culturally appropriate materials translated into a variety of languages. Healthcare workers must also be trained to respond to the needs of all priority groups, offering high-quality, evidence-informed and culturally safe care.62,89 Continued efforts to harmonise training, including cultural competency and disability awareness, will contribute to a stronger immunisation workforce nationwide.

##### Support Aboriginal and Torres Strait Islander health workforce development to contribute to immunisation.

Support for Aboriginal and Torres Strait Islander health workforce development through enhanced training enables provision of culturally appropriate services. Access to ﬂexible, tailored immunisation training for Aboriginal and Torres Strait Islander health practitioners could boost their capacity and confidence to deliver vaccines. Another crucial measure to bolster the cultural competency of the immunisation workforce is ensuring that all health services employ more Aboriginal and Torres Strait Islander health practitioners, and support these providers in their roles.90 The 2022 Strengthening Medicare Taskforce Report recommended cultivating and investing in ACCHOs to provide primary care services for their communities, building on their established expertise and trust within their local communities.30

##### Strengthen preparedness for immunisation workforce surge capacity in future health emergencies.

Barriers to sharing workforces across jurisdictions were highlighted during the COVID-19 pandemic, emphasising the need for effective planning to anticipate surge capacity needs during crises.4 Australia’s response to the COVID-19 pandemic relied on mass vaccination, which challenged the capacity of our existing immunisation workforce. Enabling transferability of immunisation providers between states and territories is supported through the existing nationally consistent approach to accrediting immunisation training programs by Health Education Services Australia. Additionally, enabling the full scope of practice to be safety achieved for other health professionals, such as Aboriginal and Torres Strait Islander health workers and practitioners, to allow them to administer vaccines during a health emergency would bolster surge capacity.

##### Build expertise across the immunisation and vaccine-preventable disease workforce in all areas, including data analytics, disease surveillance and communications.

Immunisation is more than the vaccination of individuals. While the contributions of immunisation providers are crucial, a prepared immunisation workforce also requires the development of a sufficiently large workforce with expertise in areas such as:

* data linkage, management and analytics
* epidemiology
* infectious diseases modelling
* advanced pathogen genomics
* social and behavioural sciences
* risk communication.

These developments will help Australia strengthen its current programs and prepare for future health emergencies.4 Insights from the COVID-19 pandemic proved that multi-disciplinary workforce development is critical to deliver disease control and to optimise integration of technological advances into all vaccine-preventable disease programs.91

### Harness new technologies to respond to the evolving communicable disease and vaccine landscape

#### Strategic goals

##### Strengthen government immunisation program preparedness for new vaccine rollouts, including by leveraging new technologies.

Over the coming decades, evidence suggests pandemics and emerging infectious diseases will become more frequent. Climate change, population growth, travel, land use and incursion into wildlife habitats are all contributing to a rise in emerging zoonotic infectious diseases,92 many of which will be vaccine-preventable. Improving disease surveillance and outbreak prevention – stopping a newly emergent pathogen before it requires a wide-scale vaccine response – are integral to Australia’s pandemic planning. Improving pandemic preparedness requires a One Health lens, multisectoral collaboration, sustained investment, and ways of testing preparedness. A multisectoral approach aligns with other core government strategies, such as the National Health and Climate Strategy.93

At the global level, health and other interconnected systems were inadequately prepared for the prolonged public health crisis of COVID-19. This led to surge workforce challenges and disruption to the production of essential goods relevant to the pandemic response.94 Australia delivered a largely successful pandemic vaccine program, but inequities arose from regional and socio-economic differences in vaccine distribution capability and vaccine uptake. Future rollouts must focus early and intensively on priority populations, which could include Aboriginal and Torres Strait Islander communities and older people living in aged care settings.95

Improved outbreak preparedness must also focus on re-emergence of vaccine-preventable diseases that we know how to control, such as measles. Globally, long-standing immunity gaps and decreasing vaccine coverage are contributing to the re-emergence of a number of vaccine-preventable diseases. Responding to this concerning trend effectively will require improved vaccine coverage, disease and geospatial data, as well as insights into the social and behavioural causes of under-vaccination.

##### Systematise horizon scanning for emerging and newly vaccine-preventable diseases and the vaccine pipeline.

The COVID-19 pandemic focused efforts on vaccine development and moved new vaccine technologies from small-scale to population-level use in record time. Further technological advances have accelerated development of novel vaccines, meaning that more diseases are vaccine-preventable. Australia should now systematise horizon scanning to proactively monitor for all major health threats, changes to infectious disease epidemiology, newly vaccine-preventable diseases, and new vaccine candidates and technologies.

Effective horizon scanning, coupled with more streamlined pathways to adoption, means Australia will be better positioned to benefit from promising new vaccines and biological science technologies. Emerging vaccines and technologies include:

* combination vaccines against respiratory viruses
* new tuberculosis and malaria vaccines
* advances such as microarray patches
* the use of rapid mRNA technology in a wider array of vaccines like avian inﬂuenza, hepatitis C and norovirus.96,97,98,99

The Coalition for Epidemic Preparedness Innovations is supporting research into broadly protective coronavirus and filovirus vaccines to protect against a wider array of pathogens with pandemic potential.100,101

##### Champion vaccine research and development, and support pathways to commercialisation for Australian researchers and biotechnology industries.

Science and technology will play an integral role in future pandemic preparedness. Australia has strong research and development pipelines and produces almost twice as many scientific research papers as the Organization for Economic Cooperation and Development (OECD) average.102 We must be future focused in planning for new technologies by championing local immunisation research and having clear pathways for translation ‘from bench to bedside’ for vaccines (as well as other preventative and therapeutic interventions). Creating pathways to commercialisation requires a range of actions, including fostering integration and networks across academia and industry that support development of proof-of-concept ideas and consideration of ways to measure translation and commercialisation of vaccine products.

Research suggests that strengthening Australia’s response to future emergencies will mean:

* ensuring a diversified portfolio of vaccines
* securing local manufacturing ahead of time for various vaccine technologies
* making plans for efficient distribution well in advance of threats emerging.95

Further technological advances for combatting vaccine-preventable diseases could include therapeutics repurposing and novel antivirals, point-of-care diagnostics for case identification, improved genomic analysis and enhanced data-sharing for response strategies.103

##### Maintain onshore vaccine manufacturing capacity for increased resilience against pandemics and supply chain threats.

Australia is establishing capacity to manufacture new vaccines onshore, a sovereign capability that contributes to pandemic preparedness. Australia may have benefited from having access to this innovation much earlier. This partly reﬂects a historical lack of domestic ‘deep tech’ industries – that is, companies that bring novel technological innovations to fruition. Efforts to sustain onshore vaccine manufacturing in Australia are central to boosting our national resilience to future pandemics.

### Implement sustainable reform in vaccine program governance, program delivery and accountability

#### Strategic goals

##### Strengthen collaborative ways of working between the Australian Government and state and territory governments to deliver vaccines under the NIP and emergency programs.

The governance arrangements for immunisation in Australia are robust but complex. This complexity reﬂects the various responsibilities of national, state and territory, and local governments, as well as other immunisation stakeholders. The Essential Vaccines Agreement to the Department of Health, Disability and Ageing’s Funding Agreement outlines arrangements for the funding and delivery of a coordinated approach to immunisation coverage through the NIP, including a performance framework. Effective monitoring and evaluation and periodic reviews of the Essential Vaccines Agreement are both opportunities to drive performance of the NIP.104

Developing the next Essential Vaccines Agreement is an opportunity to re-commit to shared goals for the NIP, renew performance metrics and refine funding models. Strong relationships between stakeholders, governments and committees support operation of vaccine programs in Australia (see Figure 3) to achieve the mission and vision in the NIS 2025–30. Greater community representation across immunisation governance structures would also strengthen collaborative ways of working.

Modernising Australia’s immunisation governance frameworks would enable timely, equitable and affordable access to current and future vaccine technologies. Some new products will require different regulatory or legislative mechanisms, or benefit from alternative approaches to industry collaboration and engagement. Recommendations arising from the Heath Technology Assessment Policy and Methods Review can help ensure that Australia’s policies on vaccine technology assessment keep pace with this rapidly evolving space, minimising barriers to timely access.105

Figure 4: Agencies and committees relevant for national vaccine program governance in Australia (in alphabetical order)

* **Advisory Committee on Vaccines (ACV)** – Provides independent medical and scientific advice to the Minister for Health and Ageing and the TGA on the safety, quality and efficacy of vaccines
* **Australian Health Protection Committee (AHPC)** – Provides national leadership on health protection priorities, including immunisation
* **Australian Technical Advisory Group on Immunisation (ATAGI)** – Advises the Minister for Health and Ageing on the NIP and other immunisation policies, programs and issues
* **Communicable Diseases Network Australia (CDNA)** – Coordinates national disease surveillance and responses including when responses require vaccination
* **Jurisdictional Immunisation Coordinators (JIC)** – Oversee and manage implementation of NIP and state-funded immunisation programs, and work with providers to deliver vaccination programs
* **Pharmaceutical Beneﬁts Advisory Committee (PBAC)** – Evaluates the clinical efficacy and cost-effectiveness of vaccines and provides recommendations to the Minister for Health and Ageing on the inclusion of vaccines on the NIP
* **Therapeutic Goods Administration (TGA)** – Australia’s national regulatory agency responsible for evaluating, assessing and monitoring therapeutic goods, including vaccines

##### B. Support policies that improve confidence in vaccine safety and accountability, such as exploring the feasibility of a no-fault vaccine compensation scheme.

In 2021, the Australian Government set up a time-limited no-fault vaccine claims scheme, the COVID- 19 Vaccine Claims Scheme,106 for individuals who experienced moderate to severe vaccine-related adverse events following an approved COVID-19 vaccine. Other countries, including the UK, New Zealand, US, Japan and South Korea, have broader vaccine injury compensation systems.107 The principle of such schemes is that, while vaccines are overwhelmingly safe with only very rare serious adverse events, governments will compensate individuals who have severe adverse reactions that are causally linked to particular vaccines. This protects the broader community, provides reciprocity for those who take up vaccines for both personal and community-wide benefit, and enhances vaccine confidence.108 Compensation schemes should be accessible, with structured, transparent decision-making processes.109 The period of the NIS 2025–30 offers an opportunity to explore the feasibility of establishing a compensation scheme that covers all NIP vaccines, taking into account the experience of the COVID-19 Vaccine Claims Scheme and international best practice.

Transparency supports good immunisation governance, public trust and confidence, and requires clear communication with stakeholders about program decisions. The COVID-19 pandemic shone a spotlight on processes such as vaccine procurement and brought immunisation committees such as ATAGI into the public narrative.110 Strengthening transparency could mean Australia aligning governance processes with those that apply to peak health advisory bodies in similar countries – for example, through publication of decision-making processes, meeting minutes and evidence used to inform policy.111,112 Integrating consultation from a wider network of relevant stakeholders, including peak professional bodies, into vaccination policy decision-making would improve collaboration and transparency.

##### Standardise monitoring and evaluation of national, and state and territory vaccine programs to improve outcomes.

The COVID-19 pandemic demanded extraordinary actions from governments, and the achievements of the Australian COVID-19 vaccine program came at significant financial cost. Australia’s NCVP differed from usual NIP arrangements, with the Australian Government having end-to-end responsibility, including for procurement, logistics, reporting and policy. Under the NIP, the Australian Government assesses and purchases vaccines, but delivery, logistics and reporting are conducted through states and territories. The NCVP will continue to be transitioned into a more sustainable model, providing the opportunity to integrate learnings from the NCVP into the NIP. The NIS 2025–30 Implementation Plan will be one avenue to explore ways of making monitoring and evaluation of all NIP-funded vaccine programs standard practice. This would support improved population health outcomes, ensure value, and strengthen accountability to the public and all stakeholders.

##### Strengthen Australia’s contribution to supporting regional and global immunisation efforts.

Australia cannot afford to look inwards as the risk of pandemics increases in our interconnected world. Strengthening Australia’s contribution to global health security includes practical support to national immunisation programs, vaccine-preventable disease surveillance, and outbreak prevention and control in the Indo-Pacific through initiatives such as the DFAT’s Partnerships for a Healthy Region.113 Supporting neighbouring countries with broader health systems and workforce strengthening will also enhance regional preparedness and global health security.4

# Implementation Plan for NIS 2025–2030

Integral to the success of this NIS 2025–30 is the future development of an Implementation Plan that will be shared publicly, with annual reporting against key targets. The Implementation Plan will be coordinated at the federal, state and territory levels. It will include a comprehensive framework for supporting action and a monitoring and evaluation plan to report against the progress of strategic goals set out for each Priority Area, including the development of new targets.

# Acknowledgements

The National Centre for Immunisation Research and Surveillance contributed significant expertise and work in a partnership to develop this Strategy.

Members of the Expert Advisory Group who provided their time and expertise to advise on the development of the Strategy.

Organisations, sector representatives and individuals who contributed to the public consultation for this Strategy.

National committees that participated in the development and review of this Strategy, including:

* the Aged Care Advisory Group
* Australian Health Protection Committee
* Communicable Diseases Network Australia
* the National Aboriginal and Torres Strait Islander Health Protection AHPC subcommittee
* the National Aboriginal Community Controlled Health Organisation
* Australian Technical Advisory Group on Immunisation.

# References

1 Ruff T, Taylor K & Nolan T. Australia’s contribution to global immunisation. *Australian and New Zealand Journal of Public Health* 2012;36;564-69

2 World Health Organization. Immunization Agenda 2030: a global strategy to leave no one behind. April 2020. Available from https://cdn.who.int/media/docs/default- source/immunization/strategy/ia2030/ia2030-draft-4- wha\_b8850379-1fce-4847-bfd1- 5d2c9d9e32f8.pdf?sfvrsn=5389656e\_69&download=true. Accessed 29 July 2024

3 Australian National Audit Office. Australia’s COVID-19 vaccine rollout. August 2022. Available from [https://www.anao.gov.au/work/performance-audit/australia-covid-19-](http://www.anao.gov.au/work/performance-audit/australia-covid-19-) vaccine-rollout. Accessed 27 July 2024

4 Basseal JM, Bennett CM, Collignon P et al. Key lessons from the COVID-19 public health response in Australia. *Lancet Regional Health Western Paciﬁc* 2023;30:100616. doi:10.1016/j.lanwpc.2022.100616

5 Australian Technical Advisory Group on Immunisation. Australian Immunisation Handbook. Canberra: Australian Government Department of Health and Aged Care; 2024. Available from immunisationhandbook.health.gov.au

6 National Centre for Immunisation Research and Surveillance. History of immunisation in Australia. June 2024. Available from https://ncirs.org.au/health-professionals/history- immunisation-australia. Accessed 30 July 2024

7 Australian Government Department of Health and Aged Care & Australian Centre for Disease Control. Poliovirus Detection Outbreak Response Plan for Australia. June 2024. Available from [https://www.health.gov.au/sites/default/files/2024-06/poliovirus-detection-](http://www.health.gov.au/sites/default/files/2024-06/poliovirus-detection-) outbreak-response-plan-for- australia-2024.pdf. Accessed 30 July 2024

8 Australian Technical Advisory Group on Immunisation. Australian Immunisation Handbook. Measles. October 2023. Available from https://immunisationhandbook.health. gov.au/contents/vaccine-preventable- diseases/measles. Accessed 30 July 2024

9 Australian Government Department of Health and Aged Care. Rubella officially eliminated from Australia. October 2018. Available from [https://www.health.gov.au/ministers/the-hon-](http://www.health.gov.au/ministers/the-hon-) greg-hunt-mp/media/rubella- officially-eliminated-from-australia. Accessed 30 July 2024

10 Patel C, Dey A, Wang H et al. Summary of national surveillance data on vaccine preventable diseases in Australia, 2016-2018: final report. *Communicable Diseases Intelligence (2018)* 2022;46. doi:10.33321/cdi.2022.46.28

11 Australian Government Department of Health and Aged Care. Current coverage data tables for all children. April 2024. Available from [https://www.health.gov.au/topics/](http://www.health.gov.au/topics/) immunisation/immunisation-data/childhood- immunisation-coverage/current-coverage- data-tables-for-all-children. Accessed 21 June 2024

12 Australian Government Department of Health and Aged Care. Current coverage data tables for Aboriginal and Torres Strait Islander children. April 2024. Available from https:// [www.health.gov.au/topics/immunisation/immunisation-data/childhood-immunisation-](http://www.health.gov.au/topics/immunisation/immunisation-data/childhood-immunisation-) coverage/current-coverage-data-tables-for-aboriginal-and-torres-strait-islander-children. Accessed 21 June 2024

13 Annualised data as at 30 June 2024, Australian Immunisation Register, Australian Government Department of Health and Aged Care.

14 Australian Government Department of Health and Aged Care. Human papillomavirus (HPV) immunisation. May 2024. Available from [https://www.health.gov.au/topics/](http://www.health.gov.au/topics/) immunisation/immunisation-data/human- papillomavirus-hpv-immunisation-data. Accessed 30 July 2024

15 Australian Centre for the Prevention of Cervical Cancer. National Strategy for the Elimination of Cervical Cancer in Australia. November 2023. Available from [https://www.health.gov.au/sites/default/files/2023-](http://www.health.gov.au/sites/default/files/2023-) 11/national-strategy-for-the-elimination- of-cervical-cancer-in-australia.pdf. Accessed 21 June 2024

16 Australian Government Department of Health and Aged Care. COVID-19 vaccine rollout. June 2024. Available from [https://www.health.gov.au/sites/default/files/2024-06/covid-19-](http://www.health.gov.au/sites/default/files/2024-06/covid-19-) vaccine-rollout-update-14-june- 2024.pdf. Accessed 21 June 2024

17 Australian Government Department of Health and Aged Care. Residential aged care residents inﬂuenza vaccination rates. June 2024. Available from https://www.health. gov.au/resources/publications/residential- aged-care-residents-inﬂuenza-vaccination- rates?language=en Accessed 1 July 2024

18 Feinmann J. Analysis reveals global post-covid surge in infectious diseases. *BMJ* 2024;385:q1348. doi:10.1136/bmj.q1348

19 Kaur G, Danovaro-Holliday MC, Mwinnyaa G et al. Routine vaccination coverage – worldwide, 2022. *Morbidity and Mortality Weekly Report 2023*;72:1155-61

20 Gavi, the Vaccine Alliance. Eight things you need to know about the state of global immunisation. July 2023. Available from [https://www.gavi.org/vaccineswork/eight-things-](http://www.gavi.org/vaccineswork/eight-things-) you-need-know-about-state-global- immunisation. Accessed 21 June 2024

21 World Health Organization & United Nations Children’s Fund. Estimates of national immunization coverage: WUENIC trends. June 2024. Available from https://worldhealthorg. shinyapps.io/wuenic-trends/. Accessed 24 July 2024

22 World Health Organization Western Pacific. Immunization program data: regional and country profiles 2022. 2022. Available from https://iris.who.int/bitstream/hand le/10665/374369/9789290619802-pt2-eng.pdf. Accessed 21 June 2024

23 World Health Organization. Implementing the Immunization Agenda 2030: a framework for action through coordinated planning, monitoring & evaluation, ownership & accountability, and communications & advocacy. 2021. Available from https://cdn.who.int/ media/docs/default- source/immunization/strategy/ia2030/ia2030\_frameworkforactionv04. pdf?sfvrsn=e5374082\_1&download=true. Accessed 21 June 2024

24 World Health Organization Western Pacific Region. Field Guide for Preparedness and Response to Diphtheria Outbreaks in the Western Pacific Region. 2023. Available from https://iris.who.int/bitstream/handle/10665/368048/9789290619925-eng.pdf?sequence=1. Accessed 1 July 2024

25 Daanoy S. WHO raises concerns over measles, pertussis. *Manila Bulletin*. April 2024. Available from https://mb.com.ph/2024/4/5/who-raises-concerns-over-measles-pertussis. Accessed 1 July 2024

26 Sirleaf EJ & Clark H. The Independent Panel for Pandemic Preparedness & Response. Transforming or tinkering? Inaction lays the groundwork for another pandemic. May 2022. Available from https://theindependentpanel.org/wp-content/uploads/2022/05/Transforming- or-tinkering\_Report\_Final.pdf. Accessed 27 June 2024

27 Australian Government Department of Health. National Preventive Health Strategy 2021–2030. 2021. Available from [https://www.health.gov.au/sites/default/files/](http://www.health.gov.au/sites/default/files/) documents/2021/12/national-preventive-health- strategy-2021-2030\_1.pdf. Accessed 7 June 2024

28 Australian Government Department of Health and Aged Care. The new National Aboriginal and Torres Strait Islander Health Plan 2021–2030. December 2021. Available from [https://www.health.gov.au/topics/aboriginal-](http://www.health.gov.au/topics/aboriginal-) and-torres-strait-islander-health/how- we-support-health/health- plan?utm\_source=health.gov.au&utm\_medium=callout-auto- custom&utm\_campaign=digital\_transformation. Accessed 26 June 2024

29 Joint Council on Closing the Gap. National Agreement on Closing the Gap. 2020. Available from [https://www.closingthegap.gov.au/national-agreement/national-agreement-](http://www.closingthegap.gov.au/national-agreement/national-agreement-) closing-the-gap. Accessed 24 June 2024

30 Australian Government Department of Health and Aged Care. Strengthening Medicare Taskforce Report. December 2022. Available from [https://www.health.gov.au/sites/default/](http://www.health.gov.au/sites/default/) files/2023-02/strengthening- medicare-taskforce-report\_0.pdf. Accessed 30 May 2024

31 Australian Centre for Disease Control. What we do. February 2024. Available from [https://www.cdc.gov.au/about/what-we-do.](http://www.cdc.gov.au/about/what-we-do) Accessed 24 June 2024

32 Clark K, Crooks K, Jeyanathan B, et al. Highlighting models of Indigenous leadership and self-governance for COVID-19 vaccination programmes. *AlterNative: An International Journal of Indigenous Peoples* 2024;20:250-58. doi:10.1177/11771801241235418

33 Graham S, Blaxland M, Bolt R et al. Aboriginal peoples’ perspectives about COVID-19 vaccines and motivations to seek vaccination: a qualitative study. *BMJ Global Health* 2022;7:e008815. doi:10.1136/bmjgh- 2022-008815

34 Aitken Z, Emerson E & Kavanagh AM. COVID-19 vaccination coverage and vaccine hesitancy among Australians with disability and long-term health conditions. *Health Promotion Journal of Australia* 2023;34:895- 902. doi:10.1002/hpja.691

35 Carter J, Rutherford S & Borkoles E. COVID-19 vaccine uptake among younger women in rural Australia. *Vaccines (Basel)* 2021;10:26. doi:10.3390/vaccines10010026

36 Allen K, Lambert SB, Yuen A. et al. Factors associated with COVID-19 booster vaccine willingness among migrants from the Eastern Mediterranean living in Australia: a cross- sectional study. *BMC Public Health* 2022;22:2205. doi:10.1186/s12889-022-14608-5

37 Kaufman J, Tuckerman J & Danchin M. Overcoming COVID-19 vaccine hesitancy: can Australia reach the last 20 percent? *Expert Review of Vaccines* 2022;21:159-61

38 Australian Government Department of Health and Aged Care. Aged care providers with low Covid-19 vaccination rates have been identified. June 2024. Available from https:// [www.health.gov.au/ministers/the-](http://www.health.gov.au/ministers/the-) hon-anika-wells-mp/media/aged-care-providers-with-low- covid-19-vaccination-rates-have-been- identified?language=en. Accessed 15 July 2024

39 Gardiner FW, Schofield Z, Hendry M et al. A novel COVID-19 program, delivering vaccines throughout rural and remote Australia. *Frontiers in Public Health* 2023; 17:1019536. doi:10.3389/fpubh.2023.1019536

40 Australian Government. National Partnership on Essential Vaccines. 2021. Available from https://federalfinancialrelations.gov.au/sites/federalfinancialrelations.gov.au/ files/2021- 01/essential\_vaccines\_np.pdf. Accessed 24 June 2024

41 Kinsman J, Stöven S, Elgh F et al. Good practices and challenges in addressing poliomyelitis and measles in the European Union. *European Journal of Public Health* 2018; 28:730-34

42 World Health Organization. Message by the Director of the Department of Immunization, Vaccines and Biologicals at WHO – January 2024. January 2024. Available from https:// [www.who.int/news/item/31-01-2024-](http://www.who.int/news/item/31-01-2024-) message-by-the-director-of-the-department-of- immunization--vaccines-and-biologicals-at-who---january-2024. Accessed 27 June 2024

43 Feldman AG, O’Leary ST & Danziger-Isakov L. The risk of resurgence in vaccine- preventable infections due to coronavirus disease 2019 – related gaps in immunization. *Clinical Infectious Diseases* 2021;73:1920-23. doi:10.1093/cid/ciab127

44 Australian Government Department of Health. National Immunisation Strategy for Australia 2019–2024. 2018. Available from [https://www.health.gov.au/sites/default/files/](http://www.health.gov.au/sites/default/files/)national-immunisation-strategy-for- australia-2019-2024\_0.pdf. Accessed 29 July 2024

45 Dubé E, Leask J, Wolff B et al. The WHO Tailoring Immunization Programmes (TIP) approach: review of implementation to date. *Vaccine* 2018;36:1509-515. doi:10.1016/j. vaccine.2017.12.012

46 Lazarus JV, White TM, Wyka K et al. Inﬂuence of COVID-19 on trust in routine immunization, health information sources and pandemic preparedness in 23 countries in 2023. *Nature Medicine* 2024;30:1559-63. doi:10.1038/s41591-024-02939-2

47 World Health Organization. Vaccination and trust: how concerns arise and the role of communication in mitigating crises. 2017 Available from https://cdn.who.int/media/docs/ default- source/documents/publications/vaccines-and-trust78f2bc69-8a27-4657-9b2d- 13d3075da41d.pdf?sfvrsn=b71b557d\_1&download=true. Accessed 27 July 2024

48 Thomas S, Durrheim D, Islam F et al. Improved childhood immunization coverage using the World Health Organization’s Tailoring Immunization Programmes guide (TIP) in a regional centre in Australia. *Vaccine* 2022;40:18-20. doi:10.1016/j.vaccine.2021.11.067

49 Thomas S, Paden V, Lloyd C et al. Tailoring immunisation programs in Lismore, New South Wales – we want our children to be healthy and grow well, and immunisation really helps. *Rural and Remote Health* 2022;22:6803. doi:10.22605/RRH6803

50 World Health Organization. Immunization Agenda 2030. Core Principle Annex: Partnerships. 2021. Available from [https://www.immunizationagenda2030.org/](http://www.immunizationagenda2030.org/) images/documents/BLS20116\_IA\_Global\_strategy\_document\_Core\_Principles\_001\_ partnership\_001.pdf. Accessed 12 June 2023

51 Crooks K, Casey D & Ward JS. First Nations peoples leading the way in COVID-19 pandemic planning, response and management. *Medical Journal of Australia* 2020; 213:151-52. doi:10.5694/mja2.50704

52 Quinn A, White A, Abbatangelo-Gray J et al. COVID-19 communication campaigns for vaccination: an assessment with perspectives for future equity-centered public health efforts. Journal of Health Communication 2023;28(sup1):54-66. doi:10.1080/10810730.202 3.2208529

53 Nyhan B & Reiﬂer J. Does correcting myths about the ﬂu vaccine work? An experimental evaluation of the effects of corrective information. *Vaccine* 2015;33:459-64. doi:/10.1016/j. vaccine.2014.11.01

54 Wild A, Kunstler B, Goodwin D et al. Communicating COVID-19 health information to culturally and linguistically diverse communities: insights from a participatory research collaboration. *Public Health Research and Practice* 2021;31:e3112105

55 Australian National Audit Office. Improving immunisation coverage. September 2021. Available from [https://www.anao.gov.au/work/performance-audit/improving-immunisation-](http://www.anao.gov.au/work/performance-audit/improving-immunisation-) coverage. Accessed 31 May 2024

56 Attwell K, Hannah A & Leask J. COVID-19: talk of ‘vaccine hesitancy’ lets governments off the hook. *Nature* 2022;602. doi:10.1038/d41586-022-00495-8

57 National Centre for Immunisation Research and Surveillance. The National Vaccination Insights project – national surveillance of drivers of under-vaccination in Australian children aged under 5 years. November 2023. Available from https://ncirs.org.au/vaccination- insights-project-national-surveillance-drivers-under- vaccination-australian-children. Accessed 12 June 2024

58 World Health Organization. Behavioural and social drivers of vaccination: tools and practical guidance for achieving high uptake. 2022. Available from https://iris.who.int/ handle/10665/354459. Accessed 30 July 2024 59 Kaufman J, Tuckerman J, Bonner C et al. Development and validation of the Vaccine Barriers Assessment Tool for identifying drivers of under-vaccination in children under five years in Australia. *Human Vaccines & Immunotherapeutics* 2024;20

60 Leask J, Kinnersley P, Jackson C et al. Communicating with parents about vaccination: a framework for health professionals. *BMC Pediatrics* 2012;12:154. doi:10.1186/1471- 2431-12-154

61 Abdi I, Bolsewicz K, Bullivant B et al. Understanding the factors that inﬂuence communication about COVID- 19 vaccines with patients: Perspectives of Australian immunisation providers. *Vaccine X* 2023;14:100304. doi:10.1016/j.jvacx.2023.100304

62 Migrant & Refugee Health Partnership – Migration Council Australia. Integrating culturally, ethnically and linguistically diverse communities in rapid responses to public health crises: policy brief. March 2021. Available from https://culturaldiversityhealth.org.au/ wp-content/uploads/2021/04/Integrating-CALD-communities-in- rapid-responses-to-public- health-crises-MRHP.pdf. Accessed 12 June 2024

63 Giles ML, Krishnaswamy S, Coote W et al. Factors associated with early versus late uptake of the COVID-19 vaccine during pregnancy over time in Australia: a population- based cohort study. *Vaccines* 2023;11:1713. doi.org/10.3390/vaccines11111713

64 Homaira N, He WQ, McRae J et al. Coverage and predictors of inﬂuenza and pertussis vaccination during pregnancy: a whole of population-based study. *Vaccine* 2023;41:6522-29. doi:10.1016/j.vaccine.2023.09.008

65 Kaufman J, Attwell K, Hauck Y et al. Vaccine discussions in pregnancy: interviews with midwives to inform design of an intervention to promote uptake of maternal and childhood vaccines. *Human Vaccines & Immunotherapeutics* 2019;15:2534-43. doi:10.1080/2164551 5.2019.1607131

66 Leask J, Quinn HE, Macartney K et al. Immunisation attitudes, knowledge and practices of health professionals in regional NSW. *Australian and New Zealand Journal of Public Health* 2008;32:224-9. doi:10.1111/j.1753-6405.2008.00220.x

67 Dubé E, Laberge C, Guay M et al. Vaccine hesitancy: an overview. *Human Vaccines & Immunotherapeutics* 2013;9:1763-73. doi:10.4161/hv.24657

68 Sharing Knowledge About Immunisation. Empowering immunisation conversations. 2024. Available from https://skai.org.au/healthcare-professionals. Accessed 12 June 2024

69 Centers for Disease Control and Prevention. Vaccine Information Statements (VISs). December 2023. Available from [https://www.cdc.gov/vaccines/hcp/vis/index.html.](http://www.cdc.gov/vaccines/hcp/vis/index.html) Accessed 12 June 2024

70 Tuckerman J, Blyth CC, Beard FH et al. COVID-19 and changes in the National Immunisation Program: a unique opportunity to optimise the Australian Immunisation Register (AIR). *Medical Journal of Australia* 2021;214:247-49.e1. doi:10.5694/mja2.50971

71 Dalton LG, Meder KN, Beard FH et al. How accurately does the Australian Immunisation Register identify children overdue for vaccine doses? A national cross-sectional study. *Communicable Diseases Intelligence* (2018) 2022;46. doi:10.33321/cdi.2022.46.10

72 National Centre for Immunisation Research and Surveillance. Exploratory analysis of the first 2 years of adult vaccination data recorded on AIR. November 2019. Available from https://ncirs.org.au/sites/default/files/2019- 12/Analysis%20of%20adult%20vaccination%20 data%20on%20AIR\_Nov%202019.pdf. Accessed 14 June 2024

73 Centers for Disease Control and Prevention. VaxView. March 2024. Available from [https://www.cdc.gov/vaccines/vaxview.](http://www.cdc.gov/vaccines/vaxview) Accessed 14 June 2024

74 National Centre for Immunisation Research and Surveillance. Inﬂuenza vaccination coverage data. June 2024. Available from https://ncirs.org.au/inﬂuenza-vaccination- coverage-data. Accessed 14 June 2024

75 Liu B, Stepien S, Dobbins T et al. Effectiveness of COVID-19 vaccination against COVID-19 specific and all- cause mortality in older Australians: a population based study. *Lancet Regional Health Western Paciﬁc* 2023;40:100928. doi:10.1016/j. lanwpc.2023.100928

76 Liu B, Gidding H, Stepien S et al. Relative effectiveness of COVID-19 vaccination with 3 compared to 2 doses against SARS-CoV-2 B.1.1.529 (Omicron) among an Australian population with low prior rates of SARS-CoV-2 infection. *Vaccine* 2022;40:6288-94

77 Brotherton JML, Budd A, Rompotis C et al. Is one dose of human papillomavirus vaccine as effective as three? A national cohort analysis. *Papillomavirus Research* 2018;8:100177. doi:10.1016/j.pvr.2019.100177

78 Eitelhuber T, Ngeh S, Bloomfield L et al. Using data linkage to monitor COVID-19 vaccination: development of a vaccination linked data repository. *International Journal of Population Data Science* 2022;5:1730. doi:10.23889/ijpds.v5i4.1730

79 Lloyd LK, Nicholson C, Strange G et al. The burdensome logistics of data linkage in Australia – the example of a national registry for congenital heart disease. *Australian Health Review* 2024;48:8-15. doi:10.1071/AH23185

80 Australian Bureau of Statistics. Person Level Integrated Data Asset (PLIDA). Available from [https://www.abs.gov.au/about/data-services/data-integration/integrated-data/person-](http://www.abs.gov.au/about/data-services/data-integration/integrated-data/person-) level-integrated-data- asset-plida. Accessed 28 June 2024

81 Australian Government Australian Institute of Health and Welfare. National Health Data Hub. 2024. Available from [https://www.aihw.gov.au/reports-](http://www.aihw.gov.au/reports-) data/nhdh#:~:text=The%20 National%20Health%20Data%20Hub%20(NHDH)%2C%20formerly%20the%20 National,territory%2C%20and%20Commonwealth%20data%20sources. Accessed 28 June 2024

82 Vaccines designed to reduce antimicrobial resistance. *Bulletin of the World Health Organization* 2024;102:378-79. doi:10.2471/BLT.24.020624

83 Jansen KU & Anderson AS. The role of vaccines in fighting antimicrobial resistance (AMR). *Human Vaccines & Immunotherapeutics* 2018;14:2142-49. doi:10.1080/21645515. 2018.1476814

84 Hanson KE, Goddard K, Lewis N et al. Incidence of Guillain-Barré syndrome after COVID-19 vaccination in the Vaccine Safety Datalink. *JAMA Network Open* 2022;5:e228879. doi:10.1001/jamanetworkopen.2022.8879

85 Copland E, Patone M, Saatci D et al. Safety outcomes following COVID-19 vaccination and infection in 5.1 million children in England. Nature Communications 2024;15:3822. doi:10.1038/s41467-024-47745-z. Erratum in *Nature Communications* 2024;15:5723. doi:10.1038/s41467-024-50151-0

86 Karlstad Ø, Hovi P, Husby A et al. SARS-CoV-2 vaccination and myocarditis in a Nordic cohort study of 23 million residents. *JAMA Cardiology* 2022;7:600-612. doi:10.1001/ jamacardio.2022.0583

87 Global Vaccine Data Network. About us. Available from [https://www.](http://www/) globalvaccinedatanetwork.org/aboutus. Accessed 14 June 2024

88 Top KA, Chen RT, Levy O et al. Advancing the science of vaccine safety during the coronavirus disease 2019 (COVID-19) pandemic and beyond: launching an international network of special immunization services. *Clinical Infectious Diseases* 2022;75(Suppl 1):S11-S17. doi:10.1093/cid/ciac407

89 Advisory Committee on the Health Emergency Response to COVID-19 for People with Disability. Lessons learned during the COVID-19 pandemic. 2023. Available from https:// [www.health.gov.au/sites/default/files/2023-06/lessons-learned-during-the-covid-19-](http://www.health.gov.au/sites/default/files/2023-06/lessons-learned-during-the-covid-19-) pandemic-advisory-committee-on-the-health-emergency-response-to-covid-19-for-people- with-disability\_0.pdf. Accessed 29 May 2024

90 Australian Government Department of Health. National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework and Implementation Plan 2021–2031. 2022. Available from [https://www.health.gov.au/sites/default/files/documents/2022/03/](http://www.health.gov.au/sites/default/files/documents/2022/03/) national-aboriginal-and-torres-strait-islander-health-workforce-strategic-framework-and- implementation-plan-2021-2031.pdf. Accessed 11 July 2024

91 Bunnell R, Ryan J & Kent C. Toward a new strategic public health science for policy, practice, impact, and health equity. *American Journal of Public Health* 2021;111:1489-96. doi:10.2105/AJPH.2021.306355

92 Jones K, Patel N, Levy M et al. Global trends in emerging infectious diseases. *Nature* 2008;451990-93. doi:10.1038/nature06536

93 Australian Government Department of Health and Aged Care. National Health and Climate Strategy. December 2023. Available from [https://www.health.gov.au/our-work/](http://www.health.gov.au/our-work/) national-health-and-climate-strategy. Accessed 17 July 2024

94 The Independent Panel for Pandemic Preparedness & Response. COVID-19: Make it the last pandemic. 2021. Available from https://theindependentpanel.org/wp-content/uploads/2021/05/COVID-19-Make-it-the-Last- Pandemic\_final.pdf. Accessed 3 June 2024

95 Holden R & Leigh A. The race that stopped a nation: lessons from Australia’s Covid vaccine failures. *Oxford Review of Economic Policy* 2022;38. doi:10.1093/oxrep/grac028

96 Harris E. Combined COVID-19, ﬂu vaccine candidate headed to Phase 3 trials. *JAMA* 2023;330:2044. doi:10.1001/jama.2023.22353

97 Johns Hopkins Bloomberg School of Public Health. Game changers: 5 global vaccine innovations on the horizon. April 2023. Available from https://publichealth.jhu.edu/2023/ game-changing-vaccine-developments. Accessed 3 June 2024

98 London School of Hygiene and Tropical Medicine. Microarray patches safe and effective for vaccinating children. April 2024. Available from [https://www.lshtm.ac.uk/newsevents/](http://www.lshtm.ac.uk/newsevents/) news/2024/microarray-patches- safe-and-effective-vaccinating-children. Accessed 19 June 2024

99 Penn Medicine. World-changing mRNA vaccines from Penn Medicine. Available from [https://www.pennmedicine.org/mrna#.](http://www.pennmedicine.org/mrna) Accessed 19 June 2024

100 Coalition for Epidemic Preparedness Innovations. Global consortium plans coordinated human challenge studies in hunt for transmission-blocking coronavirus vaccines. March 2024. Available from https://cepi.net/global-consortium-plans-coordinated-human- challenge-studies-hunt-transmission-blocking-coronavirus. Accessed 19 June 2024

101 Coalition for Epidemic Preparedness Innovations. CEPI seeks to fund new innovations for broad protection against Ebola and other deadly Filoviruses. June 2024. Available from https://cepi.net/cepi-seeks-fund-new- innovations-broad-protection-against-ebola-and- other-deadly-filoviruses. Accessed 19 June 2024

102 Waters-Lynch J. Why can’t Australia make mRNA vaccines? Because we don’t make enough ‘deep technology’ companies. September 2021. Available from https:// theconversation.com/why-cant-australia- make-mrna-vaccines-because-we-dont-make- enough-deep-technology-companies-166013. Accessed 20 June 2024

103 CSIRO. Strengthening Australia’s pandemic preparedness. Available from [https://www.csiro.au/en/work-](http://www.csiro.au/en/work-) with-us/services/consultancy-strategic-advice-services/ csiro-futures/health-and-biosecurity/strengthening- australias-pandemic-preparedness. Accessed 3 June 2024

104 Federal Financial Relations. Essential vaccines. Available from https://federalfinancialrelations.gov.au/agreements/essential-vaccines. Accessed 20 June 2024

105 Australian Government Department of Health and Aged Care. Health Technology Assessment Policy and Methods Review. 2024. Available from [https://www.health.gov.au/](http://www.health.gov.au/) our-work/health-technology-assessment- policy-and-methods-review. Accessed 19 June 2024

106 Australian Government Department of Health and Aged Care. COVID-19 Vaccine Claims Scheme. December 2023. Available from [https://www.health.gov.au/our-work/](http://www.health.gov.au/our-work/) covid-19-vaccine-claims-scheme. Accessed 27 June 2024

107 Attwell K, Drislane S & Leask J. Mandatory vaccination and no fault vaccine injury compensation schemes: An identification of country-level policies. *Vaccine* 2019;37: 2843-48

108 Wood N, Macartney K, Leask J et al. Australia needs a vaccine injury compensation scheme: upcoming COVID-19 vaccines make its introduction urgent. September 2020. Available from https://www1.racgp.org.au/ajgp/coronavirus/australia-needs-a-vaccine- injury-compensation-sche. Accessed 20 June 2024

109 Fairgrieve D, Rizzi M, Kirchhelle C et al. No-fault compensation schemes for COVID-19 vaccines: best practice hallmarks. *Public Health Reviews* 2023;44:1605973. doi:10.3389/phrs.2023.1605973

110 Commonwealth of Australia. Senate Select Committee on COVID-19: Final Report. 2022. Available from https://parlinfo.aph.gov.au/parlInfo/download/committees/ reportsen/024920/toc\_pdf/Finalreport.pdf;fileTyp e=application%2Fpdf. Accessed 20 June 2024

111 UK Government. Joint Committee on Vaccination and Immunisation. Available from [https://www.gov.uk/government/groups/joint-committee-on-vaccination-and-immunisation.](http://www.gov.uk/government/groups/joint-committee-on-vaccination-and-immunisation) Accessed 20 June 2024

112 Centers for Disease Control and Prevention. Advisory Committee on Immunization Practices (ACIP) Meeting Information. 2024. Available from [https://www.cdc.gov/vaccines/](http://www.cdc.gov/vaccines/) acip/meetings/index.html. Accessed 20 June 2024

113 Australian Government Indo-Pacific Centre for Health Security. Partnerships for a Healthy Region. 2023. Available from https://indopacifichealthsecurity.dfat.gov.au/ partnerships-healthy-region. Accessed 17 July 2024



1. Australian Statistical Geography Standard Statistical Areas Level 3 are defined on the Australian Bureau of Statistics website at [**https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/main-structure-and-greater-capital-city-statistical-areas/statistical-area-level-3**](https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/main-structure-and-greater-capital-city-statistical-areas/statistical-area-level-3). [↑](#footnote-ref-1)
2. Contains Australian Immunisation Register (AIR) data from 1 January 2013 to 30 June 2024. Reporting to AIR is mandatory. However, delays may exist between the administration of the vaccine and updating of records in the AIR by providers. Coverage is calculated as the percentage of children in Australia who have had all the vaccines recommended for that age in the National Immunisation Program Schedule. [↑](#footnote-ref-2)