
NSW Immunisation Strategy 2024-2028

2024 Progress Report

Health Protection NSW acknowledges the traditional owners of the lands on which we work, live and play. We pay our respect to Elders past, present and emerging. This report was produced on the lands of the Cammeraygal People of New South Wales. The knowledge, resilience and strength of Aboriginal Peoples is key to reducing the burden of vaccine-preventable diseases in their communities.

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Executive Summary

The *NSW Immunisation Strategy 2024–2028* sets out six priority areas to improve vaccine access, uptake, and equity, aiming to reduce the burden of vaccine preventable diseases across the state. This 2024 Progress Report highlights achievements and challenges in the first year of implementation.

Key achievements in 2024:

- **Embedding immunisation in routine healthcare:** Introduced targeted programs such as the Mental Health Influenza Vaccination Program, Bone Marrow Transplant (BMT) revaccination, and Priority Populations Immunisation Programs (PIIP). Opportunistic vaccination was expanded in children's hospitals to improve access for high-risk groups
- **Enhancing community awareness and understanding:** Delivered communications campaigns for childhood vaccination and winter respiratory illness, supported by multilingual resources and tailored messaging for Aboriginal, CALD, and regional communities. Preparations began for the Community Connector Program to strengthen engagement.
- **Maximising workforce capacity:** Pharmacists, nurses, midwives, and Aboriginal health practitioners were authorised to administer a broader range of vaccines. Statewide workshops and network meetings supported knowledge sharing and best practice.
- **Using data to drive performance, outcomes and address inequities:** Established a Gov2Gov data pipeline with the Australian Immunisation Register (AIR), developed interactive dashboards, and piloted linked AIR and maternity data to improve pregnancy vaccination estimates. Data-driven insights informed targeted interventions for under-vaccinated groups.
- **Optimising digital systems:** Updated platforms such as eMR, eMaternity, VaxLink, and CARMI were upgraded to support program readiness and streamline processes. Planning commenced for integration into the Single Digital Patient Record and modernisation of the State Vaccine Centre ordering system.
- **Preparing for new vaccines:** Rolled out the RSV Vulnerable Babies Program and contributed to national immunisation strategy development, ensuring readiness for emerging vaccine technologies.

Coverage Outcomes

While progress was made, several coverage targets remain unmet. Childhood immunisation rates approached 95% for five-year-olds but lagged for one- and two-year-olds. Influenza coverage for children under five and pregnant women was below target, and uptake among Aboriginal and Torres Strait Islander adults and adolescents requires further improvement.

Outlook

The 2024 initiatives have strengthened system capacity, improved outreach, and instigated embedding immunisation into routine care. Continued investment in culturally responsive engagement, digital innovation, and data-driven programs remain essential to meet coverage targets and ensure equitable protection for all NSW communities.

Introduction

The [NSW Immunisation Strategy 2024 – 2028](#) (the Strategy) provides a framework for NSW Health and its partners to improve vaccine access and uptake and reduce the impact of vaccine preventable diseases (VPDs) on individuals and communities in NSW.

The Strategy identifies six key priority areas for action to sustain or improve immunisation rates among children, young people, and adults (Figure 1). The Strategy emphasises the need for immunisation against VPDs through all stages of an individual's lifespan, from infancy through to adulthood. It also highlights the need to address inequities in knowledge, access, and uptake across the population to maximise the benefits of immunisation for all. Local health districts (LHDs) are responsible for implementing the Strategy and investing in initiatives to strengthen and support immunisation provision in their district, and ensuring its priorities and targets are met.

Figure 1 Priority areas of the NSW Immunisation Strategy 2024 – 2028



The Strategy acknowledges the structural, economic and geographic barriers that can impact immunisation coverage and recognises the need to effectively address these barriers to achieve its goals. It also recognises the importance of engagement and program co-design with partners and the community to improve or sustain high immunisation coverage, including in priority populations. Across the NSW population, there are communities or individuals that experience an increased risk of exposure to VPDs, those at risk of more severe disease from VPDs and those facing significant barriers to accessing immunisation services.

This progress report summarises the activities carried out between January to December 2024 to advance the overall goals of the six key priority areas. The 2024 immunisation coverage targets set out in the Strategy are included in Table 1, with the coverage results in 2024 reported against them. Progress is routinely monitored and is complemented by additional metrics to ensure equity across the NSW population is achieved.

Table 1 Immunisation coverage targets and result in 2024

Coverage Targets at January 2024	Stretch Targets	Progress to date (Jan to Dec 2024)
INFANTS AND CHILDREN		
95% childhood immunisation coverage for children aged 1, 2, and 5 years	95%	92% for 1-year-olds, 91% for 2-year-olds, 94% for 5-year-olds
70% Meningococcal B immunisation course completion for Aboriginal and Torres Strait Islander children aged 2 years	80%	67%
40% influenza immunisation coverage for children aged 6 months to under 5 years	50%	25%
ADOLESCENTS		
80% meningococcal ACWY immunisation coverage for adolescents aged 17 years	90%	71%
90% dTpa immunisation coverage for adolescents aged 15 years	90%	84%
90% HPV immunisation coverage for adolescents aged 15 years	90%	83%
ADULTS		
60% influenza immunisation coverage for pregnant women	80%	52%
80% dTpa immunisation coverage for pregnant women	90%	83%
75% influenza immunisation coverage for adults aged 65 years and over	80%	60%
70% zoster immunisation coverage for adults 65 years and over	80%	44%
70% zoster immunisation coverage for Aboriginal and Torres Strait Islander adults aged 50 years and over	80%	22%

* Influenza and pertussis immunisation coverage in pregnant women is based on data from 1 July 2023 to 30 June 2024

Priority Area 1: Embed immunisation in routine healthcare

Embedding immunisation in routine health care, across primary, community and hospital settings, will increase opportunities for people to know what vaccines are recommended for them and improve access. Making immunisation part of everyday conversations between health professionals and patients also provides opportunities to discuss their specific immunisation needs and address concerns or barriers. Extensive research has shown that healthcare providers play a pivotal role in delivering immunisation services, and their recommendations are a critical factor in the decision to vaccinate.

There are 4 objectives that help support this priority area:

1. Build health professionals' knowledge, confidence, and competence to recommend immunisation.
2. Identify opportunities for engagement.
3. Integrate immunisation into routine clinical care.
4. Establish and maintain high immunisation coverage in residential disability and aged care settings.

2024 activities

Objective 1: Build health professionals' knowledge, confidence, and competence to recommend immunisation

In 2024, NSW Health conducted a literature review to explore in-hospital vaccination and identified the following barriers:

- Lack of accurate immunisation status documentation in patients' charts
- Time, funding and resource constraints
- Patient refusal and vaccine hesitancy
- Poor knowledge of patients about immunisation
- Lack of provider awareness and motivation
- Sub-optimal Indigenous status identification in hospitals

Findings informed the development of standing orders for inpatient vaccinations and future strategies to promote opportunistic in-hospital vaccination.

Objective 2: Identify opportunities for engagement

In 2024, NSW Health identified key engagement opportunities to improve immunisation access and uptake:

- **Mental health settings:** Data showed 3 times higher rates of vaccine preventable diseases and 2.7 times higher influenza hospitalisations in mental health patients. This gap led to engagement across the NSW Health sector to establish a community of practice and implement the mental health influenza vaccination program.
- **Community pharmacies:** Engagement with NSW pharmacy peak bodies aimed to embed immunisation as a routine aspect of healthcare in community pharmacy settings.

- **Bone marrow transplant patients:** NSW Health addressed gaps in access to revaccination (not funded under the National Immunisation Program (NIP)) by developing guidelines and decision-making tools in collaboration with clinical networks including Blood and Marrow Transplant / Cellular Therapies Network team and Agency for Clinical Innovation to assist clinicians to determine required vaccines and timing.

Objective 3: Integrate immunisation into routine clinical care

This objective builds on the opportunities identified as part of objectives 1 and 2.

In 2024, NSW Health implemented several initiatives to embed immunisation into routine care:

- **Mental health patients:** NSW Health funded influenza vaccines for mental health patients accessing NSW Health services who were not otherwise eligible for funded vaccines. This also included the development of targeted communication materials for patients.
- **Priority populations:** Funding was allocated to support LHDs to increase vaccine coverage among people who frequently attend NSW Health services but face barriers accessing primary care. The 2024 component focused on South-Western Sydney, Western Sydney, South-Eastern Sydney, and Sydney LHDs.
- **Bone marrow transplant patients:** Vaccines are now state funded and available for post BMT patients through NSW Health facilities and general practitioners.
- **Children with chronic illnesses:** Engaged with Sydney Children's Hospital Network (SCHN) and Hunter New England Kids (HNEK) to provide additional opportunistic catch-up immunisation services for high-risk children. Children with chronic illnesses or frequent hospital attendances are at increased risk of severe illness from vaccine preventable diseases and have substantially lower immunisation coverage rates.
- **Children with complex needs:** Additional opportunistic services were offered through SCHN and HNEK for children and their families, including influenza vaccinations and tuberculosis (TB) screening and BCG vaccination and adverse events following immunisation management clinics. Targeted programs were implemented for patients with complex medical issues, children born to women with chemical use in pregnancy and cystic fibrosis patients.
- **2024 annual influenza vaccination program:** The program was delivered with a focus on accessibility and equity. Key actions included engaging residential aged care homes (RACH), primary care providers, and respiratory specialists to promote vaccination uptake; developing tailored resources for providers and the community; hosting an annual webinar in collaboration with NCIRS with over 1,100 participants; pre-allocating influenza vaccine doses to immunisation providers to ensure equitable supply; and distributing 2.3 million doses through the State Vaccine Centre (SVC). These initiatives strengthened system readiness and improved coverage among priority populations.

Objective 4: Establish and maintain high immunisation coverage in residential disability and aged care settings

In 2024, NSW Health undertook activities to strengthen influenza vaccination coverage in Residential Aged Care Homes (RACH):

- **Engagement with RACH managers:** Supporting RACH managers to ensure their residents would be offered the program in a timely manner and provided information on the prevention.
- **Post-winter debrief:** Conducted with Public Health Units (PHUs), the Aged Care Unit, and communication leads to review respiratory illness activity in 2024. The session identified enablers and barriers to inform the 2025 respiratory illness strategy.

Priority Area 2: Enhance community awareness and understanding of immunisation

Supporting individual and community awareness and understanding of vaccines may help motivate people to engage with immunisation. When combined with good access, it can increase coverage. It will be important to collaborate with a number of services such as multicultural health services, translating and interpreting services and communication partners.

There are 3 objectives that help to support this priority area:

1. Develop effective communication strategies in partnership with community.
2. Utilise behavioural insights to understand community perspectives that affect how information is received.
3. Enhance the capacity of our diverse health care staff to engage with specific populations.

2024 activities

Objective 1: Develop effective communication strategies in partnership with community

In 2024, NSW Health focused on building community trust and awareness through targeted communication campaigns, culturally tailored resources, and partnerships to ensure accurate, accessible information about immunisation. These included:

- **Childhood Vaccination Campaign:** The annual campaign aims to inform, educate and remind about the importance of on-time vaccination. It targeted pregnant women and parents and carers of children 0-5 years and had a strong focus on reaching Aboriginal and Torres Strait Islander and CALD audiences. Post campaign evaluation recommended a new creative approach for 2025.
- **Winter Respiratory Illness Campaign:** Following low coverage of influenza vaccination in 65+ in 2023, research was completed to understand the barriers. Research and community testing informed a multicultural communication strategy, supported by the Multicultural Health Communication Service. This aimed to ensure culturally relevant and accessible communications and tailored materials were developed for priority populations. Post winter evaluation was completed to help shape the 2025 winter campaign strategy.
- **Reactive outbreak messaging:** Delivered timely messages highlighting disease risk and vaccination benefits for vaccine preventable diseases such as measles and pertussis.
- **Resource updates:** Immunisation resources for the community were revised and translated into 15 languages. A children's immunisation schedule resource was created to help parents understand vaccine timing and method of vaccine administration.
- **Community Connector Program:** Preparations began for onboarding not-for-profit organisations under the Community Connector for Immunisation Grants (starting FY 2025-26). In 2024, the University of New South Wales was engaged to develop training-of-trainer modules for these organisations.

Objective 2: Utilise behavioural insights to understand community perspectives that affect how information is received

Behavioural insights were utilised to support the activities outlined in Objective 1. Further examples throughout 2024 included:

- **Customer sentiment survey:** The Department of Customer Service (DCS) conducted fortnightly customer surveys throughout 2024 that works to track health concerns. From June, questions on influenza and hygiene behaviours were added to gauge community attitudes and barriers.
- **Population Health Survey:** Immunisation questions focused on barriers to childhood vaccination (1,237 parents surveyed). Key findings:
 - **Vaccine safety** remains the most common concern for parents of children under 5.
 - **Australian-born parents/carers** were more likely than overseas-born to disagree that vaccines protect the community, are safe, or that they intend to give their child recommended vaccines.
 - **Uninsured parents/carers** were more likely than those with private health insurance born to disagree that vaccines protect the community, are safe, or that they intend to give their child recommended vaccines.
 - **Socio-economic disadvantage** correlated with greater disagreement about vaccine safety. Compared with parents/carers living in the least socio-economic disadvantaged areas, those from the most disadvantaged areas were more likely to disagree that vaccines are safe for their child.
 - **Language barriers** were more common among overseas-born parents/carers when discussing vaccination with healthcare professionals.

Objective 3: Enhance the capacity of our diverse health care staff to engage with specific populations

Efforts under Objectives 1 and 2 have been undertaken to strengthen health care staff capability to engage with diverse populations through tailored communication campaigns, updated multilingual resources, and preparatory work for the Community Connector Program.

Priority Area 3: Maximise workforce capacity to support immunisation

While specialised workforces are essential in immunisation program delivery, it is important to maximise the workforce capacity further to support immunisation in all health care settings. Registered and enrolled nurses and midwives may administer vaccines (Schedule 4 medications) under a medical/nurse practitioner order. Authorised nurse/midwife immunisers and pharmacist immunisers are authorised under NSW legislation to independently initiate and administer certain vaccines.

There are 3 objectives that help to support this priority area:

1. Expand models of care.
2. Strengthen the Aboriginal health workforce.
3. Build workforce capability.

2024 activities

Objective 1: Expand models of care

In 2024, NSW Health worked to expand the models of care for NSW pharmacist immunisers and nurse / midwife immunisers.

- **Pharmacist immunisers:** The NSW Pharmacist Vaccination Standards were expanded to allow pharmacists to supply and administer a broader range of vaccines without a prescription from a medical officer, including pneumococcal conjugate, RSV, rabies (pre-exposure), and mpox (selected pharmacies).
- **Nurse and midwife immunisers:** The NSW Registered Nurses and Midwives Authority and Standards were expanded to authorise these practitioners to administer additional vaccines without a medical order, including RSV vaccines, RSV monoclonal antibody, rabies (pre-exposure), and mpox.

These program expansions aimed to improve access, especially in rural and regional areas.

Objective 2: Strengthen the Aboriginal health workforce

In 2024, NSW Health implemented targeted initiatives to strengthen the Aboriginal health workforce, focusing on expanding roles, authority, and community engagement to improve immunisation access and uptake.

- **Funding for Aboriginal Immunisation Health Workers (AIHWs):** HPNSW supported LHDs to employ AIHWs who work with Aboriginal Medical Services (AMSs) and programs such as Aboriginal Mums and Bubs to promote vaccination uptake and engage communities.
- **New Authority for Aboriginal Health Practitioners (AHPs):** In collaboration with the NSW Health Aboriginal Workforce Unit, HPNSW introduced an authority enabling AHPs to independently administer influenza vaccines to people aged 5 years and over without a medical order. This began as a pilot in Western NSW LHD facilities and was later extended statewide to all AHPs.

Objective 3: Build workforce capability

NSW Health initiatives in 2024 focused on strengthening workforce capacity through training, collaboration, and knowledge sharing:

- **Immunisation Policy and Practice Workshop:** Annual statewide forum for public professionals across public health, clinical practice and policy development. Key themes included translating policy into practice, addressing vaccine hesitancy, strengthening systems, leveraging data, and enhancing cross-sector collaboration.
- **NSW Immunisation Network:** Monthly meetings for PHUs and LHD immunisation teams to share updates and coordinate efforts in surveillance, education, and service delivery.
- **School Vaccination Program Workshop:** Interactive training for school program coordinators and immunisation staff, covering vaccination coverage data, new guidelines, best practices, and emerging trends.

The workshops and network meetings in 2024 provided updates on vaccination coverage, guidelines and best practice while fostering collaboration, shared learning, and coordinated efforts to strengthen immunisation programs across NSW.

Priority Area 4: Use data better to drive performance, improve outcomes and address inequities

Access to accurate, timely, and meaningful data is vital for identifying areas and populations with low immunisation coverage and understanding barriers and facilitators of vaccine uptake. This includes data to understand the influences on immunisation coverage.

There are legislative requirements for vaccine reporting. The AIR is a national register that records vaccines given to all people in Australia. The AIR Act 2015 mandates that immunisation records are submitted to the AIR within 24 hours, and no later than 10 business days.

NSW Health uses data from the AIR to monitor immunisation coverage, including unit record data and data from published reports.

There are 3 objectives that help to support this priority area:

1. Collaborate to improve AIR data quality.
2. Enable sharing of timely and meaningful data.
3. Explore data linkage opportunities.

2024 activities

Objective 1: Collaborate to improve AIR data quality

In 2024, NSW Health established the Gov2Gov data pipeline, establishing a connection with AIR data held by the Australian Government Department of Health, Disability and Ageing (DoHDA), known as the Gov2Gov feed.

- This connection enables the Epidemiology and Data Systems Branch (EDSB) to extract data on vaccines given to all people in NSW and transform and store the data so that it can be used for purposes outlined in the *Australian Immunisation Register Act 2015*, including monitoring vaccine uptake and timeliness.
- EDSB produces several datasets from the Gov2Gov data, which are used to improve immunisation access, uptake and equity across the state.
- Robust data governance procedures have been implemented to ensure secure storage, controlled access, and appropriate use of these data assets.

Objective 2: Enable sharing of timely and meaningful data

In 2024, NSW Health worked to strengthen data accessibility and insights to improve immunisation program performance and equity. Key achievements included:

- **Interactive Dashboards:** Developed Power BI reports to monitor coverage trends and demographics including:
 - **Immunisation coverage dashboard:** Designed for PHU and HPNSW staff to examine immunisation coverage by demographics using maps, tables and trend graphs. It supports monitoring against KPIs and benchmarks in the *Essential Vaccine Schedule (EVS)*, which underpins funding agreements to support the implementation of the NIP. Under the EVS in

2023-24, states and territories were required to meet five performance benchmarks and one milestone. NSW met benchmarks 2 to 5 and the milestone in 2023-24.

- **RSV Program Monitoring dashboard:** Combined AIR data on nirsevimab uptake, hospital pharmacy ordering data (Pharmalytix), and distribution data from the State Vaccine Centre. It enabled monitoring of the 2024 NSW RSV Vulnerable Babies Program across demographic groups.
- **Aboriginal Immunisation Health Worker (AIHW) Program:** Used biannual NCIRS reports to identify gaps in timely immunisation for Aboriginal and Torres Strait Islander children. AIHWs combined data-driven insights with culturally safe engagement to improve immunisation outcomes and contribute meaningfully to closing the gap in Aboriginal and Torres Strait Islander children's health.
- **Vaccine Safety Surveillance:** Continued implementing robust monitoring of vaccine administration errors (VAE) and adverse events following immunisation (AEFI), supported by statewide AEFI network meetings for education and best-practice sharing.
- **Knowledge Exchange:** Hosted regular AEFI network meetings enabled PHUs to share case studies and receive expert updates, fostering continuous improvement in vaccine safety.

These initiatives combined analytics, cultural responsiveness, and safety oversight to ensure timely, meaningful data sharing and informed decision-making across NSW.

Objective 3: Explore data linkage opportunities

In 2024, NSW Health advanced the use of linked data to improve understanding of immunisation coverage in priority populations:

- **Pregnancy Coverage:** Existing data sources alone were insufficient for accurate coverage estimates. A pilot study linked AIR and MatIQ data to provide more accurate estimates of maternal vaccination coverage in mothers who gave birth in NSW public hospitals by LHD of hospital. Results for 2022-23 showed 82% pertussis coverage (above target) and 57% influenza coverage (below target). Linking data addressed under-reporting issues and provided a more accurate picture of immunisation coverage in pregnancy. Ongoing monitoring will continue using linked data.
- **Disparities in vaccine uptake among CALD communities:** The COVID-19 response has led to the first large-scale reporting of adult immunisation data since the establishment of the AIR. Insights from linked COVID-19 data revealed disparities in vaccine uptake among CALD communities and those with chronic illnesses. These findings informed a 2024 policy proposal that secured funding for PPIP, including Community Connector Grants. This initiative empowers not-for-profit organisations to employ trained connectors to deliver accurate immunisation information and support access to trusted immunisation providers.

By leveraging data linkage, NSW Health has progressed towards Priority Area 4 by improving completeness of vaccination data, providing equity insights and informing targeted interventions for vulnerable groups.

Priority Area 5: Optimise the use of digital systems to support programs

Technology is evolving and advancing at a greater pace than ever before. How technology such as digital systems can enhance immunisation programs should be under constant review. With the implementation of new systems, a strong equity lens should be applied in recognition that not all members of the community are digitally enabled or able to use technology.

In 2023, NSW Health completed an AIR integration project to enable the reporting of vaccines administered in NSW Health facilities to the AIR via an automated interface. This project ensures timely and accurate reporting to the AIR while reducing the administrative burden on clinicians and ensuring they are meeting their legislative reporting requirements.

There are 3 objectives that help to support this priority area:

1. Prepare for evolving technology and develop system enhancements.
2. Promote CARMI to improve adolescent vaccine uptake in schools.
3. Support community skills and knowledge.

2024 activities

Objective 1: Prepare for evolving technology and develop system enhancements

In 2024, NSW Health advanced digital infrastructure to support immunisation programs by:

- **eMR and eMaternity updates:** Enhanced systems to record maternal RSV vaccination and nirsevimab immunisation, enabling clinicians to identify newborns requiring RSV protection.
- **VaxLink enhancements:** Updated to align digital systems with updated policy requirements. Key improvements included adding risk-based compliance pathways for individuals with medical contraindications, streamlining mandatory vaccine tracking, and removing COVID-19 as a mandatory requirement. These changes reduced administrative burden and strengthened workforce safety.
- **Single Digital Patient Record (SDPR) plan commenced:** Collaboration commenced with eHealth to plan enabling immunisation records/activities in SDPR, particularly to integrate vaccination workflows into NSW Health systems to support opportunistic vaccination within healthcare facilities.
- **State Vaccine Centre upgrades:** Plans finalised for upgrades finalised to deliver a modernised ordering platform to improve usability, cold chain compliance, stock visibility, ordering governance, reporting and overall regulatory oversight, with implementation scheduled for 2025.

Objective 2: Promote CARMI to improve adolescent vaccine uptake in schools

In 2024, NSW Health rebuilt the Consent and Records Management for Immunisation (CARMI) platform to streamline school-based vaccination processes and improve operational efficiency for PHUs and Community Health Centres. Key enhancements included:

- **Automated outage banner:** Dynamic notifications alert users when the Medicare API (application programming interface) is unavailable, improving transparency and user experience.

- **Consent record flexibility:** Updated portal to allow entry of a single name for parent or child, aligning with Medicare card formatting and simplifying data entry.
- **Vaccine listing update:** Revised meningococcal ACWY vaccine listing to include MenQuadfi alongside Nimenrix.

Objective 3: Support community skills and knowledge

In 2024, NSW Health worked to maintain accurate and timely vaccine reporting through system upgrades:

- **AIR Integration:** HPNSW and eHealth NSW continued implementing automated reporting interfaces from NSW Health clinical systems (e.g. eMR, eMeds) to the AIR.
- **Mandatory API upgrade:** Services Australia announced that AIR API version 1.4 would be mandatory by March 2025. A statewide project commenced to transition systems including eMR, CARMI and VaxLink to the new API.
- **New reporting fields:** Additional mandatory fields for pregnancy status and vaccine funding source were introduced, with updates applied across NSW Health systems to ensure compliance and accurate reporting.

Priority Area 6: Prepare to adopt and implement new vaccines

The unpredictable nature of emerging and re-emerging vaccine preventable diseases poses challenges. Additional vaccines are expected to be scheduled or rolled out over the period of this Strategy, as existing vaccines are required for the management of infectious disease outbreaks, and new vaccines are developed in response to the emergence of new pathogens. Recent examples include the 2021 rollout of COVID-19 vaccines, and targeted immunisation initiatives for populations at higher risk of Japanese encephalitis and mpox in 2022.

There are 3 objectives that help to support this priority area:

1. Prepare for vaccine technological advances.
2. Build motivation and confidence as new vaccines are introduced.
3. Plan for rapid targeted or population-scale vaccine rollouts.

2024 activities

Objective 1: Prepare for vaccine technological advances

NSW Health focused on readiness for new vaccine technologies by implementing programs and contributing to national strategy development.

- **RSV Vulnerable Babies Program:** In 2024, NSW Health delivered a state-funded program providing nirsevimab to eligible high-risk infants born between 1 October 2023 and 31 December 2024. This initiative aimed to protect vulnerable babies from severe RSV disease and targeted infants born prematurely or with specific medical conditions.
- **NSW contribution to the National Immunisation Strategy:** NSW actively participated in the development of the National Immunisation Strategy through the Jurisdictional Immunisation Coordinator Advisory Group (JICAG). Insights from the NSW Immunisation Strategy 2024–2028 helped shape national priorities and implementation approaches, ensuring alignment between state and national immunisation goals.

Objective 2: Build motivation and confidence as new vaccines are introduced

As part of implementing the NSW RSV Vulnerable Babies Program, efforts were made to ensure providers and the public had clear, accessible information to support confidence in new vaccine rollouts.

- **Communication to the community:** Developed and distributed communication materials, webpages for the public.
- **Community to immunisation providers:** Developed and distributed advice, communications, webpages and a clinician guide for immunisation providers.

These resources supported the safe and effective rollout of the RSV Vulnerable Babies Program and helped build trust in new immunisation technologies.

Objective 3: Plan for rapid targeted or population-scale vaccine rollouts

NSW Health strengthened preparedness for emerging infectious disease threats through national collaboration, workforce expansion, and integration of innovative technologies.

- **Preparedness activities:** NSW Health maintained a robust approach to readiness by conducting horizon scanning, participating in national technical advisory bodies such as ATAGI, and expanding the immunisation workforce. Digital infrastructure improvements and integration of new technologies into existing programs were also key components of this strategy.
- **Collaboration with national bodies:** NSW worked closely with the interim Australian Centre for Disease Control to enhance global surveillance and preparedness for emerging infectious diseases.
- **National engagement and technical contributions:** The NSW jurisdictional immunisation coordinator is a standing member of ATAGI and has also co-chaired the National RSV Working Group. These roles ensured NSW contributed to the development and rollout of maternal and infant RSV immunisation strategies, including the introduction of RSV vaccine Abrysvo® and nirsevimab (Beyfortus™). This engagement ensures NSW remains aligned with national advancements in immunisation science and policy, enabling timely integration of new vaccine technologies into state-level programs.

Conclusion

The NSW Immunisation Strategy 2024–2028 set out a comprehensive agenda to improve vaccine access, uptake, and equity across the state. Since its launch, significant progress has been made across all six priority areas, with coordinated efforts from LHDs, PHNs, AMS, and other key partners.

Immunisation is increasingly embedded in routine healthcare, with the rollout of initiatives such as the mental health influenza vaccination program, the BMT recipient revaccination program, and opportunistic vaccination programs in hospital settings. Community awareness and confidence have also been strengthened through multilingual campaigns, CALD-specific outreach, and targeted social research to better understand barriers to uptake.

A robust focus on workforce development has seen the expansion of pharmacist and authorised nurse and midwife immuniser roles, alongside support for Aboriginal health practitioners and a strengthened Policy and Practice Workshop. At the same time, the use of data to drive performance has been enhanced through Power BI dashboards, vaccine safety monitoring, online consent for the school vaccination program and vaccine management platforms. Digital platforms such as VaxLink, CARMI, and the SVC have seen key upgrades, setting the groundwork for streamlined vaccine delivery and program monitoring. Finally, NSW Health has demonstrated strong readiness for new and emerging vaccines, as seen with the rollout of the RSV Vulnerable Babies Program and ongoing participation in national working groups.

Despite this progress, key challenges remain. Immunisation coverage targets across most cohorts particularly among adolescents, pregnant women, and Aboriginal and Torres Strait Islander adults have yet to be fully met. Structural and social barriers continue to impact vaccination uptake in certain areas of NSW, particularly among CALD communities and in regions where alternative therapies may be preferred over immunisation. While digital and data infrastructure is improving, further integration and standardisation are needed to enable real-time, equitable service delivery. NSW Health remains committed to addressing these gaps.

Achieving high and equitable immunisation coverage across all communities will require sustained investment, system improvements, and culturally responsive engagement. The progress made so far provides a strong foundation for continued advancement in the years ahead.

Appendix 1: List of acronyms

Acronym	Definition
AEFI	Adverse Events Following Immunisation
AHP	Aboriginal Health Practitioners
AIHW	Aboriginal Immunisation Health Worker
AIR	Australian Immunisation Register
API	Application Programming Interface
AMS	Aboriginal Medical Services
ATAGI	Australian Technical Advisory Group on Immunisation
BMT	Bone Marrow Transplant
CALD	Culturally and Linguistically Diverse
CARMI	Consent and Records Management for Immunisation
CHW	Children's Hospital at Westmead
DoHDA	Department of Health, Disability and Ageing
dTpa	Diphtheria-tetanus-pertussis acellular
EDSB	Epidemiology and Data Systems Branch
eMR	Electronic Medical Record
EVS	Essential Vaccine Schedule
GP	General Practice
HNEK	Hunter New England Kids
HPNSW	Health Protection New South Wales
HPV	Human papillomavirus
JHCH	John Hunter Children's Hospital
JICAG	Jurisdictional Immunisation Coordinator Advisory Group
LHD	Local Health District
MatIQ	Maternity Intelligence System
MHCS	Multicultural Health Communication Service

MMR	Measles, Mumps, Rubella
MOH	Ministry of Health
NCIRS	National Centre for Immunisation Research and Surveillance
NIP	National Immunisation Program
NIS	National Immunisation Strategy
OPA	Our Practice Advisory
PHN	Primary Health Network
PHU	Public Health Unit
PPIP	Priority Populations Immunisation Programs
RACH	Residential Aged Care Homes
RSV	Respiratory Syncytial Virus
SCHN	South Children's Hospital Network
SDPR	Single Digital Patient Record
SHN	Specialty Health Networks
SVC	State Vaccine Centre
VAE	Vaccine Administration Errors
VPD	Vaccine Preventable Disease

Appendix 2: Glossary of terms

Term	Definition
Immunisation	The process of both getting a vaccine and becoming immune to the disease following vaccination.
Immunisation coverage	The proportion (reported as a percentage) of people within a population that received an immunisation.
Immunisation provider	The professional healthcare setting where an individual received their immunisation.
Infection	The invasion and growth of germs in the body. The germs may be bacteria, viruses or other organisms. Infections can begin anywhere in the body and can spread to other parts of the body. An infection can be asymptomatic or result in symptoms like fever or other health problems.
Monoclonal antibody	Artificial proteins that act like human antibodies in the immune system
Vaccination	The term used for getting a vaccine by having an injection or taking an oral vaccine dose.

Appendix 3: 2024 activities in focus

Priority Area 1: Embed immunisation in routine healthcare

Implementation of the mental health influenza vaccination program

The Mental Health Living Longer (MHLL) program is being led by the Mental Health team in NSW Ministry of Health (MoH). It uses routinely collected health data to understand causes of mortality in mental health service users. Data collected by InforMH¹ showed that the rate of vaccine-preventable hospitalisations in mental health service users was more than 3 times greater than the same rate in other NSW residents (aIRR 3.2, 95% CI 3.1 – 3.3). The rate of influenza hospitalisations in mental health service users was 2.7 (aIRR 2.7, 95% CI 2.6 – 2.8) times greater than the rate in other NSW residents. To address this, NSW Health funded influenza vaccines during the 2024 influenza vaccination program for mental health patients accessing NSW Health services who were not eligible for National Immunisation Program (NIP) influenza vaccines. This involved collaboration with the MoH Mental Health team to establish a community of practice with LHD mental health services to support the implementation of the program and the development of relevant communication materials specifically targeted at consumers of mental health services.

Funding for targeted LHDs to establish priority populations immunisation programs (PPIP)

In July 2024, funding was allocated via Service Agreements to support selected LHDs to increase vaccine coverage among people in priority populations who frequently attend NSW Health services and who may have trouble accessing primary care. Examples include renal dialysis patients, haematology/oncology patients, alcohol and other drug service patients and mental health patients. Programs were not limited to these groups, LHDs were required to review local services and patient cohorts to develop their strategic plans.

In 2024, the project focused support within the South-Western Sydney LHD (3 positions), Western Sydney LHD (2 positions), South-Eastern Sydney LHD (2 positions), and Sydney LHD (1 position). LHDs were required to submit project plans on target priority populations and implementation strategies, including performance indicators.

Implementation of bone marrow transplant (BMT) recipient revaccination program

During the consultation process for the Strategy, a gap was identified in access to vaccines for patients after their BMT procedure. Revaccination is recommended following a BMT, however, these vaccines are not funded under the NIP. To address access issues and protect this vulnerable patient cohort, Health Protection NSW (HPNSW) consulted with the Blood and Marrow Transplant/ Cellular Therapies (BMT+CT) Network team at Agency for Clinical Innovation (ACI) to develop guidelines and decision-making support tools to assist clinicians to determine required vaccines and timing. These vaccines are now state funded and available for post BMT patients through NSW Health facilities and general practitioners.

Literature scan to inform barriers to in-hospital vaccination

The Strategy's steering committee recommended that HPNSW conduct a literature scan to identify barriers to in-hospital vaccination. The scan was performed on Australian and international literature. This work identified key barriers to vaccination in hospital settings which included:

- lack of accurate immunisation status documentation in patients' charts

- time, funding and resource constraints
- patient refusal and vaccine hesitancy
- poor knowledge of patients about immunisation
- lack of provider awareness and motivation
- sub-optimal Indigenous status identification in hospitals

The outcome of this work shed light on how barriers to in-hospital vaccination could be overcome, and it informed the development of standing orders for NSW Health facilities' inpatient vaccinations, as well as future efforts to promote opportunistic in-hospital vaccinations.

Opportunistic immunisation in Sydney Children's Hospital Network (SCHN) and Hunter New England Kids (HNEK)

Children with chronic illnesses or frequent hospital attendances are at an increased risk of severe disease from vaccine-preventable diseases and have substantially lower immunisation coverage rates compared to their healthy peers. The opportunistic child immunisation services at SCHN and HNEK provide immunisation services to patients and their families who attend the Children's Hospital at Westmead (CHW), the Sydney Children's Hospital, Randwick (SCHN) and the John Hunter Children's Hospital (JHCH).

In 2024, in addition to opportunistic catch-up immunisations, services in these facilities included seasonal influenza and TB screening/BCG vaccination and adverse events following immunisation management clinics. Additionally, targeted programs were implemented for patients with complex medical issues such as liver disease and cystic fibrosis patients (CHW), children born to women with chemical use in pregnancy (CUPS clinic), (SCHN) and cystic fibrosis patients (HNEK). The program continues to improve immunisation access for Aboriginal and Torres Strait Islander families for instance through the establishment of outreach clinics in an Eastern Sydney suburb.

Engagement and education of NSW immunisation providers - annual influenza vaccination program

To support the implementation of the NSW influenza program in 2024, and promote vaccine uptake, extensive support was provided to general practitioners (GPs), residential aged care facilities (RACFs), pharmacists, and respiratory specialists. The program's promotion included but was not limited to the development of a range of resources for providers and the community. HPNSW also engaged with RACF managers to support them in ensuring their residents would be offered the program in a timely manner and provided information on the prevention of vaccine preventable diseases. An annual influenza vaccination program webinar was held in March 2024 in collaboration with immunisation experts from the National Centre for Immunisation Research and Surveillance (NCIRS) where over 1,100 participants were provided with essential information on the up-and-coming influenza season.

In the 2024 program, NSW Health pre-allocated influenza vaccine doses to all immunisation providers to ensure equitable supply across NSW at the start of the program and distributed over 2.3 million vaccines overall.

Engagement with NSW pharmacy peak bodies

HPNSW distributes recent news and updates on various vaccination matters to the Pharmaceutical Society of Australia (PSA), Pharmacy Guild of Australia (NSW) and several pharmacy banner groups for further distribution to NSW community pharmacists. Each month key immunisation related topics such as ways to promote vaccination uptake in pharmacy settings, reminders on how to store and transport vaccines safely, and news about recent webinars or conferences with

sessions related to expanding the role of community pharmacists in immunisation are included. This engagement and information sharing aims to establish immunisation as a routine aspect of healthcare provided by community pharmacists.

Priority Area 2: Enhance community awareness and understanding of immunisation

Childhood vaccination campaign

A childhood vaccination campaign has been run each year in NSW for more than a decade. Throughout 2024, the childhood vaccination campaign continued to inform, educate and remind pregnant women and parents and carers of children 0 – 5 years about the importance of on-time vaccination. The campaign also drove traffic to the NSW Health childhood immunisation landing page which provided direction to the immunisation schedule and translated resources.

Paid advertising ran in two bursts between February and June 2024. There was a strong focus on reaching Aboriginal and Torres Strait Islander and CALD audiences (30% of the media budget) as well as regional audiences (37% of the media budget). A dedicated media budget was also set aside to directly target the lowest SA3 areas and areas with high rates of births to Aboriginal and Torres Strait Islander mothers.

The campaign was fully integrated across paid advertising, owned social media channels, proactive media, digital/website, events and stakeholder engagement. Improvements and updates were made to the NSW Health childhood immunisation landing page including translations and a simplified immunisation schedule, fact sheets and baby milestones cards. NSW Health also partnered with the Australian Government to provide information and resources to parents and carers and pregnant women about childhood vaccination, and the importance of on-time vaccination, at the Parents, Babies and Children's Expo in Sydney in May 2024.

For the second half of 2024, owned social media channels were used to continue directing traffic to the updated childhood vaccination landing page and resources. This included reactive messaging in response to outbreaks which aimed to emphasise the current risk of disease and the benefits of vaccination for vaccine preventable diseases such as measles and pertussis.

Post campaign research identified that while immunisation awareness is high, the campaign had not appeared to significantly shift vaccination rates since the COVID-19 pandemic. A new creative campaign was recommended ahead of the next campaign, with preparation and approvals undertaken in late 2024.

Winter respiratory illness preparedness initiative 2024

Influenza vaccination coverage in people aged 65 and over was lower than expected in 2023. To improve the community's awareness and understanding of immunisation, campaign research was conducted by the research agency Ipsos prior to the launch of the 2024 respiratory illness campaign. This research aimed to identify barriers and motivators to vaccination for people aged 65 years and over and informed a refreshed creative approach. It included insights from mainstream, Aboriginal and Torres Strait Islander communities, and CALD communities in NSW, specifically Mandarin- and Arabic-speaking audiences.

During the campaign preparation phase, the Multicultural Health Communication Service (MHCS) undertook community testing and consultation to inform the multicultural communications strategy. Consultation with the Centre for Aboriginal Health (CAH) occurred to shape communications to Aboriginal and Torres Strait Islander communities. These activities helped refine campaign messaging and creative assets by improving the understanding of community needs and promote positive engagement.

Paid advertising ran from May to August 2024, targeting parents/carers of children aged 6 months to under 5 years, pregnant women and people aged 65 years and above (including CALD communities) and all Aboriginal and Torres Strait Islander people aged 6 months and above. The campaign was fully integrated across paid advertising, owned social media channels, proactive media, digital/website and stakeholder engagement.

For paid media, MHCS provided strategic advice on the CALD media plan and translated social media tiles and content to ensure cultural relevance and accessibility. Tailored materials were also developed for priority populations including Aboriginal and Torres Strait Islander communities. Throughout the campaign, MHCS engaged CALD media outlets, community organisations, leaders, members, GPs, and bi/multi-lingual health professionals to support the campaign and promote flu vaccination uptake within multicultural communities.

A range of clinical stakeholder activities were used to supplement the paid campaign messaging, with information and resources distributed to aged care providers, GPs, pharmacies and Primary Health Networks (PHNs).

A post campaign evaluation was conducted by Ipsos from August to September 2024 with findings shaping the 2025 winter campaign strategy. This included recommendations for an additional pre-winter vaccination education campaign for the general population to supplement the winter respiratory campaign. These initiatives will be underpinned by both consumer and healthcare professional stakeholder engagement.

A post-winter debrief was held with NSW Health Public Health Units (PHUs), the Aged Care Unit in Health and Social Policy Branch in the Ministry of Health and communication leads to evaluate the respiratory illness activity in 2024. This identified a range of enablers and barriers for consideration when implementing the 2025 respiratory illness strategy.

Multilingual and improved immunisation resources

To advance accessibility and promote health equity, NSW Health undertook the translation and subtitling of a suite of childhood immunisation resources available on its website into 15 languages. This initiative was designed to support CALD communities by facilitating access to accurate and current immunisation information in their preferred language. By reducing language barriers, the initiative contributes to informed health decision-making and improved immunisation uptake across diverse population groups.

In April 2024, as part of its commitment to improving public health outcomes for children aged 0 to 5 years, HPNSW developed an immunisation schedule resource for parents to help them understand their child's immunisation schedule. The resource was developed to also help parents and carers from diverse cultural and linguistic backgrounds to understand the schedule points and vaccines being offered.

To enhance clarity and usability, the schedule resource incorporates visual representations such as icons depicting oral drops and syringes to indicate the method of vaccine administration. This approach supports informed decision-making and promotes timely vaccination by simplifying the communication of key information. The initiative aligns with NSW Health's strategic priorities in health literacy, inclusivity, and early childhood health promotion.

Training community connectors for better engagement with CALD communities

Not-for-profit organisations will be on boarded under a community connector for immunisation grants program from financial year 2025-26. In 2024, to support these organisations, a request for tender to engage an academic partner to develop training of trainer modules to support community connectors for immunisation grant organisation (once on boarded) was released.

The University of New South Wales (UNSW) through Associate Professor Holly Seale has been engaged to develop these modules to support these community connectors.

Community sentiments surveys

The Department of Customer Service (DCS) continued to run a customer sentiment survey throughout 2024. This research is conducted online on a fortnightly basis with a sample size of 850 residents of NSW. There were regular questions included about health, such as the concern about the cost of health care.

Specific questions were also added about flu and hygiene behaviours in June 2024. This provided a current indication of community concern in relation to flu levels, perceived effectiveness of hygiene behaviours, hygiene behaviours undertaken, and motivations and barriers for following hygiene behaviours.

Introduction of a Vaccine Barrier Assessment Tool (VBAT) to the NSW Health Population Health Survey

The NSW Health Population Health Survey immunisation questions were changed in 2023 to include 6 questions relating to barriers to childhood vaccination, these were repeated in 2024. The questions were asked of parents of children aged under 5, with 1,282 parents surveyed in 2023 and 1,237 surveyed in 2024. Key take away messages from the 2024 survey include:

- vaccine safety is the most common concern for parents/carers regarding vaccination of children under 5 years.
- compared with parents/carers born overseas, Australian-born parents/carers were more likely to disagree with:
 - vaccinating their child protects the community
 - vaccines are safe for their child
 - intending to give child recommended vaccines

(It is noted that the sample size was too small for to detect differences in most sub-groups).

- compared with parents/carers with private health insurance, uninsured parents/carers were more likely to disagree with:
 - vaccinating their child protects the community
 - vaccines are safe for their child
 - intending to give child recommended vaccines
- compared with parents/carers living in the least socio-economic disadvantaged areas, those from the most disadvantaged areas were more likely to disagree with:
 - vaccines are safe for their child
- parents/carers born overseas are more likely to face language barriers when discussing vaccination with healthcare professionals.

Priority Area 3: Maximise workforce capacity to support immunisation

Enhancing NSW pharmacist immunisers' role in immunisation

In 2024, the NSW Pharmacist Vaccination Standards (the Standards) were significantly expanded to authorise NSW pharmacist immunisers to supply and administer a broader range of vaccines to eligible people without the need for a prescription from a medical officer. These additional vaccines

include pneumococcal conjugate vaccine, respiratory syncytial virus (RSV) vaccines, rabies vaccine for pre-exposure prophylaxis, and mpox vaccine (only available at selected pharmacies). These enhancements were implemented to improve vaccine access, particularly in rural and regional areas where access to general practice services may be limited.

Further expansion of the authorised nurse/midwife immuniser program

In 2024, the NSW Registered Nurses and Registered Midwives Authority and Standards were expanded to enable authorised NSW registered nurse and midwife immunisers to administer a broader range of vaccines without the need for a prescription from a medical practitioner. These additional vaccines include RSV vaccines and an RSV monoclonal antibody, rabies vaccine for pre-exposure prophylaxis, and mpox vaccine. These enhancements were as well implemented to improve vaccine access.

Authorised Aboriginal health practitioner workforce

To enhance access and address health inequities, HPNSW provides funding to LHDs to employ Aboriginal immunisation health workers to promote vaccination within their communities. These staff members collaborate closely with local Aboriginal Medical Services (AMSs), as well as programs such as Aboriginal Mums and Bubs, and actively engage with community members to increase vaccine uptake.

In 2024, HPNSW collaborated with the NSW Health Aboriginal Workforce Unit to develop and implement an Authority to authorise Aboriginal health practitioners (AHPs) to independently administer influenza vaccines without a medical order to people aged 5 years and over. This commenced as a pilot program in Western NSW LHD facilities. This program was subsequently extended to all AHPs in NSW.

2024 Immunisation Policy and Practice Workshop

The annual immunisation policy and practice workshop is a dedicated forum for professionals across public health, clinical practice, and policy development to explore the intersection of immunisation strategy and real-world delivery. Through expert-led sessions, case studies, and collaborative discussions, participants examine current policy frameworks, emerging challenges, and innovative approaches to improving vaccine access, uptake, and equity. Key themes include:

- translating policy into practice
- addressing vaccine hesitancy and misinformation
- strengthening immunisation systems and workforce capacity
- leveraging data for informed decision-making
- enhancing collaboration across sectors and jurisdictions

This annual workshop fosters dialogue and shared learning and supports the development of practical solutions and forward-thinking strategies to strengthen immunisation programs at all levels. It also provides a platform for PHUs to exchange ideas and showcase their local immunisation-related initiatives.

The presentations at the 2024 workshop included information on NSW immunisation coverage rates, the NSW Immunisation Strategy 2024-2028, RSV future landscape and horizon, the community champions program and the pharmacist vaccination program.

NSW immunisation network collaborations

HPNSW hosts monthly network meetings to provide the latest immunisation updates to all members of the Health Protection Leadership Team (HPLT) and immunisation coordinators and

staff in LHDs. This network fosters coordinated efforts in surveillance, education, policy development, and service delivery, ensuring that immunisation strategies are evidence-based, equitable, and responsive to emerging challenges.

Annual school vaccination program workshop

The school vaccination program workshop is an interactive training and educational workshop, which brings together school program and immunisation coordinators from across the state to enhance professional expertise, foster collaboration, and explore emerging trends in the field. This annual event brings together leaders, authorised nurse immunisers and program managers for a day of insightful presentations, interactive sessions, and strategic discussions. It is also an opportunity to engage with innovative ideas and share best practices,

The workshop provides an update on overall vaccination coverage data, vaccine-preventable diseases, new guidelines, and best practices for vaccine delivery. Some of the presentations in the 2024 workshop included trauma-informed immunisation of refugee young people, The Vax4Health research project is an inclusive initiative led by the Kirby Institute. Its primary goal is to co-design and improve vaccination services for students with disability, particularly those attending special schools. Vax4Health research findings, meningococcal B prevalence and vaccination and an update on the Western NSW Aboriginal immunisation health worker program were presented.

Priority Area 4: Use data better to drive performance, improve outcomes and address inequities

Development of the Australian Immunisation Register Gov2Gov data pipeline

The Epidemiology and Data Systems Branch (EDSB) within HPNSW has established a connection with AIR data held by the Australian Government Department of Health, Disability and Ageing (DoHDA), known as the Gov2Gov feed. This connection enables the EDSB to extract data on vaccines given to all people in NSW and transform and store the data so that it can be used for purposes outlined in the *Australian Immunisation Register Act 2015*, including monitoring vaccine uptake and timeliness. The EDSB produces several datasets from the Gov2Gov data, which are used to improve immunisation access, uptake and equity across the state. The EDSB has developed and implemented robust data governance procedures for data storage, access and use.

Development of immunisation coverage PowerBI reports for PHUs and HPNSW

Immunisation coverage exploration PowerBI report

The EDSB developed an interactive PowerBI report that enables relevant staff across PHUs and HPNSW to examine immunisation coverage across a range of demographics. Immunisation coverage is displayed using maps, tables and trend graphs and key insights are highlighted to enable staff to identify gaps and develop initiatives to improve vaccine uptake.

Staff can use the PowerBI reports to monitor performance against key performance indicators and improvement measures, which are set for each LHD based on NSW Health priorities. Staff can also use the PowerBI report to monitor performance against performance benchmarks outlined in the Essential Vaccine Schedule (EVS), which forms the basis of a funding agreement between DoHDA and states and territories to support the implementation of the NIP. Under the EVS in 2023-24, states and territories were required to meet five performance benchmarks and one milestone:

- Benchmark 1 – maintained or increased vaccination coverage rates for 60 ≤ 63-month-olds

- Benchmark 2 – maintained or increased vaccination coverage rates for Aboriginal and Torres Strait Islander children in two of the following three cohorts:
 - 12- ≤ 15-month-olds
 - 24- ≤ 27-month-olds
 - 60- ≤ 63-month-olds
- Benchmark 3 – an increase in the vaccination coverage rate for both adolescent boys and adolescent girls aged 15 years for human papillomavirus (HPV)
- Benchmark 4 – an increase in vaccination coverage rates for 60- ≤ 63-month-olds in 4 of the 10 lowest vaccination coverage SA3 geographical areas
- Benchmark 5 – an annual decrease in the wastage and leakage rate for agreed vaccines
- Milestone – provision of a seasonal influenza vaccination rollout plan for the 2024 influenza season

NSW met benchmarks 2 to 5 and the milestone in 2023–24.

RSV PowerBI report

EDSB developed an interactive PowerBI report that brought together AIR data on nirsevimab uptake, pharmalytix data on nirsevimab doses ordered by hospital pharmacies, and nirsevimab immunisation distribution data from the state vaccine centre. These data were presented by a range of demographics that enabled staff to monitor the implementation of the 2024 NSW RSV Vulnerable Babies Program.

Using linked data to better understand immunisation coverage in priority populations

Immunisation coverage in pregnancy

Vaccination in pregnancy is a safe and effective way of protecting infants against pertussis, influenza and RSV infection in the first months of life. Vaccination in pregnancy also reduces the risk of severe illness from influenza for pregnant women. In 2024, pregnant women were recommended to receive an inactivated pertussis vaccine between 20- and 32-weeks' gestation and an inactivated influenza vaccine at any stage of pregnancy. These vaccines are funded under the NIP. The NSW Immunisation Strategy 2024 – 2028 sets targets of 80% for pertussis and 60% for influenza immunisation coverage in pregnancy, with stretch targets of 90% and 80%, respectively.

There are several sources of information on vaccination in pregnancy, including the NSW Perinatal Data Collection (PDC), the AIR, and the QIDS Maternity Intelligence System (MatIQ). None of these data sources alone provide reliable and timely estimates of maternal vaccination coverage. EDSB conducted a pilot study in 2024 that used linked data from the MatIQ (public hospital maternity data) and the AIR to determine if data linkage could enhance completeness of vaccination data, and if these data could be used to develop indicators to monitor maternal influenza and pertussis immunisation coverage in mothers who gave birth in NSW public hospitals by LHD of hospital.

The study found that immunisation coverage in pregnancy in the 2022-23 financial year, based on linked data from the MatIQ and the AIR, was 82% (above target) for pertussis and 57% (below target) for influenza. Linking data from the MatIQ and the AIR overcame some of the problems of under-reporting in both the MatIQ and the AIR and provided a more complete picture of immunisation coverage in pregnancy than either data asset alone.

Results from this study were shared with HPNSW, the NSW Immunisation Network, the NSW Immunisation Strategy Steering Committee, LHD Chief Executives, and PHUs. EDSB will continue to monitor immunisation coverage in pregnancy using linked MatIQ and AIR data.

A business case for funding for PPIP

The COVID-19 response has led to the first large-scale reporting of adult immunisation data since the establishment of the AIR. As such, it has been the first time that NSW Health has been able to systematically document differences in adult immunisations between different community groups, including CALD groups and groups in the community that have lower vaccine uptake, such as some people with chronic illnesses. Data from the AIR linked to other Australian Government data sets have shown that there are:

- significant differences in the uptake of COVID-19 boosters between people of different CALD backgrounds, and
- differences in the uptake of COVID-19 boosters between people who received their initial immunisation at a mass vaccination centre versus a pharmacy or GP.

Evidence presented to the 2023 Parliamentary Inquiry into improving crisis communications to CALD communities suggested that in Western Sydney 24% of individuals surveyed wished to get their COVID-19 information from a community organisation and 23% from their GP.

These data formed the foundation of a 2024 submission of a new policy proposal to the Expenditure Review Committee outlining the case for enhancing vaccine uptake among these communities, which ultimately led to the development and implementation of the PPIP including the Community Connectors for Immunisation Grants. These grants will be provided to not-for-profit organisations to employ community connectors who will be empowered with up to date, factual knowledge about immunisation through a training of trainers program delivered by the UNSW, to support them with the delivery of this information and assisting them help community members access trusted immunisation providers.

Aboriginal Immunisation Health Worker (AIHW) Program: data-driven approach

As part of the AIHW program, NCIRS provides biannual reports (April and October) to HPNSW. These reports deliver tailored analyses on the timeliness of immunisation for Aboriginal and Torres Strait Islander children at key milestones in the NIP: 6 months, 12 months, and 4 years of age.

Timeliness is defined as receiving scheduled vaccinations within two months of the recommended age. These data, disaggregated by LHD, serve as a critical tool for identifying service delivery gaps and guiding targeted interventions.

AIHWs are central to this effort. Their culturally grounded roles include:

- building trust and ensuring cultural safety in healthcare settings
- educating and supporting families on the importance of timely immunisation
- facilitating access through coordination of local services
- advocating for community needs within public health systems.

By combining data-driven insights with culturally responsive service delivery, the AIHW program empowers LHDs to improve immunisation outcomes and contribute meaningfully to closing the gap in Aboriginal and Torres Strait Islander child health.

Monitoring and review of VAE and AEFI reports to ensure immunisation outcomes and public safety

HPNSW conducts ongoing surveillance of vaccine safety across the state, including monitoring reports of vaccine administration errors (VAEs), adverse events following immunisation (AEFIs), and adverse events of special interest (AESIs). These surveillance activities are essential for identifying trends and informing improvements in vaccine delivery and safety practices. Insights from these reports are used to develop targeted communication materials for immunisation providers, offering practical guidance on vaccine safety particularly in the context of new immunisation products. For example, in support of the 2024 RSV Vulnerable Babies Program, HPNSW developed a clinician guide detailing the safety and effectiveness of nirsevimab, a monoclonal antibody introduced for eligible at-risk infants.

Robust processes are in place to ensure timely and appropriate responses to VAEs and AEFIs, including investigation, follow-up, and reporting to relevant stakeholders. These actions are undertaken with the overarching goal of maintaining public confidence in immunisation programs and ensuring the continued safety of the population.

AEFI network education and knowledge exchange

HPNSW facilitates regular network meetings focused on AEFIs. These sessions serve as a key platform for statewide collaboration, education, and continuous quality improvement in vaccine safety. Key features of the network meetings include:

- statewide case summaries: each session includes a consolidated overview of recent AEFI cases reported across NSW, supporting situational awareness and trend monitoring
- local case presentations: PHUs present case studies and share local experiences, fostering peer learning and collaborative problem-solving
- expert contributions: specialists from NCIRS regularly participate, providing updates on national and international vaccine safety data, emerging research, and global trends

The teleconferences enable timely exchange of information and best practices across PHUs and immunisation coordinators. They also enhance the capability of local teams to manage AEFIs effectively and apply evidence-based approaches. Insights gained through the network contribute directly to the continuous improvement of immunisation program safety and delivery across NSW.

Priority Area 5: Optimise the use of digital systems to support programs

eMR PowerChart Maternity and eMaternity updates to support the 2025 RSV prevention program

Electronic medical record (eMR) PowerChart Maternity and eMaternity are the patient electronic medical record systems utilised by NSW Health for the management of maternity encounters in NSW Health facilities.

In 2024, in preparation for the 2025 RSV prevention program, HPNSW collaborated with eHealth NSW and eMaternity and eMR PowerChart Maternity system administrators to support changes to record and report maternal RSV vaccination and nirsevimab immunisation. The system updates were critical to inform the management of newborn infants as they enabled clinicians to identify if infants require nirsevimab based on maternal RSV vaccination status.

Modernising immunisation infrastructure through VaxLink enhancements

VaxLink platform is used by Staff Health to manage and monitor staff vaccination status and support compliance against the revised NSW Health Policy Directive *PD2024_015 – Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases* (OASV policy).

VaxLink has undergone significant enhancements over the past few years to meet the evolving needs of the Staff Health network. In collaboration with eHealth, HPNSW has worked to improve the platform's functionality, streamline reporting processes, and strengthen follow-up procedures, thereby increasing the platform's overall effectiveness and usability.

In 2024, the platform underwent targeted enhancements to support the implementation of the revised OASV policy. These updates were designed to ensure alignment between digital systems and updated policy requirements for NSW Health workers and students. Key changes supported by the platform include:

- removal of COVID-19 vaccination as a mandatory requirement, reflecting updated public health guidance (COVID-19 vaccination remains strongly recommended in accordance with the Australian Immunisation Handbook)
- inclusion of individual risk assessments for those with medical contraindications, enabling tailored compliance pathways and improved documentation
- streamlined tracking and reporting for mandatory vaccinations, including hepatitis B, influenza, measles-mumps-rubella (MMR), varicella, and tuberculosis, based on occupational risk categories

The enhancements to VaxLink improve usability, ensure policy compliance, and support safe workforce practices across NSW Health facilities. These changes also contribute to more efficient onboarding and monitoring processes, reducing administrative burdens while maintaining high standards of infection prevention.

Driving improvement through involvement in the Single Digital Patient Record (SDPR) program design and evaluation

In 2024, HPNSW started collaborating with eHealth to plan enabling immunisation records/activities in SDPR, particularly to integrate vaccination workflows into NSW Health systems to support opportunistic vaccination within healthcare facilities. One example is when a pregnant woman attends an antenatal clinic, the SDPR, which will be linked with the AIR, is designed to prompt healthcare providers to discuss and offer any due vaccinations.

Additionally, clinical decision support tools such as Our Practice Advisory (OPA) pop-up alerts have been designed in this system. These alerts prompt clinicians to review the patient's immunisation status on the AIR and offer recommended vaccinations as appropriate, thereby enhancing timely and proactive vaccination delivery.

Digital enhancements to the state vaccine centre (SVC) ordering interface

HPNSW has been undertaking ongoing enhancements to the SVC's vaccine ordering platform to improve its functionality as a tool for cold chain compliance, vaccine access, ordering governance, and overall regulatory oversight. The online vaccine ordering platform plays a critical role in ensuring that vaccines are ordered, stored, and distributed in accordance with national standards and best practice. The enhancements aim to improve system useability, streamline ordering workflows to reduce administrative burden and errors, enhance visibility and traceability of vaccine stock and distribution, and strengthen data integration for reporting and compliance purposes. The development/drafting of such enhancements was finalised in 2024 with implementation stage planned to commence in 2025. The enhancements are

expected to contribute to improved vaccine management, enhanced cold chain governance, and improved system functionality to vaccine providers.

Consent and Records Management for Immunisation (CARMI) enhancements and rebuild overview

The Consent and Records Management for Immunisation (CARMI) application streamlines the school-based vaccination process by enabling parents and carers to submit online consent for their adolescent child's routine immunisations. The platform also supports operational efficiency for PHUs and Community Health Centres by facilitating clinic scheduling, resource allocation, vaccination data recording and upload, and the generation of key performance indicator (KPI) and operational reports.

In 2024, CARMI was comprehensively rebuilt as part of the enhancements project. A total of 30 development stories were successfully implemented and deployed. Key improvements included:

- automated outage banner- a dynamic notification system was introduced to alert users when the Medicare API (application programming interface) is unavailable, enhancing transparency and user experience
- consent record flexibility - the parent/guardian portal was updated to allow entry of a single name for either the parent or child, aligning with Medicare card formatting and simplifying data entry
- vaccine listing update - the meningococcal ACWY vaccine listing was revised to include MenQuadfi alongside Nimenrix, ensuring accurate representation of current vaccine options.

AIR Integration Governance Committee – progress and implementation

In 2023, HPNSW collaborated with eHealth NSW to establish an interface from a range of NSW Health clinical systems including eMeds in the eMR to the AIR to enable automated reporting of vaccines administered through NSW Health services and to meet mandatory reporting requirements. In 2023 the majority of LHDs implemented this interface into their systems, however, several LHD/Specialty Health Networks (SHN) did not initially integrate with the interface.

In 2024, Services Australia, who manages the AIR, advised software managers and AIR portal users that the use of an upgraded API, version 1.4, would be mandatory by 1 March 2025. To ensure ongoing reporting of NSW Health facility vaccination records, eHealth led a project that commenced in 2024 with collaboration with HPNSW to transition a range of systems to this new API including eMR, CARMI and VaxLink. Additionally, Services Australia introduced new mandatory reporting fields relating to pregnancy status and vaccine funding source. To ensure accurate reporting and compliance with mandatory reporting requirements, eHealth in collaboration with HPNSW, led a project to include these additional fields in interfaces used by NSW Health services.

Priority Area 6: Prepare to adopt and implement new vaccines

Implementation of state-funded 2024 RSV Vulnerable Babies Program

The *NSW RSV Vulnerable Babies Program* provided nirsevimab to eligible infants born between October 1, 2023, and December 31, 2024, to protect them from severe RSV disease. This program targeted high risk infants who meet specific eligibility criteria, including being born prematurely or having certain risk conditions. As part of implementing this program, various communication materials, webpages and educational resources were developed and distributed to immunisation

providers and the public to support the safe and effective rollout and implementation of this new initiative.

Preparedness for emerging infectious disease threats and novel immunisation technologies

Australia faces increasing risks from infectious diseases, driven by factors such as climate change, growing population density, and global mobility. These evolving conditions necessitate proactive surveillance and readiness for new immunisation strategies and technologies.

The establishment of the interim Australian Centre for Disease Control (CDC) in 2024 has strengthened national capacity for international horizon scanning of emerging infectious disease threats, supporting the development and evaluation of novel vaccine technologies within Australia and NSW Health preparedness. NSW Health maintains a robust approach to preparedness through:

- local horizon scanning via research partnerships and participation in national technical advisory bodies, including Australian Technical Advisory Group on Immunisation (ATAGI)
- operational readiness to adopt new vaccine technologies, supported by
 - expansion of the immunisation workforce
 - enhanced utilisation of data systems and digital infrastructure
 - integration of new technologies into existing immunisation programs.

This multi-level engagement ensures NSW Health is well positioned to rapidly respond to emerging infectious disease threats, lead in the implementation of innovative immunisation programs and align with national and global best practices in vaccine deployment.

Participation in an expert advisory group (EAG) for the National Immunisation Strategy development

The NSW representative on the Jurisdictional Immunisation Coordinator Advisory Group (JICAG) actively participated in the expert advisory group for the development of the National Immunisation Strategy (NIS). Key insights from the NSW Immunisation Strategy 2024–2028 were instrumental in shaping the NIS, particularly in identifying strategic priorities and implementation approaches. The cross-jurisdictional collaboration by the JICAG was valuable in highlighting gaps in immunisation delivery and informing national-level solutions.

National engagement and technical contributions

The NSW jurisdictional immunisation coordinator is a standing member of the ATAGI, which provides expert advice to the Australian Government on vaccine policy, clinical guidance and implementation strategies under the NIP.

The coordinator has co-chaired the National RSV Working Group in collaboration with DoHDA, contributing to the development and rollout of maternal and infant RSV immunisation strategies, including the use of the RSV vaccine Abrysvo® and nirsevimab (Beyfortus™).

This dual involvement ensures NSW remains aligned with national advancements in immunisation science, regulatory approvals, and programmatic updates, facilitating timely integration of emerging vaccine technologies and evidence-based practices into state-level immunisation programs.



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