

Embedding Immunisation into Routine Healthcare – Toolkit for Local Health Districts



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Audience

This toolkit is intended for use by all clinicians working in NSW Health Local Health Districts (LHDs) to facilitate embedding immunisation into routine healthcare for patients. This includes patients being vaccinated through the course of routine care, in targeted clinics or through in-reach and outreach clinics.

What the kit contains

This Toolkit has been developed to support LHDs to implement the NSW Immunisation Strategy 2024-2028 and to embed vaccination into the routine care of patients accessing LHD services. The Toolkit includes information about:

- Background
- Priority groups
- Routinely embedding vaccination into patient care
- Funded vaccines
- Checking a patient's immunisation history
- Mandatory reporting of vaccines to the AIR
- Monitoring vaccination encounters
- Immunisation workforce
- Reporting adverse events following immunisation
- Vaccine storage and cold chain management
- Useful links
- Contact

Background

General practice has historically provided the majority of vaccinations in NSW. However, all health care professionals including LHD staff should take every opportunity to vaccinate children, adolescents and adults on time and at the recommended intervals to ensure they are protected against serious vaccine preventable diseases. Health workers play a critical role in shaping attitudes towards immunisation and maintaining high vaccination coverage.

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.

NSW LHD staff are in a unique position to discuss vaccination with patients particularly those from high risk and hard to reach populations. It is therefore essential that healthcare workers have the required skills, knowledge and confidence to provide accurate information to patients and discuss the risks and benefits of vaccination.

Priority groups

Patient cohorts who are at highest risk of severe outcomes from specified diseases should be prioritised for vaccination. This includes, but is not limited to, patient groups that have frequent contact with LHD services, such as renal, oncology, mental health, rehabilitation and maternity services; and older patients, particularly those that are being discharged into residential care. Culturally appropriate services should also be made available for Aboriginal and Torres Strait Islander people and people from Culturally and Linguistically Diverse (CALD) backgrounds.

Additional information is also available on the [NSW seasonal influenza webpage](#) and the [pneumococcal decision tree webpage](#) to support the appropriate administration of these vaccines.

Vaccine recommendations for people who are immunocompromised, including people with cancer, solid organ transplant recipients, people with functional or anatomical asplenia and chronic conditions are included in the [Australian Immunisation Handbook: Vaccination for people who are immunocompromised](#).

Routinely embedding vaccination into patient care

LHDs should consider opportunities to embed vaccination into routine patient care. This may include review of models of care, the development of processes or integration into existing procedures and pathways, the review of the vaccination status of patients, system prompts, and offering vaccination during their interaction with NSW Health services. Integrating a vaccination assessment into pre-admission assessment may also support vaccination. LHDs have introduced several strategies to support embedding immunisation into routine healthcare. [Appendix A](#) provides an overview of these initiatives to assist with the planning and implementation of future activities that strengthen this approach.

Funded vaccines

The Australian Government funds vaccines under the National Immunisation Program (NIP) for children, adolescents, at risk groups and older people. Details of these vaccines are available in the [NSW Immunisation Schedule](#).

NIP funded vaccines are also available for catch up of people less than 20 years of age and all refugees and humanitarian entrants. Additional information on eligibility for these vaccines is available from the [Australian Government catch-up immunisations webpage](#). COVID-19 vaccines are also funded by the Australian Government. The [Australian Immunisation Handbook](#) provides recommendations on who should receive these vaccines.

NSW Health also provides free vaccines for specified cohorts. The additional vaccines provided free in NSW is available on the [NSW Health website](#).

Ordering funded vaccines

All NIP and state funded vaccines can be ordered through the [State Vaccine Centre \(SVC\)](#). Providers are required to have a Vaccine Account Number (VAN). In LHDs this is generally managed by the pharmacy department however individual services in some cases will have their own account. This may include public health units (PHU), sexual health clinics or maternity services. Services requiring access to funded vaccines that cannot obtain these through the facilities pharmacy department should apply for a VAN via the [SVC webpage](#).

Checking a patient's immunisation history

The Australian Immunisation Register (AIR) is a national register for recording vaccines given to people of all ages who live in Australia. The AIR commenced on 1 January 1996 under its previous name of the

Australian Childhood Immunisation Register (ACIR). It was expanded to a whole-of life register in 2016 and is administered by Services Australia. Medical practitioners, midwives and nurse practitioners with a Medicare provider number are automatically recognised as an immunisation provider and authorised to record or access immunisation data on the AIR. In order to access AIR in NSW Health locations, staff will need to be added to the eHealth-managed PRODA sub-organisations for each location they deliver care at. To be added to these sub-organisations, staff should contact their LHD ICT Team who will arrange this with the eHealth AIR Integration Service Team. Further information on obtaining access to AIR is available on the [Australian Government access to AIR webpage](#).

Vaccination encounters are recorded on the AIR using the person's Medicare number and individual reference number (IRN) on their card. Vaccination records for people who are not eligible for Medicare can be reported to AIR using their name, date of birth and address. Vaccination encounters can be recorded against the patient's Individual Healthcare Identifier.

NSW Health provides the parents of each newborn with a Personal Health Record ("The Blue Book") that includes background information on immunisation and a table to record the vaccinations given to the child. The Blue Book is a useful reference for immunisation providers to confirm that people are up to date with their vaccinations or to arrange a catch-up vaccination schedule, if needed. It should not be relied on solely for vaccination history, the person's immunisation history should also be checked on the AIR to ensure all vaccinations have been recorded.

Immunisations that have been administered overseas can be added to the AIR by immunisation service providers by logging into the AIR. If the patient's documents are not available in English a [Free Translating Service](#) is available.

Mandatory reporting of vaccines to the AIR

Immunisation providers have a legal obligation to ensure that NIP vaccines are reported to the AIR. The Australian Government Department of Health and Aged Care has mandated under the Australian Immunisation Register Act 2015 that all recognised vaccination providers must submit a record of vaccine administration to the AIR within 24 hours and no later

than 10 working days after administration. Therefore, an AIR Integration Project was initiated by the Ministry of Health and eHealth NSW in July 2022 to assist LHDs and Specialty Health Networks (SHNs) to meet their obligations for immunisation reporting to the AIR. The following electronic patient records are integrated and allow immunisation data to be extracted and sent to the AIR:

- Cerner eMR – eMeds
- eRIC
- CHIME
- ORION
- SHIP
- MedChart
- MOSAIQ.

In some cases, it is not possible for eHealth NSW to source immunisation records directly from the patient record system. This may include paper record systems, non-standard records, and systems assessed as not suitable for integration. The following electronic patient record systems are not automated to AIR:

- eMaternity
- Cerner eMR – PowerForms
- NICUS
- SHOE
- CBOK
- Intensys
- Paper records.

Vaccinations recorded in Cerner PowerForms and eMaternity cannot be automatically extracted and sent to the AIR due to incompatibility issues between those systems and the required AIR information formats. Any records in the above systems must be uploaded to the AIR manually via the existing web portal or via one of the above integrated systems.

Vaccines administered as part of the staff health program should be recorded and transmitted to the AIR through the VaxLink system.

Vaccines administered as part of the school vaccination program should be recorded and transmitted to AIR via the CARMI system.

Monitoring vaccination encounters

To monitor vaccine administration, it is recommended that LHDs consider reporting capability through local source systems such as Cerner. Local system administrators may be able to access reports through these systems. Additionally, vaccination reports are available through the ServiceNow reports built in the AIR Integration Solution. It should however be noted that this is limited to reporting on the vaccination encounters that are sent through the MuleSoft solution, which is the system used for the AIR integration, which will not include vaccinations recorded in eMaternity, Cerner PowerForms, and those recorded on paper records (See section on Mandatory reporting of vaccines to the AIR). Additionally, staff in Public Health Units have access to immunisation data through three dashboards:

- Influenza immunisation dashboard
- RSV immunisation monitoring dashboard
- Vaccine Coverage Exploration Dashboard.

Immunisation workforce

Vaccines are Schedule 4 medications and can be prescribed by a medical officer or Nurse/Midwife Practitioner (with appropriate scope of practice and experience in immunisation) for administration by a nurse or midwife. Services that frequently provide care to eligible cohorts may consider the use of standing orders, for example standing orders for the influenza or diphtheria, tetanus, pertussis (dTpa) and RSV (respiratory syncytial virus) vaccines in antenatal services.

A [protocol and authority](#) have been published to authorise all NSW Health registered nurses (RNs) and midwives to initiate influenza vaccination without a medical officer prescription for non-acute inpatients aged 65 years and older. It is not mandatory for an RN or midwife to be an Authorised Nurse Immuniser to initiate influenza vaccination under this protocol.

Vaccines should be preferably prescribed in the patient's electronic medication chart to facilitate automated reporting to the AIR (see previous list) and given via the appropriate route of administration for the vaccine and the patient's age, as detailed in the [Australian Immunisation Handbook](#). If the vaccine is prescribed by a medical officer or nurse/midwife practitioner, a registered nurse or enrolled nurse can administer it and it does not need to be administered by an authorised nurse/midwife immuniser.

HPNSW also supports the availability of an authorised nurse/midwife immuniser workforce in LHDs through the provision of annual funding for scholarships through the local PHU. This funding is available for registered nurses and registered midwives who wish to become [authorised immunisers](#) and whose role is appropriate for this qualification. Details on approved courses are available on the [NSW Immunisation webpage](#). Staff wishing to apply for a scholarship should contact their local PHU.

Reporting adverse events following immunisation

An adverse event following immunisation (AEFI) is defined in The Australian Immunisation Handbook as "any untoward medical occurrence that follows immunisation. It does not necessarily have a causal relationship with the vaccine". AEFIs are notifiable conditions under the NSW Public Health Act.

All AEFI notifications are required to be reported to the Therapeutic Goods Administration (TGA). To report a suspected AEFI, download the [National Adverse Events Following Immunisation \(AEFI\) Reporting Form](#) and contact your local PHU on 1300 066 055. Further information regarding AEFIs is available on the [NSW Immunisation AEFI webpage](#).

If an AEFI occurs at the time of vaccination in an LHD setting, e.g. anaphylaxis, a report must also be made on the NSW Health incident management system IMS+.

Vaccine storage and cold chain management

Vaccines are sensitive medicines that must be protected from light and temperature fluctuations outside of +2°C to +8°C. All immunisation providers responsible for ordering, storing, receiving and administering vaccines must understand the principles of vaccine storage.

The [National Vaccine Storage Guidelines: Strive for 5](#) provide best practice guidelines for storing vaccines and managing the cold chain. The NSW Health [Vaccine Storage and Cold Chain Management Policy](#) also provides mandatory requirements for the storage and management of vaccines in LHD facilities. The policy directive includes a [Vaccine Refrigerator](#) Protocol.

A Vaccine Storage and Cold Chain Management online training module is available. NSW Health employees should access this through the [My Health Learning portal](#).

All cold chain breaches outside of the recommended range of +2°C to +8°C (excluding fluctuations up to +12°C for less than 15 minutes) must be reported to the PHU by calling 1300 066 055.

Additionally, vaccines may lose potency if exposed to direct sunlight or ultraviolet (UV) light, including fluorescent light. If a vaccine loses potency, it may become less effective in providing protection against vaccine preventable diseases. To protect vaccines from light exposure they must be stored in the purpose-built vaccine refrigerator inside their original cardboard packaging. Vaccines must not be removed from the original cardboard packaging to increase refrigerator capacity. The original cardboard packaging ensures vaccines are protected against:

- exposure to sunlight and ultraviolet (UV) light or fluorescent light
- temperature fluctuations
- possible breach of sterility
- tampering
- vaccine administration errors.

Further information on managing the cold chain and protecting vaccines is available on the [NSW Health vaccine storage and cold chain management webpage](#).

Useful links:

NSW Immunisation webpage: <https://www.health.nsw.gov.au/immunisation/Pages/default.aspx>

NSW Immunisation Schedule: <https://www.health.nsw.gov.au/immunisation/Publications/nsw-immunisation-schedule.pdf>

NSW AEFI webpage: <https://www.health.nsw.gov.au/immunisation/Pages/aefi.aspx>

NSW vaccine storage and cold chain management webpage: <https://www.health.nsw.gov.au/immunisation/Pages/cold-chain-management.aspx>

NSW State Vaccine Centre webpage: <https://nsw.tollhealthcare.com/>

National Immunisation Program webpage: <https://www.health.gov.au/our-work/national-immunisation-program>

National Vaccine Storage Guidelines: Strive for 5: <https://www.health.gov.au/resources/publications/national-vaccine-storage-guidelines-strive-for-5>

Australian Government catch-up immunisations webpage: <https://www.health.gov.au/topics/immunisation/immunisation-information-for-health-professionals/catch-up-immunisations>

Australian Government access to AIR webpage: <https://www.servicesaustralia.gov.au/how-to-set-up-your-access-to-air?context=23401>

Australian Immunisation Handbook: <https://immunisationhandbook.health.gov.au/>

NSW Immunisation Resource Order Form: <https://www.health.nsw.gov.au/immunisation/Pages/immunisation-brochures.aspx>

Appendix A

LHD Initiatives to embed immunisation into routine healthcare

The NSW Treasury approved \$15 million to support a four-year initiative to increase immunisation in under vaccinated NSW communities. Selected LHDs were provided with a portion of this budget to implement their own innovative localised Priority Populations Immunisation Programs (PPIP). An overview of these initiatives is provided below to support future planning of practical activities to embed immunisation into routine healthcare in all LHDs.

Partnership and collaboration

Immunisation can be embedded into routine care through strategic partnerships and collaborative initiatives. Authorised Nurse Immunisers (ANIs) have fostered peer-support and professional development by collaborating through forums such as an ANI specific Community of Practice and knowledge-sharing sessions. Beyond their network, ANIs have provided hands-on support to clinical teams such as Respiratory, Infectious Diseases, Mental Health and Aged Care to enhance their existing vaccination programs.

Consumer engagement and education

LHDs have introduced various initiatives to integrate immunisation into the community by raising awareness through direct engagement with consumers. Partnership with the Department of Education facilitated the delivery of presentations to high school students and their parents to explain school vaccinations and their importance to support the School Vaccination Program managed by Public Health Units.

A digital marketing strategy was designed to engage the local Aboriginal community, using social media as a key platform for sharing information. Other existing channels have also been leveraged to deliver health-related messaging to consumers, including:

- Local radio stations that deliver health-related messaging segments to older adults
- TAFE – Adult Migrant English Program
- Promotional events (e.g. an expo which connected refugees and migrants with health services)

Embedding immunisation in clinical settings has also been promoted internally by ANIs via bi-monthly educational webinars. These sessions would provide the district with updates on new vaccines, changes to eligibility, cold chain management and district specific practical tips for immunisation.

Innovation in Service Delivery

To enhance access to vaccination, community outreach clinics have been established by LHDs. These clinics focus on reaching priority populations across the district by attending community partner sites such as:

- Community Health Centres
- Women and Children's Crisis Accommodation
- Churches and Mosque's

Cultural support workers attend these clinics to discuss vaccination with CALD community members, including those who have declined vaccination on the day of the clinic.

Within NSW Health hospitals, vaccination clinics have been established to support direct vaccination efforts within services such as renal dialysis and outpatients, infectious diseases and immunology patients and geriatrics. To promote these clinics, internal channels are leveraged including the CE newsletter, screen savers and grand rounds presentations.

To compliment the direct vaccination efforts, capacity-building activities have also been developed to enable long-term change within clinical services. These activities focus on integrating vaccination workflows into clinical interactions (i.e. pharmacists assessing eligibility of vaccination at the time of admission or discharge while undertaking the standard medication review), establishing referral pathways for vaccination, developing resources and targeting education to key staff who would champion immunisation within clinical services.

To further embed immunisation into routine care, service level action plans were developed with priority clinical streams. These plans were tailored to the service and aimed to improve vaccination rates amongst populations experiencing barriers to accessing primary care, social vulnerabilities and those with complex co-morbid conditions that lead to increased early mortality. Some of these streams included:

- Intellectual Disability
- Drug Health Services
- Homelessness and Rough Sleepers
- Mental Health.

