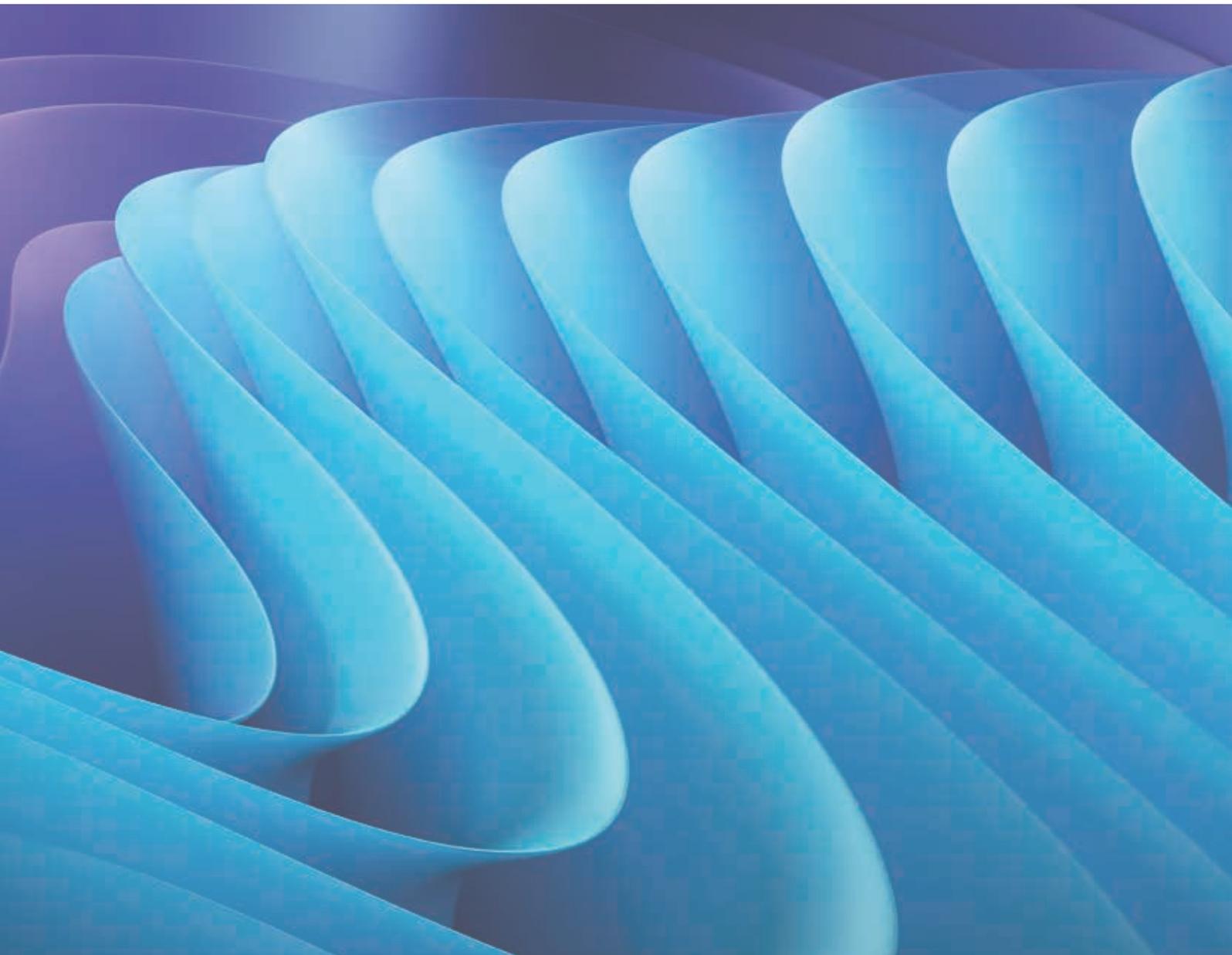


Opportunistic Immunisation Toolkit for Local Health Districts



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Contents

Audience	2
What the kit contains	2
Background	2
Opportunistic vaccination	2
LHD vaccination initiatives	3
Funded vaccines	4
Priority groups	7
Ordering funded vaccines	7
Checking a patient's immunisation history	7
Mandatory reporting of vaccines to the AIR	7
Monitoring vaccination encounters	7
Immunisation workforce	7
Reporting adverse events following immunisation	8
Vaccine storage and cold chain management	8
Useful links	9
Contact	9

Audience

This toolkit is intended for use by all clinicians working in NSW Health Local Health Districts (LHDs) to facilitate the opportunistic vaccination of 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 (when available) and enhance opportunistic vaccination of patients accessing LHD services. The Toolkit includes information about:

- Background
- Opportunistic vaccination
- LHD vaccination initiatives
- Funded vaccines
- Priority groups
- Ordering 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

While over 90% of all childhood vaccinations in NSW are given in general practices, all health care professionals 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 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.

Opportunistic vaccination

LHDs should consider opportunities to imbed vaccination into routine patient care. This may include the development of processes or integration into existing procedures and pathways, the review of the vaccination status of patients, and offering vaccination during their interaction with NSW Health services. Integrating a vaccination assessment into pre-admission assessment may also support opportunistic vaccination.

Oral Health Services are currently looking at innovative ways to utilise their patient wait lists to assess patients for a range of health issues such as blood borne virus testing. Incorporating a vaccination assessment may also be feasible to assist in supporting vaccination of some hard-to-reach populations.

Other areas where opportunistic vaccination may be beneficial is through the community health centres and settings where patients may spend a lot of time such as rehabilitation, renal and oncology services.

LHD vaccination initiatives

Following the transition of the COVID-19 vaccination program to a business-as-usual approach, LHDs have undertaken opportunistic vaccination programs during 2022/23. An overview of these initiatives is provided that may help to inform future planning of clinics.

1. Temporary vaccination hubs that were initially established in Northern Sydney LHD (NSLHD) to roll out COVID-19 vaccines were utilised to provide both COVID-19 and influenza vaccinations as a drop-in centre.
2. A mobile support team (MST) that provided services in the community was initially established in NSLHD in response to overcrowding in the Emergency Department (ED) and to improve patient flow. The MST provided clinical care to help keep people well at home, including facilitating patient transport, blood tests, ECGs, changing simple dressings and removing sutures.

The MST subsequently provided a pathway for opportunistic and outreach vaccination to at-risk populations and for vaccination at scale. Each time a nurse connected with a patient, they took the opportunity to discuss their vaccination status and offer it. Patient eligibility for a vaccination was checked through the Australian Immunisation Register (AIR) using Provider Digital Access (PRODA) and the electronic medical records. Risk assessment tools were used to determine vaccination eligibility and suitability. The nurses also liaised directly with general practitioners or doctors through the Virtual Hospital as part of the vaccination risk assessment and consent process.

The service was available to large facilities such as accommodation services (residential care and disability services) and schools in the community to vaccinate teachers.

A trial was undertaken for the MST to vaccinate inpatients; however, the uptake was low as patients were often too sick. This model could be considered for sub-acute services such as rehabilitation or geriatrics services.

3. In Western Sydney LHD (WSLHD) mobile outreach teams operated centrally from the COVID-19 vaccination hub, and the staffing configuration for each team included a doctor, nurse and administration officer. Outreach teams were used to increase vaccination rates by holding clinics in community settings such as churches, mosques and community centres, and at community events (e.g., NRL All-Star match).

4. In-reach teams were also established in WSLHD to vaccinate patients. The staffing configuration included one doctor for the LHD and a nurse at each site. Multiple channels were used to identify patients eligible for vaccination when admitted to the hospital. Lists were generated from the Patient Flow Portal, and immunisation history or vaccination status was determined through electronic medical records and the AIR. Lists were generated for inpatient and outpatient settings and the Data Quality Manager would identify eligibility for the vaccination and liaise with the nominated treating doctor to ensure suitability. The doctor was responsible for discussing vaccine options, benefits and harms with the patient. The Data Quality Manager would also go ward to ward and clinic to clinic to identify patients eligible for vaccination, and they also attended the emergency departments.
5. Central Coast LHD (CCLHD) established a nurse-led in reach/outreach vaccination service as a winter initiative to improve COVID-19 and influenza vaccine uptake among vulnerable patient cohorts. The team consisted of an Authorised Immuniser Clinical Nurse Specialist, and 1-2 Authorised Nurse Immunisers (ANIs), who coordinated with Nurse Unit Managers (NUMs) across the 3 hospital sites to offer vaccinations to inpatients and selected outpatient clinics (renal dialysis, drug and alcohol, Aboriginal health services). Clinical staff could also refer patients to the team. Patient lists were generally available from the Patient Flow Portal prior to team visits, and these were pre-screened on the AIR to determine which vaccines were required. Patients identified as due for vaccination were offered vaccination and ANIs obtained informed, valid consent. In 2023 over 10 weeks, 339 influenza and 241 COVID-19 vaccines were administered across 26 different hospital wards and 11 outpatient clinics. Evaluation of the ANI-led model has found it overcame access barriers to increase vaccination uptake for many at-risk patients while saving time and raising awareness of opportunistic vaccination for frontline medical, nursing and pharmacy staff.

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](#).

NSW Immunisation Schedule Updated October 2023



Vaccines funded under the National Immunisation Program

Childhood vaccines				
Age	Disease	Vaccine	Information	
Birth	Hepatitis B	H-B-VAX II (IM) OR ENGERIX B (IM)	Within 7 days of birth (ideally within 24 hours)	
6 weeks	Diphtheria, tetanus, pertussis, hepatitis B, polio, <i>Haemophilus influenzae</i> type b	INFANRIX HEXA (IM) OR VAXELIS (IM)	Rotarix: Dose 1 limited to 6-14 weeks of age Bexsero: Recommended for other children (see AIH [†]). Prophylactic paracetamol recommended	
	Pneumococcal	PREVENAR 13 (IM)		
	Rotavirus	ROTARIX (Oral)		
	Meningococcal B (Aboriginal* children only)	BEXSERO (IM)		
4 months	Diphtheria, tetanus, pertussis, hepatitis B, polio, <i>Haemophilus influenzae</i> type b	INFANRIX HEXA (IM) OR VAXELIS (IM)	Rotarix: Dose 2 limited to 10-24 weeks Bexsero: Recommended for other children (see AIH [†]). Prophylactic paracetamol recommended	
	Pneumococcal	PREVENAR 13 (IM)		
	Rotavirus	ROTARIX (Oral)		
	Meningococcal B (Aboriginal* children only)	BEXSERO (IM)		
Annual influenza vaccination	6 months	Diphtheria, tetanus, pertussis, hepatitis B, polio, <i>Haemophilus influenzae</i> type b	INFANRIX HEXA (IM) OR VAXELIS (IM)	Children ≥ 6 months with at risk conditions for IPD [‡] are recommended to receive an additional dose of Prevenar 13 (see AIH [†]) Aboriginal children ≥ 6 months with certain at risk conditions may require an additional dose of Bexsero (see AIH [†])
	12 months	Meningococcal ACWY	NIMENRIX (IM)	Bexsero: Recommended for other children (see AIH [†]). Prophylactic paracetamol recommended
		Pneumococcal	PREVENAR 13 (IM)	
		Measles, mumps, rubella	MMR II OR PRIORIX (IM or SC)	
		Meningococcal B (NIP funded for Aboriginal# children only)	BEXSERO (IM)	
	18 months	Diphtheria, tetanus, pertussis	INFANRIX OR TRIPACEL (IM)	
		Measles, mumps, rubella, varicella	PRIORIX TETRA (IM or SC)	
		<i>Haemophilus influenzae</i> type b	ACT-HIB (IM or SC)	
	4 years	Diphtheria, tetanus, pertussis, polio	INFANRIX-IPV OR QUADRACEL (IM)	Children with at risk conditions for IPD [‡] are recommended to receive an additional dose of Pneumovax 23 (see AIH [†])

At risk groups, adolescents and adults

Age/group	Disease	Vaccine	Information
All people with asplenia, hyposplenia, complement deficiency and treatment with eculizumab	Meningococcal ACWY	NIMENRIX (IM)	See AIH [†] for required doses and timing. Additional groups are recommended to receive these vaccines but these are not funded
	Meningococcal B	BEXSERO (IM)	
≥ 5 years with asplenia or hyposplenia	<i>Haemophilus influenzae</i> type b	ACT-HIB (IM or SC)	If incompletely vaccinated or not vaccinated in childhood
≥ 18 years	Zoster	SHINGRIX (IM)	Only immunocompromised people ≥ 18 years with certain medical conditions (see AIH [†])
Year 7	Diphtheria, tetanus, pertussis	BOOSTRIX OR ADACEL (IM)	
	Human papillomavirus	GARDASIL 9 (IM)	
Year 10	Meningococcal ACWY	NIMENRIX (IM)	
Pregnant	Influenza	INFLUENZA	Influenza: Any trimester Pertussis: each pregnancy between 20-32 weeks
	Pertussis	BOOSTRIX OR ADACEL (IM)	
Aboriginal* people ≥ 50 years	Pneumococcal	PREVENAR 13 (IM) then PNEUMOVAX 23 (IM)	Prevenar 13: ≥ 50 years Pneumovax 23: 2-12 months later (see AIH [†]) Pneumovax 23: at least 5 years later Shingrix: ≥ 50 years
	Zoster	SHINGRIX (IM)	
≥ 65 years	Zoster	SHINGRIX (IM)	Shingrix: Funded for people ≥ 65 years
≥ 70 years	Pneumococcal	PREVENAR 13 (IM)	Pneumococcal funded for people ≥ 70 years
People with at risk conditions for IPD [‡]	See the online AIH [†] for conditions recommended to receive Prevenar 13 and Pneumovax 23		

Influenza

Age/at risk condition	Recommendation	Information
All children ≥ 6 months to < 5 years	ANNUAL INFLUENZA VACCINATION	Discuss influenza vaccination with other present family members
Aboriginal* people ≥ 6 months		
People with at risk conditions ≥ 6 months		Children aged less than 9 years of age who are receiving the influenza vaccine for the first time should receive 2 doses of the vaccine, 4 weeks apart
≥ 65 years		
Pregnant women		For vaccine brands and eligibility see: www.health.nsw.gov.au/immunisation/Pages/flu.aspx

The term Aboriginal is inclusive of Aboriginal and Torres Strait Islander people. ‡ IPD: Invasive pneumococcal disease. AIH[†]: Online Australian Immunisation Handbook. October 2023 © NSW Health. SHPN (HP NSW) 230769.

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 following table indicates additional [vaccines provided free in NSW](#):

VACCINE	ELIGIBILITY
Hepatitis B	<p>As per the Australian Immunisation Handbook:</p> <ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander people • Household and sexual contacts of acute and chronic hepatitis B cases • Immunosuppressed people • People with HIV or hepatitis C • Men who have sex with men • Injecting drug users • Sex workers • Clients of sexual health clinics (at LHD discretion) • Existing LHD employees. (Hepatitis B vaccine is not free for persons outside of these priority populations, healthcare students or persons travelling overseas)
Measles, mumps, rubella	<ul style="list-style-type: none"> • Unvaccinated individuals born during or after 1966. • For vaccination of rubella seronegative post-natal women.

Additionally, Health Protection NSW (HPNSW) has provided funding for [mpox](#) and [Japanese encephalitis](#) vaccines, to protect against these diseases for at risk people.

Priority groups

Patient cohorts who are at highest risk of severe outcomes from specified diseases should be prioritised for vaccination. This includes 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](#).

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. This project was completed in October 2023.

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*).

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) vaccines in antenatal services.

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 may 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/Documents/immunisation-order-form.pdf>

Contact:

If further information regarding immunisation is required, please contact your local Public Health Unit on **1300 066 055**.

