

Antenatal Pertussis Vaccination



*NSW Public Hospital
Antenatal Clinic
Guidelines*

H19/61890

Table of Contents

Introduction.....	2
Antenatal Pertussis Vaccination Schedule	2
Antenatal 28-week Checklist	3
Staff Education & Training	3
Standing Orders	4
Vaccine Ordering	4
Vaccine Cold Chain Management	5
Pre-Vaccination Assessment and Vaccine Administration	7
Clinical Presentation of Anaphylaxis.....	12
Adult Adrenaline Dosages.....	12
Adverse Events Following Immunisation (AEFI) Reporting	13
Recording of Vaccinations.....	14
Program Reporting	14
Useful Resources and Websites & References	14
Order Resources	15
Appendix 1 Frequently Asked Questions	16
Appendix 2 Standing Order Templates	20
Appendix 3 Pregnancy Card Stamp Template	22
Appendix 4 Maternity dTpa/influenza Pre-vaccination Checklist	23
Appendix 5 Vaccination Competency Assessment Checklist	24
Appendix 6 – Staff Decision Aid	21

Introduction

Under the National Immunisation Program (NIP), pregnant women are offered diphtheria, tetanus and pertussis (dTpa) vaccine between 20-32 weeks gestation (usually given at 28 weeks). This protects infants through maternal pertussis antibody transfer. Under the NIP Boostrix® and Adacel® (dTpa) vaccines are provided free to GPs, Aboriginal Medical Services and antenatal clinics for all pregnant women. These guidelines have been developed to assist antenatal clinics to implement and maintain pertussis vaccination clinics to ensure the safe and effective delivery of the program. As influenza vaccine is also recommended in each pregnancy, guidance on influenza vaccination is also included.

While these guidelines relate to maternal vaccination, health care workers in maternity services must receive a dTpa booster every 10 years. This vaccination is available free through staff health. For more information refer to [PD2018_009 Occupational Assessment Screening and Vaccination Against Specified Infectious Diseases](#).

Antenatal Pertussis Vaccination Schedule

The pertussis vaccination is usually given to pregnant women at 28 weeks (can be given anytime between 20-32 weeks) of each pregnancy. The vaccine should be given as early as possible (from 20 weeks) to women who are identified as being at high risk of preterm birth, or who are unlikely to attend a 28 week visit for any reason. For the purpose of this guideline, women at high risk of preterm birth are considered to be those with a previous history of early preterm birth, or those admitted in the antenatal period prior to 28 weeks gestation. Pregnant women who are not vaccinated between 20 and 32 weeks should receive dTpa vaccine as soon as possible and at any time up to birth. Newborns may not be adequately protected against pertussis if the vaccine is given within 2 weeks of birth.

Vaccination is recommended with each pregnancy to provide maximum protection to every infant; this includes pregnancies which are closely spaced (e.g. <2 years). If vaccination during pregnancy is not planned or does not occur, vaccination during the post-partum period, as soon as possible after birth of the infant (before hospital discharge), will reduce the likelihood of pertussis occurring in the mother and therefore provide some indirect protection to the infant.

Refer to **Appendix 1** 'Frequently Asked Questions'.

Close family members and carers

It is important that all people in close contact with infants <6 months of age are vaccinated at least two weeks before contact with the infant. It is recommend that:

- all children in households with new babies are up to date with their pertussis vaccinations. The primary course is recommended at 6 weeks, 4 and 6 months of age followed by booster doses at 18 months, 4 and 12 years (in high school) of age.
- other adult household contacts and carers of newborn infants have received a pertussis booster within the past 10 years.

Antenatal 28-week Checklist

The recommended timing range for pertussis vaccination has been extended to include the second trimester, however to reduce disruption to established protocols, pregnant women should continue to routinely receive their pertussis vaccination at their 28 week visit, except in circumstances where they have been identified as being at high risk of preterm birth or are unlikely to attend a 28 week visit for any reason. These women should receive their pertussis vaccination at 20 weeks or as soon as possible after this time. Local health districts (LHDs) should therefore continue to include this vaccination on their 28 week antenatal checklist to ensure that all pregnant women are offered free dTpa vaccine.

It is recommended that dTpa vaccination is discussed with pregnant women at their 24 week check-up in advance of the 28 week clinic so that she is prepared and has time to consider vaccination. Influenza vaccine, which can be given at any stage during pregnancy, should be offered as early in pregnancy as possible as it protects pregnant women from the severe effects of influenza and provides protection to the baby in-utero and for up to six months after birth. Influenza vaccine can be given at the same time as dTpa vaccine; one should be administered in the left deltoid and the other in the right deltoid.

Staff Education & Training

Recommendation from a health care provider has been strongly associated with influenza vaccine uptake among pregnant women and can overcome their concerns about safety. Furthermore, it has been identified that health care provider recommendation is paramount to raising awareness of pertussis vaccination recommendations among pregnant women (Wiley et al 2013a; Wiley 2013b)

Staff education and training about immunisation is important for consistent and evidence-based practice and must be prioritised for staff involved in antenatal pertussis vaccination clinics. Funding is provided to local health districts to reimburse midwives and registered nurses who successfully complete the [Australian College of Nursing \(ACN\) Immunisation Course for Registered Nurses and Midwives](#). This course is not compulsory however it is strongly recommended for registered nurses and midwives working in health areas where administration of vaccines is part of their role. The course is offered online and should be widely promoted to all relevant staff. Facilities should

contact their local public health unit regarding reimbursement for staff that have successfully completed the course.

The HETI online education module is being updated to reflect the new recommendations. All staff involved in maternal vaccination should complete this training. A range of program materials that can be used for staff education are available on the NSW Health website at www.health.nsw.gov.au/protectnewborns.

A **competency assessment checklist** is provided at **Appendix 5** and is to be conducted on all staff administering vaccinations in the antenatal clinics.

Standing Orders

Authorised nurse immunisers, registered nurses and midwives must only administer vaccine under a standing order that has been approved by the local Drugs and Therapeutics Committee. Further information is available in NSW Health Policy Directive [PD2013_043 Medication Handling in NSW Public Health Facilities](#) (refer to Section 7.4). Facilities should arrange to have their standing orders approved as a priority.

Standing order templates for dTpa and influenza vaccine are provided in **Appendix 2** and detailed information on the two vaccines provided under the National Immunisation Program are available from:

- Boostrix[®] vaccine:
<https://www.ebs.tga.gov.au/ebs/picmi/picmirepository.nsf/pdf?OpenAgent&id=CP-2010-PI-05642-3>
- Adacel[®] vaccine:
<https://www.ebs.tga.gov.au/ebs/picmi/picmirepository.nsf/pdf?OpenAgent&id=CP-2013-PI-01321-1&d=201906041016933>

Vaccine Ordering

The dTpa and influenza vaccines should be ordered from the NSW Vaccine Centre. Facilities that do not have an existing vaccine account should contact the local public health unit on **1300 066 055** to request a new Vaccine Account Number (VAN). Following approval by NSW Health, a user name and password for the online vaccine ordering system will be forwarded to the nominated email address of the new VAN.

Vaccine Ordering

Log onto the NSW Vaccine Centre online ordering system at

<https://nsw.tollhealthcare.com/>

Vaccine Cold Chain Management

Vaccines are delicate biological substances that can become less effective or destroyed if they freeze, become too warm or are exposed to direct sunlight or UV light, including fluorescent light. All vaccines must be transported and stored at **+2°C to +8°C** (the 'cold chain') to ensure their potency and effectiveness is maintained. Health professionals have a responsibility to ensure that their patients receive effective health products, for example, vaccines that have not been adversely affected by heat or cold.

The *National Vaccine Storage Guidelines Strive for 5 (current edition)* provide essential information to guide health professionals in cold chain management and include the following:

- All vaccines must be transported and stored in their original packaging at **+2 °C to +8 °C. Do not remove from their packaging as light may affect their potency.**
- Vaccines must only be stored in a vaccine specific refrigerator
- Vaccine fridge temperatures must be checked at least twice daily. The minimum, maximum and current temperatures must be recorded.
- All temperature checks/activity must be recorded on the fridge monitoring chart, for example, 'restocking', 'cleaning', 'power outage' etc.
- The thermometer must be reset after twice daily temperature checks and after any excursions outside **+2 °C to +8 °C**.
- After the fridge door has been opened, ensure the current temperature display has returned to between **+2 °C to +8 °C**, before pressing 'reset'.
- A data logger must be placed in the vaccine fridge and the temperatures downloaded weekly and whenever the temperature is $<+2^{\circ}\text{C}$ and/or $>+8^{\circ}\text{C}$. This is to ensure the fridge is stable and identify any cold chain breaches early.
- **Temperatures noted to be outside +2 °C to +8 °C must be reported immediately to the manager and public health unit (PHU).** Quarantine the vaccines which must not be used until advice is provided by the PHU.
- Vaccines should only be removed from the fridge immediately prior to administration.
- Do not leave vaccines out of the fridge for any length of time.

- The fridge must have appropriate signage to ensure all staff are aware that it contains vaccines and should not be opened unnecessarily or switched off. The fridge should be connected to an emergency power back-up with an appropriate alarm in place.
- Where outreach clinics are conducted in rural and remote areas, vaccines must be transported and cared for as specified in the *National Vaccine Storage Guidelines Strive for 5 (Current edition)*.
- All staff involved in vaccine storage and management must complete the HETI Vaccine Storage and Cold Chain Management module.

Additional cold chain guidance is available in NSW Health Policy Directive: [PD2017_014 Vaccine Storage and Cold Chain Management](#)

**For all Cold Chain Queries and Breaches
Contact the local Public Health Unit on 1300 066 055**

Pre-Vaccination Assessment and Vaccine Administration

Pre-vaccination requirements

Performing the pre-vaccination assessment is an important factor in reducing the likelihood of an adverse event following immunisation (refer to page 12). Prior to commencing any immunisation clinic, it is essential to ensure that there is access to emergency equipment including 1mL syringes and adrenaline 1:1000 1mg/mL. Immunisation providers must obtain informed consent for all women, either verbal or written and must include:

- Explaining the [risks and benefits](#) to the woman, including potential adverse events and how common they are.
- Performing a [pre vaccination checklist](#) on all women (refer to **Appendix 4**). Women who have any medical contraindications to vaccination should not be vaccinated by a midwife in the antenatal clinic and referred to their GP.
- Checking if influenza vaccine is required as influenza vaccine can be given at any stage during pregnancy. Influenza and dTpa vaccines can be given at the same time; one should be administered in the left deltoid and the other in the right deltoid.

Vaccine Preparation

Boostrix[®] vaccine is provided in a pre-filled package and does not require reconstitution

Boostrix[®] vaccine should be clear and gently rotated prior to use to mix. The rubber bung should be removed and the needle attached to the syringe.



Adacel is supplied as 0.5mL of suspension in a vial and should be administered intramuscularly into the deltoid muscle. Adacel is a uniform, cloudy white suspension. Shake the vial well before withdrawing the dose.

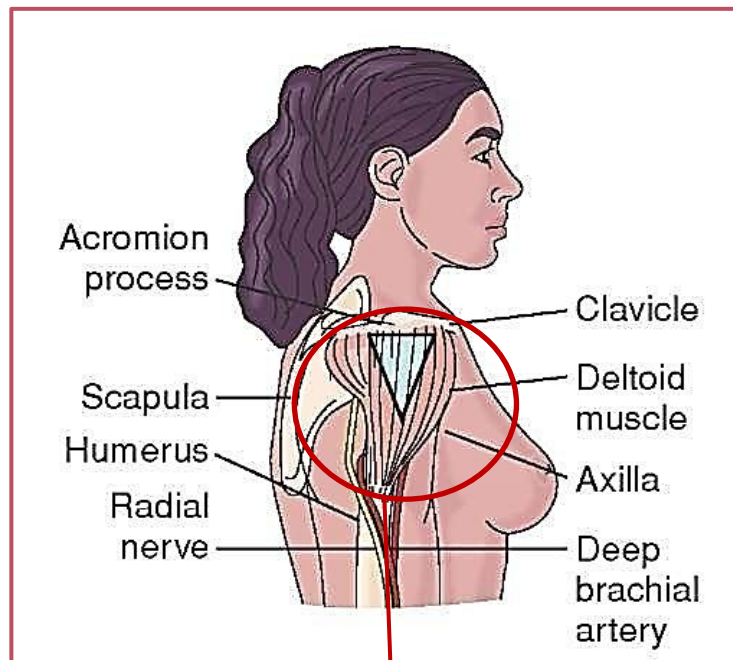


Before using a vaccine, it is essential to check the fridge temperature to ensure the vaccine has been stored between **+2 °C to +8 °C**. The vaccine expiry date should be checked and the syringe barrel for particulate matter or colour change.

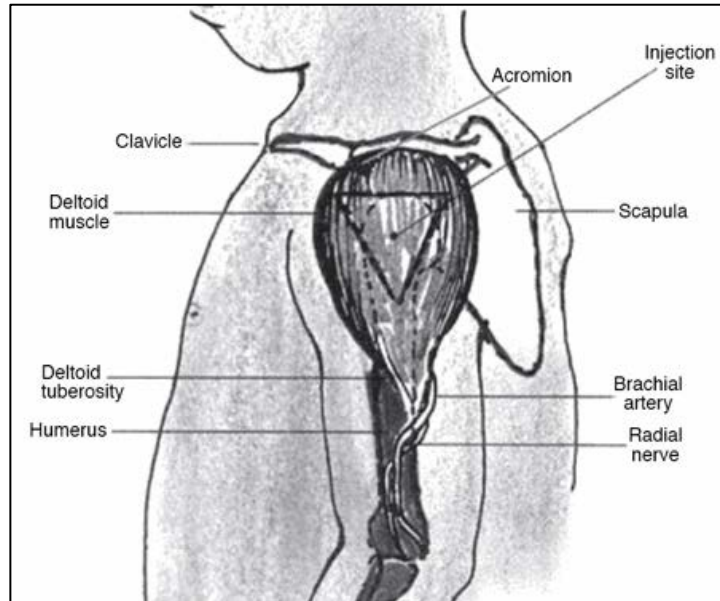
Where vaccine storage issues have been identified, do not use the vaccine and report them to your PHU on 1300 066 055.

Recommended injection site

The deltoid muscle is the recommended site for intramuscular (IM) administration of vaccines in adults as illustrated in the images below:



Source: <http://what-when-how.com/paramedic-care/principles-of-medication-administration-clinical-essentials-paramedic-care-part-6/>



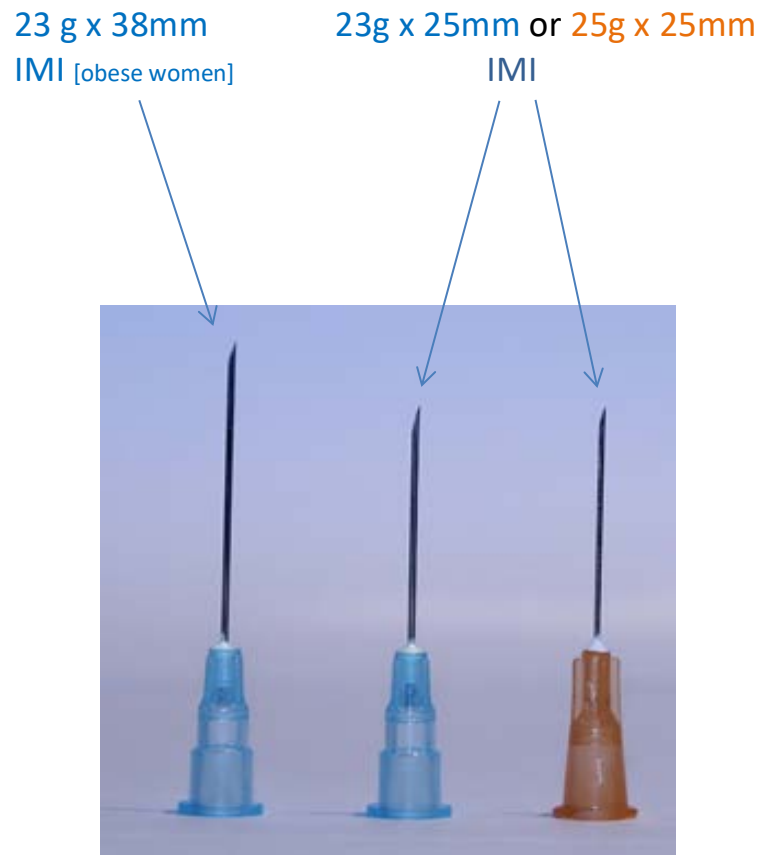
Source : <http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home~handbook10part2~handbook10-2-2>

**If giving a dTpa and influenza vaccine at the same time
give one in the left deltoid and one in the right deltoid**

Needle Selection

Needle selection for the administration of Adacel® should be in accordance with the below table. Although Boostrix® vaccine is provided in a pre-filled syringe and needle pack, should a woman require a different needle due to body size, the following is a guide for needle selection:

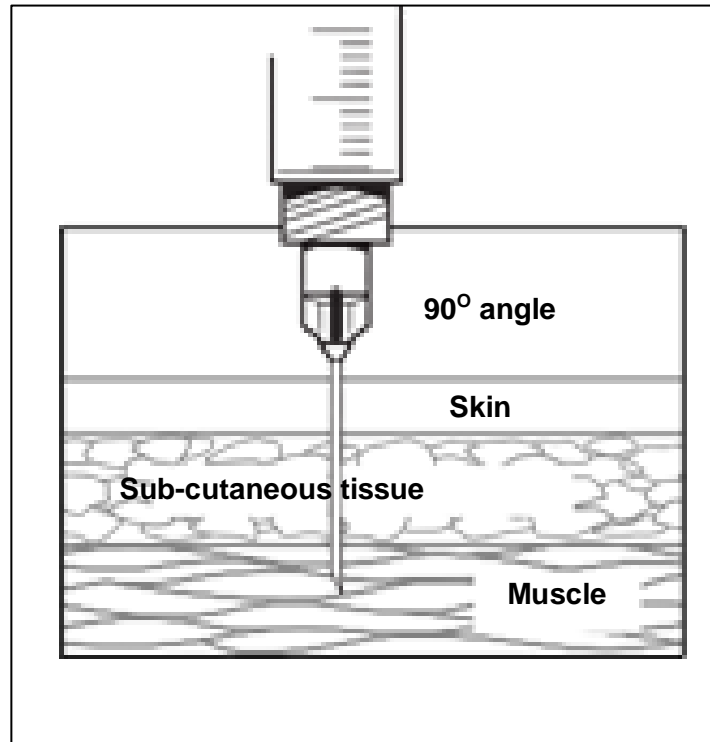
Adult size	Needle type
Regular size adult for IM vaccination	23 or 25 gauge, 25mm in length
Very large or obese adults for IM vaccination	23 gauge, 38mm in length



Vaccine Administration

Standard work health and safety guidelines should always be followed during vaccination. Gloves are not routinely recommended for immunisation service providers, unless the person administering the vaccine is likely to come into contact with body fluids or has open lesions on their hands. Refer to [Australian Guidelines for the Prevention and Control of Infection in Healthcare](#)

The diagram below demonstrates the angle of insertion of the needle for intramuscular injections. dTpa and influenza vaccines are administered by **deep intramuscular injection (IMI)** in the deltoid muscle of adults.



Source: <http://www.immunize.org/catg.d/p2020.pdf>

Post-vaccination Care

- Where feasible, vaccination should take place at the beginning of the antenatal visit which will allow time for the woman to remain in the vicinity of the immunisation clinic for 15 minutes post vaccination in order to observe for any [adverse events](#) following immunisation (AEFI) as specified in *The Australian Immunisation Handbook (online edition)*.
- Side effects of vaccinating pregnant women against pertussis and influenza are reported to be mild with no additional risk of complications when given during pregnancy. Research has found that antibodies taken from cord blood of women vaccinated against pertussis earlier in pregnancy were as high as those vaccinated in the third trimester. Safety studies suggest that pertussis vaccination in second and third trimester was not associated with clinically significant harm to the fetus or the mother. The United Kingdom has recommended maternal pertussis vaccination at 16-32 weeks gestation since 2016. There is also good evidence that influenza vaccination during pregnancy is safe and effective. Local reactions such as redness, swelling and pain at the injection site occur in more than 10% of all vaccine recipients.
- The most serious immediate AEFI is anaphylaxis which must be managed according to [The Australian Immunisation Handbook \(online edition\)](#). Anaphylaxis following routine vaccination is very rare and is most likely to begin within 15 minutes of vaccination.

Clinical Presentation of Anaphylaxis

Anaphylaxis		
Onset	Usually within 15 minutes but can occur within hours of vaccine administration	
Symptoms and signs	Respiratory	Cough, wheeze, hoarseness, stridor or signs of respiratory distress
	Cardiovascular	Tachycardia, weak/ absent carotid pulse Sustained hypotension* Loss of consciousness
	Skin	Pruritis, redness, weals or angioedema
	Gastrointestinal	Abdominal cramps, diarrhoea, nausea, vomiting
	Neurological	Severe anxiety and distress

Adult Adrenaline Dosages

Doses of IMI Adrenaline 1:1000 for anaphylaxis	
Adult (over 50 kg)	0.5 mL

Adverse Events Following Immunisation (AEFI) Reporting

All AEFIs are to be reported to the public health unit on **1300 066 055** as soon as possible, using the [National AEFI Form](http://www.health.nsw.gov.au/immunisation/Pages/aeFI.aspx) available at <http://www.health.nsw.gov.au/immunisation/Pages/aeFI.aspx>.

NOTE: Please do not report AEFIs directly to the Therapeutic Goods Administration (TGA) as specified at the end of the national AEFI form. All AEFIs must be notified directly to the local PHU as specified above.

Recording of Vaccinations

eMaternity/Cerner Maternity database

The eMaternity and Cerner Maternity databases have been updated to include questions relating to maternal pertussis and influenza vaccination status.

1. Have you been vaccinated against influenza this pregnancy?

Yes ___ No ___ Unknown ___

If yes, date of influenza vaccination: [day/month / year]

2. Have you been vaccinated against whooping cough this pregnancy?

Yes ___ No ___ Unknown ___

If yes, date of pertussis vaccination: [day/month / year]

Antenatal Record

Pertussis and influenza vaccinations must also be recorded on the antenatal record.

Pregnancy 'Yellow Card'

Clinics should make local arrangements to develop a stamp to record pertussis and influenza vaccinations on the pregnancy 'yellow card'. A stamp template is provided in **Appendix 4**.

Adult/Adolescent Vaccination Record Card

Pertussis and influenza vaccinations may be recorded on an Adult/Adolescent Vaccination Record Card which is available to order from the Better Health Centre warehouse on bhc@nscchs.health.nsw.gov.au or (02) 9887 5450.

Australian Immunisation Register

The Australian Immunisation Register (AIR) is a national register that records vaccines given to people of all ages in Australia including children, adolescent and adult vaccinations. Antenatal clinics should record vaccines administered to pregnant women directly on the AIR or document on a yellow card or adult vaccination record card to enable the patient's GP to record the details.

All pregnant women who receive dTpa and influenza vaccines in the antenatal clinic should be advised to provide the vaccination details to their GP

Useful Resources and Websites & References

[The Australian Immunisation Handbook \(online edition\)](#)

[NH&MRC revised pertussis chapter](#)

[National Vaccine Storage Guidelines – Strive for 5 \(current edition\)](#)

[NSW Health whooping cough website](#)

[NSW Health Pertussis Vaccination in Pregnancy website](#) (a range of brochures are available, including translations into 27 community languages)

Staff Decision Aid (**Appendix 6**) – a printable A3 version is available at:
www.health.nsw.gov.au/protectnewborns

Wiley KE, Massey PD, Cooper Robbins SC, Wood N, Quinn HE, Leask J. (2013a) Uptake of influenza vaccine by pregnant women: A cross-sectional survey with implications for policy and practice. *Medical Journal of Australia*. 2013,198: 373–375.

Wiley KE, Massey PD, Cooper Robbins SC, Wood N, Quinn HE, Leask J. (2013b) Pregnant women’s intention to take up a post-partum pertussis vaccine, and their willingness to take up the vaccine while pregnant: A cross sectional survey. *Vaccine* 31:3972– 3978

Order Resources

Click on each resource below to obtain the relevant order form:

[National Vaccine Storage Guidelines Strive for 5 \(current edition\)](#)
[NSW Health Antenatal Pertussis Program Resources Order Form](#)

Appendix 1 Frequently Asked Questions

Why is it important to be protected against pertussis?

Pertussis, also known as whooping cough, is a bacterial infection affecting the respiratory system, caused by the organism *Bordetella pertussis*. It affects individuals of all ages, but is more severe (and can be fatal) in small babies, particularly those too young to be vaccinated or those who are unvaccinated.

Although pertussis vaccination can protect pregnant women and their infant, immunity wanes over time and epidemics of whooping cough still occur. The National Health and Medical Research Council (NH&MRC) recommends that all pregnant women should receive diphtheria, tetanus and pertussis (dTpa) vaccine between 20 and 32 weeks gestation of each pregnancy and that all children receive pertussis-containing vaccine at 6 weeks, 4 months and 6 months of age followed by booster doses at 18 months, 4 years and 11-13 years of age.

How does vaccinating the mother against pertussis protect the infant?

Vaccination of pregnant women with dTpa vaccine has been shown to be effective in preventing pertussis disease in newborn infants via the transfer of high levels of maternal antibodies in utero. Vaccination of mothers at least two weeks before birth reduced the risk of infants being hospitalised with pertussis in the first six months of life by 94%. Therefore, dTpa vaccine is recommended as a single dose between 20 and 32 weeks gestation of each pregnancy (usually at 28 weeks) and has been shown to be more effective in reducing the risk of pertussis in young infants than vaccination of the mother post-partum.

When should dTpa vaccine be given to pregnant women?

Pertussis antibody levels do not peak until approximately two weeks after vaccination. The optimal time for vaccination is during the second or early in the third trimester (between 20 and 32 weeks). However, the vaccine can be given at any time from 20 weeks up to birth.

Why has the recommended timing of pertussis vaccination changed?

Evidence from a number of studies found that antibodies taken from cord blood of women vaccinated earlier in pregnancy were as high (if not higher) than those vaccinated in the third trimester. Safety studies suggest that vaccination in second and third trimester was not associated with clinically significant harm to the fetus or the mother. The change in timing will therefore increase the likelihood that babies who are born preterm are protected against pertussis by enabling vaccination of pregnant women earlier in their pregnancy.

If the recommended timing of pertussis vaccination has change to 20-32 weeks why is it still being given at 28 weeks?

NSW has an established antenatal pertussis vaccination program. Therefore, pregnant women should continue to routinely receive their pertussis vaccination at their 28 week visit, except in circumstances where they have been identified as being at high risk of preterm birth or for women who are unlikely to attend a 28 week visit for any reason. These at-risk women should receive their pertussis vaccination at 20 weeks or as soon as possible after this time. Women who do not receive the vaccine before 32 weeks should still receive the vaccination as soon as possible, at any time up until birth.

What if a woman has pregnancies that are close together – does she need to be vaccinated each pregnancy?

Women should receive a pertussis vaccine with every pregnancy, even if pregnancies are closely spaced (e.g. <2 years). It is preferable to leave at least 12 months between doses of a pertussis containing vaccine (e.g. Boostrix® or Adacel®) as the risk of a local reaction to the vaccine (pain and/or swelling at the injection site) increases with multiple doses, particularly if given close together in time. If a woman has received a dose of pertussis vaccine in the months prior to falling pregnant, the pregnancy dose can be given later in the third trimester to maximize the time between doses while still boosting immune levels to pass onto the baby.

What if a woman is given a tetanus booster (ADT) during pregnancy?

If a woman has received an ADT vaccination (for a wound) it is still important that she has a dTpa vaccination to provide whooping cough protection for her newborn. It is preferable to leave at least 4 weeks between the ADT and the dTpa vaccines. The low risk of significant injection site reaction is considered to be balanced by the benefit to each infant of protection against pertussis.

What should happen if a woman is not vaccinated during pregnancy?

For any pregnancy where antenatal vaccination does not occur, vaccination in the immediate post-partum period, as soon as possible after birth of the infant (before hospital discharge), will reduce the likelihood of pertussis occurring in the mother and also provide some indirect protection to the newborn.

Is pertussis vaccination during pregnancy safe?

Yes. Studies have found no evidence of an increased risk of adverse pregnancy outcomes related to pertussis vaccination during pregnancy. There is a small risk that significant injection site reactions following subsequent doses might occur in some women who receive dTpa vaccines

during successive closely spaced pregnancies. This low risk is considered to be balanced by the benefit to each infant of protection against pertussis.

Is it safe for mothers to breastfeed after being vaccinated with dTpa vaccine during pregnancy?

Yes dTpa vaccine can be given to women who plan to breast feed. There is evidence that pertussis antibodies in breast milk are increased after immunisation in pregnancy and breastfeeding may therefore help reduce the likelihood of a baby becoming ill with pertussis. Whilst there may be some pertussis antibodies transferred to the infant in breast milk of vaccinated women, this will not be enough to replace the need for the infant to complete the recommended primary immunisation schedule on time, commencing at 6 weeks of age.

Does vaccinating the mother have an impact on the infant's pertussis vaccination schedule?

No, the infant will be provided with maternal antibodies that will protect them through the period they are building their own immunity from vaccination, which commences when they are 6 weeks of age. It is important to advise mothers that her infant should receive all of their vaccinations on time so that they are protected against serious diseases as soon as possible.

How can I order dTpa vaccine for my pregnant women?

The National Immunisation Program provides free dTpa (Boostrix[®] and Adacel[®]) vaccine for women between 20 and 32 weeks gestation via GPs, Aboriginal Medical Services, and hospital antenatal clinics. The dTpa vaccine can be ordered from the NSW Vaccine Centre for your pregnant women with your routine monthly order at <https://nsw.tollhealthcare.com/>. If you do not have a vaccine account number (VAN), please contact your local public health unit on **1300 066 055** to discuss further.

Is the vaccine also free for close family contacts and carers?

No, dTpa vaccine is only funded for pregnant women. Close family members and carers are recommended to receive the pertussis-containing vaccine at least two weeks before any contact with the newborn, however they are required to pay for this vaccination. You should advise them to attend their immunisation provider and request pertussis vaccination if they have not received a dose in the last 10 years.

Where can I find out more information about the program?

For more information please visit the NSW Health Antenatal Pertussis Vaccination Program website at: www.health.nsw.gov.au/protectnewborns

Appendix 2 Standing Order Templates

TITLE	Standing order for adult diphtheria, tetanus and pertussis (dTpa) vaccine
Trade Name(s)	Boostrix®; Adacel®
Presentation ¹	Boostrix: 0.5mL in needleless prefilled syringe for injection Adacel: 0.5mL suspension in a vial
Indication	Pregnant women between 20 and 32 weeks gestation (usually at 28 weeks but as soon as possible after 20 weeks for those identified as at high risk of preterm birth or who are unlikely to attend a 28 week visit. Post-partum for women not vaccinated during pregnancy.
Contraindications ¹	Previous anaphylaxis following a previous dose of diphtheria, tetanus and pertussis-containing vaccine or any vaccine component
Precautions ¹	Recent (< 12months) vaccination with diphtheria, tetanus or pertussis containing vaccine. Observe woman until at least 15 minutes post administration for development of allergic reaction
Dose ¹	0.5mL containing diphtheria, tetanus and pertussis toxoids. Refer to the medication packaging for specific dosages
Dose frequency ¹	Once only
Administration ¹	To be administered in hospital only Rotate gently to mix before use 0.5mL given as a slow intramuscular injection
Storage of vaccine ²	Refrigerate, store between +2°C to +8°C and according to <i>The National Vaccine Storage Guidelines Strive for 5 (current edition)</i> . Must be stored out of patient and public access, preferably in a locked room– see PD2013_043 Medication Handling in NSW Public Hospitals
Adverse effects ¹	1 in 10 has local swelling, redness or pain at the injection site or fever Serious adverse events are very rare
Nursing Accreditation Requirements	An RN/RM whose competency (refer to Appendix 5 Competency Assessment Checklist) to administer vaccines (schedule 4 medications) and to comply with this Standing Order has been assessed and approved by a Local Facilitator in accordance with the procedures specified in <i>The Australian Immunisation Handbook (online edition)</i>
Documentation	Record specific medication trade name, batch number, vaccination site and date in antenatal record, eMaternity/Cerner Maternity database and in the discharge letter. Administration record is to be documented by the administering nurse. Document on the “once only” section of the appropriate medication chart The record of administration must be checked and countersigned by a medical officer within 24 hours of initial administration.
Related Documents	<ol style="list-style-type: none"> The Australian Immunisation Handbook (online edition) National Vaccine Storage Guidelines Strive for 5 (current edition) PD2013_043 Medication Handling in NSW Public Hospitals Pregnancy – Protection and Vaccination from Conception to Birth (brochure) Important Vaccines for Pregnancy (Aboriginal brochure) Boostrix® CMI and Adacel® CMI

Standing order activation:

(to be completed for each occasion of patient administration and/or supply)

Date:	Medical Officer Name:	
Reason for activation:		

TITLE	Standing order for influenza vaccine
Trade Name(s)	FluQuadri® Afluria Quad® Fluarix Tetra®
Presentation ¹	0.5mL in needleless prefilled syringe for injection
Indication	All pregnant women
Contraindications ¹	Previous anaphylaxis following a previous dose of influenza vaccine or any vaccine.
Precautions ¹	Egg allergy; History of Guillain-Barré syndrome. Observe woman until at least 15 minutes post administration for development of allergic type reactions. Notify medical officer immediately if allergic type symptoms develop
Dose ¹	0.5mL containing 15ug haemagglutinin of each of the four recommended strains. Refer to the medication packaging for specific dosages
Dose frequency ¹	Once only
Administration ¹	To be administered in hospital only Rotate gently to mix before use 0.5mL given as a slow intramuscular injection
Storage ²	Refrigerate, store between +2°C to +8°C and according to <i>The National Vaccine Storage Guidelines Strive for 5 (current edition)</i> . Must be stored out of patient and public access, preferably in a locked room – see PD2013_043 Medication Handling in NSW Public Hospitals
Adverse effects ¹	About 1 in 10 has local swelling, redness and pain at the injection site. Fever, malaise and myalgia occur in 1-10%; Guillain-Barré syndrome occurs in about 1 in 1 million; Serious adverse events are very rare
Nursing Accreditation Requirements	An RN/RM whose competency (refer to Appendix 5 Competency Assessment Checklist) to administer vaccines (schedule 4 medications) and to comply with this Standing Order has been assessed and approved by a <i>Local Facilitator</i> , in accordance with the procedures specified in <i>The Australian Immunisation Handbook (online edition)</i>
Documentation	Record specific medication trade name and batch number in antenatal record, eMaternity/Cerner Maternity and in the discharge letter. Administration record is to be documented by the administering nurse. Document on the “once only” section of the appropriate medication chart The record of administration must be checked and countersigned by a medical officer within 24 hours of initial administration.
Related Documents	<ol style="list-style-type: none"> The Australian Immunisation Handbook (online edition) National Vaccine Storage Guidelines Strive for 5 (Current edition) PD2013_043 Medication Handling in NSW Public Hospitals Pregnancy – Protection and Vaccination from Conception to Birth (brochure) Important Vaccines for Pregnancy (Aboriginal brochure) https://www.tga.gov.au/

Standing order activation:

(to be completed for each occasion of patient administration and/or supply)

Date:	Medical Officer Name:	
Reason for activation:		

Appendix 3 Pregnancy Card Stamp Template

Antenatal clinics should use the following template to order a pregnancy card stamp:

Vaccination Details	
Name of Vaccine administered :	_____ (<i>brand name</i>)
Vaccine batch number:	_____
Vaccination site:	_____
Date of vaccination:	/ /
Administered by:	_____ (<i>print name</i>)
Signature:	_____

Appendix 4 Maternity dTpa/influenza Pre-vaccination Checklist

Person to be vaccinated

SURNAME: _____

First name(s): _____

Date of birth: / /

Gestational weeks: _____

Identifies as an Aboriginal or Torres Strait Islander

Name of person completing this form (please print): _____

CHECKLIST

Please indicate if the person to be vaccinated:

- is unwell today
- has had a severe reaction following any vaccine
- has *any* severe allergies (to anything)
- has received any vaccine(s) during this pregnancy
- has a past history of Guillain-Barré syndrome
- has a bleeding disorder

If you ticked any of the above boxes, please provide more details and defer vaccination or discuss with a medical officer before proceeding:

NOTE: If you identify the presence of a condition or circumstance indicated on the pre-vaccination screening checklist, refer to the [Pre-vaccination section](#) of [The Australian Immunisation Handbook \(online edition\)](#) which lists the specific issues pertaining to such condition(s) or circumstances and provides the appropriate action with a rationale.

Appendix 5 Vaccination Competency Assessment Checklist

The following checklist must be utilised by the local facilitator to assess registered nurses and midwives competency to conduct an immunisation clinic.

RN/RM Name: _____ **Employee number:** _____

Competency	Competent	Not yet competent	Assessor Signature	Date DD/MM/YY
Demonstrates knowledge of antenatal pertussis vaccination and its requirements in the antenatal setting				
Demonstrates knowledge about the vaccine type, composition, reactogenicity and effectiveness				
Demonstrates ability to set up an immunisation clinic according to the online edition of <i>The Australian Immunisation Handbook</i>				
Demonstrates ability to manage the vaccine cold chain (including management of cold chain breaches)				
Demonstrates ability to order vaccines and/or knowledge how to ensure adequate vaccine stock (if vaccines ordered via hospital pharmacy)				
Demonstrates ability to perform vaccine checking and preparation procedures prior to administration of the vaccine				
Greets patient, confirms her identification and that dTpa vaccine has <u>not</u> been administered this pregnancy or influenza vaccine has <u>not</u> been administered this season, as appropriate				
Demonstrates ability to explain the benefits of the vaccine to be administered, including potential adverse events following immunisation, provide information materials and correctly answer questions as required				
Demonstrates ability to conduct a pre-vaccination assessment				
Demonstrates knowledge on how to counsel a woman who refuses vaccination and actions required				
Demonstrates knowledge on how to manage a woman who has a contraindication(s) to vaccination and actions required				
Demonstrates ability to obtain informed consent using the pre-vaccination checklist				
Demonstrates accurate injection technique and site locations to administer dTpa and influenza vaccines in accordance with the procedures specified in <i>The Australian Immunisation Handbook</i> (online edition)				
Demonstrates ability to recognize signs and symptoms of a patient experiencing an adverse event following immunisation and respond appropriately				
Demonstrates ability to record the immunisation encounter accurately and completely				
Follows infection control and work health and safety practices				
Demonstrates safe disposal of sharps and clinical waste				
Demonstrates ability to manage the vaccine cold chain during the <u>complete</u> immunisation encounter				
Demonstrates ability to provide appropriate post-vaccination advice, including where to seek advice if concerned				

ASSESSOR NAME (please print): _____ **Position:** _____

Antenatal Pertussis Vaccination Program Guidelines

Appendix 6 – Staff Decision Aid

A printable A3 electronic version is available at www.health.nsw.gov.au/protectnewborns

