# Antenatal Pertussis Vaccination Program Guidelines

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Introduction
The NSW Antenatal Pertussis Vaccination Program offers free diphtheria, tetanus and pertussis (dTpa) vaccine to all pregnant women in the third trimester (preferably at 28 weeks) to protect infants through maternal pertussis antibody transfer. NSW Health provides Boostrix® (dTpa) vaccine free to GPs, Aboriginal Medical Services and antenatal clinics for all pregnant women in the third trimester. These guidelines have been developed to assist antenatal clinics establish and implement 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 should prioritise their own 10-yearly boosters of pertussis vaccine, available free through staff health. For more information refer to PD2011_005 Occupational Assessment Screening and Vaccination Against Specified Infectious Diseases.

Antenatal Pertussis Vaccination Schedule
The optimal time for pertussis vaccination is between 28 and 32 weeks gestation; however the vaccine can be given at any time during the third trimester and up to birth. Early third trimester vaccination is preferred because pertussis antibody levels do not peak until approximately two weeks after vaccination and active transfer of maternal antibody to the fetus occurs predominantly from 30 weeks gestation onwards.

Vaccination is recommended with each pregnancy to provide maximal 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 delivery 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 (however they will be required to attend their doctor for a prescription for the vaccine). 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
Local Health Districts (LHDs) should amend their 28 week antenatal checklist to ensure that all pregnant women are offered free dTpa vaccine in the third trimester. It is recommended that this 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. If not given until the third trimester, 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 prior to the establishment of the antenatal pertussis vaccination clinics. Funding will be 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 part-time over 12 weeks and conducted fully 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.

A HETI online education module is currently being developed. All staff involved in maternal vaccination should complete this training. This training will be available from December 2015. Clinics should not be delayed and these guidelines should be utilised to educate staff as an interim measure. 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 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 Boostrix® vaccine is available at: http://au.gsk.com/en-au/products/our-prescription-medicines-and-vaccines/#vaccines.

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 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 \[+2^\circ C \text{ to } +8^\circ C\] (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 (2nd 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 $+2 \, ^\circ C$ to $+8 \, ^\circ C$.
- 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 $+2 \, ^\circ C$ to $+8 \, ^\circ C$.
- After the fridge door has been opened, ensure the current temperature display has returned to between $+2 \, ^\circ C$ to $+8 \, ^\circ C$, before pressing ‘reset’.
- A data logger should be placed in the vaccine fridge and the temperatures downloaded weekly and whenever the temperature is $<+2 \, ^\circ C$ and/or $>+8 \, ^\circ C$. This is to ensure the fridge is stable and identify any cold chain breaches early.
- **Temperatures noted to be outside $+2 \, ^\circ C$ to $+8 \, ^\circ C$ 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 (2nd edition)*, section 7.

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 10). 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 (during the third trimester); 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. Before using the 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. 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. If there are any vaccine storage issues, do not use the vaccine and report them to your PHU.

Needle Syringe containing diphtheria tetanus and pertussis antigens
Recommended injection site

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


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

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:

<table>
<thead>
<tr>
<th>Adult size</th>
<th>Needle type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular size adult for IM vaccination</td>
<td>23 or 25 gauge, 25mm in length</td>
</tr>
<tr>
<td>Very large or obese adults for IM vaccination</td>
<td>23 gauge, 38mm in length</td>
</tr>
</tbody>
</table>

**Notes:**
- **23 g x 38mm** IMI [obese women]
- **23g x 25mm** or **25g x 25mm** IMI
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 *The Australian Immunisation Handbook (10th edition)* Section 2.2 Administration of Vaccines (online version updated March 2015) for detailed information.

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.

![Diagram showing angle of insertion for intramuscular injection](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 (10th edition).
- Side effects of vaccinating pregnant women against pertussis and influenza are reported to be mild with no risk of complications when given during pregnancy. Following dTpa vaccination of over 40,000 pregnant women during the third trimester in the US and UK, the most common side effects were pain and redness in the arm where the dTpa vaccine was given. 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 (10th edition) (online version updated March 2015). Anaphylaxis following routine vaccination is very rare and is most likely to begin within 15 minutes of vaccination.

Clinical Presentation of Anaphylaxis

<table>
<thead>
<tr>
<th>Anaphylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
</tr>
<tr>
<td>Usually within 15 minutes but can occur within hours of vaccine administration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symptoms and signs</th>
<th>Respiratory</th>
<th>Cardiovascular</th>
<th>Skin</th>
<th>Gastrointestinal</th>
<th>Neurological</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>Cough, wheeze, hoarseness, stridor or signs of respiratory distress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Tachycardia, weak/ absent carotid pulse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sustained hypotension*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loss of consciousness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>Pruritis, redness, weals or angioedema</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Abdominal cramps, diarrhoea, nausea, vomiting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurological</td>
<td>Severe anxiety and distress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adult Adrenaline Dosages

<table>
<thead>
<tr>
<th>Doses of IMI Adrenaline 1:1000 for anaphylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult (over 50 kg)</td>
</tr>
</tbody>
</table>

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 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.
Patient Referral to GP/Aboriginal Medical Service (AMS)
Antenatal clinics that require a lead time to establish their clinics should refer their pregnant women to their GP/AMS for vaccination, until their antenatal pertussis vaccination clinic is established. Vaccination clinics must be established by 1 October 2015.

As the optimal time for pertussis vaccination is 28-32 weeks for maternal pertussis antibody transfer to her infant, women can be vaccinated up to delivery and do not need to be referred back to their GP for vaccination should they attend the antenatal clinic later than 28 weeks. Influenza vaccine can be given at any stage of pregnancy, depending on the availability of influenza vaccine.

Recording of Vaccinations
ObstetriX database
The ObstetriX database has been updated to include questions relating to maternal pertussis and influenza vaccination status. The update is currently being rolled across the Local Health Districts, (Sydney and South West Sydney LHDs will update Cerner). The following questions have been added:

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@nsccahs.health.nsw.gov.au or (02) 9887 5450.

All pregnant women who receive dTpa and influenza vaccines in the antenatal clinic should be advised to provide the vaccination details to their GP
Program Reporting
LHDs that have the upgraded version of ObstetriX installed (includes maternal influenza and pertussis vaccinations), should contact their PHU to make arrangements for data extraction and reporting on the number of pregnant women who have received dTpa and influenza vaccines. LHDs without the upgraded version of ObstetriX should make arrangements to have it installed as a matter of urgency.

Useful Resources and Websites & References
The Australian Immunisation Handbook (10th edition)
NH&MRC revised pertussis chapter
National Vaccine Storage Guidelines – Strive for 5 (2nd edition)
NSW Health Pertussis Vaccination in Pregnancy website (a range of brochures are available, including translations into 26 community languages)
NSW Health whooping cough website

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. (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:
The Australian Immunisation Handbook (10th edition) 2013
National Vaccine Storage Guidelines Strive for 5 (2nd edition) 2013
NSW Health Antenatal Pertussis Program Resources Order Form
Appendix 1 Frequently Asked Questions

Why is pertussis disease important to be protected against?

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. There has been an increase in pertussis notifications in NSW since mid-2014 indicating that another epidemic may peak in 2015. The National Health and Medical Research Council (NH&MRC) recommends that all pregnant women should receive diphtheria, tetanus and pertussis (dTpa) vaccine in the third trimester of every 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 seven days before delivery has reduced pertussis disease by 91% in infants <3 months of age in England in 2014. Therefore, dTpa vaccine is recommended as a single dose during the third trimester of each pregnancy (preferably 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?

As pertussis antibody levels do not peak until approximately two weeks after vaccination and active transport of maternal antibody to the fetus occurs predominantly from 30 weeks gestation onwards, the optimal time for vaccination is early in the third trimester (between 28 and 32 weeks). However, the vaccine can be given at any time during the third trimester up to delivery.

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®) 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 than 28 weeks 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 delivery 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 women vaccinated at 28-38 weeks gestation, 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 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?
NSW Health provides free dTpa (currently Boostrix®) vaccine for women in the third trimester of pregnancy via GPs, Aboriginal Medical Services, and hospital antenatal clinics. dTpa vaccine should be ordered from the NSW Vaccine Centre for your pregnant women with your routine monthly order at www.nsw.csldirect.com.au. 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 in the third trimester. Close family members and carers must pay for pertussis-containing vaccine. You should advise them to attend their doctor and request pertussis vaccination.

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

<table>
<thead>
<tr>
<th><strong>Trade Name(s)</strong></th>
<th>Boostrix®; Adacel®</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Presentation ¹</strong></td>
<td>0.5mL in needleless prefilled syringe for injection</td>
</tr>
</tbody>
</table>
| **Indication** | - All pregnant women in the third trimester (preferably at 28 weeks but can be later)  
- Post-partum for women not vaccinated in the third trimester |
| **Contraindications¹** | Previous anaphylaxis following a previous dose of diphtheria, tetanus and pertussis -containing vaccine or any vaccine component |
| **Precautions¹** | Recent (< 12months) vaccination with diphtheria, tetanus or pertussis containing vaccine.  
Observe woman until at least 15 minutes post administration for development of allergic reaction |
| **Dose¹** | 0.5mL containing diphtheria, tetanus and pertussis toxoids. Refer to the medication packaging for specific dosages |
| **Dose frequency¹** | Once only |
| **Administration¹** | To be administered in hospital only  
Rotate gently to mix before use  
0.5mL given as a slow intramuscular injection |
| **Storage of vaccine²** | Refrigerate, store between +2°C to +8°C and according to The National Vaccine Storage Guidelines Strive for 5 (2013). Must be stored out of patient and public access, preferably in a locked room—see PD2013_043 Medication Handling in NSW Public Hospitals |
| **Adverse effects¹** | 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 The Australian Immunisation Handbook (10th edition) |
| **Documentation** | Record specific medication trade name, batch number, vaccination site and date in antenatal record, ObstetriX 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 |
3. PD2013_043 Medication Handling in NSW Public Hospitals  
4. Pregnancy – Protection and Vaccination from Conception to Birth (brochure)  
5. Important Vaccines for Pregnancy (Aboriginal brochure)  
6. Boostrix® CMI |

**Standing order activation:**
(to be completed for each occasion of patient administration and/or supply)

<table>
<thead>
<tr>
<th><strong>Date:</strong></th>
<th><strong>Medical Officer Name:</strong></th>
</tr>
</thead>
</table>

**Reason for activation:**
<table>
<thead>
<tr>
<th>TITLE</th>
<th>Standing order for influenza vaccine</th>
</tr>
</thead>
</table>
| Trade Name(s) | Fluvax®  
Vaxigrip®  
Fluarix® |
| Presentation | 0.5mL in needleless prefilled syringe for injection |
| Indication | All pregnant women |
| Contraindications | Previous anaphylaxis following a previous dose of influenza vaccine or any vaccine. |
| Precautions | 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 | 0.5mL containing 15ug haemagglutinin of each of the three recommended strains. Refer to the medication packaging for specific dosages |
| Dose frequency | Once only |
| Administration | To be administered in hospital only  
Rotate gently to mix before use  
0.5mL given as a slow intramuscular injection |
| Storage | Refrigerate, store between +2°C to +8°C and according to The National Vaccine Storage Guidelines Strive for 5 (2013). 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 | 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 Local Facilitator, in accordance with the procedures specified in The Australian Immunisation Handbook (10th edition) |
| Documentation | Record specific medication trade name and batch number in antenatal record, ObstetriX 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
3. PD2013 043 Medication Handling in NSW Public Hospitals  
4. Pregnancy – Protection and Vaccination from Conception to Birth (brochure)  
5. Important Vaccines for Pregnancy (Aboriginal brochure)  
6. Fluvax®CMI; Fluarix®CMI; Vaxigrip®CMI

### Standing order activation:
(to be completed for each occasion of patient administration and/or supply)

<table>
<thead>
<tr>
<th>Date:</th>
<th>Medical Officer Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for activation:</td>
<td></td>
</tr>
</tbody>
</table>
Antenatal Pertussis Vaccination Program Guidelines

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: _______________________(brand name)

Vaccine batch number: ______________________________

Vaccination site: ___________________________________

Date of vaccination:      /       /

Administered by: ________________________________ (print name)

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 Table 2.1.2, Part 2 Vaccination Procedures of The Australian Immunisation Handbook (10th edition) (online version updated March 2015) 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.

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

**ASSESSOR NAME (please print):** ________________________________  **Position:** ________________________________
Appendix 6 – Staff Decision Aid