Health Management Protocols for the

Drug Therapy Protocol: Midwifery

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In 2008 Queensland Health successfully changed legislation to enable midwives to supply, administer, obtain and possess particular drugs. These drugs are identified in the Drug Therapy Protocol: Midwifery and are detailed in the Health Management Protocols for the Drug Therapy Protocol: Midwifery. This remains the principal clinical reference for Queensland midwives working in maternity services under a drug therapy protocol. Queensland maternity facilities can now establish this innovative and progressive protocol to support the professional role of midwives.

It is with pleasure that I launch the second edition of the Health Management Protocols for the Drug Therapy Protocol: Midwifery. With the implementation of these documents, and other Queensland Health innovations in maternity service provision, Queensland is well placed to progress national maternity reform measures that increase women’s access to midwifery care.

Midwifery health management protocols provide clear and concise protocols under which a midwife can administer and supply medications listed on the Drug Therapy Protocol: Midwifery in accordance with the Health (Drugs and Poisons) Regulation 1996. The clinical guidelines that outline the situations and conditions are the product of extensive review and consultation with interdisciplinary health care professionals, including those working in isolated and rural areas.

These protocols ensure best practice, enabling women and their babies to receive timely, appropriate and effective maternity care by midwives. This is especially important for families who live in rural and remote areas. The implementation of these documents in services is imperative to providing safe and accessible maternity care.

These protocols support midwives to work to the scope of professional midwifery practice. A fundamental driver for national
and state maternity reform is to enable an increased professional role and autonomous practice for midwives within maternity teams. Collaborative partnerships across maternity service providers, based on mutual understanding of roles, scope of practice and professional responsibilities, will benefit the women and babies who we care for. These protocols support collaborative practice within clear frameworks of safe, accessible and high level quality care provision.

All Queensland Health districts are encouraged to adopt the protocols contained in this guide and to actively contribute to ongoing review and revision.

Dr Tony O’Connell
Director-General
Queensland Health 2011
Introduction

The Midwifery Health Management Protocols for the Drug Therapy Protocol: Midwifery is the product of an extensive review and consultation process with interdisciplinary health care professionals, including those working in isolated and rural areas.

The Midwifery Health Management Protocols (HMP) are concise clinical guidelines for responding to health needs of women and their babies in maternity service areas.

They are designed to support compliance with the Health (Drugs and Poisons) Regulation 1996 (Queensland) and the Drug Therapy Protocol: Midwifery (DTP).

The interventions in the Health Management Protocols for the Drug Therapy Protocol: Midwifery are based on the best available evidence and information on best practice from experienced health professionals working throughout Queensland.

The contents are not an exhaustive list of situations that may confront midwives but rather, those they most commonly encounter.

The HMP is effective for a maximum of 2 years from the date of endorsement. Following this period of two years, or sooner if considered necessary, the HMP must be reviewed by the interdisciplinary team and endorsed again by the District Health Service Manager or Chief Executive Officer of a non-Queensland Health organisation, even if no changes have been made.


The Therapeutic Guidelines, based on the latest international literature, interpreted by some of Australia’s most eminent and respected experts, with input from an extensive network of general practitioners and other users ([www.tg.com.au](http://www.tg.com.au)), was also used extensively to review the Midwifery HMPs.
S2 or S3 poisons such as Adrenaline, Aspirin, Paracetamol, Paracetamol/Codeine, Ferrous Sulphate, Folic Acid, and Nystatin, etc. are not included in the HMP’s as midwives can already administer these.

In addition, unscheduled drugs such as Vitamin K administered to newborn babies for prophylaxis of haemorrhagic disease of the newborn are not included. However routine intramuscular administration of Phytomenadione Vitamin K (Konakion) 1mg to all newborns is standard policy in all Queensland hospitals.

The Drug Therapy Protocol: Midwifery is located at


We welcome your comments on this edition and your contribution to future editions.

Please write or email:
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Guidelines

The Health Management Protocols for the Drug Therapy Protocol: Midwifery does not generally include information such as contra-indications, precautions, and adverse reactions relevant to the various drugs recommended. Midwives must have access to the current version of:

- the Drug Therapy Protocol: Midwifery
- the Australian Medicines Handbook
- current MIMS Annual
- the Health (Drugs and Poisons) Regulation 1996
- the NHMRC Australian Immunisation Handbook.

Each Health Management Protocol (HMP) presumes that a thorough physical assessment and a specific and general medical history have occurred, including checking adverse drug reaction history. The history taking and physical examination/clinical assessment may require modification in emergency situations.

Assessment and advice

Client presentation

The following information should be collated, utilising the statewide pregnancy health record, at each visit to enable identification of the client’s health status:

- take a patient history (including any concerns since last presentation, fetal movements)
- perform clinical observations (blood pressure, fetal heart rate)
- perform physical examination (abdominal palpation, fundal height)
- diagnostic and pathology services (review of previous pathology results, msu if indicated)
- collaboration with other team members
- documentation of findings and any discussion with other team members.
Consultation with medical officers

The Australian College of Midwives provides three levels of consultation and referral:
A. discuss the situation with a colleague — midwife, and/or with a medical colleague or other health care provider
B. consult with a medical or other health care provider
C. refer a woman or her infant to secondary or tertiary care.


Considering the following can assist with effective consultation with medical officers:
- it is often easier if you write your findings down first (time permitting)
- it is helpful to advise the medical officer (MO) early that you have a client about whom you want some advice or alternatively who you think may need evacuation in a rural or remote service
- begin with the name and age of the woman, her gravidity, parity and current gestation, then provide current concerns and proceed to discuss findings from examination/clinical assessment
- identify your concerns clearly
- always consult with the MO if you are unsure.

SBAR is a tool that is useful for clinicians when liaising with other health professionals. The key elements are:
S: Situation
B: Background
A: Assessment
R: Recommendations

Documentation

All medications given under the DTP must be documented appropriately in the client record and on the National Inpatient Medication Chart as used in Queensland Health services. All clinical findings and consultation with health professionals should be documented in the client record.

#### Urinary tract infections in pregnancy

Urinary tract infection is a common complication of pregnancy and may lead to preterm labour, low birth weight babies and increase in perinatal mortality and maternal anaemia.

#### Assessment

- Assess as per Guideline: Assessment and advice
- Obtain a full history including past episodes of urinary tract infection (UTI) both in and out of pregnancy and relevant sexual history
- Heart rate, temperature, blood pressure, abdominal palpation especially for loin or suprapubic tenderness
- Urinalysis
- Collect a MSU for microscopy, culture and sensitivity
- Consider Sexually Transmitted Infection (STI) tests for gonorrhoea/chlamydia, trichomonas/bacterial vaginosis, and syphilis if not already done
- Complete a routine antenatal maternal and fetal examination including abdominal palpation and assessment of fetal heart rate
- Obtain history of any medication hypersensitivity or allergy.

#### Acute Cystitis

- Lower abdominal pain and sometimes mild low back pain; low abdominal or suprapubic pain with dysuria or frequency in early pregnancy could also be pelvic inflammatory disease (PID); any woman presenting with low abdominal pain should be assessed for PID
- Urinary frequency
- Discomfort/burning on passing urine (dysuria)
- Abnormal urinalysis (nitrites/protein/blood).

#### Pyelonephritis

- Fever, rigors, nausea, vomiting
• Loin pain
• Abnormal urinalysis (nitrites/protein/blood).

**Asymptomatic Bacteruria**
• No symptoms
• Abnormal urinalysis (nitrites/protein/blood)
• Pure growth >105/cmm on urine culture.

**Management**

**Acute Cystitis**
• Advise increase fluid intake
• Before results of MCS urine is available treat with Cephalexin unless allergic to Penicillin or other beta-lactam antibiotics (includes Cephalexin) and if sensitivity to Amoxycillin unknown.

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<th>Schedule</th>
<th>4</th>
<th>Cephalexin</th>
<th>DTP MID</th>
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<td>Form</td>
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<td>Oral</td>
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<td>250mg</td>
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<td></td>
<td>Oral</td>
<td>Adult</td>
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Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:**
As per local care manual, consult medical officer.

If allergic to penicillin or beta lactans, consult medical officer, and treat with Nitrofurantoin.

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<th>Schedule</th>
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<th>Nitrofurantoin</th>
<th>DTP MID</th>
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Not to be used in renal impairment or if labour imminent.
Take with food or milk.
Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:**
As per local care manual, consult medical officer.

**Pyelonephritis**
Consult medical officer (MO): will require IV antibiotics and hospitalisation.

**Asymptomatic Bacteruria (antenatal screening)**
If culture is sensitive to Amoxycillin and woman is not allergic, treat with Amoxycillin.

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<th>Schedule</th>
<th>4</th>
<th>Amoxycillin</th>
<th>DTP MID</th>
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<td>Form</td>
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Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:**
As per local care manual, consult medical officer.

Consult MO if culture is not sensitive to Amoxycillin or if there has been other positive cultures this pregnancy.

**Follow-up required**
• Check culture and sensitivity, and consult MO if resistant organism found
• Repeat MSU at least 48 hours after completion of treatment to confirm clearance of infection
• Consult MO if UTI persists or recurs after treatment
• Repeat MSU monthly until birth as required.

**Post birth follow-up**
• MSU at 6 week postnatal visit
• Consult MO regarding renal ultrasound and serum urea/creatinine/uric acid at 3 month postpartum if recurrent UTIs.

**Referral/consultation**
Consult MO as above.

*Source: MIMS online, accessed 26th May 2011.*

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**Referral/consultation**
Consult MO as above.

Hypertensive disorders in pregnancy

Hypertension during pregnancy is associated with a significantly higher risk of adverse perinatal and/or maternal outcomes. Preeclampsia can occur from 20 weeks; it is a complex multi-system disease with significant risks to the health of the mother and baby. Preeclampsia can progress very rapidly.

Gestational hypertension

Assessment

Gestational hypertension is hypertension arising in pregnancy after 20 weeks gestation without any other feature of the multi-system disorder preeclampsia (see below) and which resolves within 3 months postpartum.

- The earlier the gestation at presentation and the more severe the hypertension, the higher the likelihood of developing preeclampsia or an adverse pregnancy outcome.
- Hypertension is defined as:
  - systolic blood pressure is > 140mmHg, and/or
  - diastolic blood pressure (Korotkoff V) is > 90mmHg.
- These blood pressures should be confirmed by repeated readings over several hours in an outpatient or inpatient setting.
- A rise in systolic blood pressure > 30mmHg and/or a rise in diastolic blood pressure > 15mmHg may be significant in some women.

Management

- Usually in a day stay assessment unit if available
- Some women may require a short admission to hospital
- Maternal and fetal investigations must be performed to exclude preeclampsia
- Women with gestational hypertension usually do not require antihypertensive treatment (severe hypertension would identify the woman as preeclamptic).

Mild/moderate hypertension

Treatment should be considered in consultation with a medical officer, depending on individual circumstances and geographical location, if:

- systolic BP is 140–169mmHg and/or
- diastolic BP if 90–109mmHg and/or
- there are associated signs and symptoms of preeclampsia.

Severe hypertension

Severe hypertension is defined as:

- systolic BP is greater than or equal to 170mmHg and/or
- diastolic BP greater than or equal to 110mmHg.

Severe hypertension requires urgent assessment and management.


Antihypertensive medications for severe hypertension

- Reducing systolic BP initially by only 20–30mmHg and diastolic by 10–15mmHg should protect the mother from cerebral haemorrhage without jeopardising the foetus
- Continuous electronic fetal monitoring during acute treatment
- The risk of sudden hypotension with vasodilators such as Nifedipine can be minimised by the use of concomitant plasma expansion.

Contraindications for Nifedipine

- Not recommended for use in combination with Salbutamol tocolytic
- Maternal cardiac disease
- Antepartum haemorrhage
- Fetal distress
- Concomitant use of Magnesium Sulphate (MgSO4) — this is not an absolute contraindication, but care must be taken as hypotension may result. A patient treated with Nifedipine should NOT be given bolus doses of Magnesium Sulphate.
Advise the woman that Nifedipine may cause facial flushing, headache, nausea and increased heart rate. Other side effects include hypotension, cardiac failure and increased liver enzymes.

Consult medical officer (MO) on all occasions if BP >140/90 in pregnancy and before administering Nifedipine, unless an emergency.

If using Nifedipine conduct the following:
- insert a large bore IV cannula
- record BP, pulse and respiratory rate every 30 minutes
- auscultate chest 8 hourly
- prepare the woman for evacuation to a referral maternity facility if required.

### Schedule 4 Nifedipine DTP MID

<table>
<thead>
<tr>
<th>Form</th>
<th>Strength</th>
<th>Route of administration</th>
<th>Recommended dose</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablet (not controlled release)</td>
<td>10–20mg tablet</td>
<td>Oral</td>
<td>10–20mg</td>
<td>Dose can be repeated after 45 minutes on medical orders if required</td>
</tr>
</tbody>
</table>

Caution: Concomitant use with Magnesium Sulphate is not absolutely contraindicated; however, care must be taken as hypotension may result. If hypotension occurs, Nifedipine and Magnesium Sulphate should be ceased and reviewed by the medical practitioner. Not recommended for use in combination with Salbutamol Tocolytic. Provide verbal consumer medicine information and written (if available).

Management of associated emergency:
As per local care manual, consult medical officer.


### Preeclampsia

Preeclampsia is a multi-system disorder characterised by hypertension and involvement of one or more other organ systems and/or the fetus. Raised BP is commonly, but not always, the first manifestation. Proteinuria is also common but should not be considered mandatory to make the clinical diagnosis.

- If present, manage severe hypertension as per HMP.
- Admission to hospital is required once the diagnosis of preeclampsia has been made. Bed rest, however, is not usually required and no specific dietary restrictions are necessary.

Inpatient monitoring should include:
- BP 4 hourly if stable
- CTG daily (from 28 weeks gestation)
- daily ward urine analysis
- maintain accurate fluid balance record
- at least daily review by medical officer.


### Referral/consultation

Consult MO on all occasions if BP >140/90 in pregnancy and before administering Nifedipine, unless an emergency.

### Follow-up required

Consult MO for review.


### Monitor

- Fetal heart with continuous Cardiotocography (CTG). In the preterm baby a non-reactive CTG tracing indicates the need for more detailed biophysical monitoring. In the mature baby a non-reactive CTG tracing may be an indication for delivery.
Suppression of preterm labour

Preterm labour is defined as labour before 37 weeks gestation. Suppression of preterm labour is initiated to:

- enable transportation of the baby in-utero to a maternity facility
- delay the birth of the baby for at least 48 hours whilst steroids accelerate fetal lung maturation. Steroids are given only after consultation with medical officer (MO).

Assessment

- Assess as per Guideline: Assessment and advice
- Uterine contractions — 1:10 minutes or more in association with cervical effacement and dilatation
- Cervical length of less than 1cm
- Cervical dilatation of greater than 2cm (insufficient on its own in multiparous women).

Investigations

- Fetal fibronectin testing
- High vaginal swabs for microscopy and culture
- Low vaginal/anorectal swab for Group B streptococcus
- Mid-stream specimen of urine for culture
- Cardiotocography (CTG) (interpretation should take early gestational age into account)
- Transvaginal ultrasound of cervical length.

Management

Tocolysis and steroids are the main strategies to manage preterm labour.

Nifedipine, a calcium channel blocker, is an effective smooth muscle relaxant with low toxicity and is the tocolytic of choice. Although known as an antihypertensive drug, the drop in blood pressure in normotensive women, after starting tocolytic therapy, is significantly more with intravenous Salbutamol in comparison to Nifedipine.

Contraindications for Nifedipine

- Not recommended for use in combination with Salbutamol tocolytic
- Greater than 34 weeks gestation
- Maternal cardiac disease
- Antepartum haemorrhage
- Hypotension
- Hepatic dysfunction
- Fetal distress
- Concomitant use of Magnesium Sulphate — this is not an absolute contraindication, but care must be taken as hypotension may result. A patient treated with Nifedipine should NOT be given bolus doses of Magnesium Sulphate
- Fetal demise in-utero
- Intra-uterine infection.

Advise women Nifedipine may cause facial flushing, headache, nausea and increased heart rate. Other side effects include hypotension, cardiac failure and increased liver enzymes.

If using Nifedipine conduct the following:

- insert a large bore IV cannula
- record BP, pulse and respiratory rate every 30 minutes
- auscultate chest 8 hourly
- prepare the woman for evacuation (if required)
- consult medical officer on all occasions.

See drug box on following page.
### Prevention of Neonatal Respiratory Distress Syndrome (RDS)

- Give antenatal corticosteroid therapy to women 24–34 weeks gestation who are at risk of preterm birth within the next 7 days
- Betamethasone and Dexamethasone are both effective in preventing neonatal RDS although Betamethasone is preferred because of fewer neonatal adverse effects
- Repeat courses of corticosteroids should not be used routinely; a trial has found they reduce neonatal RDS and severe lung disease compared with a single course but information on long term effects is lacking; other trials are ongoing.
- Standard recommended treatment for prevention of neonatal RDS is 2 doses of Betamethasone 24 hours apart. Consult a medical officer on all occasions of premature labour before treatment, and for an order for the second dose.

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Betamethasone injection</th>
<th>DTP MID</th>
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<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
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<tr>
<td>Ampoule</td>
<td>5.7mg/mL</td>
<td>IM</td>
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</table>

Provide verbal consumer medicine information and written (if available).

Management of associated emergency:
As per local care manual, consult medical officer.

### Maternal observations and clinical assessment

- Fetal heart rate (CTG)
- Uterine contractions
- Further management as per local protocol.

### Referral/consultation

Consult MO on all occasions.

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Schedule 4 Nifedipine

<table>
<thead>
<tr>
<th>Form</th>
<th>Strength</th>
<th>Route of administration</th>
<th>Recommended dose</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Tablet (not controlled release)</td>
<td>20mg</td>
<td>Oral — In the case of urgency — ask the woman to chew the tablet</td>
<td>Single dose only, 20mg</td>
<td>First dose 20mg Second dose of 20mg can be given if still contracting 30 minutes after initial dose. If still contracting 30 minutes after second dose; third 20mg dose can be given on medical orders only. Maximum dose of 160mg per day.</td>
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</tbody>
</table>

Contraindications as per above.
Provide verbal consumer medicine information and written (if available).

Management of associated emergency:
As per local care manual, consult medical officer.

Rh D immunoglobulin

Correct management of a woman who is Rh D negative during pregnancy and postnatally will decrease the risk of Haemolytic disease in the newborn and subsequent pregnancies. Rh D negative women have a much reduced likelihood of producing Anti-D antibodies to an Rh D positive fetus if Rh D immunoglobulin is administered.

In Queensland Health Rh D negative women are provided prophylactic Anti-D immunoglobulin on two occasions during pregnancy. The first at 28 weeks and the second at 34 to 36 weeks gestation.

Indications
Rh D immunoglobulin is indicated for the prevention of Rh D sensitisation in Rh D negative women.

Contraindications
In the maternity setting Rh D immunoglobulin should not be given to:
• an Rh D positive woman
• an Rh D negative woman with preformed Anti-D antibodies
• a baby.

General information
• Rh D immunoglobulin should be given slowly by deep intramuscular injection, using a 20 gauge needle. If a large dose (more than 5mL) is required, it is advisable to administer it in divided doses at different sites.
• Rh D immunoglobulin is a blood product and the minimum requirement is for informed consent to be documented in the woman’s health record.
• It is essential that the 28 week antibody screening blood sample be taken from the mother before the first routine prophylactic injection is given.

Management of suspected Fetomaternal Haemorrhage

Zero to twelve week gestation
In the first 12 weeks gestation, any Rh D negative women (who have not actively formed their own Anti-D) who are at risk of fetomaternal haemorrhage (FMH) should be offered a CSL 250 International units (50 microgram) dose of Anti-D.

Quantitative acid elution test (Kleihauer) is not required before administration in the first 12 weeks gestation. Risk factors include:
• chorionic villus sampling
• miscarriage or threatened miscarriage
• trauma
• termination of pregnancy
• ectopic pregnancy.

Twelve week gestation onwards
For incidents after 12 weeks gestation any Rh D negative woman (who have not actively formed their own Anti-D) who are at risk of FMH should be assessed by a quantitative acid elution test (Kleihauer) first, and then offered a CSL 625 International units (125 microgram) dose of Anti-D. Risk factors include:
• abdominal trauma or any other suspected intra-uterine bleeding or sensitising event
• termination of pregnancy
• obstetric haemorrhage
• amniocentesis, cordocentesis
• external cephalic version of a breech presentation, whether successful or not.

Multiple pregnancies
For multiple pregnancies, regardless of gestation, the dose is 625 International units (125 microgram).

General information
A dose of 250 International units (50 micrograms) of Rh D immunoglobulin is sufficient to prevent immunisation by a FMH of 2.5mL of fetal red cells (5mL whole blood). Demonstrated larger FMH
may require further doses of Rh D immunoglobulin. Dosage is 20 microgram of Rh D immunoglobulin for every 1mL of fetal red cells above 6mL (assuming woman has received 125 microgram dose already).

- For successful immunoprophylaxis, Rh D immunoglobulin should be administered as soon as possible after the sensitising event, but always within 72 hours. If Rh D immunoglobulin has not been offered within 72 hours, a dose offered within 9–10 days may provide protection.
- Where FMH quantitation shows that FMH greater than that covered by the dose already administered has occurred, administration of an additional dose/s sufficient to provide immunoprophylaxis must be administered, preferably within 72 hours.
- Administration of 250 International units Rh D immunoglobulin (minidose) is sufficient to prevent immunisation by fetomaternal haemorrhage of 2.5mL of fetal red cells (5mL whole blood).
- Administration of 625 International units Rh D immunoglobulin is sufficient to prevent immunisation by feto-maternal haemorrhage of up to 6mL of fetal red cells (12mL whole blood).
- For haemorrhages greater than 6mL, the recommended dose is 100 International units per extra mL of Rh D positive red blood cells in excess of 6mL. (i.e. 50 International units per mL of whole fetal blood in excess of 12mL whole blood)

**NOTE:** Evidence for the efficacy of this dose for these indications is not available. It is therefore recommended that the magnitude of fetomaternal haemorrhage be assessed from the mother before administration of Rh D immunoglobulin. When there is a likelihood of a significant FMH, such as severe abdominal trauma, abruption, transplacental puncture or puncture of the baby’s blood vessels, further doses of Rh D immunoglobulin need to be administered for FMH in excess of 6mL fetal red blood cells (12mL whole blood).

### Antenatal prophylaxis (at 28 and 34 weeks of gestation)

- **Universal prophylaxis with Rh D immunoglobulin** is recommended for all pregnant women who are Rh D negative with no preformed Anti-D antibodies.
- Rh D immunoglobulin, in the form of 625 International units CSL Rh D immunoglobulin, should be offered at 28 weeks and again at 34 weeks, to all Rh D negative women with no preformed Anti-D antibodies.
- It is essential that women are screened again for pre-existent Anti-D and that the blood sample is taken before the first routine prophylactic injection is given at 28 weeks. The result of the test does not need to be available before the administration.
- No repeat screening is necessary before the second administration at 34 weeks.

### Postpartum administration

- A dose of 625 International units should be offered to every Rh D negative woman giving birth except when the baby is known to be Rh D negative.
- Rh D immunoglobulin should not be given to women with pre-existing Anti-D antibodies, except where this is known to be due to antenatally administered Rh D immunoglobulin.
- If it is unclear whether the Anti-D detected in the mother’s blood is passive from the Anti-D administration or preformed, a medical officer should be consulted. If there is continuing doubt, Rh D immunoglobulin should be administered.
- The magnitude of FMH should be assessed by a method capable of quantifying a haemorrhage of greater than or equal to 6mL of fetal red cells (12mL whole blood). For FMHs of 6mL red cells or greater, further doses should be administered sufficient to prevent maternal immunisation.
- Administration of 625 International units Rh D immunoglobulin is sufficient to prevent immunisation by feto-maternal haemorrhage of up to 6mL of fetal red cells (12mL whole blood).
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<thead>
<tr>
<th>Blood Product</th>
<th>Rh D Immunoglobulin</th>
<th>Route of administration</th>
<th>Recommended dose</th>
<th>Duration</th>
<th>Restrictions/Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampoule</td>
<td>250 International units or 625 International units</td>
<td>Deep, slow intramuscular injection</td>
<td><strong>Pregnancy</strong>&lt;br&gt;Sensitising events in the first trimester&lt;br&gt;250 International units&lt;br&gt;Sensitising events beyond the first trimester&lt;br&gt;625 International units&lt;br&gt;Sensitising event in a multiple pregnancy&lt;br&gt;625 International units&lt;br&gt;<strong>Antenatal prophylaxis</strong>&lt;br&gt;(28 and 34 weeks)&lt;br&gt;625 International units</td>
<td>Stat</td>
<td>Antenatal prophylaxis at 28 and 34 weeks gestation&lt;br&gt;Sensitising events during pregnancy&lt;br&gt;Postpartum to avoid iso-immunisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Postpartum</strong>&lt;br&gt;Unless the baby is known to be Rh D negative&lt;br&gt;625 International units</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:** As per local care manual, consult medical officer.


Follow-up required where FMH quantitation shows that FMH greater than that covered by the dose already administered has occurred, administration of an additional dose is sufficient to provide immunoprophylaxis must be administered and preferably within 72 hours.

**Referral/consultation** if it is unclear whether the Anti-D detected in the mother's blood is passive from the Anti-D administration or preformed, a medical officer should be consulted.

For sensitising events beyond the first trimester consult with medical officer.

Intrapartum

Pain management in first stage labour

Women experience a wide range of pain in labour and exhibit an equally wide range of responses to it. An individual’s reaction to labour pain may be influenced by the circumstances of her labour, as well as the environment and support provided to her during this period.

Management

- Assess as per Guideline: Assessment and advice
- Reassure woman that pain is a normal part of childbirth; encourage her to try mobilisation, positional changes, shower, massage, heat packs and warm water immersion to make her more comfortable
- Encourage appropriate family member/support person to remain present and active
- Give adequate explanation, encouragement and reassurance.
- Encourage frequent intake of fluids and regular bladder emptying.

Pharmacological management of pain in first stage of labour

Nitrous oxide and oxygen

If woman requests pain relief and she is in established labour, firstly offer Nitrous oxide and oxygen, up to 70% nitrous oxide and 30% oxygen.

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Nitrous oxide and oxygen (Entonox)</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Gas</td>
<td>Up to 70% Nitrous oxide mixed with oxygen 30%</td>
<td>Inhalation</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available).

Management of associated emergency:
As per local care manual, consult medical officer.
Morphine

If all other pain relief strategies are unsatisfactory and the woman requests further pain relief, she is not allergic and if birth is not imminent — give Morphine in a single injection with or without Metoclopramide. Morphine is opioid of choice in the first stage of labour.

Prior to administration of opioid, vaginal examination to determine progress of labour and exclude imminent birth should be discussed. Obtain history of any medication hypersensitivity or allergy. If previous allergy to narcotics, discuss with medical officer.

<table>
<thead>
<tr>
<th>Schedule 8</th>
<th>Morphine Sulphate</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Ampoule</td>
<td>10mg/mL</td>
<td>Intramuscular</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available). Monitor for respiratory depression.

Management of associated emergency:
As per local care manual, consult medical officer.

Pethidine

Pethidine is more likely than morphine to cause sedation in the infant if administered during labour. Pethidine can be offered for pain management in labour if birth is not imminent, with or without Metoclopramide. Before administration obtain history of any medication hypersensitivity or allergy. If previous allergy to narcotics, discuss with medical officer.

<table>
<thead>
<tr>
<th>Schedule 8</th>
<th>Pethidine</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Ampoule</td>
<td>100mg/mL</td>
<td>Intramuscular</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available). Monitor for respiratory depression.

Management of associated emergency:
Dystonic reactions e.g. Oculogyric crisis is extremely rare (unless repeated doses for adults). As per local care manual, consult medical officer.

Maternal assessment and care

- Monitor and record BP/heart rate
- Monitor and record fetal heart rate
- Abdominal palpation
- Monitor and record contractions and vaginal loss
- Prior to administration of narcotic, vaginal examination to determine progress of labour and exclude imminent birth should be offered/discussed
- Monitor for any adverse reactions including respiratory depression in mother or neonate after birth
- Other care as per local protocols.

Referral/consultation

Monitor mother (and infant after birth) for effectiveness and/or adverse reactions; consult medical officer for any concerns.

**Group B streptococcus prophylaxis**

Group B streptococcus (GBS) is a bacterium that is present as part of the normal flora in the vagina and gastrointestinal tract. Approximately 10–30% of women are symptomatic carriers of GBS. GBS colonisation of the infant is acquired intrapartum from the maternal genital tract and, if left untreated, 1 in 200 neonates will develop neonatal sepsis.

Queensland Health has adopted a risk-based protocol for early onset GBS, that is, treatment (intrapartum antibiotic prophylaxis) based on identification of maternal risk factors. Intrapartum antibiotic prophylaxis does not prevent late onset GBS disease.

**Assessment**

To ensure adequate prophylaxis, antibiotics should, where possible, be commenced at least four hours prior to birth; administration two hours prior to birth provides adequate prophylaxis in determining neonatal management. Before administration, obtain history of any medication hypersensitivity or allergy.

Clinical Risk Factors for disease transmission are defined as:
- preterm labour at less than 37+ weeks (spontaneous or induced labour)
- rupture of membranes >18 hours prior to birth
- maternal fever ≥38˚C (intrapartum or within 24 hours of giving birth)
- GBS colonisation in current pregnancy
- GBS Bacteruria in current pregnancy
- previous GBS infected baby irrespective of her colonisation status.

Conditions not requiring routine intrapartum prophylaxis:
- elective caesarean
- GBS carriage detected in previous pregnancy (even if GBS status is unknown in the current pregnancy)
- threatened preterm labour with intact membranes.

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Benzylpenicillin</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Vial</td>
<td>600mg</td>
<td>Intravenous</td>
</tr>
</tbody>
</table>

Provided by medical officer for order of 600mg 4 hourly until birth

**Management of associated emergency**

As per local care manual, consult medical officer.

**Referral/consultation**

Notify medical officer (MO) of maternal risk factors. If allergic to Penicillin contact MO.

**Follow-up required**

All newborn babies are at risk of infection irrespective of gestational age, maternal risk factors or intrapartum antibiotic treatment. Minimum observations for infants at risk include:
- clinical surveillance for signs of sepsis
- temperature, pulse and respiratory rate 4 hourly
- neonatal/paediatric review of baby as per local protocols.

**Active management of the third stage**

The third stage of labour refers to the period of time following the birth of the baby, to the separation and expulsion of the placenta and membranes and control of any bleeding.

**Management**

- Administer a prophylactic oxytocic agent — Oxytocin (IV or IM) to the mother immediately after the birth of the baby.
• Clamp and cut the umbilical cord close to the perineum within 2–3 minutes of administration of the oxytocic.
• Immediately after cord clamping place one hand on the uterine fundus and await the onset of a strong uterine contraction. This is likely to occur within 2–3 minutes after oxytocic administration.

**Note:** collect cord blood at this time if required.

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Oxytocin (Syntocinon)</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Ampoule</td>
<td>10 International units/mL</td>
<td>Intramuscular</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:**
As per local care manual, consult medical officer.

*Source: The Australian Medicines Handbook*

In women with a previous history of Postpartum Haemorrhage (PPH) give Oxytocin/Ergometrine maleate (Syntometrine) unless Ergometrine is contraindicated i.e. woman is hypertensive, diastolic BP >90mmHg and/or she has cardiovascular disease.

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Oxytocin/Ergometrine maleate (Syntometrine)</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Ampoule</td>
<td>Ergometrine maleate 0.5mg</td>
<td>Intramuscular</td>
</tr>
<tr>
<td></td>
<td>Oxytocin 5 International units/mL</td>
<td></td>
</tr>
</tbody>
</table>

Ergometrine is contraindicated when diastolic BP >90mmHg or Hx of cardiovascular disease.

Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:**
As per local care manual, consult medical officer.

*Source: The Australian Medicines Handbook*

**Controlled Cord Traction (CCT)**

• Place side of one hand above the level of the symphysis pubis, applying counter pressure in an upward direction, thus stabilising the uterus during CCT. **Do not** manipulate the uterus.
• With the strong uterine contraction (within 2–3 minutes after administration of the oxytocic), very gently pull downward on the cord following the direction of the birth canal until the placenta appears at the vulva. Continue to apply counter pressure to the uterus.
• During CCT you will observe signs of separation of the placenta, including:
  – lengthening of the cord
  – small amount of fresh blood loss
  – the uterine fundus becomes smaller and rounder.

**Note:** If the placenta does not descend during 20–30 seconds of CCT or there is resistance to CCT **do not** continue to pull on the cord.
• Hold the cord loosely (i.e. without any pulling/traction) and wait until the uterus is well contracted again.
• With the next contraction, repeat controlled cord traction with counter traction.

**Birth of the placenta and membranes**

• Once the placenta is visible, release cord traction and counter traction on the uterus.
• The placenta may be taken into two hands and gently twisted so that the membranes form a rope; in a gentle upward and downward movement ease the membranes out of the vagina without tearing them (note the time).
• Immediately massage the uterus to ensure it remains contracted
• Examine the placenta and membranes to ensure they are complete
• Measure the blood loss.
• Post-birth observations and care as per site protocols.
• If heavy or continued vaginal blood loss see *Statewide Maternity and Neonatal Clinical Guideline — Primary Postpartum Haemorrhage.*
Referral/consultation
Notify medical officer if placenta and membranes remain insitu after 30 minutes or excessive bleeding.


Postpartum haemorrhage

A postpartum haemorrhage is life threatening. Think TONE, TRAUMA, TISSUE and THROMBIN.

Postpartum haemorrhage is defined clinically as any amount of blood loss that results in haemodynamic instability. Traditional definitions state that PPH is a blood loss of 500mL or more and that severe PPH is a blood loss of 1000mL or more. A primary PPH occurs within 24 hours of birth. A secondary haemorrhage occurs between 24 hours and 6 weeks postpartum.

Risk factors

- Increased maternal age
- History of previous PPH
- Antepartum/intrapartum haemorrhage
- Anaemia
- Over distended uterus (e.g. multiple pregnancy, polyhydramnios)
- Grand multi-parity
- Prolonged labour
- Placenta praevia
- Placental abruption
- Fibroids
- Von Willebrand disease.

Common causes

**TONE**
- Atonic uterus (most common cause).

**TRAUMA**
- Genital tract trauma
- Ruptured uterus
- Uterine inversion.

**TISSUE**
- Retained products of conception
- Adherent placenta.

**THROMBIN**
- Coagulation abnormalities.

Immediate response to signs of haemorrhage

- **SUMMON HELP** (senior midwife and medical officer should be called to attend any obstetric emergency)
- Lie woman flat, keep warm and reassure
- Massage the fundus
- Administer oxygen via mask
- Insert IV access
- Obtain vital signs.

Placenta delivered (TONE)

- Massage the fundus to stimulate contraction
- Ensure active management of third stage has occurred
- Check placenta for completeness
- Administer intravenous Ergometrine 250mcg OR intravenous Oxytocin 5–10 International units if blood pressure is elevated
- Insert urinary catheter
- Medical officer may order oxytocin infusion
- Medical officer may request Misoprostol (800–1000 microgram per rectum).
**NB:** DO NOT give Ergometrine (either on its own or in Syntometrine) to women with pre eclampsia or hypertension.

**Management of associated emergency:**
As per local care manual, consult medical officer.

*Source: The Australian Medicines Handbook.*

OR

**THROMBIN**

- Collect blood for group and cross match, FBC and coagulation studies
- Monitor for signs of coagulopathy changes.

**Referral/consultation**
Consult medical officer (MO) on all occasions of PPH.

**Observations following postpartum haemorrhage**

- Monitor maternal vital signs
- Uterus should be palpated
- Monitor fluid intake
- Monitor urine output
- Lactation support.


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**TRAUMA**

- Check for trauma to genital tract (cervix, vagina and perineum).
- Identify the apex of any tear or laceration.
- Repair/apply pressure as appropriate.

**Placenta not delivered (TISSUE)**

- Ensure active management of third stage has occurred
- Repeat IV Oxytocin 5–10 International units
- Insert urinary catheter
- If placenta remains undelivered, or is incomplete initiate immediate medical review and/or transfer if required.

---

**Schedule 4**

<table>
<thead>
<tr>
<th>Form</th>
<th>Strength</th>
<th>Route of administration</th>
<th>Recommended dose</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampoule</td>
<td>500 micrograms in 1mL</td>
<td>Intramuscular</td>
<td>Adult only</td>
<td>500 micrograms only</td>
</tr>
<tr>
<td>Ampoule</td>
<td>500 micrograms in 1mL</td>
<td>Intravenous</td>
<td>Adult only</td>
<td>250 micrograms only</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available).

**Management of associated emergency:**
As per local care manual, consult medical officer.

*Source: The Australian Medicines Handbook.*
Repair of the perineum

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Lignocaine 1%</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Ampoule</td>
<td>1%</td>
<td>Subcutaneous</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available).

Management of associated emergency:
As per local care manual, consult medical officer.


Management

- After thorough inspection of the perineum and vaginal walls, discussion with the woman and obtaining consent to proceed, infiltrate the perineum and vaginal wall with 1% lignocaine plain, to a total of 20mLs.
- Wait until the area is anaesthetised before commencing the repair.
- Give advice to the woman regarding perineal hygiene and diet.
- Document your care and advice.

Referral/consultation

Consult MO for all third/fourth degree tears.

Follow-up

As per local protocol.

Postnatal

Mastitis

Mastitis is characterised by inflammation of the breast accompanied by systemic flu-like symptoms and pyrexia. When occurring in the immediate postpartum period the most common causal organism is *Staphylococcus Aureus*.

If the woman decides she no longer wants to breastfeed, to reduce the risk of complications from the mastitis, it is recommended that she continue to express until the mastitis is gone, and then wean gradually.

**Assessment**
- Assess as per Guideline: Assessment and advice
- Presenting symptoms may include rigors, malaise, myalgia, headache, anxiety and occasional vomiting
- Breast symptoms may include localised erythematous and tenderness
- Examine breast for redness, tenderness and mass; examine axilla for lymph nodes; observe for signs of blocked ducts while palpating the breast tissue
- Most episodes of mastitis occur in the first 6 weeks postpartum.

Some causes include:
- blocked ducts due to poor drainage
- damaged nipples
- oversupply of milk in the first few weeks
- sudden changes in feeding patterns
- tiredness, illness and stress.

**Management**
- Breastfeeding (or expressing) must continue to reduce the risk of complications
• Keep feeding on the side that is not infected, and offering the infected breast
• If the woman cannot attach the baby to the infected breast, she should begin expressing that breast
• If the milk is not removed from the infected breast a breast abscess may form
• The milk from the affected breast is safe for baby
• Provide advice and support with consideration for the factors contributing to the mastitis
• Antibiotics should be commenced
• Obtain history of any medication hypersensitivity or allergy
• The woman should get plenty of rest and drink plenty of fluids
• Give analgesia: paracetamol or a non-steroidal anti-inflammatory drug (NSAID)
• Discuss possible causes with the mother, reinforcing breastfeeding management and specific treatment strategies related to the identified cause.
• Consider referral and consultation with a lactation consultant either face to face or via telephone if not available in local area.
• If symptoms of mastitis are unrelieved or episodes recur, the following diagnostic tests may be appropriate in collaboration with medical practitioner:
  – sample of breast milk for leucocyte count, culture and sensitivity
  – swabs from infant’s nose and throat and other suspicious site of infection
  – diagnostic ultrasound to exclude abscess.

If woman not allergic to Penicillin, treat with Flucloxacillin:

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Flucloxacillin</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Capsule</td>
<td>500mg</td>
<td>Oral</td>
</tr>
</tbody>
</table>

Take half to one hour before food

Provide verbal consumer medicine information and written (if available). Considered safe for breastfeeding women. Does not accumulate in breast milk and levels in breast milk are undetectable 6 hours after dosage.

Management of associated emergency:
As per local care manual, consult medical officer.

If hypersensitive to Penicillin, discuss with medical officer, and treat with Cephalexin.

<table>
<thead>
<tr>
<th>Schedule 4</th>
<th>Cephalexin</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Capsule</td>
<td>250mg</td>
<td>Oral</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available). Considered safe for breastfeeding women.

Management of associated emergency:
As per local care manual, consult medical officer.

Follow-up required

Review next day, if no improvement, consult medical officer (MO).

If a breast abscess is suspected consult MO, the diagnosis can be confirmed by ultrasound. The abscess requires drainage (either percutaneous aspiration or open drainage).

Referral/consultation

Consult MO on all occasions of breast abscess.

Consult MO on all occasions of mastitis if not improving on review day.

In addition, consider referral and consultation with a lactation consultant either face to face, or via telephone if not available in local area.

Rubella immunisation

Rubella is a mild illness caused by the rubella virus. However, rubella is serious because it can produce defects in children born to women who are infected by the virus during pregnancy. Congenital rubella syndrome (CRS) occurs in up to 90% of infants born to women who are infected with rubella during the first trimester of pregnancy. The risk of a single congenital defect falls to approximately 10–20% by the 16th week. From the 20th week defects are rare.

At present, in Australia, there is no recommended minimum level for the positive cut off value when testing for immunity. If serological testing returns an equivocal result, medical officer will determine if vaccination is required.

General information regarding exposure to the rubella virus in pregnancy

All pregnant women with suspected rubella or exposure to rubella should be serologically tested, irrespective of a history of previous vaccination, clinical rubella or a previous positive rubella antibody result. This is because the rash of rubella is not diagnostic, asymptomatic infection can occur, and acute rubella can be confirmed only by laboratory tests.

Serological testing for rubella

- If a pregnant woman at 20 weeks gestation or less has been exposed to the rubella virus serological testing should always be performed. A blood sample should be taken and sent to the laboratory with the date of the last menstrual period and the date of presumed exposure (or date of onset of symptoms).
- She should be offered counselling. There is no treatment to reduce the risk to the unborn baby.
- If the woman has an antibody titre below the protective level, or a low level of antibodies and remains asymptomatic, a second blood specimen should be collected 28 days after the exposure (or onset of symptoms) and tested in parallel with the first. If the woman develops symptoms, the specimen should be collected and tested as soon as possible. A third blood specimen may be required in some circumstances.
- Women found to be seronegative on antenatal rubella immunity testing should be vaccinated after birth and before discharge.
- There is no risk to pregnant women from contact with recently vaccinated individuals. The vaccine virus is not transmitted from vaccines to susceptible contacts.

Vaccination postpartum

- Women found to be seronegative on antenatal rubella immunity testing should be vaccinated after birth and before discharge.
- These women should be tested for rubella immunity 6–8 weeks after vaccination. A blood sample should be taken and sent to the laboratory with the date of the vaccination.
- Anti-D immunoglobulin does not interfere with the antibody response to vaccine. If Anti-D immunoglobulin is also required, the two may be given at the same time in different sites with separate syringes, or at any time in relation to each other.

Schedule 4 Priorix (MMR)

<table>
<thead>
<tr>
<th>Measles, mumps and rubella live attenuated vaccine</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
</tr>
<tr>
<td>Reconstituted vaccine</td>
<td>0.5mL (powder + solvent)</td>
</tr>
</tbody>
</table>

Rubella-containing vaccine should not be given within at least 3 months after an injection of immunoglobulin, other antibody-containing blood product, or whole blood transfusion, because the expected immune response may be impaired.

Provide Consumer Medicine Information.
Please consult with Australian Immunisation Handbook.

Management of associated emergency:
As per local manual, consult medical officer.

Breastfeeding is not a contraindication to rubella vaccination. The rubella vaccine virus may be secreted in human breast milk, and there have been rare cases of transmission of vaccine virus through breast milk reported. However, these infections have been mild.

**Follow-up required**

- Women should be tested for immunity 6–8 weeks after vaccination and revaccinated if necessary.
- The success of the vaccination may be reduced if the woman required a whole blood transfusion at the birth, or soon after. This can increase the chances of the woman needing a second vaccination (after 2 months) if she is still not immune.
- Advise not to become pregnant for 1 month after vaccination.


**Contraception: progesterone only ‘Minipill’**

When used as contraceptives, progestogens thicken cervical mucus to impede the passage of sperm and change the endometrium reducing the potential for implantation. Progesterone also acts on the hypothalamus to suppress the pituitary luteinising hormone surge which may inhibit ovulation. Oral progestogen-only contraceptives suppress ovulation in <50% of women.

**Assessment**

Full clinical assessment and counselling must be made prior to supply.

**Indications**

- Postpartum contraception for breastfeeding women.
- Contraception, including when oestrogen-containing products are not tolerated or are unsuitable.

**Contraindications**

- Pregnancy
- Breast or liver cancer
- Liver disease.

**Important considerations/relative contraindications to progesterone contraceptives**

- Abnormal vaginal bleeding — avoid until fully investigated, as progestogens can cause irregular vaginal bleeding.
- If used as contraceptive before 3 weeks postpartum may cause heavy, irregular bleeding.
- Past history of ectopic pregnancy (risk is no higher than for women not using contraception)
- Polycystic ovarian syndrome because of the possibility of increased androgenic activity
- May be continued peri-operatively (including major surgery); minimal risk of thromboembolism unless other cardiovascular risk factors are present.

Safe to use whilst breastfeeding and is the preferred hormonal contraceptive for breastfeeding women as it does not inhibit lactation.

**Essential Minipill counselling**

- Start on day 1 of menses (preferred) or day 21 of cycle (if started at any other time, use additional methods of contraception e.g. condoms, for 48 hours)
- Commence from 6 weeks postpartum if breastfeeding.
- May be commenced at 2 weeks postpartum if not breastfeeding.
- Take pills at the same time every day. Choose a time when you are most likely to remember, and keep to it. Use additional contraception for 48 hours if starting after first day of menstruation.
- Must be taken continuously; there are no inactive (sugar) pills or 7-day break as with the combined pill.
• If you forget to take a pill, take it as soon as you remember and take the next pill at the usual time. If the pill is more than 3 hours overdue, you are not protected. Resume normal pill taking, but use another contraceptive method (e.g. condoms) for the next 48 hours. If unprotected intercourse has occurred, emergency contraception should be used.

• Vomiting, very severe diarrhoea, and other medications may stop the pill from working. Additional methods of contraception should be used for seven days.

• Progesterone only pills are less effective than the Combined Oral Contraceptive

• Consider the possibility of ectopic pregnancy in cases of contraceptive failure; progestogen-only contraceptives do not reliably inhibit ovulation and therefore offer less protection against ectopic than intrauterine pregnancy.

<table>
<thead>
<tr>
<th>Restricted substance</th>
<th>Levonorgesterel</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Tablet</td>
<td>30 micrograms</td>
<td>Oral</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available).

Management of associated emergency:
As per local care manual, consult medical officer.

**Referral/consultation**
Non-breastfeeding women requiring oral contraception need review by medical practitioner.

**Follow-up required**
Clients on oral contraceptive pills should be followed up by a medical officer within 6–8 weeks.

*Source: Australian Medicines Handbook: July, 2010 www.amh.hcn.net.au*
Neonatal

Neonatal resuscitation

In the neonate opioids may cause respiratory depression at birth as well as neuro-behavioural side effects which can be exhibited in changes to feeding patterns and normal reflexes. Debate exists over the duration of the effects of Pethidine in relation to administration.

Naloxone (Narcan) is an opiate-receptor antagonist that reverses the effects of narcotics. Naloxone is of particular value in reversing respiratory depression due to opiate administration or exposure and thus can be useful in the treatment of newborns with respiratory depression from maternal narcotic administration.

During neonatal resuscitation

- If a mother received narcotics within 4 hours of birth, her newborn may experience some degree of respiratory depression due to transplacental drug effect. However, Naloxone should not be considered a resuscitation drug. Always establish and maintain adequate ventilation before considering and administering Narcan.
- NEVER administer naloxone to the infant of a mother with narcotic addiction (or on methadone maintenance). Sudden reversal of chronic narcotic action can cause severe life-threatening withdrawal symptoms, including refractory seizures.
- Opiate analgesics have a longer duration of action than naloxone, and respiratory depression may return as the naloxone wears off. Continued observation and monitoring of respiratory function is essential.
- The indications for giving naloxone to the baby require both of the following to be present:
  - continued respiratory depression after positive pressure ventilation has restored normal heart rate and colour AND
  - a history of maternal narcotic administration within the past 4 hours.
### Hepatitis B vaccination and immunoglobulin

Hepatitis B is a vaccine preventable disease. The rationale for the universal birth dose is not only to prevent vertical transmission from a carrier mother (recognising that there may be errors or delays in maternal testing, reporting, communication or appropriate response), but also to prevent horizontal transmission in the first months of life from a carrier among household or other close contacts.

#### Recommendations for infants

A birth dose of hepatitis B vaccine, followed by doses given at 2, 4 and either 6 or 12 months, is recommended for all children.

- The birth dose should be given as soon as the baby is physiologically stable, and preferably within 24 hours of birth.
- The midwife/parent/guardian should remain with the baby for at least 15 minutes after vaccination.
- Every effort should be made to administer the vaccine before discharge from hospital.
- If an infant has missed the birth dose and is aged 8 days or older, a catch-up schedule is not required.
- A primary course of a hepatitis B-containing combination vaccine should be given at 2, 4 and either 6 or 12 months of age (provided the mother is HBsAg negative).
- Parents/guardians should be provided with the date of the next scheduled vaccination (preferably in writing).
- Preterm babies — provided they are healthy, immunise with childhood vaccines according to usual chronological age.
There is no evidence of risk to the baby if the mother is breastfeeding. Breastfeeding does not adversely affect immunisation and is not a contraindication for the administration of any vaccine to the baby.

**Preterm babies**

Preterm babies do not respond as well to hepatitis B-containing vaccines as term babies. Thus, for babies at <32 weeks’ gestation or <2000g birth weight, it is recommended to give vaccine at 0, 2, 4 and 6 months of age and either:

- measure anti-HBs at 7 months of age and give a booster at 12 months of age if antibody titre is <10mL, or
- give a booster at 12 months of age without measuring the antibody titre.

**Management of infants born to hepatitis B carrier mothers**

- Routine antenatal screening for HBsAg is essential for correct implementation of the strategy to prevent newborn infants from becoming infected with, and therefore carriers of HBV.
- Infants born to HBsAg positive mothers should be given HBIG (hepatitis B Immunoglobulin) and a dose of hepatitis B vaccine on the day of birth.

**Follow-up required**

Mother and baby will need review by MO if mother HBsAg positive.

---

### Vaccine Hepatitis B vaccine H-B-Vax II Paediatric DTP MID

<table>
<thead>
<tr>
<th>Form</th>
<th>Strength</th>
<th>Route of Administration</th>
<th>Recommended dose</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampoule</td>
<td>5 micrograms IM</td>
<td>0.5mL</td>
<td>Neonates only at birth, then as per the Australian Immunisation Handbook</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** All babies (preterm or term) of carrier mothers must be given a birth dose of hepatitis B vaccine and HBIG (Hepatitis B Immunoglobulin).

Provide Consumer Medicine Information. Please consult with Australian Immunisation Handbook.

---

### Hepatitis B Immunoglobulin DTP MID

<table>
<thead>
<tr>
<th>Form</th>
<th>Strength</th>
<th>Route of Administration</th>
<th>Recommended dose</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampoule</td>
<td>100 International units</td>
<td>Intramuscular</td>
<td>100 International units</td>
<td>At birth</td>
</tr>
</tbody>
</table>

For babies born to HBsAg positive mothers only

**Note:** All babies (preterm or term) of carrier mothers must be given a birth dose of hepatitis B vaccine and HBIG (in opposite thighs)

Provide Consumer Medicine Information. Please consult with Australian Immunisation Handbook.

**Management of associated emergency:**
As per local care manual, consult medical officer.

**BCG vaccine**

In Australia, greater than 80% of tuberculosis (TB) cases occur in people born overseas; particularly from Asia, southern and eastern European countries, the Pacific Islands, and north and sub Saharan Africa, which reflect the composition of Australia’s migrant and refugee intake. Rates of TB are also high in Aboriginal and Torres Strait Islander people and in Papua New Guineans living in some parts of Australia.

**Indications**

Individuals at increased risk of contracting tuberculosis (TB):
- Aboriginal and Torres Strait Island (ATSI) neonates in regions with high incidence of TB
- neonates born to parents with leprosy or TB, or who have a family history of leprosy.

**Precautions**

BCG vaccination should be deferred in the following circumstances:
- neonates with a birth weight <2.5kg or those who may be relatively malnourished
- neonates of mothers who are HIV positive
- children who are currently on isoniazid preventive therapy for latent TB infection (as the therapy can inactivate the BCG)
- a 4 week interval should be allowed after administration of another live vaccine, for example measles, mumps and rubella (MMR), varicella [and MMRV when available] or yellow fever vaccine; unless given concurrently with the BCG.

**Dosage and administration**

BCG vaccine is administered as a single dose by intradermal injection. It should be given only by specially trained medical, midwifery or nursing staff who are fully conversant and certified by the Queensland TB Control Centre.

<table>
<thead>
<tr>
<th>BCG Vaccine</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
</tr>
<tr>
<td>Powder + Solvent</td>
<td>1.5mg</td>
</tr>
<tr>
<td>Only to be administered by Midwives certified by Queensland TB control centre.</td>
<td></td>
</tr>
</tbody>
</table>

**Management of associated emergency:**
As for severe allergic reactions see ANAPHYLAXIS in local care manual.

**Source:** The Australian Immunisation Handbook 9th Edition.

- The midwife/parent/guardian should remain with the baby for at least 15 minutes after vaccination
- A small red papule forms and eventually ulcerates, usually within 2–3 weeks of vaccination. The ulcer heals with minimal scarring over several weeks. There may be swelling and tenderness in local lymph nodes.
- BCG vaccine also protects against leprosy.

There is no evidence of risk to the baby if the mother is breastfeeding. Breastfeeding does not adversely affect immunisation and is not a contraindication for the administration of any vaccine to the baby.

Emergency contraception

Used to prevent pregnancy after unprotected intercourse or possible failure of contraceptive method (e.g. missed pills, condom breakage); may be used up to five days after unprotected intercourse, has been shown to be most effective when commenced within 24 hours.

Levonorgestrel method is preferable as it has a higher efficacy and lower side effect incidence than the combined oestrogen/progesterone (Yuzpe) method. Emergency contraception has no effect on an established pregnancy; failure of emergency contraception is not thought to increase the risks of birth defects but the possibility of ectopic pregnancy should be considered.

Indications
- Emergency contraception

Assessment
- Assess as per Guidelines: Assessment and advice
- Obtain a full history including menstrual, contraceptive, STI risk and counselling must be made prior to supply.

Management
Ensure the following:
- where relevant the woman is offered STI screening-urine testing and/or lower vaginal swab for PCR and possible serology
- the woman is clear on how to take the tablet/s
- should be taken as soon as possible, preferably within 72 hours (3 days) after unprotected intercourse. It is most effective when taken within 24 hours after unprotected intercourse
- advise the woman to use barrier methods until her next period.
- next menses usually occurs within 3 days of expected time; advise to return if menses is delayed by greater than 1 week late, or if it
is unusually light (she should have a pregnancy test)
• review by medical officer in 3 weeks time
• if emergency contraception fails, be alert to the possibility of ectopic pregnancy.

<table>
<thead>
<tr>
<th>Restricted substance</th>
<th>Levonorgestrel</th>
<th>DTP MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Strength</td>
<td>Route of administration</td>
</tr>
<tr>
<td>Tablet</td>
<td>1.5mg</td>
<td>Oral</td>
</tr>
</tbody>
</table>

Provide verbal consumer medicine information and written (if available)

**Management of associated emergency:**
As per local care manual, consult medical officer.

**Follow-up required**

All clients require follow-up to exclude pregnancy and STI, if at risk, with a medical officer 3 weeks after dose, and to discuss contraception.

The Midwifery Health Management Protocols and the Health (Drugs and Poisons) Regulation 1996

The Health Management Protocols for the Drug Therapy Protocol: Midwifery incorporates HMPs that are essential for the implementation of the Drug Therapy Protocol: Midwifery (DTP) in Queensland as authorised in the Health (Drugs and Poisons) Regulation 1996.

The Midwifery DTP specifies the content for the HMPs in this manual, setting out the approved conditions and restrictions applying to the administration and supply of drugs listed in the DTP appendix.

The HMPs are not a substitute for consultation with a more experienced or qualified colleague. They are intended to assist midwives to gather information, which will inform later consultation, or enable them to choose an appropriate course of action.

Importantly, the Midwifery Health Management Protocols for the Drug Therapy Protocol: Midwifery incorporates advice about when to consult with, or seek advice and assistance from, a Medical Officer.

The Health Management Protocols for the Drug Therapy Protocol: Midwifery is a resource for midwives. Midwives must remain aware that they are individually accountable for their own practice. The use of HMPs in the manual must be based on each midwife’s existing competence and scope of practice.

A midwife must be aware that practising within the HMP/DTP does not relieve them of their legal responsibility or accountability for their actions and may not provide immunity in case of negligence.

Collaborative practice

Collaborative practice is the term used to describe the practice relationship between midwives, medical practitioners and other health professionals who will use this manual as a guide to practice, thereby giving confidence to providers, women and their families. The collaborative practice relationship incorporates the dual notions
of collaboration and delegation. The defining characteristics of the collaborative practice relationship are:
- mutual respect and acknowledgment of each profession’s role, scope of practice and unique contribution to health outcomes
- clearly stated protocols and guidelines for clinical decision-making which comply with relevant legislation and are supported by the health facility and the health organisation
- clearly defined levels of accountability with an acceptance that joint clinical decision-making is an integral component of collaborative practice
- a belief that the best health outcomes are achieved when well prepared health professionals work in collaboration and partnership in both the practice and educational settings.

**Source:** Primary Clinical Care Manual, 6th edition 2009.

**Definition of a Midwife**
A midwife is a health professional who, in partnership with a woman, provides specialist care, education and support during pregnancy, birth, postnatal and the early parenting period.

Midwives believe that pregnancy and childbirth are normal and significant life events for women and their families and respect and support this transition.

Midwives work in many settings including hospitals, birth centres and the community. Midwifery care includes the detection of complications in mother and baby; the referral to other specialists as needed; and the initiation of necessary emergency care. Midwives also have an important role in health counselling and providing information to women, their families and the community.

Registration as a midwife is dependant upon successful completion of a recognised midwifery education program and, continuing demonstration of the necessary knowledge, skill and experience to provide safe and professional midwifery care.

**Source:** International Confederation of Midwives and International Federation of Gynaecology or Obstetrics.

**MBS/PBS for eligible midwives**
Legislative changes enable eligible midwives to access the PBS. The Drug Therapy Protocol: Midwifery is a resource for registered midwives employed within Queensland Health. The following table identifies some of the differences between a DTP and PBS for midwives, however the table should not be considered a definitive explanation of this complex subject.

<table>
<thead>
<tr>
<th>Drug Therapy Protocol: Midwifery</th>
<th>PBS for eligible midwives</th>
</tr>
</thead>
<tbody>
<tr>
<td>District endorsed</td>
<td>Commonwealth legislation</td>
</tr>
<tr>
<td>Any registered midwife who has met the local requirements can administer and supply medications under an approved drug therapy protocol</td>
<td>Only eligible midwives who have been endorsed by NMBA for scheduled medicines can prescribe medications under PBS</td>
</tr>
<tr>
<td>Midwives administer and supply medications under an approved Drug Therapy Protocol</td>
<td>Eligible midwives can prescribe medications within the scope of midwifery practice</td>
</tr>
<tr>
<td>Administration and supply of medications under specific circumstances</td>
<td>Prescription of medications with the midwifery scope of practice</td>
</tr>
<tr>
<td>Specific medications only for which a Health Management Protocol has been approved</td>
<td>Midwives can prescribe medications identified in the PBS as being authorised for midwives to prescribe (identified as a midwife item in the PBS schedule)</td>
</tr>
<tr>
<td>Midwife required to have completed local education package</td>
<td>Midwife required to have completed a prescribing program of study that is approved by NMBA</td>
</tr>
</tbody>
</table>

**Midwifery Health Management Protocols (HMPs)**
HMPs outline the situations and conditions under which drugs, listed in the Drug Therapy Protocol: Midwifery (Appendix 1), may be obtained, possessed, administered and/or supplied by a midwife registered by the Nursing and Midwifery Board of Australia.

To qualify for registration midwives must successfully complete a course accredited by the Nursing and Midwifery Board of Australia and fulfil any other requirements of the Nursing and Midwifery Board of Australia.
Midwives are, to the extent necessary to practise midwifery, authorised to:

1. **Obtain** a controlled or restricted drug or S2 or S3 poison.
2. **Possess** a controlled or restricted drug at a place where the person practises midwifery.
3. **Administer** or **supply** a controlled or restricted drug under a drug therapy protocol or on the instruction of a doctor or nurse practitioner.
4. **Administer** an S2 or S3 poison.
5. **Supply** an S2 or S3 poison in a rural hospital or isolated practice area for a person requiring treatment at the rural hospital or in the isolated practice area.

All drug, dosage and duration recommendations within the HMPs, unless identified otherwise, have been sourced from the Therapeutic Guidelines, based on the latest international literature and interpreted by some of Australia’s most eminent and respected experts.


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1. **“administer”**, for a controlled or restricted drug or a poison, means give a person a single treatment dose of the drug or poison, to be taken by the person immediately. **“supply”**, for a controlled or restricted drug or a poison, means give, or offer to give, a person one or more treatment doses of the drug or poison, to be taken by the person during a certain period. **“obtain”**, for a controlled or restricted drug or a poison, means acquire, buy, receive or otherwise obtain the drug or poison, **“possess”** a controlled drug, restricted drug, poison or other substance, includes having custody or control of the drug, poison or other substance and have the ability or right to obtain custody or control of the drug, poison or other substance.

**Source**: Health (Drugs and Poisons) Regulation 1996, Appendix 9, “Dictionary”.

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