Document No: 2396208



# TITLE: Preterm Labour (PTL): Management of Threatened and Active PTL Guideline

## Contents

## 1. Purpose

This guideline outlines the expected management of women presenting with threatened or active (established) preterm labour within Lakes District Health Board or referred to Lakes DHB at gestations ≥ 24+0 weeks and < 37+0 weeks. Between 23+0 and 23+6 weeks' gestation it may be appropriate to follow the pathway outlined in this guideline. However, this should only be done after reviewing Section 13 (Threatened and active PTL at < 24+0 weeks), and after discussion with both an obstetric specialist and neonatal specialist.

## 2. Definitions and Risk Factors

| | |
|---|---|
| APH | Antepartum haemorrhage |
| UTI | Urinary tract infection |
| fFN | Fetal fibronectin |
| LMC | Lead maternity carer |
| CTG | Cardiotocography |
| MSU | Mid-stream urine |
| FHR | Fetal heart rate |
| FBC | Full blood count |
| CRP | C-reactive protein |
| O&G | Obstetrics & gynaecology |
| PPROM | Preterm pre-labour rupture of membranes |
| SCBU | Special care baby unit |
| IV | Intravenous |
| G&H | Group and hold |
| DAU | Day assessment unit |
| BU | Birthing unit |
| MEWS | Maternity early warning score |
| MVSC | Maternity vital sign |
| LLETZ | Large loop excision of transformation zone |
| DCC | Delayed cord clamping |
| WCF | Women children and family |
| ACMM | Associate Clinical Midwife Manager (Waikato) |

Preterm labour (PTL)

Refers to the onset of labour < 37+0 weeks gestation
Clinically it is determined by regular uterine contractions with accompanied significant cervical dilatation of ≥ 3cm.

Threatened PTL

Defined as uterine contractions but with no or limited evidence of cervical change at < 37+0 weeks gestation. Clinically it is difficult to differentiate those with threatened PTL who will go onto PTL and birth and those that will not.

Risk factors for PTL

Many cases of threatened PTL and PTL are not associated with any identifiable risk factors; however, there are certain conditions which may increase the risk:

- Previous PTL
- Preterm PPROM
- Previous second trimester loss
- History of cervical surgery (cone biopsy, LLETZ with depth ≥ 10 mm)
- History of ≥ 1 surgical termination of pregnancy or evacuation of retained products of conception after miscarriage
- History of caesarean section at full cervical dilatation
- Congenital uterine and/or cervical anomalies
- Multiple pregnancy
- Polyhydramnios
- Recurrent bleeding in first trimester (≥ 5 days)
- Placental abruption/antepartum haemorrhage
- Smoking, alcohol or illicit drug use

## 3. Management principles

Preterm birth is the leading cause of neonatal death and major morbidity. It imposes additional risks on infant, child and life-long health of the off-spring. Current therapeutic strategies are unlikely to prevent preterm birth in women presenting with symptoms of preterm labour (PTL) (threatened PTL). However, we do have an opportunity to identify those at most risk of going onto preterm birth so interventions that reduce neonatal morbidity and mortality can be targeted appropriately.
Of women presenting with symptoms of PTL, 60 - 70% will go on to deliver at term and only 5% deliver within one week of presentation. Therefore clinical assessment of threatened PTL alone is a relatively poor predictor of preterm birth. The use of adjunct tests including vaginal biomarkers such as fetal fibronectin (fFN) or transvaginal ultrasound measurement of cervical length with strong negative predictive values allows us to rule out the risk of preterm birth in many women and limit the use of unnecessary antenatal admissions and interventions.
Special consideration should be made for those women who have barriers to accessing maternity services for assessment and management, for example those who live remote to Rotorua hospital. Multidisciplinary conversations between the woman, her LMC, Obstetric and neonatal teams need to occur early to identify these barriers and mitigate any risk to the woman, pepi and whanau.
Maori, Pacific and Indian women have higher rates of perinatal related mortality rates from spontaneous premature birth compared to “All other”. Health Professionals should therefore consider these inequities when assessing and managing these women and their whanau

(https://www.hqsc.govt.nz/our-programmes/mrc/pmmrc/publications-and-resources/publication/3823/).

## 4. Assessment

History taking

- Review history for symptoms of labour or other diagnosis which may present with similar symptoms (e.g. APH, UTI, constipation) and review risk factors
- Confirm gestational age

Physical examination

- Maternal Vital signs (full set as per MVSC)
- Abdominal palpation to detect uterine activity (frequency, duration and strength), assess fetal size and presentation
- Sterile speculum examination. Avoid gel to allow fetal fibronectin (fFN) testing if indicated (see below)
- Look for pooling of liquor, discharge, cervical dilatation and length
- If pooling of liquor present and/or rupture of membrane is confirmed, refer to Rupture of Membranes in Pregnancy guideline (see associated documents)
- Digital vaginal examination if clinically appropriate, and only after speculum examination (+/- fFN)). Assess using Bishops score if cervix < 3cm dilated
- CTG - FHR pattern and evidence of uterine activity

Investigations

- MSU
- Consider use of fFN (see below) if ≤ 34+6 weeks
- High vaginal swab for culture
- FBC and CRP
- If fFN is not available and ≤ 34+6 weeks, obstetric team may review and consider transvaginal ultrasound of cervical length. As per below table:

| **Cervical length** on TV USS | **Management** |
|---|---|
| ≥ 30mm | Treat as fFN 0 - 49 ng/mL |
| 15 - 30mm | Assess clinical situation and discuss with specialist obstetrician on-call |
| ≤ 15mm | Treat as fFN > 200 ng/mL |

Fetal Fibronectin (fFN)

Fetal Fibronectin is a glycoprotein found in amniotic fluid and extracts of placental tissue that can be thought of as 'trophoblast glue' promoting cellular adhesion at the utero-placental and decidual-fetal membrane interfaces. It can be found at elevated levels in the cervico-vaginal fluid of women between 22 and 36 weeks gestation who have an increased risk of PTL.
fFN should be used to identify women at most risk of PTL within the next seven days. Its greatest value lies in its negative predictive value. i.e. women presenting with symptoms of PTL and a negative fFN 0-49ng/mL are very unlikely (< 2%) to deliver within a time-frame where current hospital admission and corticosteroid use will be of benefit.

Women with a positive test ≥ 50 ng/mL have a higher risk of delivery within the next seven days (positive predictive value 15 - 50%). However, the majority of women will still not deliver within a time-frame where current hospital admission and other interventions may be of benefit. Use of the quantitative analyser to obtain an absolute value of fFN is better able to identify those at highest risk and more appropriately tailor care to each individual women ensuring antenatal care is not compromised to the detriment of mother and their babies who do go on to deliver preterm but reducing unnecessary interventions for all others. The following thresholds for care have been set:

**Table: Stratification of Preterm Birth Risk by fFN Concentration**

| fFN Level | Delivery <7days | Delivery <14 days | Delivery before 34+0 gestation |
|---|---|---|---|
| 10-49 ng/mL | 0% | 1.6% | 8.2% |
| 50-199 ng/mL | 0% | 7.7% | 11.5% |
| 200-499 ng/mL | 14% | 29% | 33% |
| >500 ng/mL | 38% | 46% | 75% |

Abbott DS, Radford SK, Seed PT, et al. Evaluation of a quantitative fetal fibronectin test for spontaneous preterm birth in symptomatic women.Am J Obstet Gynecol 2013;208:122.e1-6.

Indications for fFN testing:

| Inclusion criteria | Exclusion criteria* |
|---|---|
| ▪ Fetus is alive and viable<br>▪ 24+0 - 34+6 weeks gestation<br>▪ 23+0 - 23+6 weeks gestation if active intervention is being considered*<br>▪ Membranes are intact<br>▪ Cervix is < 3cm dilated<br>▪ Corticosteroid use, +/- tocolysis, +/- magnesium sulphate are being considered<br>▪ Singleton and twin pregnancy | Absolute contraindications<br>Other complications have been identified that warrant delivery within the next seven days (and admission/use of corticosteroids)<br>▪ PPROM<br>▪ Higher order multiple pregnancy (≥ triplets) |

| Relative contraindications** |
|---|
| ▪ current vaginal bleeding<br>▪ sexual intercourse within 24hrs<br>▪ speculum or digital vaginal examination within the last 24 hours<br>▪ transvaginal ultrasound examination within the last 24 hours |

**. These factors will increase the likelihood of a positive fFN result (but may represent a false positive). However, a negative result will be a true negative result and can guide the clinical management of the woman. These cases must be discussed with the specialist obstetric team oncall.

* fFN can be taken at time of first examination at 23+0 - 23+6 weeks and only sent after consideration of case and full discussion with specialist obstetrician on-call, paediatrician oncall +/-neonatologist and parents (refer to Section 13 - Threatened and active PTL at < 24+0 weeks).

fFN Specimen collection

This should be done at the time of **first** speculum examination. The speculum examination should use water as a lubricant. The use of a gel lubricant at the time of testing may produce a false negative result therefore should be avoided.

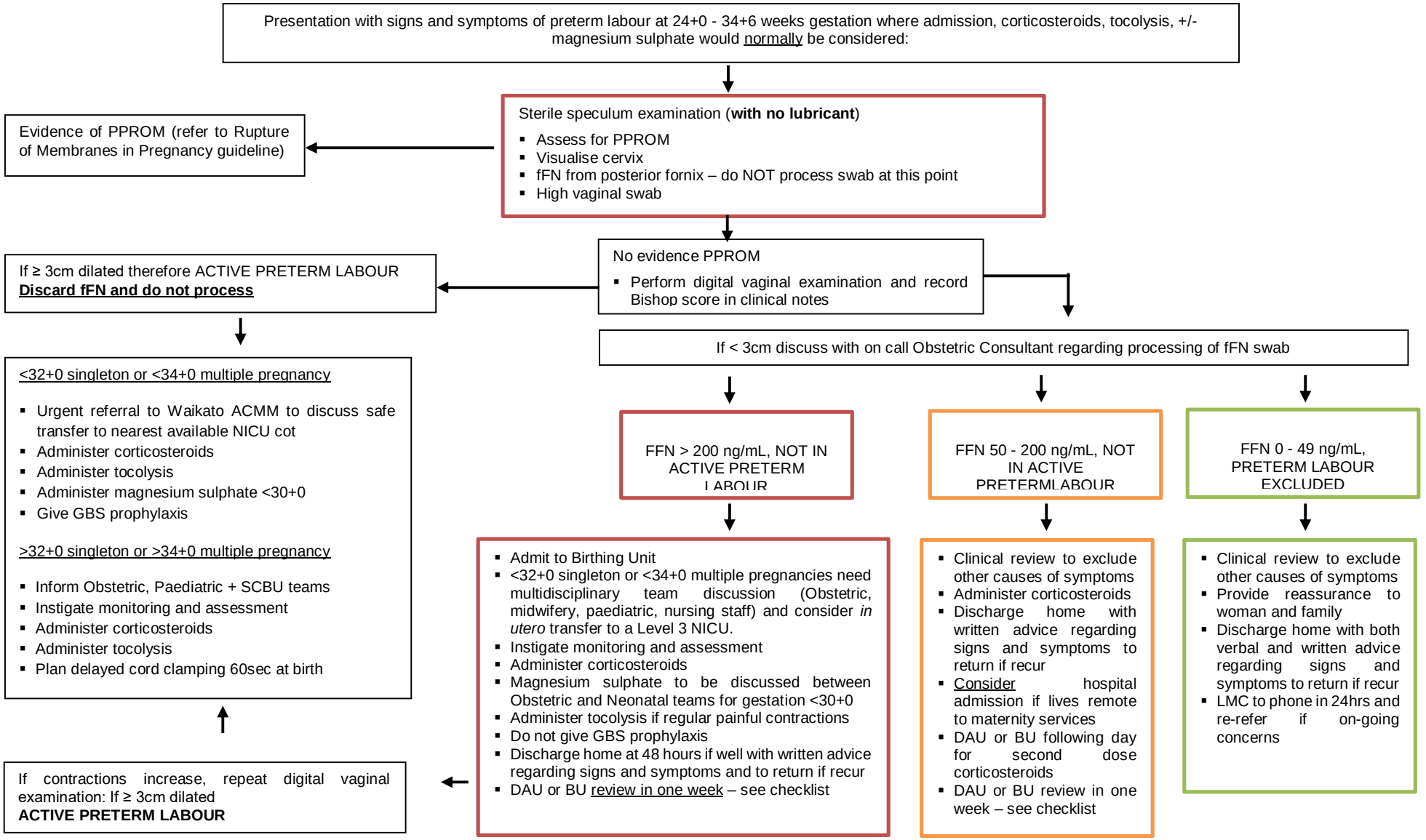
Collection of the fFN specimen should be prior to any other cervical examination or swab. Place fFN swab into posterior fornix of vagina and rotate for 10 seconds. Place the swab into the fFN plastic specimen collection tube.

Proceed with remainder of vaginal assessment and follow the PTL Care Plan Algorithm for on-going care. If assessment is not suggestive of significant risk of PTL, the fFN sample can be stored before processing for up to six hours at room temperature and three days in the refrigerator if required.

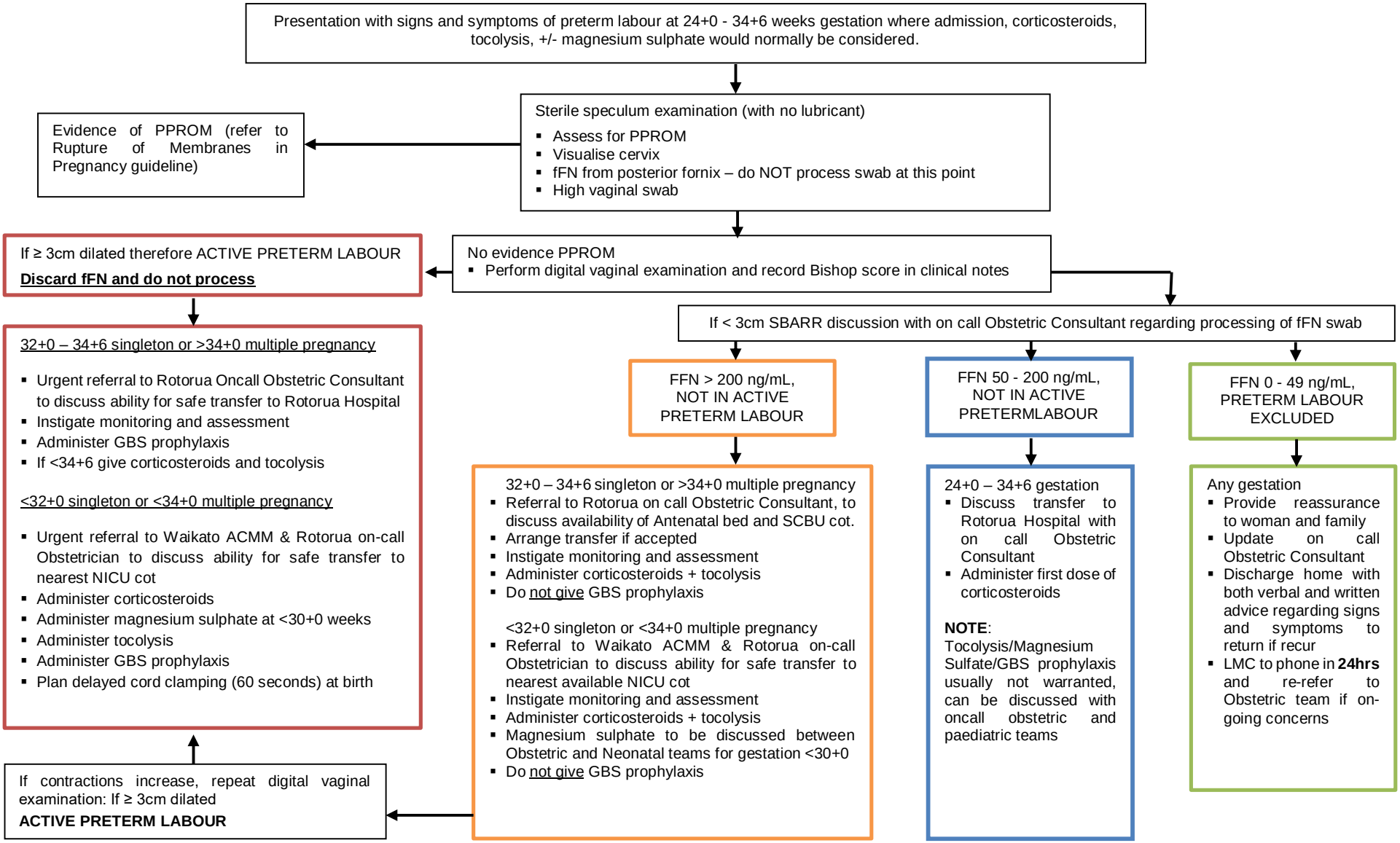
**The decision to process the fFN specimen through the machine must be discussed with the on-call obstetrician.**

See appendix fFN “How to guide”

## 5. PTL Care Plan Algorithm – ROTORUA



## 6. PTL Care Plan Algorithm – TAUPŌ



## 7. Management of confirmed active Preterm Labour 24+0 - 34+6 weeks

Please see relevant care plan for women who present to either ROTORUA or TAUPO.

Staff to be informed

- Midwife in charge on BU +/- CMC
- Obstetrician on-call
- Paediatrician on-call + SCBU staff
- LMC
- Social worker, National Travel Assistance Office if considering transfer

In utero transfer

- The appropriateness of transfer should be made after clinical assessment, followed by discussion between the obstetric and paediatric and SCBU teams.
- Rotorua SCBU is a Level 2 Neonatal Unit (>32+0 singleton and >34+0 multiple pregnancies)
- Waikato NICU is a tertiary neonatal intensive care unit. If considering transfer to Waikato Hospital please see Waikato Hospital Maternity Services – Inter Hospital Transfer and Repatriation Guideline
- Social worker and National Travel Assistance(NTA) Office to be notified of transfer by the Obstetric team (please email NTA@lakesdhb.govt.nz: name, DOB, NHI and destination). Women are entitled to have a support person travel and accommodated with them in the area of destination and it is Lakes DHB responsibility to arrange this.

Monitoring and assessment

- Insert large bore IV line
- Obtain FBC, CRP, G&H
- Confirm fetal presentation
- Maternal monitoring (see Maternal Vital Signs Monitoring Chart)
- Fetal monitoring (see Fetal Surveillance policy in associated documents). Continuous CTG should be performed while in active labour
- At peri-viable gestations 23+0- 25+0 weeks - individual plan to be made in consultation with parents and obstetrician on-call and paediatric team regarding degree of monitoring and level of intervention (refer to Threatened and active PTL at < 24+0 weeks for further guidance (section 13).

Antenatal Corticosteroids

- Refer to Antenatal Corticosteroids Given to Women Prior to Birth to Improve Fetal, Infant Child and Adult Health: New Zealand and Australian clinical practice guideline (2015)
  - Should be considered for all women between 24 and 34+6 weeks gestation with threatened preterm labour and a fFN >50ng/mL
  - In women who have received previous corticosteroids in this pregnancy, refer to guideline for repeat doses.

Magnesium Sulphate

- Refer to Magnesium Sulphate for Pre-eclampsia and for Neuroprotection in Pre-term Births < 30+0 Weeks guideline in associated documents

- Australian and New Zealand National Clinical Practice Guidelines were published in March 2010 (The Antenatal Magnesium Sulfate for Neuroprotection Guideline Development Panel, 2010). They recommend consideration of the antenatal use of magnesium sulfate in women at risk of imminent* preterm birth < 30 weeks regardless of plurality (number of babies in utero), parity, reason for early delivery, anticipated mode of delivery and whether or not antenatal corticosteroids have been used.
- The decision to give magnesium for women at risk of **imminent*** preterm birth should be made on an individual basis and involve discussion with the on call obstetric Consultant.

> ***Imminent delivery is defined*** as when early delivery is planned or definitely expected within 24 hours (if birth is planned commence magnesium sulfate as close to four hours before birth as possible). Do not delay starting magnesium sulfate in eligible women who may deliver within a few hours - the sooner the better and there is benefit even if a full 4 hours is not given.

- If urgent delivery is necessary because of actual or imminent maternal or fetal compromise e.g. severe fetal distress or antepartum haemorrhage, birth should NOT be delayed to administer magnesium sulfate.

Tocolysis

- Should be considered for all women ≤ 34+6 weeks gestation to allow time for corticosteroid,
- Nifedipine (section 10) should be the first-line Tocolytic agent. It is administered orally with less side effects than other available tocolytic agents (betamimetics)
- Refer to and follow the Nifedipine use flowchart

Neonatal Group B Streptococcal disease prevention

- Preterm birth is a risk factor for neonatal group B streptococcal disease
- Group B streptococcus prophylaxis should be offered for all women in **active** PTL Refer to Group B Streptococcus (GBS) - prevention of early - Onset Neonatal Infection guideline in associated documents
- Treatment should continue until birth or until the patient is transferred from Labour and Birthing Unit if symptoms of PTL settle and the patient remains undelivered

Cord clamping

- Delayed cord clamping (DCC) (60 seconds) at the time of preterm birth has a beneficial effect on neonatal outcome reducing mortality for all births < 37 weeks (RR 0.68, 95% CI 0.52 - 0.90) and ≤ 28 weeks (RR 0.70, 95% CI 0.51-0.95) with no reported adverse effects for mother or neonate and so should be used for all births regardless of mode of delivery, plurality or indication for preterm birth.
- At the time of birth, the neonate should be held below the level of introitus or placenta with no palpation or milking of the cord. A clock or stopwatch should be used to time 60 seconds before clamping the cord in the usual way and handing the baby to the neonatal team.
- Oxytocic drugs should be used in the usual manner and can be given before or after cord clamping. Delayed cord clamping is not associated with an increased risk of postpartum haemorrhage.
- Document a plan for DCC (60 seconds) in event of births in clinical records

Future pregnancy risks after preterm birth

- Medical review should occur prior to hospital discharge and advice regarding the risk of recurrence should be given.

- If delivery < 35+0 weeks gestation, referral for Obstetric Consultation is recommended in future pregnancies.

## 8. Management of fFN > 200 ng/mL, not in active Preterm Labour

| fFN Level | Delivery <7days | Delivery <14 days | Delivery before 34+0 gestation |
|---|---|---|---|
| **200-499 ng/mL** | **14%** | **29%** | **33%** |
| **≥500 ng/mL** | **38%** | **46%** | **75%** |

Please see relevant care plan for women who present to either ROTORUA or TAUPO.
Staff to be informed

- Midwife In Charge on BU +/- LMC
- Specialist obstetrician on-call
- Paediatrician on call +/- SCBU staff
- LMC
- Social Worker, National Travel Assistance Office if considering transfer

In utero transfer

- The appropriateness of transfer should be made after clinical assessment, followed by discussion between the Midwife, Obstetric, Paediatric and SCBU teams.
- Rotorua SCBU is a Level 2 Neonatal Unit (>32+0 singleton and >34+0 multiple pregnancies)
- Waikato NICU is a tertiary neonatal intensive care unit. If considering transfer to Waikato Hospital please see Waikato Hospital Maternity Services – Inter Hospital Transfer and Repatriation Guideline
- Social worker and National Travel Assistance(NTA) Office to be notified of transfer by the Obstetric team (please email NTA@lakesdhb.govt.nz: name, DOB, NHI and destination). Women are entitled to have a support person travel and accommodated with them in the area of destination and it is Lakes DHB responsibility to arrange this.

Monitoring and assessment

- Insert large bore IV line
- Obtain FBC, CRP, G&H and ask Laboratory to process urgently
- Confirm fetal presentation
- Maternal monitoring: Maternal Vital Signs Monitoring Chart and MEWS
- Fetal monitoring: daily CTG unless uterine activity (refer to the Nifedipine use flowchart)

Antenatal Corticosteroids

- Refer to Antenatal Corticosteroids To Improve Neonatal Outcomes guideline in associated documents
  - Should be considered for all women ≤ 34+6 weeks gestation
  - In women who have received previous corticosteroids in this pregnancy, refer to guideline for repeat doses

Magnesium Sulphate

- Not always warranted in this group of women
- Refer to Magnesium Sulphate for Pre-eclampsia and for Neuroprotection in Pre-term Births < 30+0 Weeks guideline in associated documents
- Australian and New Zealand National Clinical Practice Guidelines were published in March 2010 (The Antenatal Magnesium Sulphate for Neuroprotection Guideline Development Panel, 2010). They recommend consideration of the antenatal use of magnesium sulphate in women at risk of imminent* preterm birth < 30 weeks regardless of plurality (number of babies in utero), parity, reason for early delivery, anticipated mode of delivery and whether or not antenatal corticosteroids have been used.
- The decision to give magnesium for women at risk of **imminent*** preterm birth should be made on an individual basis and involve discussion with the on call obstetric Consultant.

> ***Imminent delivery is defined*** as when early delivery is planned or definitely expected within 24 hours (if birth is planned commence magnesium sulphate as close to four hours before birth as possible). Do not delay starting magnesium sulphate in eligible women who may deliver within a few hours - the sooner the better and there is benefit even if a full 4 hours is not given.

Tocolysis

- Should be considered for all women ≤ 34+6 weeks gestation with on-going painful uterine contractions to allow time for corticosteroid administration
- Nifedipine (section 11) should be the first-line tocolytic agent. It is administered orally with less side effects than other available tocolytic agents (betamimetics)
- Refer to and follow the Nifedipine use algorithm

Neonatal Group B Streptococcal disease prevention

- Should not be routinely used but consider in women < 37+0 weeks gestation if they progress to active PTL
- Refer to Group B Streptococcus (GBS) - prevention of early - Onset Neonatal Infection
- Guideline in associated documents

Cord clamping

- Document a plan for delayed cord clamping (60 seconds) in event of woman going onto preterm birth <37 weeks

On-going care

- A referral should be made for a DAU or BU appointment in one week for clinical review as there is still a risk of pre-term labour after admission, and Appendix ??(checklist) can be used to guide this review.

- All women should be discharged with written and verbal advice of the signs and symptoms of preterm labour with a plan for return if symptoms recur.

## 9. Management of fFN 50 - 200 ng/mL, not in active preterm labour

| fFN Level | Delivery <7days | Delivery <14 days | Delivery before 34+0 gestation |
|---|---|---|---|
| **50-199 ng/mL** | **0%** | **7.7%** | **11.5%** |

Patients with symptoms of PTL and a fFN 50 - 200 ng/mL are unlikely to deliver within the next few days but may be at risk of preterm birth (at a later time).
Antenatal corticosteroids are usually still warranted.
Admission to hospital is unlikely to make a significant impact on improving outcomes therefore once a clinical review to exclude other causes has been completed and corticosteroids given these women can be discharged home.
For those women who present to Taupo or live remote to Rotorua, discussion with the oncall Obstetrician is warranted and these women may need transfer to Rotorua for observation and to facilitate corticosteroid completion.

Antenatal Corticosteroids

- Refer to Antenatal Corticosteroids To Improve Neonatal Outcomes guideline in associated documents
  - Should be considered for all women ≤ 34+6 weeks gestation
  - In women who have received previous corticosteroids in this pregnancy, refer to guideline for repeat doses
- Discharge home if appropriate with plan for review in DAU or BU on the following day
  - Verbal and written advice should be given regarding signs and symptoms of preterm labour and plan for earlier return if symptoms recur (see appendix leaflet).
  - Three way conversation between woman, LMC and obstetric team.

Next day review in DAU/BU

- Review any current symptoms
- Administer the second dose of corticosteroid
- Follow-up in DAU in one week. If this is unlikely to be achieved e.g. woman lives remote to DAU and has access difficulties, then Obstetric team to discuss with woman and LMC a clear plan for one week review. For example if LMC can do in a primary birthing unit. See appendix checklist.

One week review in DAU (see checklist)

- Review laboratory results from initial presentation - urine, bloods, and swabs.
- Assess for on-going symptoms
- Any concerns for on-going or new symptoms repeat maternal assessment as appropriate, commence fetal monitoring and refer to Obstetric team oncall.

## 10. Management of fFN 0 - 49 ng/mL, preterm labour excluded

| fFN Level | Delivery <7days | Delivery <14 days | Delivery before 34+0 gestation |
|---|---|---|---|
| 10-49 ng/mL | 0% | 1.6% | 8.2% |

Patients with symptoms of PTL and fFN 0 - 49 ng/ml are very unlikely to deliver within the next seven days (< 2%)

- Reassurance should be given to these patients
- Clinical review to exclude other causes of symptoms e.g. UTI, placental abruption
- Discharge home with advice regarding signs and symptoms of preterm labour and plan for return if symptoms recur
- LMC to phone patient in 24hours for a review of symptoms, and liaise with oncall Obstetric team if on going concerns.

## 11. Nifedipine tocolysis

The aim of tocolysis in the presence of threatened preterm labour is to delay birth to allow for the administration of antenatal corticosteroids for fetal lung maturation (≤34+6 weeks), magnesium sulphate for fetal neuroprotection (≤30 weeks gestation) or for transfer to another facility if required.
Nifedipine is the drug of choice for tocolysis in threatened preterm labour. It is a calcium channel blocker and decreases tone in the smooth muscle of the myometrium. It's use as a for tocolysis is 'off-label' however many studies have assessed its use as a tocolytic agent including a Cochrane review favourably comparing it to other tocolytic drugs. Calcium channel blockers were associated with fewer side effects and reduced need to stop treatment as a result of these side effects.

**Trade name:** Adalat® 5 mg capsules (short acting Nifedipine) (section 29),
Nyefax Retard® 20 mg tablets (slow release Nifedipine)

**Mechanism of action:** Calcium channel blocker

**Contraindications:**

Absolute:
- Suspected/confirmed intrauterine infection
- Suspected/confirmed placental abruption
- Significant hypotension
- Maternal shock
- Previous allergic response to Nifedipine

Relative:
- Use of β-blocker (risk of hypotension)
- Lethal congenital anomalies of the fetus
- Severe fetal growth restriction with suspected fetal compromise
- Abnormal CTG
- Steroids completed within last 7 days

**Possible adverse effects:**
- Most common: transient palpitation, headaches and facial flushing
- Less common: constipation, dizziness, nausea, tachycardia, fatigue, peripheral oedema, increased liver enzymes. Liver enzyme changes are not a concern with such a limited use, but care should be taken in those with known liver disease

**Dose and administration:**
- Refer to Nifedipine use algorithm
- Initial dosing: Short acting Nifedipine 10 mg (2 x 5 mg capsules) (Adalat®) every 15 minutes if still contracting (up to 4 doses)
- Maintenance: Slow release Nifedipine 8 hourly 20 - 40 mg (maximum of 160 mg in 24 hours) (Nyefax Retard)
- Dose can be adjusted according to clinical symptoms

- Slow release Nifedipine should be discontinued 12 hours after the last corticosteroid dose. There is no data to support continued maintenance therapy

**Monitoring:**

Maternal:

- First hour: MVSC – Obtain MEWS score with full set of observations at 0, 30 and 60 minutes
- Next 2 hours: as above hourly
- Remaining time on treatment: as above four hourly

Fetal:

- Continuous CTG at commencement of treatment
- Continuous CTG for the first hour and until painful contractions cease
- Subsequent CTG daily or as clinically indicated e.g. increase in maternal temperature or pulse rate or return/increase in contractions

## 12. Nifedipine tocolysis flowchart

**ACTIVE PRETERM LABOUR**

**or**

**FFN > 200 ng/mL, NOT IN ACTIVE PRETERM LABOUR (& regular painful contractions)**

at 24+0 - 34+6 weeks gestation and corticosteroids and/or magnesium sulphate not yet completed or if antenatal transfer is planned

↓

No contraindication to tocolysis

↓

Time 0
- Short acting nifedipine 2 x 5 mg po (Adalat®)
- Pulse and BP
- Continuous CTG

↓

Time 15 mins
- Short acting nifedipine 2 x 5 mg po (Adalat®) if still contracting
- Continuous CTG

↓

Time 30 mins
- Short acting nifedipine 2 x 5mg po (Adalat®) if still contracting
- Pulse, BP and temperature
- Continuous CTG

↓

Time 45 mins
- Short acting nifedipine 2 x 5 mg po (Adalat®) if still contracting
- Continuous CTG

↓

Time 60 mins
- Slow release nifedipine (Nyefax Retard®) 20 - 40 mg po and chart every 8 hours
- Pulse, BP and temperature hourly for 2 hours and then four hourly
- Stop CTG if contractions settled and repeat

↓

Time 36 hours - (12 hours after second corticosteroid dose)
- Last dose slow release nifedipine (Nyefax Retard®)

## 13. Repeat presentation with symptoms of preterm labour

Women who present with symptoms of PTL but who do not go onto to deliver will be discharged from hospital with advice to return if symptoms recur. If they represent with recurrence of symptoms of PTL then repeat assessment and manage accordingly.

## 14. Threatened and active PTL at < 24+0 weeks

The 2019 New Zealand Consensus Statement on the care of mother and baby(ies) at periviable gestations is available for health professionals to update their knowledge around preterm labour at 23 and 24 weeks gestation.
Over the last 10 - 20 years there have been significant improvements in survival and survival free of major morbidity in infants born at peri-viable gestational ages (23+0 - 25+0 weeks). Active interventions including the use of antenatal corticosteroids and magnesium sulphate are likely to be significant influencing factors on survival and survival free from major morbidity.

The number of births at $23^{+0}$ to $24^{+6}$ weeks in New Zealand each year is low but care of both the wahine/mother and pēpi/baby is complex and should be provided by one of the six tertiary maternity and neonatal centres in New Zealand. For women within Lakes DHB it is important that there is a multidisciplinary approach to counselling of the woman that includes local obstetric and paediatric teams, and as appropriate tertiary obstetric and neonatology teams.

The following Information for health professionals counselling parents at 22+5 to 24+6 weeks gestation can be accessed for further information.

https://media.starship.org.nz/periviability-information-for-health-professionals/Periviability_information_for_health_professionals.pdf

## 15. Supporting evidence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## 16. Associated documents

- Antenatal corticosteroids to improve neonatal outcomes
- Diabetes in Pregnancy
- Fetal Surveillance Policy
- Group B Streptococcus (GBS) - prevention of early - Onset Neonatal Infection
- Intrapartum Care -Normal Labour and Birth
- Magnesium Sulphate for Pre-eclampsia and for Neuroprotection in Pre-term Births < 30+0 Weeks
- Point of Care Testing Equipment Management - POCT Protocol
- Rupture of membranes in Pregnancy
- Waikato Hospital Maternity Services - Inter Hospital Transfer and Repatriation
- Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines)

## 17. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this Lakes DHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

## 18. Corrections and amendments

The next scheduled review of this document is as per footer. However, if the reader notices any errors or believes that the document should be reviewed before the scheduled date, they should contact the owner or Document Control without delay.

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