Threatened Preterm Labour/Preterm Pre-Labour Rupture of Membranes (PROM)

1. Overview / Description

This guideline focuses on the management of women with threatened preterm labour or preterm prelabour ruptured membranes in whom transfer to a higher level of care is being considered.

This procedure should be read in conjunction with the SCV e-maternity handbook for the principles of preterm labour management (available from https://www.bettersafercare.vic.gov.au/resources/clinical-guidance/maternity-ehandbook/preterm-labour) and the general principles of maternity referrals https://www.rch.org.au/piper/guidelines/PIPER_Perinatal__Emergency_Maternal_Referrals/

Preterm birth outside a tertiary centre is associated with poorer outcomes, and so where possible, women should be transferred to a location where the appropriate level of care is available for the baby's gestation at birth, as per the Victoria Newborn Capability Framework. Aim for in-utero transfer wherever possible.

2. Related Documents

- Safer Care Victoria e maternity handbook

3. Definition of Terms

PPROM:	Preterm pre-labour rupture of membranes (prior to the onset of labour and before 37 completed weeks' gestation)
PIPER:	Paediatric Infant Perinatal Emergency Retrieval

4. Responsibility

All PIPER Nursing & Perinatal Consultants.

5. Procedure

5.1 Transfer and Referral to PIPER

- A midwife escort is NOT usually required, as the skill set of paramedics is sufficient to provide safe care in most cases, and birth in transit is not anticipated.
- **In most cases, cervical dilatation will need to be reassessed before the patient leaves by ambulance. If there has been further cervical dilatation, call the PIPER perinatal consultant back immediately, as in utero transfer may no longer be a safe option. Delivery in transit is to be avoided at all times.**
- Input from the on-call PIPER neonatal consultant will be sought when required. If transfer is not considered feasible, PIPER neonatal will provide neonatal support and retrieval.

5.2 Management

Management includes confirmation of the diagnosis, tocolysis, steroids, antibiotics and ensuring safe transfer.

5.3 Diagnosis of preterm labour or PPROM

See SCV maternity e handbook.

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The best predictor of preterm birth is a previous preterm birth, but many women who deliver preterm will be in their first ongoing pregnancy or will not have a history of preterm birth.

Of women who present with contractions typical of preterm labour, only around 15% will deliver preterm. Of women who present with preterm pre-labour rupture of membranes (PPROM), 56% will deliver within 7 days and 22% will remain undelivered after 4 weeks.

Fetal fibronectin, or alternative tests to predict preterm labour, can be helpful in deciding whether to transfer a woman to a higher level of care. These tests are not applicable in the setting of ruptured membranes, or cervical dilation greater than 3 cm. FFN is most useful in ruling out preterm labour. In the setting of a negative FFN test, the chance of spontaneous labour in the next seven days in a woman with threatened preterm labour is less than 1%. With a positive FFN, the chances of preterm birth in the next 7 days ranges from 1% to 15% depending on the level of the FFN. More detailed estimates of the risk of preterm labour can be determined by using the Quipp app. **Generally, a positive FFN should lead to consideration of transfer.**

5.4 Tocolysis

Tocolysis can be used to allow for transfer to an appropriate hospital in a woman who is contracting. It is not usually required in the setting of ruptured membranes without contractions.

Nifedipine	Nifedipine is the first line tocolysis in most situations.
Route	Oral (crushing or chewing recommended to increase rate of absorption)
Dose	STAT 20 mg, **immediate release** If contractions persist after 30 minutes repeat 20 mg If contractions persist after a further 30 minutes repeat 20 mg
Maintenance dose	If blood pressure is stable 20 mg, 8 hourly
Comments	**Use Immediate release formulation ONLY** Relative contraindications: • Previous adverse reaction to calcium channel blockers • Maternal cardiac disease • Hypotension • Hepatic dysfunction • Concurrent use of salbutamol or other beta-sympathomimetics • Concurrent use of nitrates or antihypertensive medication
GTN	A GTN patch 5 – 10 mg may be used as an alternative.
Comments	GTN is part of the medication available to an ambulance crew, so may be used as an alternative when patients are being transferred directly to hospital from home, or during interhospital transfer.
Indomethacin	Indomethacin may be used as a tocolytic if nifedipine is unavailable. Please discuss with the PIPER consultant. Although there are concerns about the fetal impact of indomethacin, these are extremely unlikely when a single dose of 50 mg orally is used, and the gestation is less than 32 weeks

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5.5 Corticosteroids

Administer corticosteroids if birth is likely to occur before 34+6 weeks. Consider steroids from 22 weeks gestation. Monitor blood glucose levels in women with diabetes

Bethamethasone (Celestone chronodose) 11.4 mg (5.7 mg x 2 vials), im, repeated in 24 hours

5.6 Antibiotics

- Prophylactic antibiotics are not recommended in threatened preterm labour.
- Antibiotics should be given in preterm prelabour ROM
- Prophylactic antibiotics for GBS should be administered in established preterm labour, unless GBS status is known to be negative.
- If chorioamnionitis or other infection is suspected, this must be treated appropriately.
- Chorioamnionitis should be considered with maternal fever (> 38o C), increased white cell count or CRP, maternal or fetal tachycardia , uterine tenderness or offensive smelling vaginal discharge.
- Please refer to SCV for antibiotic regimes

5.7 Magnesium Sulphate (MgSO4)

Intravenous magnesium sulfate (MgSO4) is recommended for neuroprotection of the fetus under 30 to 34 weeks gestation, to reduce the risk of cerebral palsy. It is NOT used during in utero transfer.

5.8 Extreme preterm birth

Women from 22 weeks gestation onwards, where other clinical features are favorable, may be suitable for transfer for neonatal resuscitation, depending on the clinical scenario, and the wishes of the woman.

Factors that are associated with a better outcome include female gender, antenatal steroid administration and later gestational age. Prolonged rupture of membranes, growth restriction and congenital anomalies are associated with a poorer outcome.

Women need suitable counselling to make the decision regarding their wishes for resuscitation. This counselling can be provided locally and should be by senior clinicians. If there is not capacity for local counselling, it can be provided by telehealth/telephone from another service or from the Piper neonatologist on call, or by transferring the woman for counselling.

Women who are transferred for counselling and decide against active resuscitation will usually be transferred back to the referring service until the agreed gestation for resuscitation.

6. References

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7. Disclaimer

The Paediatric, Infant Perinatal Emergency Retrieval (PIPER) Neonatal and Paediatric guidelines were developed by PIPER clinicians for the sole use within the PIPER service at The Royal Children's Hospital Melbourne.

The authors of these guidelines have made considerable effort to ensure the information upon which they are based is accurate and up to date. Users of these guidelines are strongly recommended to confirm that the information contained within them especially drug doses is correct by way of independent resources. The authors accept no responsibility for any inaccuracies or information perceived as misleading.

8. End of Document