

## Rupture of Membranes in Pregnancy

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## 1. Purpose of guideline

The purpose of this guideline is to establish the expected management of women with spontaneous pre-labour rupture of membranes (PROM), to ensure the wellbeing and safety of both the women and her unborn baby within Auckland District Health Board (Auckland DHB).

## 2. Guideline management principles and goals (all PROM)

1. The Lead Maternity Carer (LMC) is responsible for the initial assessment of the woman to confirm rupture of membranes (ROM) at  $\geq 37$  weeks gestational age and the development of an individualised clinically appropriate plan. Prior to 37 weeks with suspected PROM, the LMC is expected to refer for acute assessment in WAU and provide the necessary support for the woman in this process.
2. The woman and her partner / whānau / family must be fully informed of the research evidence regarding expediting birth after prelabour ROM, and a clear plan made in partnership with them. Provide all women with the Auckland DHB patient information leaflet 'Term pre-labour Rupture of Membranes' or 'Pre-term premature rupture of the Membranes' (see [Associated documents](#)) as a basis for discussion.
3. Any plan to expedite birth should take place as soon as resources allow; and if there is clinical concern regarding risk of sepsis then senior clinicians should attend in order to escalate care.
4. The LMC should consult with the acute team for Women's Assessment Unit (WAU) if obstetric consultation (Referral guidelines) is recommended. Clearly document information provided and the plan made, in the woman's clinical record.

## 3. Definitions

Term	Definition
<b>Term Pre-labour ROM (term PROM)</b>	Rupture of the membranes at or beyond 37 weeks gestation where labour has not started after one hour.
<b>Pre-term pre-labour ROM (PPROM)</b>	Rupture of the membranes prior to the onset of labour < 37 weeks gestation.
<b>Pre viable</b>	Pregnancy less than 23+0 weeks gestation
<b>Planned early birth</b>	Immediate intervention or intervention within 24 hours
<b>Expectant management</b>	An intended delay in expediting birth, of more than 24 hours

## 4. Diagnosis and assessment at all gestations

Accurate diagnosis of rupture of the membranes is crucial. This can be difficult in PPRM at very early gestations (e.g. 24 weeks) due to a lower liquor volume and women may not realise they are leaking liquor.

Perform a sterile speculum examination with consent (see [Appendix 1](#): Clinical assessment). Digital examination is not recommended (unless there is a suspicion of cord presentation or prolapse) as it increases the risk of infection and does not provide more information than a speculum examination.

A Cardiotocograph (CTG) should be performed for at least 30 minutes to assess fetal wellbeing and uterine activity when gestation is  $\geq 26$  weeks. Under 28 weeks in this context the interpretation of the CTG can be difficult and advice should be sought from a senior obstetrician/maternal fetal medicine (MFM) specialist. Less than 24 weeks gestation there must be careful consideration of management, as outlined in the Preterm Labour (PTL) - Management of Threatened and Active PTL guideline (see [Associated documents](#)), as CTG monitoring is not appropriate.

Gestation less than 37 weeks:

- Low vaginal/rectal swabs should be taken in a single sweep and Group B Streptococcus (GBS) screening requested. The presence of gram positive cocci on the initial gram stain should not lead to a presumptive diagnosis of GBS - await cultures.
- Consider swabs for Chlamydia trachomatis and Neisseria gonorrhoea according to risk. (Sherwood, 2006). It should be noted however that overall lower genital tract swabs are poor predictors of intrauterine infection in women with PPROM.
- An ultrasound examination may be useful to assess fetal size, presentation, and liquor volume.

## 5. Antenatal risk factors for Group B Streptococcus (GBS)

Refer to guideline 'Group B Streptococcus - Prevention of Early Onset Neonatal Infection' (see [Associated documents](#)).

## 6. Pre-labour rupture of membranes at term (Term PROM)

- The incidence of Term PROM is 8%. Seventy per cent of women with term PROM go into labour spontaneously within 24 hours, and 85 per cent within 48 hours (Royal Australian and New Zealand College of Obstetricians and Gynaecologists [RANZCOG] 2010).
- The initial assessment is to be performed by the LMC at home or at the LMC's clinic or in WAU (this assessment does not need to be done by an obstetrician).
- Woman with term pre-labour rupture of membranes who are known to have an antenatal risk factor where GBS prophylaxis would be recommended should be advised to come to WAU for an assessment by the LMC as soon as possible.
- The diagnosis of ROM must be established or excluded as soon as possible.
- Expedited birth in term PROM is generally recommended to be via induction of labour, unless there is a clear indication for caesarean section.
- Women with confirmed term PROM who have antenatal risk factors for GBS should be recommended expedited induction of labour as soon as possible.
- Women without antenatal risk factors for GBS should be counselled regarding either planned early birth (defined as immediate IOL or IOL within 24 hours) or expectant management at home or in hospital (defined as intended delay in expediting birth, of more than 24 hours). Planned early birth should be recommended based on the following evidence:

- The Cochrane review of 23 RCTs (2017) concluded that compared with expectant management, planned early birth resulted in:
  - Fewer women with infectious morbidity (RR 0.49; 95% CI 0.33 to 0.72)
  - Fewer babies with early-onset neonatal sepsis (RR 0.73; 95% CI 0.58 to 0.92)
  - No difference in caesarean section rates
  - No difference in serious maternal morbidity/mortality nor in perinatal death.
- Ensure that the woman and her partner understand the implications of both options.
- Give the woman the Auckland DHB patient information leaflet 'Pre-labour Rupture of Membranes' - Information for women at term (37 or more weeks)' and use this to guide discussion.

### 6.1 Term PROM planned early birth

Women who have chosen to have their birth expedited within 24 hours of term ROM should be in the hospital until resources allow to proceed with their birth plan. An acute induction of labour booking form (or Caesarean section booking form if indicated) should be completed and the WAU Clinical Charge Midwife (CCM), Delivery Unit (DU) CCM and DU Senior Medical Officer informed.

### 6.2 Term PROM expectant management at home

Women with term PROM who meet the following criteria are eligible for expectant management at home, providing they are fully informed. Prior to being discharged home, an acute induction of labour (IOL) is booked at a convenient time 24 hours or more after ROM. Induction of labour booked according to Induction of Labour policy (see [Associated documents](#)).

- No risk factors for early-onset neonatal GBS infection (see [Antenatal risk factors for GBS](#))
- Singleton uncomplicated pregnancy
- Cephalic presentation and engaged
- Clear liquor
- Normal fetal movements and CTG
- Afebrile
- Normal heart rate
- Has **NOT** had a digital vaginal examination
- No cervical suture
- Has use of working phone
- Lives less than 40 minutes away from a maternity facility.
- Able to get transport to and from hospital easily.
- Has given informed consent for expectant management

At home:

- The woman should be advised to undertake, four hourly monitoring of her temperature and pulse. Ensure she has access to a thermometer and give instructions on its use and what is a normal range. Demonstrate how to take a pulse and what the normal range is.
- Give clear information about reporting changes in liquor colour, fetal movement patterns, feeling unwell or if labour establishes.

### 6.3 Term PROM expectant management in hospital

- Expectant management in hospital is appropriate if a woman does not meet criteria for going home, or is unhappy to go home despite choosing expectant management. There should be consultation with the team on call for WAU prior to admission.
- Induction of labour (IOL) is booked at a convenient time for 24 hours or more after ROM (IOL booked according to Induction of Labour guideline.)
- A full set of vital signs should be performed every four hours and documented on Maternity Early Warning Score (MEWS) chart: Escalation as per chart.
- In addition the following should be observed:
  - Liquor: colour, smell and amount
  - Uterine activity
  - A minimum of a daily CTG
  - If any concerns notify the appropriate obstetric team.

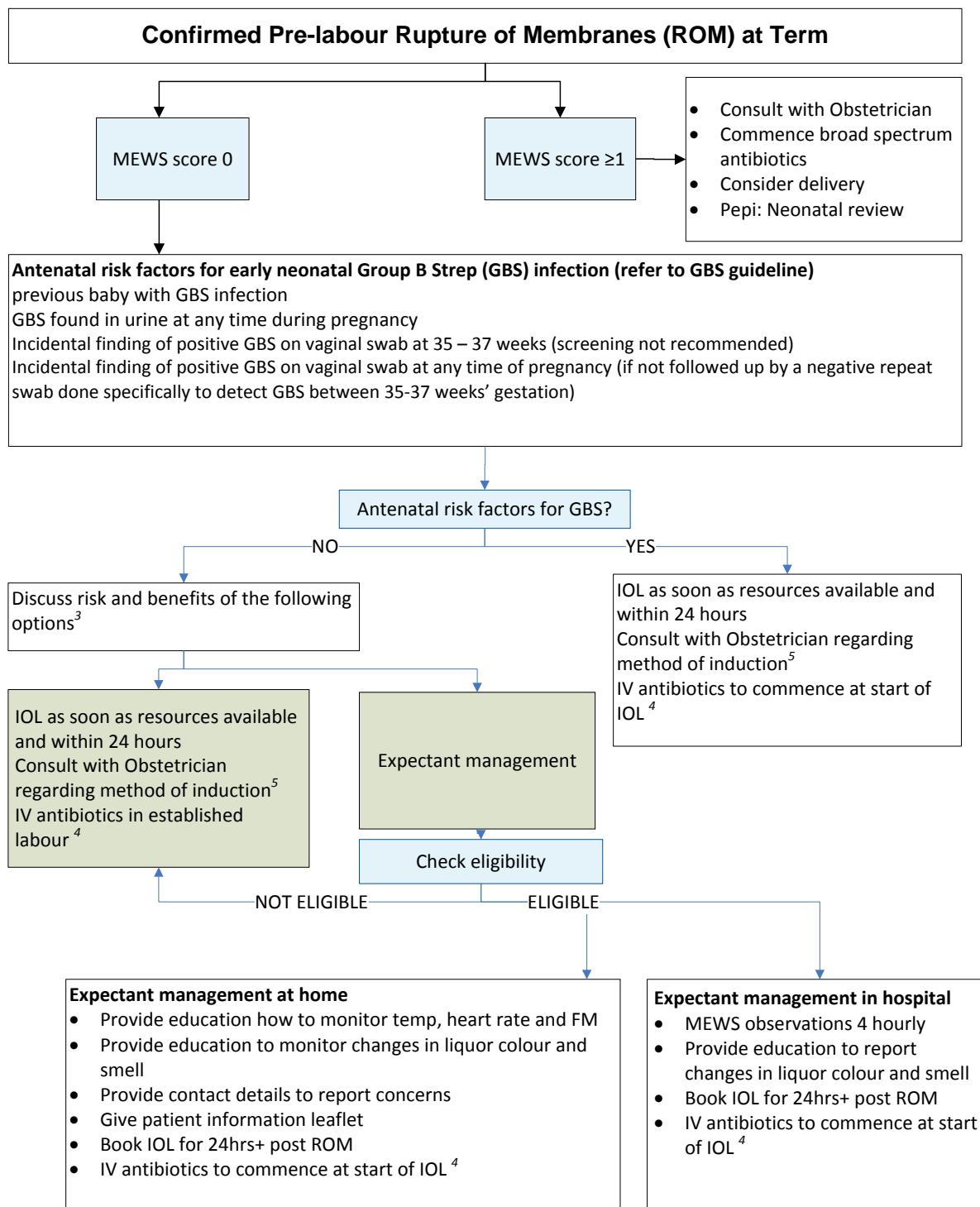
## 7. Intra partum management of term PROM

Research suggests that although the use of prostaglandins for ripening of the cervix in women with term PROM are not contraindicated, the use of intravenous (IV) syntocinon infusion is associated with less risk of chorioamnionitis and endometritis (see Oxytocin for Induction and Augmentation of Labour guideline for more detail).

Intra-partum chemoprophylaxis must be given if there are any ante-partum or intra-partum (risk factors for early onset neonatal GBS disease. Refer to Group B Streptococcus (GBS) - Prevention of Early-Onset Neonatal Infection guideline (see [Associated documents](#)).

If chorioamnionitis is suspected, follow the advice in the GBS guideline regarding investigation and broad spectrum antibiotic therapy. A suspicion of chorioamnionitis, or a maternal temperature of  $\geq 38$  degrees Celsius with term PROM mandates obstetric review.

## 8. Confirmed pre-labour rupture of membranes (PROM) at term – Algorithm



<sup>1</sup> It is not NWH policy to routinely screen for GBS in pregnancy

<sup>2</sup> GBS positive swab prior to 35 weeks is NOT predictive of current colonisation

<sup>3</sup> Evidence supports improved outcomes with early planned birth

<sup>4</sup> Antibiotics should be started at least 4 hours prior to birth for neonatal protection

<sup>5</sup> Evidence supports less risk of infection with IV Oxytocin rather than vaginal PG

## 9. Preterm Pre-labour rupture of membranes (PPROM)

PPROM complicates up to three per cent of pregnancies and is associated with 30-40 per cent of all spontaneous preterm births

In the absence of overt signs of infection or fetal compromise, a policy of expectant management with appropriate surveillance of maternal and fetal wellbeing should be followed in pregnant women who present with preterm prelabour rupture of membranes, including those close to term ( i.e. 34-36+6 weeks gestation). Once term (37 weeks) is reached, birth should be planned.

### Risks:

- At very early gestations, prematurity and the associated complications (death, respiratory distress syndrome, chronic lung disease, intraventricular haemorrhage, necrotising enterocolitis and retinopathy) are increased.
- Neonatal infection, particularly if the interval between PPRM and delivery is prolonged.
- Neonatal lung hypoplasia if PPRM occurs < 24 weeks; the prevalence of pulmonary hypoplasia in neonates of pregnancies complicated by PROM before or at the limit of viability is approximately 30 per cent. The mortality rate for these neonates is 70 to 90 per cent (McElrath, 2020).
- Maternal infection.
- Need for caesarean section.

The majority of women with PPRM go into labour spontaneously. There is an inverse relationship between gestational age at the time of PPRM and the onset of spontaneous labour. In women with PPRM near term, 50% of women laboured within twelve hours, and 95 per cent within 72hours (Caughey, Robinson & Norwitz, 2008). In women with PPRM < 26 weeks, more than half laboured within one week, and 22 percent remained undelivered four weeks later.

**Note: Women who experience PPRM < 24 weeks gestation** should be assessed acutely by the obstetric team and a senior obstetrician informed. From 22+5 weeks, an assessment should be made at the time of admission regarding viability with counselling provided to the women and whānau by the specialist obstetrician on call and including the specialist neonatologist on call when active intervention is considered appropriate.

Refer to Section 13 of the Preterm Labour guideline – Threatened and active PTL at <24+0 weeks. Routine offer of ‘active intervention’ including corticosteroids for fetal lung maturity, tocolysis, and neonatal resuscitation should not occur as standard <24 weeks without careful consideration and periviability counselling as above, but may be considered between 23+0 and 23+6 weeks (discussions to commence from 22+5 weeks to allow for administration of two doses of corticosteroid injections in preparation for active intervention from 23+0 weeks).

Where PPRM occurs <24 weeks and pregnancy is ongoing, there should be consultation with the Maternal Fetal Medicine team to plan ongoing care. If PPRM has occurred <22 weeks, counselling by senior staff may include discussion regarding termination of pregnancy in view of poor prognosis associated with such early PPRM.



## 9.1 PPRM expectant management in hospital

Initial care involves the woman staying in hospital. Care includes:

- Four hourly full set of vital signs documented on a MEWS chart
- The woman monitoring pattern of fetal movements and reporting any changes or concerns to the midwife.
- Daily CTG or as directed by Senior Medical Officer
- Weekly ultrasound scan for liquor volume
- Fortnightly ultrasound scan for fetal growth
- Low Vaginal/Perianal Swab (LVS) for GBS, Full Blood Count (FBC) and C-reactive protein (CRP) as clinically indicated.
- Antibiotics - see below 9.1.1
- Administration of corticosteroids as per Antenatal Corticosteroid guideline and Preterm Birth guideline, up to 34+6 weeks gestation.
- Magnesium sulphate as per guideline Magnesium Sulfate for Pre-eclampsia and for Neuroprotection in Pre-Term Births < 30 Weeks (see [Associated documents](#))
- Women should be offered counselling from a neonatologist especially at borderline viability
- Virtual tour of Newborn unit
- Social worker or other support services referral as required.

If there are signs of infection or contractions an obstetric registrar or specialist review is required and broad spectrum antibiotics may be indicated as well as consideration of expediting birth.

### 9.1.1 PPRM antibiotic cover

Prospective randomised controlled trials of women with PPRM taking prophylactic antibiotics verses a placebo have found a significant prolongation of pregnancy and a significant reduction in the incidence of chorioamnionitis, perinatal morbidity, neonatal sepsis, necrotising enterocolitis and respiratory distress syndrome with prophylactic antibiotics (Kenyon, Taylor & Tarnow-Mordi, 2001). Currently no one specific antibiotic regime appears to be superior to another, however regimes including amoxicillin-clavulanic acid appear to be inferior.

- Standard therapy: Erythromycin ethyl succinate (EES) 400mg orally four times a day for 10 days (note that 400mg EES is equivalent to 250mg of erythromycin stearate, however the latter is not on the Hospital Medicines List hence not available).
- Alternative for allergy or intolerance: Penicillin V 500mg orally four times a day for 10 days
- Other alternatives: Discuss with Infectious Disease service.

### 9.1.2 Tocolysis

There is no evidence to support the use of prophylactic tocolytic drugs to improve neonatal outcome prior to the onset of contractions in the setting of PPRM.

However, if PPRM occurs between 24 and 34+6 weeks of gestation and there is uterine activity, tocolysis may be indicated for a short time to allow the administration of corticosteroids providing there are no signs of sepsis (fever, maternal and/or fetal tachycardia, uterine tenderness and irritability, leucocytosis), antepartum haemorrhage or other contraindication to corticosteroid use.



This decision should be made in consultation with the Labour and Birthing Suite (L&BS) or MFM specialist on call. At gestation <24 weeks, see section 9 above.

### 9.1.3 Cervical suture

If a cervical suture is present consult with the obstetric specialist on-call. On-going care should be individualised. If there are any signs of infection the suture should be removed and birth should be expedited. Alternatively, it may be appropriate to continue close surveillance with suture in situ, at least until corticosteroids have been given if <34+6 weeks.

## 9.2 PPROM expectant management at home

Women with PPROM who meet the following criteria may be considered eligible for expectant management at home:

- No antenatal risk factors for early-onset neonatal GBS infection (see GBS guideline) other than being preterm
- Singleton uncomplicated pregnancy
- Cephalic presentation and engaged
- Clear liquor
- Normal fetal movements
- No cervical suture in situ
- No signs of sepsis (fever, maternal and/or fetal tachycardia, uterine tenderness and irritability, leucocytosis)
- Has **NOT** had a digital vaginal examination
- Likely to attend all follow-up, and report concerns promptly
- Willing to take own temperature twice a day
- Has working phone
- Lives less than 40 minutes away
- Able to get transport to and from hospital easily
- Able to attend appointments three times per week in Day Assessment Unit (DAU). The women will be with reviewed by her team (not the WAU team on call).

**Note:** ensure first DAU appointment made and given to women before discharge home

### 9.2.1 DAU appointment

DAU midwife records fetal movement, maternal temperature and heart rate, and performs a CTG. The woman's team will then review the woman and adjust the plan as needed. The woman's team is responsible for arranging weekly ultrasound scans for liquor volume and two weekly scans for fetal growth (or as clinically indicated).

### 9.2.2 Timing of birth

- Prior to 37 weeks expectant management with appropriate surveillance is recommended (Morris et al., 2015).

- Group B Streptococcus (GBS) prophylaxis should be given to all women in active/established pre-term labour (<37 weeks) although consideration may be given to omitting this if there is a negative GBS Low vaginal swab/rectal swab in the previous five weeks.
- See Group B Streptococcus (GBS) - Prevention of Early-Onset Neonatal Infection guideline (see [Associated documents](#)).

**In women with evidence of chorioamnionitis /sepsis, birth should be expedited and Broad-spectrum antibiotics should be started immediately.**

### 9.2.3 Mode of delivery

- Plan for vaginal birth in the absence of fetal or maternal compromise or clinical indication for caesarean section..
- Where there is evidence of fetal infection, unless birth is imminent, caesarean section may be indicated. However, in very early gestations (at 23 and 24 weeks) with little liquor this may result in fetal trauma and a classical scar on the uterus or other surgical complications. Risks and benefits should be weighed carefully and discussed with the woman so that she may choose how to proceed. In some circumstances, it may be recommended to the woman that she does not undergo caesarean section with the understanding of possible fetal demise prior to birth.

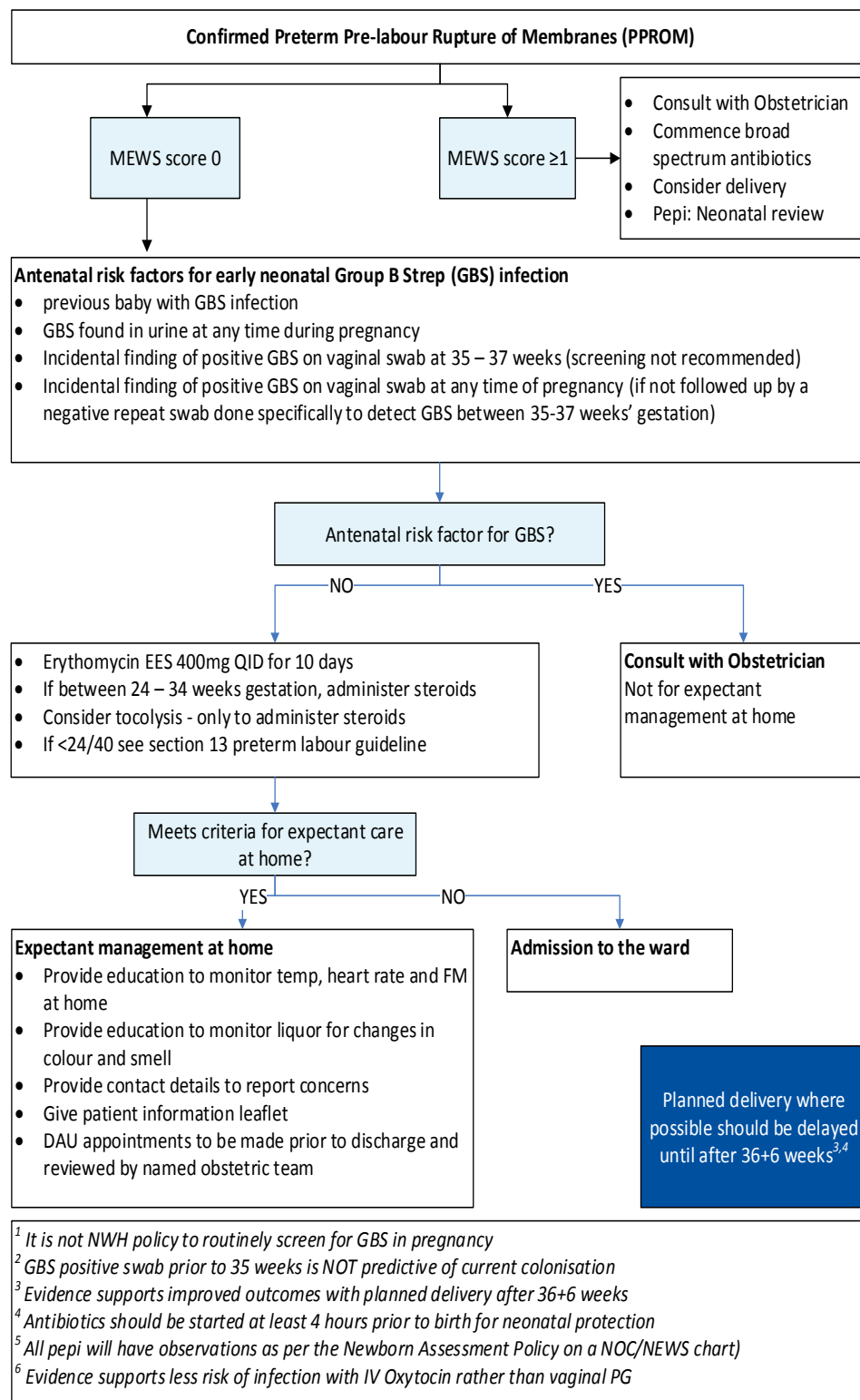
## 10. Rupture of membranes before and at the limit of viability

- Previabie defined as < 23 weeks gestation.
- Periviable (at the limit of viability) is defined as 23+0 to 23+6 weeks gestation.
- PPROM before or at the limit of viability complicates 0.1 – 0.7 per cent of pregnancies.
- The rupture of membranes can either be spontaneous or after amniocentesis or other invasive procedure.
- Studies show that 50 per cent of women remain pregnant beyond the first week after rupture (McElrath, 2020).
- Chorioamnionitis is more common with PPROM before or at the limits of viability than in pregnancies without PROM at the same gestation.
- **In previable pregnancies at membrane rupture:** Antenatal corticosteroids or tocolytics are not given. Antibiotics may be considered as early as 20 weeks gestation, to prolong pregnancy. See 9.1.1 PPROM antibiotic cover. Whilst intrapartum chemoprophylaxis for GBS (as per Risk Factors in the GBS guideline) is unlikely to benefit the neonate at previable gestations, it may be considered for prevention of maternal morbidity. At previable gestations, care should be individualised after full counselling by a senior obstetrician. Termination of pregnancy is an acceptable option for management and should be discussed with the woman by a senior obstetrician, this discussion does not need to happen after hours unless there are clinical concerns regarding sepsis.
- **In pregnancies at the limit of viability at membrane rupture:** See Preterm Birth guideline, section 13: Threatened and active PTL at < 24 weeks.

Key points re PPROM before and at the limit of viability:

5. Digital vaginal examination should be avoided unless the woman is in active labour or birth is imminent.
6. Early review with senior obstetric and neonatal staff is imperative.
7. Corticosteroids should be considered in consultation with senior obstetric staff when the limit of viability is approached and timed according to the plan for neonatal management.
8. Clinical signs of chorioamnionitis or maternal sepsis is an indication for broad spectrum antibiotics and expedited birth of the baby.
9. Outpatient management can be considered if the woman elects for conservative management in the absence of any risk factors or maternal or fetal compromise.

## 11. Confirmed preterm pre-labour rupture of membranes (PPROM) - Algorithm



## 12. Supporting evidence

- Dare, M. R., Middleton, P., Crowther, C. A., Flenady, V., & Varatharaju, B. (2006). Planned early birth versus expectant management (waiting) for prelabour rupture of membranes at term (37 weeks or more). *Cochrane database of systematic reviews*, (1).
- Induction of Labour in Aotearoa New Zealand, a clinical practice guideline, 2019. Retrieved from: <https://www.midwife.org.nz/wp-content/uploads/2020/02/induction-of-labour-in-Aotearoa-New-Zealand-guideline-2019.pdf>
- National Institute for Health and Care Excellence. (2008, July). Inducing labour. Retrieved from <https://www.nice.org.uk/guidance/cg70/chapter/1-guidance>
- Royal college of Obstetricians & Gynaecologists Green-top guideline No. 73: Care of Women Presenting with Suspected Preterm Prelabour Rupture of Membranes from 24+0 Weeks of Gestation (Green-top Guideline No. 73) Retrieved from: <https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg73/>
- MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/RCOG-Preterm-Prelabour-Rupture-of-Membranes.pdf?ext=.pdf
- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. (2010, July). Term Prelabour Rupture of Membranes (Term PROM). Retrieved from [https://www.ranzcog.edu.au/RANZCOG\\_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Term-Prelabour-Rupture-of-Membranes-\(Term-Prom\)-\(C-Obs-36\)-review-2017.pdf?ext=.pdf](https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Term-Prelabour-Rupture-of-Membranes-(Term-Prom)-(C-Obs-36)-review-2017.pdf?ext=.pdf)
- Sherwood, J. (2006), *Chlamydia Screening in New Zealand: Report for the National Screening Unit July 2006*. Wellington: Ministry of Health  
Retrieved from <https://www.health.govt.nz/publication/chlamydia-screening-new-zealand-report-national-screening-unit>
- McElrath, T., (2020). Prelabor rupture of membranes before and at the limit of viability. Retrieved from: <https://www.uptodate.com/contents/prelabor-rupture-of-membranes-before-and-at-the-limit-of-viability>
- Morris, J. M., Roberts, C. L., Bowen, J. R., Patterson, J. A., Bond, D. M., Algert, C. S., ... & PPRM Collaboration. (2016). Immediate delivery compared with expectant management after preterm pre-labour rupture of the membranes close to term (PPROMT trial): a randomised controlled trial. *The Lancet*, 387(10017), 444-452.
- King Edward memorial hospital. Rupture of membranes-spontaneous (2019)  
Retrieved from: [https://www.kemh.health.wa.gov.au/-/media/Files/Hospitals/WNHS/For-health-professionals/Clinical-guidelines/OG/WNHS,-d,-OG,-d-,RuptureOfMembranes\\_Previable-Preterm-Term.pdf](https://www.kemh.health.wa.gov.au/-/media/Files/Hospitals/WNHS/For-health-professionals/Clinical-guidelines/OG/WNHS,-d,-OG,-d-,RuptureOfMembranes_Previable-Preterm-Term.pdf)
- Bond, D., Middleton, P., Levett, K., van der Ham, D., Crowther, C., Buchanan, S., Morris, J. (2017) Planned early birth versus expectant management for women with preterm prelabour rupture of membranes prior to 37 weeks' gestation for improving pregnancy outcome. Retrieved from: [https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004735.pub4/full?highlight=Abstract=membranes%7Cpremature%7C\\*outcomes%7Cof%7Cpreterm%7Crupture%7Cprematu%7Cmembran%7Crupture](https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004735.pub4/full?highlight=Abstract=membranes%7Cpremature%7C*outcomes%7Cof%7Cpreterm%7Crupture%7Cprematu%7Cmembran%7Crupture)
- Kenyon, S.L., Taylor, D.J., & Tarnow-Mordi, W. for the ORACLE collaborative group (2001). Broad-spectrum antibiotics for preterm, prelabour rupture of fetal membranes: the ORACLE I

randomised trial. Retrieved from:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(00\)04233-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(00)04233-1/fulltext)

- Caughey, A.B., Robinson, J.N. & Norwitz, E.R. (2008) Contemporary Diagnosis and Management of Preterm Premature Rupture of Membranes.

Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2492588/>

### 13. Associated documents

- Access Holders in Women's Health
- Group B Streptococcal (GBS) - Prevention of Early-Onset Neonatal Infection
- Induction of Labour (IOL)
- Oxytocin for Induction and Augmentation of Labour guideline
- Informed Consent
- Magnesium Sulphate for Pre-eclampsia and for Neuroprotection in Pre-Term Births <30 weeks
- Preterm Labour (PTL) - Management of Threatened and Active PTL
- Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines)
- Sepsis during Pregnancy and Postpartum

#### Other

- Maternal Fetal medicine service referral form available from:  
<https://www.nationalwomenshealth.adhb.govt.nz/assets/Uploads/Fetal-medicine-service-referral-CR2943-11.19.pdf>

#### Patient information leaflets

- Pre-labour Rupture of Membranes- Information for women at term (37 or more weeks)
- Pre-term premature rupture of the Membranes
- Induction of Labour

### 14. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this Auckland 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.

### 15. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). 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.



## Appendix 1: Assessment, examination, investigations and diagnosis

<b>Key components of initial assessment:</b>	
<input type="checkbox"/>	Confirmation of ROM including assessment for differential diagnoses
<input type="checkbox"/>	Confirmation of gestation
<input type="checkbox"/>	Assessment of maternal wellbeing
<input type="checkbox"/>	Assessment of fetal viability
<input type="checkbox"/>	<b>Diagnosis:</b> The diagnosis of mid-trimester preterm rupture of membranes, similarly to PPROM is made based upon history, physical examination and ultrasound
<input type="checkbox"/>	<b>History:</b> Time, type and colour of fluid, amount, presence of signs indicative of infection (odour, abdominal pain, fever).
<input type="checkbox"/>	<b>Assessment for differential diagnosis:</b> Incontinence, physiological discharge, vaginal infection.
<input type="checkbox"/>	<b>Physical examination:</b> Abdominal palpation, noting any abdominal tenderness.
<input type="checkbox"/>	<b>Investigations:</b> DO NOT perform digital vaginal examination unless in established labour or immediately prior to commencing induction of labour (IOL) unless there is reason to exclude cord prolapse or malpresentation.
<input type="checkbox"/>	Sterile speculum examination (see below) including LVS and STI screening if indicated.
<input type="checkbox"/>	Mid-stream urine.
<input type="checkbox"/>	Ultrasound examination for fetal growth, presence of fetal heart and AFI (this provides a useful adjunct but is not diagnostic)
<input type="checkbox"/>	<b>Maternal and fetal baseline assessment:</b> Auscultate fetal heart and assess uterine activity. CTG may be performed to assess fetal wellbeing and uterine activity if clinically indicated and available.
<input type="checkbox"/>	Full set of maternal observations recorded on a MEWS chart.
<b>A sterile speculum examination:</b> <ul style="list-style-type: none"> <li>Should be offered to women who present with suspected ROM unless they are in active labour. However, if obvious clear liquor is seen externally and the fetal heart/CTG recording is normal a speculum examination may not be required.</li> <li>Can only be performed with maternal consent.</li> <li>Is performed after the woman has been lying flat for at least 30 minutes.</li> </ul>	