## Term prelabour rupture of membranes (PROM)


<table>
<thead>
<tr>
<th>Aspect</th>
<th>Considerations</th>
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<tbody>
<tr>
<td><strong>Relevant to:</strong></td>
<td>Pregnant women with a live singleton, fetus with cephalic presentation equal to or greater than 37+0 weeks gestation, with suspected prelabour rupture of membranes</td>
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</tbody>
</table>
| **Context** | Occurs in around 8% of pregnancies\(^1\)  
Majority (60–95\%)\(^2-7\) of women will spontaneously establish in labour within 24–48 hours  
Advise women to present for assessment when PROM is suspected |
| **Initial assessment** | Review history and time of fluid loss (sudden gush or continued leakage of fluid per vagina)  
Conduct a clinical assessment [refer to Queensland Clinical Guideline: *Normal birth*\(^8\)]  
Avoid digital vaginal examinations as may increase risk of infection\(^9,10\)  
Sterile speculum examination:  
o Visualise pooling of amniotic fluid or leakage from the cervical os with coughing  
o Visualise cervical length and dilatation  
o Exclude cord prolapse  
If required, test vaginal secretions with immunoassay (e.g. AmniSure\(^6\)) or pH stick (e.g. Nitrazine) as per manufacturer’s instructions  
Low vaginal and anal swab for Group B *Streptococcus* (GBS)  
If unable to confirm diagnosis and/or repeat presentation with good history, consider ultrasound scan of liquor volume, increased surveillance or active management  
Advise about risk of cord prolapse and emergency management if occurs |
| **Management options** | Expectant management:  
Waiting for the spontaneous onset of labour  
Active management  
Planned intervention intended to lead to birth (induction of labour (IOL) or caesarean section (CS))  
Refer to Queensland Clinical Guideline: *Induction of labour*\(^11\)  
Offer women information about the risks and benefits of expectant and active management |
| **Clinical indications for active management (IOL or CS)** | Maternal choice  
PROM greater than 24 hours  
Head high or not fixed at pelvic brim  
Group B *Streptococcus* (GBS) positive\(^12,13\) or previous baby with early onset GBS (EOGBSD)  
Signs of maternal infection  
Concern for maternal or fetal wellbeing  
Meconium/blood stained liquor\(^1,14,15\)  
Cervical suture—remove and send for culture (IOL may/may not be indicated)  
Non-cephalic presentation (consider CS)  
Contraindications to vaginal birth\(^16\) (CS) |
| **Antibiotics** | Routine prophylactic antibiotics are not recommended for women with term PROM prior to the onset of labour\(^17\)  
PROM of 18 hours or more prior to birth is a risk factor for EOGBSD  
At the onset of labour, if maternal risk factors for EOGBSD, recommend IV prophylactic antibiotics [refer to Queensland Clinical Guideline: *EOGBSD*\(^12\)]  
If chorioamnionitis or other infection suspected, recommend IV antibiotics\(^18\)  
Refer to Queensland Clinical Guideline: *Preterm labour and birth*\(^18\) |
Outcomes of active management compared to expectant management

<table>
<thead>
<tr>
<th>Risk with active management</th>
<th><em>Active compared to expectant management</em></th>
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<tbody>
<tr>
<td>Time from ROM to birth</td>
<td>Decreased</td>
</tr>
<tr>
<td>(MD -10.10 hours; 95% CI -12.15 to -8.06; 9 trials n=1484)</td>
<td><strong>Decreased</strong></td>
</tr>
<tr>
<td>Chorioamnionitis</td>
<td>Decreased</td>
</tr>
<tr>
<td>(RR 0.55; 95% CI 0.37 to 0.82; 8 trials, n=6874)</td>
<td><strong>Decreased</strong></td>
</tr>
<tr>
<td>Caesarean section</td>
<td>No significant difference</td>
</tr>
<tr>
<td>(RR 0.84; 95% CI 0.69 to 1.04; 23 trials, n=8576)</td>
<td><strong>No significant difference</strong></td>
</tr>
<tr>
<td>Maternal length of stay</td>
<td>Decreased</td>
</tr>
<tr>
<td>(MD -0.79 days; 95% CI -1.20 to -0.38; 2 trials, n=748)</td>
<td><strong>Decreased</strong></td>
</tr>
<tr>
<td>Positive maternal experience</td>
<td>Mixed reports</td>
</tr>
<tr>
<td>(RR 0.73; 95% CI 0.58 to 0.92; 16 trials, n=7314)</td>
<td><strong>No significant difference</strong></td>
</tr>
<tr>
<td>Admission to neonatal/special care</td>
<td>Decreased</td>
</tr>
<tr>
<td>(RR 0.75; 95% CI 0.66 to 0.85; 8 trials n= 6179,)</td>
<td><strong>Decreased</strong></td>
</tr>
<tr>
<td>Neonatal sepsis (definite or probable)</td>
<td>Decreased</td>
</tr>
<tr>
<td>(RR 0.73; 95% CI 0.58 to 0.92; 16 trials, n=7314)</td>
<td><strong>No significant difference</strong></td>
</tr>
<tr>
<td>Postpartum antibiotic use, pyrexia, endometritis, operative vaginal birth, primary postpartum haemorrhage, caesarean section for fetal distress, uterine rupture, epidural analgesia, cord prolapse, stillbirth, Apgar &lt; 7 at 5 minutes, definite neonatal sepsis, perinatal mortality</td>
<td>No data</td>
</tr>
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*Generally low-quality evidence with significant heterogeneity; Of the 8615 women from 23 trials included in the analysis, 5042 are from one trial. All trials included women with singleton pregnancy with PROM at 37 weeks or later. CI: confidence interval; MD: mean difference, n: number; RR: risk ratio

Expectant management

<table>
<thead>
<tr>
<th>PROM an</th>
<th>Consideration</th>
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<tbody>
<tr>
<td>Model of care</td>
<td>• Individually, assess women when recommending at home or inpatient expectant care</td>
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<tr>
<td></td>
<td>o There is limited high quality data about the safety of home versus inpatient care</td>
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<td></td>
<td>• Follow local protocols/criteria to determine suitability for model of care—if no local protocol, for at home care, suggested criteria includes13:</td>
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<tr>
<td></td>
<td>o Maternal choice</td>
</tr>
<tr>
<td></td>
<td>o No clinical indications for active management</td>
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<tr>
<td></td>
<td>o Sufficient staffing and established systems for follow-up contact and advice</td>
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<td></td>
<td>o Woman able to self-monitor for signs of infection and return to hospital</td>
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<tr>
<td></td>
<td>o Home environment safe, supportive and conducive to monitoring and rest21</td>
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</tbody>
</table>

| Maternal and fetal care | • Assess fetal movement and heart rate at initial contact22 |
|                        | o Routine CTG not indicated until after 24 hours of PROM unless other risk factors present23 |
|                        | o Refer to Queensland Clinical Guideline: Intrapartum fetal surveillance23 |
|                        | • Avoid digital vaginal examinations13 in the absence of contractions to reduce risk of chorioamnionitis15 |
|                        | • Assess for signs/symptoms of infection |
|                        | o Feeling unwell or flu-like symptoms |
|                        | o Maternal temperature (37.5 °C or above) |
|                        | o Offensive vaginal discharge or presence of meconium |
|                        | o Uterine tenderness |
|                        | o Maternal tachycardia (greater than 100 beats per minute (bpm)) |
|                        | o Fetal tachycardia (greater than 160 bpm) |
|                        | o Maternal concern about fetal movements [refer to Queensland Clinical Guideline: Fetal movements24] |

| Recommend IOL | • If labour not established by 24 hours of PROM advise women: |
|               | o Risk of chorioamnionitis almost double after 24 hours (OR 1.77, 95% CI 1.27 to 2.47)15 |
|               | o Limited high level evidence about maximum duration of expectant management16 |
|               | • If woman chooses longer than 24 hours of expectant management then: |
|               | o Advise return to hospital each 24 hours for fetal and maternal assessment |
|               | o Recommend IOL if: |
|               | o Concern for maternal or fetal wellbeing |
|               | o Woman requests IOL |

| Advise women | • To report (and return to hospital if at home) concern about fetal movements or if signs of infection (as above) |
|              | o Vaginal intercourse may be associated with increased risk of infection22 |
|              | o Showering or bathing is not associated with increased risk of infection22 |
|              | • To avoid tampon use |

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Summary flowchart: Prelabour rupture of membranes at term

**Woman with confirmed PROM and live singleton, cephalic fetus ≥ 37+0 weeks**

**Risks/benefits of active care:**
- Decreased
  - Chorioamnionitis
  - Admission to nursery
  - Neonatal sepsis (definite or probable)
- No difference in
  - CS or operative birth
  - PPH
  - Cord prolapse
  - Stillbirth
  - Apgar < 7 at 5 minutes
  - Perinatal mortality
  - Definite neonatal sepsis
- Mixed reports
  - Maternal experience
  - No data
  - RDS
  - NEC
  - Postnatal depression
  - Breastfeeding
  - Meningitis

**Indications for active care**
- Maternal choice
- High head
- GBS positive or previous baby with EOGBSD
- Maternal infection
- Meconium/blood stained liquor
- Concern for maternal or fetal wellbeing
- Cervical suture (remove) +/- IOL
- PROM > 24 hours
- Non-cephalic presentation (usually CS)
- Vaginal birth contraindicated (CS)

**Monitoring**
- Assess fetal wellbeing (FHR, CTG if risk factors)
- Assess for signs of infection:
  - Temperature ≥ 37.5 °C
  - Change in vaginal loss (odour, colour, amount)
  - Uterine tenderness/pain
  - Feeling unwell
  - Maternal or fetal tachycardia

**Plan ongoing care**
- Assess indications for active care (IOL or CS)
- Discuss risks and benefits of active and expectant care relevant to individual circumstance

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**Indications for active care?**
- Yes
- No

**Expectant care at home?**
- Yes
- No

**Recommend active care**
- Recommend expectant care in hospital

**Recommend expectant care at home if:**
- Active care not indicated
- Clinician available for advice and follow-up
- Woman able to self-monitor for signs of infection and return to hospital
- Safe home environment

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**Recommend expectant care at home?**
- Yes
- No

**Recommend expectant care at hospital?**
- Yes

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**CS:** caesarean section, **CTG:** cardiotocograph, **EOGBSD:** early onset Group B Streptococcus Disease, **FHR:** fetal heart rate, **GBS:** Group B Streptococcus, **IOL:** induction of labour, **NEC:** necrotising enterocolitis, **PPH:** primary postpartum haemorrhage, **PROM:** prelabour rupture of membranes, **QCG:** Queensland Clinical Guidelines, **RDS:** respiratory distress syndrome, **ROM:** rupture of membranes, **>**: greater than, **≥**: greater than or equal to

Queensland Clinical Guideline: F18.47.1-V1-R23
References