Term prelabour rupture of membranes (PROM)

IMPORTANT: *Consider individual clinical circumstances. Consult a pharmacopeia for complete drug information. Read the full disclaimer at www.health.qld.gov.au/qcg*

Aspect	Considerations
Relevant to:	• 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[1-3]
Context	• Occurs in around 8% of pregnancies[1,4,5] • Approximately 85% of women will spontaneously establish labour within 24–48 hours[1] • Advise women to present for assessment when PROM is suspected
Standard care	• Refer to Queensland Clinical Guideline: *Standard care*[6] for care considered 'usual' or 'standard' o Includes for example: privacy, consent, decision making, sensitive communication, medication administration, staff education and support, culturally appropriate care
Initial assessment	• Review history and time of fluid loss (sudden gush or continued leakage of fluid per vagina) • Conduct a clinical assessment[7] including abdominal palpation to confirm presentation o Refer to Queensland Clinical Guideline: *Normal birth*[8] • Avoid digital vaginal examinations as may increase risk of infection[1,9] • Sterile speculum examination[7]: o Visualise pooling of amniotic fluid or leakage from the cervical os with coughing o Visualise cervical length and dilatation o Exclude cord prolapse o Consider high vaginal swab for Group B *Streptococcus* (GBS) • If unsure of PROM, test vaginal secretions with immunoassay (e.g. AmniSure®) or pH stick (e.g. Nitrazine) as per manufacturer's instructions • If unable to confirm diagnosis and/or repeat presentation with good history, consider ultrasound scan of liquor volume, increased surveillance, or active management • Vaginal-rectal swab or vaginal-perianal swab for GBS[10] • Advise about risk of cord prolapse and emergency management if occurs
Management options	• Offer women information about the risks and benefits of: o Expectant management: ▪ Waiting for spontaneous onset of labour o 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]
Clinical indications for active management (IOL or CS)	• Maternal choice[12] • PROM greater than 24 hours • Head high or not fixed at pelvic brim • Group B *Streptococcus* (GBS) positive[1] or previous baby with early onset GBS disease (EOGBSD)[10] • Signs of maternal infection • Concern for maternal or fetal wellbeing • Meconium/blood stained liquor[7,13,14] • Cervical suture—optimal timing for removal not well established[15] o Prior to active management remove and send for culture (IOL may/may not be indicated) • CS indicated (e.g. non-cephalic presentation)[16] o Urgency of CS dependent on risk of cord prolapse
Antibiotics	• Routine prophylactic antibiotics are not recommended for women with term PROM prior to the onset of labour[7] • PROM of 18 hours or more prior to birth is a risk factor for EOGBSD o At the onset of labour, if maternal risk factors for EOGBSD, recommend intravenous (IV) prophylactic antibiotics [refer to Queensland Clinical Guideline: *EOGBSD*[10]] • If chorioamnionitis or other infection suspected, recommend IV antibiotics[17] o Refer to Queensland Clinical Guideline: *Preterm labour and birth*[18]

Outcomes of active care compared to expectant management

*Outcomes[19]	Management type (n/total)		Relative risk	Confidence interval (95%)	Comment
	Active	Expectant			
Caesarean section	516/4289	644/4287	0.84	0.69 to 1.04	No significant difference
Early onset neonatal sepsis (definite or probable)	110/3677	149/3637	0.73	0.58 to 0.92	Less likely
Chorioamnionitis (suspected or proven)	227/3442	393/3432	0.55	0.37 to 0.82	Less likely
Induction of labour	3000/3460	779/3485	3.41	2.87 to 4.06	More likely
Admission to neonatal/special care	369/3082	495/3097	0.75	0.66 to 0.85	Less likely
Postpartum antibiotic use, pyrexia, endometritis, operative vaginal birth, primary postpartum haemorrhage, caesarean section for fetal distress, uterine rupture, epidural analgesia, cord prolapse, stillbirth, Apgar < 7 at 5 minutes, perinatal mortality					No significant difference
Breastfeeding, postnatal depression, meningitis, respiratory distress syndrome, necrotising enterocolitis, neonatal encephalopathy, disability at childhood follow-up					No data

*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.

Expectant management

Aspect	Consideration
Model of care	• Individually, assess women when recommending at home or inpatient expectant care[20] o Expectant management at home may be appropriate for low-risk women with no clinical signs of chorioamnionitis[7,20,21] • Follow local protocols/criteria to determine suitability for model of care—if no local protocol, for at home care, suggested criteria includes:[1] o Maternal choice o No clinical indications for active management/care o Sufficient staffing and established systems for follow-up contact and advice o Woman able to self-monitor for signs of infection and return to hospital[1] o Home environment safe, supportive and conducive to monitoring and rest[7]
Maternal and fetal care	• Assess fetal movement and heart rate at initial contact[22] o Routine CTG not indicated until after 24 hours of PROM unless other risks present[23] o Refer to Queensland Clinical Guideline: *Intrapartum fetal surveillance* [23] • Avoid digital vaginal examinations[1,9,13] in the absence of painful and regular contractions to reduce risk of chorioamnionitis[13] • Assess for signs/symptoms of infection or ongoing concerns o Feeling unwell or flu-like symptoms o Maternal temperature (37.5 °C or above) o Offensive vaginal discharge and/or bleeding, 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 Abnormal cardiotocograph (CTG) or fetal heart rate o Maternal concern about fetal movements [refer to Queensland Clinical Guideline: *Fetal movements*[24]]
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)[13] o Limited high level evidence about maximum recommended duration of expectant management[25] • If woman chooses longer than 24 hours of expectant management then: o Advise return to hospital each 24 hours for fetal and maternal assessment • Recommend IOL if: o Concern for maternal or fetal wellbeing o Woman requests IOL
Advise women	• Provide instruction on when to report (and return to hospital if at home) with any concerns about fetal movements and/or if signs of infection/concerns (as above) • Vaginal intercourse may be associated with increased risk of infection[22] • Showering or bathing is not associated with increased risk of infection[22] • To avoid tampon use and/or swimming

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
  - o Chorioamnionitis
  - o Admission to nursery
  - o Neonatal sepsis (definite or probable)
- No difference in
  - o CS or operative birth
  - o PPH
  - o Cord prolapse
  - o Stillbirth
  - o Apgar < 7 at 5 minutes
  - o Perinatal mortality
  - o Definite neonatal sepsis
- Mixed reports
  - o Maternal experience
- No data
  - o RDS
  - o NEC
  - o Postnatal depression
  - o Breastfeeding
  - o 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)

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

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

Indications for active care? — Yes → **Recommend active care**

No → **Expectant care at home?**

No → **Recommend expectant care in hospital**

Yes → **Recommend expectant care at home**
- Advise return to birthing unit for assessment if:
  - o PROM > 24 hours
  - o Change in fetal movements
  - o Signs of infection
  - o Change in vaginal loss
- Offer information that risk of infection:
  - o Increased with vaginal intercourse
  - o Not affected by showering or bathing
- Recommend IOL if:
  - o Woman requests
  - o Concern for maternal or fetal wellbeing

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**:** F23.47-1-V2-R28

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