

Policy

# Clinical Guideline

## Prelabour rupture of the membranes (PROM) $\geq$ 37 weeks Clinical Guideline

**Policy developed by:** SA Maternal & Neonatal Clinical Network

**Approved SA Health Safety & Quality Strategic Governance Committee on:**

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**Summary** Clinical practice guideline for the management of prelabour rupture of the membranes  $\geq$  37 weeks.

**Keywords** PROM, prelabour rupture of the membranes, GBS, oxytocin, prostaglandin, IOL, liquor, pooling, speculum, ferning, chorioamnionitis, clinical guideline

**Policy history** Is this a new policy? **N**  
Does this policy amend or update an existing policy? **Y v6.0**  
Does this policy replace an existing policy? **N**

**Applies to** All SA Health Portfolio  
All Department for Health and Ageing Divisions  
All Health Networks  
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

**Staff impact** All Staff, Management, Admin, Students, Volunteers  
All Clinical, Medical, Nursing, Allied Health, Emergency, Dental, Mental Health, Pathology

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### Version control and change history

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# South Australian Perinatal Practice Guidelines prelabour rupture of the membranes (PROM) $\geq$ 37 weeks

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## Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

### Explanation of the aboriginal artwork:

The aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the aboriginal culture. The horse shoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horse shoe shape depicts a pregnant women. The smaller horse shoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in unison.



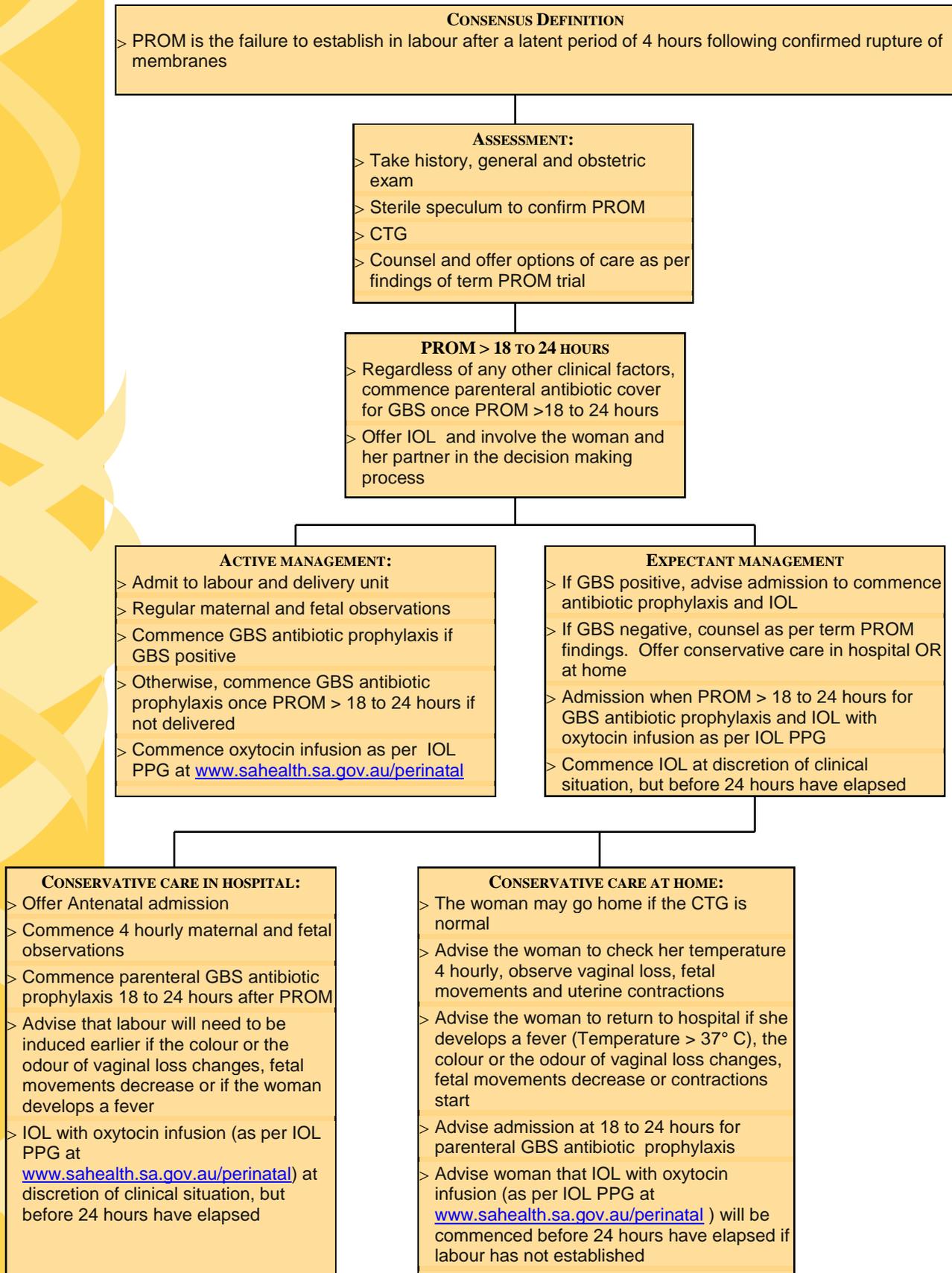
***Australian Aboriginal Culture is the oldest living culture in the world yet Aboriginal people continue to experience the poorest health outcomes when compared to non-Aboriginal Australians. In South Australia, Aboriginal women are 2-5 times more likely to die in childbirth and their babies are 2-3 times more likely to be of low birth weight. The accumulative effects of stress, low socio economic status, exposure to violence, historical trauma, culturally unsafe and discriminatory health services and health systems are all major contributors to the disparities in Aboriginal maternal and birthing outcomes. Despite these unacceptable statistics the birth of an Aboriginal baby is a celebration of life and an important cultural event bringing family together in celebration, obligation and responsibility. The diversity between Aboriginal cultures, language and practices differ greatly and so it is imperative that perinatal services prepare to respectfully manage Aboriginal protocol and provide a culturally positive health care experience for Aboriginal people to ensure the best maternal, neonatal and child health outcomes.***

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South Australian Perinatal Practice Guidelines Workgroup at:  
[HealthCYWHSPerinatalProtocol@sa.gov.au](mailto:HealthCYWHSPerinatalProtocol@sa.gov.au)

# prelabour rupture of the membranes (PROM) $\geq 37$ weeks

## Management of PROM $\geq 37$ weeks



# prelabour rupture of the membranes (PROM) ≥ 37 weeks

## Introduction

- > There is no universally accepted definition of PROM and **hence failure to establish in labour after a latent period of 4 hours following confirmed rupture of membranes** has been adopted
- > PROM situations arise in 6 – 19 % of women at term. Even when the cervix is unfavourable, the majority of women labour spontaneously within 12 hours<sup>2</sup>
  - > 50 % of these women will be in labour after 12 hours
  - > 86 % will be established in labour within 24 hours
  - > 94 % will be established in labour within 48 – 95 hours
  - > 6 % of women will not establish in labour within 96 hours of PROM<sup>3,4</sup>
- > The risks of PROM at term relate to maternal and neonatal infection, prolapsed cord and fetal compromise resulting in operative delivery or low five minute Apgar score<sup>4</sup>
- > The incidence of chorioamnionitis in women at term with prelabour rupture of the membranes is 6-10 % and occurs in up to 40 % of women with membrane rupture > 24 hours. Increasing numbers of digital vaginal examinations, longer duration of active labour and meconium staining of the amniotic fluid are the most important risk factors for the development of chorioamnionitis<sup>5</sup>
- > Active management with early induction of labour with oxytocin infusion has been shown to reduce maternal and neonatal infection risks<sup>4</sup>
- > The overall risk of maternal postpartum endometritis is 3-4 %

## Literature review

- > International Term PROM Trial<sup>6</sup> (Level I Evidence)
- > The findings of the trial should be discussed with the women on confirmation of PROM. The trial showed that both active management and expectant management were, in general, acceptable forms of care<sup>6</sup>
  - > Similar rates of neonatal infection and caesarean section were found with active or expectant forms of management
  - > Induction of labour with intravenous oxytocin infusion resulted in a lower risk of maternal infection
  - > Women viewed active management more positively than expectant management
- > For women positive for Group B Streptococcal vaginal colonization with PROM at term, induction of labour with oxytocin may reduce the risk of neonatal infection when compared with vaginal Dinoprostone (PGE<sub>2</sub>) gel or expectant management<sup>7</sup>

# prelabour rupture of the membranes (PROM) ≥ 37 weeks

## Assessment

- > Take history and perform general and obstetric examination

### Sterile speculum examination

- > Sterile speculum examination avoids the need for digital vaginal examination reducing risk of infection

### Confirm diagnosis of PROM

- > Pooling of liquor
- > Amnistix (nitrazine yellow) positive reaction results in a blue / purple colour on contact
- > Ferning on microscopy

Also:

- > Estimate cervical dilatation
- > Exclude cord prolapse
- > Take vaginal microbiological swabs (including GBS screening if results not available or not already taken)

### Cardiotocography

- > If PROM confirmed for cardiotocography (CTG to assess fetal condition)

### Counselling

- > The woman and her partner need to be counselled about the management options of active or conservative management for PROM at term, as detailed below

## Management

- > The following SA coroner's recommendations must be acknowledged:
  - > Regardless of any other clinical factors, women at term who have rupture of the membranes for >18 to 24 hours should commence parenteral antibiotic cover
  - > Offer induction in cases of term PROM and involve the woman and her partner in any decision making process

### Expectant Management

- > It is recommended that women who are carriers of Group B Streptococcus commence parenteral antibiotics and are induced as soon as practicable
- > Women with term PROM who are Group B Streptococcus negative and choose expectant management of labour must be offered admission for parenteral antibiotic prophylactic cover before PROM exceeds 18 to 24 hours with appropriate follow up of mother and baby. The induction of labour may be deferred to a more convenient time at the discretion of the clinical staff and the woman, but not for longer than 24 hours
- > If conservative management at home is the woman's preferred option then:
  - > She may go home if CTG is normal
  - > Ask the woman to record her temperature every 4 hours and to observe vaginal loss, fetal movements and uterine contractions

# prelabour rupture of the membranes (PROM) ≥ 37 weeks

- > Advise the woman to return to the hospital if she develops a fever ( $> 37.0^{\circ} \text{C}$ ), the colour or the odour of vaginal loss changes, the baby does not move as much as previously or contractions start
- > Women who have not established in labour after PROM should be advised to report to the hospital for admission before PROM exceeds 18 to 24 hours to commence parenteral prophylactic antibiotics and consideration of induction of labour

## Active Management

- > Those women accepting the active form of management should be admitted to a Labour and Delivery Unit for further observation of maternal pulse, temperature and fetal heart rate
- > It is recommended that women who are carriers of Group B Streptococcus commence parenteral antibiotics and are induced as soon as practicable

### Oxytocin induction:

- > If labour does not establish after a latent period of 4 hours from PROM, then an oxytocin infusion should be started
- > Be prepared for a prolonged latent phase of cervical dilatation

### Prostaglandin induction:

- > Most studies, including the International Term PROM trial, have used prostaglandin  $E_2$  but in Australia the manufacturers do not recommend its use with ruptured membranes
- > Available evidence does not support the safety or efficacy of prostaglandin  $E_2$  in the presence of Term PROM

## Intrapartum antibiotics

### PROM > 18 to 24 hours

- > Parenteral antibiotic cover for GBS is required in all cases (irrespective of GBS status) of PROM > 18 to 24 hours (SA coroner's recommendations 2009)
  - > Give benzylpenicillin 3 g IV loading dose, then 1.2 g IV every 4 hours until delivery
  - > If allergic to penicillin, clindamycin 600 mg IV in 50 – 100 mL over at least 20 minutes every 8 hours

### Chorioamnionitis

- > The diagnosis of chorioamnionitis relies on the clinical presentation and may be difficult in its early manifestations
- > The clinical picture may include **maternal fever** with two or more of the following:
  - > Increased white cell count ( $> 15 \times 10^9 / \text{L}$ )
  - > Maternal tachycardia ( $> 100 \text{ bpm}$ )
  - > Fetal tachycardia ( $> 160 \text{ bpm}$ )
  - > Uterine tenderness
  - > Offensive smelling vaginal discharge
  - > C-Reactive Protein  $> 40$
- > Consideration should also be given to check for any other site of infection (e.g. urinary or respiratory tract) which could cause these changes

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- > If in doubt consultation with a senior obstetrician, maternal fetal medicine or infectious disease physician should be considered
- > Histological examination of placenta and membranes with evidence of acute inflammation may confirm diagnosis post birth

## Management

- > If chorioamnionitis is confirmed, delivery of the fetus is indicated
- > Commence ampicillin (or amoxicillin) 2 g IV initial dose then 1g IV every 6 hours, gentamicin 5 mg / kg IV daily, metronidazole 500 mg IV every 12 hours
- > If allergic to penicillin, give clindamycin 600 mg IV every 8 hours AND gentamicin 5 mg / kg IV daily
- > For information about gentamicin levels, see 'Peripartum prophylactic antibiotics' in the A to Z index at [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal)

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## Useful web sites

Courts Administration Authority South Australia

<http://www.courts.sa.gov.au/index.html>

South Australia Coroners findings for 2009

[http://www.courts.sa.gov.au/courts/coroner/findings/findings\\_2009/content\\_2009.html](http://www.courts.sa.gov.au/courts/coroner/findings/findings_2009/content_2009.html)

[http://www.courts.sa.gov.au/courts/coroner/findings/findings\\_2009/linnell\\_sienna\\_joos.pdf](http://www.courts.sa.gov.au/courts/coroner/findings/findings_2009/linnell_sienna_joos.pdf)

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# prelabour rupture of the membranes (PROM) ≥ 37 weeks

## Consumer advice for management of PROM > 18 to 24 hours

- > Active management with early induction of labour with oxytocin has been shown to reduce maternal and neonatal infection risks<sup>4</sup>
- > The incidence of chorioamnionitis in women at term with prelabour rupture of the membranes is 6-10 % and occurs in up to 40 % of women with membrane rupture > 24 hours. Increasing numbers of digital vaginal examinations, longer duration of active labour and meconium staining of the amniotic fluid are the most important risk factors for the development of chorioamnionitis<sup>5</sup>
- > The overall risk of maternal postpartum endometritis is 3-4 %
- > Discuss the findings of the Term PROM trial:
  - > The trial showed that both active management and expectant management were, in general, acceptable forms of care<sup>6</sup>
  - > Induction of labour with intravenous oxytocin resulted in a lower risk of maternal infection<sup>6</sup>
  - > Women viewed active management more positively than expectant management<sup>6</sup>
  - > It is generally safer for women with PROM at term to remain in hospital if they do not want labour induction<sup>9</sup>
  - > The likelihood of receiving antibiotics before or after delivery is significantly higher for nulliparas if they are managed at home rather than in hospitals<sup>9</sup>
  - > Infants are at a twofold higher risk of becoming infected if management is at home<sup>9</sup>
  - > There is an increased risk of caesarean for women not colonized with group B streptococcus if they remain at home rather than in hospital<sup>9</sup>

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## Abbreviations

ABO	Antibiotics
bpm	Beats per minute
CTG	Cardiotocograph
C	Celsius
et al.	And others
g	Gram(s)
GBS	Group B Streptococcus
IOL	Induction of labour
IUGR	Intrauterine growth restriction
IV	Intravenous
kg	kilogram
LMP	Last menstrual period
MSL	Meconium stained liquor
µL	Microlitre
mg	Milligrams
mmol/L	Millimoles per litre
NICE	National Institute for Clinical Excellence
PPG	Perinatal Practice Guideline
PROM	Pre-labour rupture of the membranes
PE	Preeclampsia
PGE <sub>2</sub>	Prostaglandin E <sub>2</sub>
RCOG	Royal College of Obstetricians and Gynaecologists
USS	Ultrasound

## Version control and change history

**PDS reference:** OCE use only

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1.0	18 Feb 2004	28 Apr 08	Original version
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