This care process model (CPM) was developed by Intermountain Health's Obstetrics (OB) Development Team under the guidance of the Women and Newborns clinical program. It provides evidence-based recommendations for assessing and managing pregnancies affected by preterm premature rupture of membranes (PPROM).

ASSESSMENT / DIAGNOSIS OF PPROM

Patient presents with suspected PPROM

Transfer to L & D
Give tocolytics ONLY if needed for transport

no

Is patient in active labor?

yes

Assess Patient

Physical Examination
Avoid digital exam to prevent infection unless in active labor or delivery is imminent.

Use sterile speculum to:
☐ Visually inspect for amniotic fluid leaking from cervical canal and pooling in vagina
☐ Inspect for cervicitis and umbilical cord or fetal prolapse
☐ Assess cervical dilation and effacement
☐ Obtain cultures as needed

Medical History
Determine:
☐ Timing and quantity of fluid
☐ Weeks of gestation or estimated due date
☐ History of PPROM

Is patient in active labor?

no

yes

Able to confirm PPROM by visual inspection?

no

yes

Manage PPROM (page 2)

PpH testing

pH ≥ 7

ppH ≤ 6

Confirm arborization (ferning)

PPROM unlikely

Is PPROM present?

uncertain

yes

no

Manage PPROM (page 2)

For equivocal results consider:

- Ultrasound to check fluid volume
- Amniotic fluid-specific marker tests: e.g. AmniSure ROM or ROM Plus (fluid-specific tests should NOT be used without performing standard clinical assessments above)

PPROM GUIDANCE

ASSESSMENT ............ PAGE 1
MANAGEMENT ............ PAGE 2
MEDICATION TABLES ...... PAGE 3

Intermountain Measures

The overarching goal of this CPM is to promote evidence-based practice and clinical consistency in the management of PPROM within the Intermountain Healthcare system. Specific measurements of efficacy include:

- Increase corticosteroid (betamethasone) administration given to patients at 24 to 33 weeks 6 days gestation

Supporting Evidence

Prelabor Rupture of Membranes
ACOG (2020)
MANAGEMENT OF PPROM

Pregnant patient exhibits PPROM

Is intrauterine infection or bleeding sufficient to threaten maternal well-being or fetal death present?

DELIVER promptly yes

no

MANAGE per gestational age as outlined below

≤24 weeks

Counsel with patient and family. Neonatology consult strongly recommended**

INPATIENT

Refer to Intermountain’s Pregnancy Termination Policy

MANAGE EXPECTANTLY

INPATIENT SURVEILLANCE

- Daily nonstress test to monitor fetal health
- Periodic (not daily) ultrasound to assess fetal growth and amniotic fluid.
  *If leak reseals, patient may be discharged home.

MEDICATION

- Antibiotics to prolong latency (see pg 3)
- No GBS prophylaxis, corticosteroids, tocolytics or magnesium sulfate before viability unless resuscitation is considered

OUTPATIENT SURVEILLANCE

- Instruct patient contact provider if temperature ≥100.4°F/38°C
- Perform weekly ultrasound

If fetus reaches viability and patient and neonatal care team opt for resuscitation, admit and MANAGE EXPECTANTLY INPATIENT

24 weeks to 33 weeks 6 days

May manage expectantly per patient request IF (ALL):
- Discussion of risks with patient
- GBS negative

INPATIENT SURVEILLANCE

- Daily nonstress test to monitor fetal health
- Periodic (not daily) ultrasound to assess fetal growth and amniotic fluid.

MEDICATION

- Antibiotics to prolong latency (see pg 3)
- Corticosteroids if meet gestational criteria below:

23-23 wks 6 days: if resuscitation planned

24-33 wks 6 days: no criteria*

34-36 wks 6 days: ALL below
  - no previous corticosteroids
  - no chorioamnionitis
  - delivery expected/anticipated >24 hours but <7 days

- Magnesium sulfate (neuroprotection) IF <32 weeks AND delivery expected <24 hours

SPECIAL POPULATIONS

- HSV, HIV, or hepatitis C positive: MFM consult and formal ultrasound
- Cerclage: leave in place unless infection or unexplained bleeding

34 weeks to 36 weeks 6 days

MANAGE EXPECTANTLY INPATIENT

PROCEED TO DELIVERY (Generally by induction)

MEDICATION

- Antibiotics for GBS prophylaxis as needed
- Corticosteroids IF ALL below:
  - no previous corticosteroids
  - no chorioamnionitis
  - delivery expected/anticipated >24 hours but <7 days (do not delay birth for corticosteroid use)

*No recommendation for or against single rescue course if previously had single course.

**Patient Choice

Refer to Intermountain’s Pregnancy Termination Policy

GBS- Group B Streptococcus; MFM- Maternal Fetal Medicine; HSV- Herpes Simplex Virus; HIV- Human Immunodeficiency Virus.
## Antibiotics (to prolong latency); 7-day course

<table>
<thead>
<tr>
<th>No penicillin allergy</th>
<th>Penicillin allergy - high risk of anaphylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First 48 hours</strong></td>
<td><strong>First 48 hours</strong></td>
</tr>
<tr>
<td>Ampicillin (2 grams IV every 6 hours)</td>
<td>Azithromycin (1 gram PO) OR Erythromycin (250 mg IV every 6 hours)</td>
</tr>
<tr>
<td>+ Erythromycin* (250 mg IV every 6 hours)</td>
<td>+ Clindamycin† (900 mg IV every 8 hours)</td>
</tr>
<tr>
<td></td>
<td>+ Gentamicin (5 mg/kg actual body weight IV every 24 hours)</td>
</tr>
<tr>
<td><strong>Next 5 days</strong></td>
<td><strong>Next 5 days</strong></td>
</tr>
<tr>
<td>Amoxicillin (250 mg PO every 8 hours)</td>
<td>Clindamycin (300 mg PO every 8 hours)</td>
</tr>
<tr>
<td>+ Erythromycin* (333 mg PO every 8 hours)</td>
<td>+ Erythromycin** (333 mg PO every 8 hours)</td>
</tr>
</tbody>
</table>

* Azithromycin - 1 gram single oral dose can be substituted for erythromycin (IV or PO). Because of its long half-life, use of azithromycin eliminates need for erythromycin during the remainder of the antibiotic course.

** If used the azithromycin was used during the first 48 hours, no erythromycin PO is required due to azithromycin's long half-life.

† If patient has tested positive for clindamycin resistant GBS or if susceptibility is unknown, replace clindamycin with vancomycin 20 mg/kg actual body weight IV, every 8 hours (maximum single dose 2 grams) for 48 hours. Follow-up with erythromycin 333 mg PO every 8 hours for 5 days.

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## Corticosteroid (to lower risk of respiratory distress syndrome)

**Betamethasone*** 12 mg IM every 24 hours for 48 hours. (Do not give if 34-37 weeks if patient was given previous corticosteroids.)

*If betamethasone not available, use dexamethasone 6 mg IM every 12 hours for 48 hours.

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## Magnesium sulfate (for neuroprotection if < 32 weeks when delivery is expected within 24 hours)

**Magnesium sulfate** bolus 6 grams IV over 40 min. then infuse a 2 grams/hr maintenance dose from premixed 20 grams/500 mL bag until delivery or until 12 hours of therapy (if preterm delivery seems unlikely after 12 hours of therapy, discontinue therapy)

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This CPM presents a model of best care based on the best available scientific evidence at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative. Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base. Send feedback to Annette Crowley, Clinical Programs Manager, Intermountain Health, (WomenandNewborns@imail.org).

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