Evidence-based guideline — Premature rupture of membranes (PROM / PPROM)

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1. Definitions

PROM (prelabor rupture of membranes): rupture of membranes before onset of labour.

PPROM: PROM before 37+0 weeks’ gestation.

Previable / periviable: institutional/local definition (commonly <24 wks = previable; 24–25+6 often considered periviable) — counsel individually.

2. Initial assessment (urgent)

1. Confirm history (gush, continuous leakage, decreased fluid).

2. Sterile speculum exam to look for pooling and rule out obvious active bleeding or cord prolapse. Avoid digital vaginal exam if placenta praevia or labour not established.

3. Tests to confirm ROM (if unclear): sterile pooling + nitrazine/pH strip + ferning on slide. Commercial tests (e.g., AmniSure / IGFBP-1) may be used if available. Do not give antibiotics unless diagnosis is confirmed.

4. Document gestational age precisely (best obstetric estimate).

5. Assess maternal & fetal status: maternal vitals, uterine tenderness/CTG, fetal heart rate, uterine activity, signs of infection. Obtain baseline CBC, CRP and consider cultures per local policy (see monitoring).

3. Management principles by gestational age

> Management must be individualized after counselling (maternal/fetal risks, neonatal survival by gestation, local neonatal capacity). Involve neonatology and senior obstetric staff early for preterm (<34 wks) and periviable cases.

A. Previable PPROM (typically <24+0 wks)

Counsel regarding prognosis (very high neonatal morbidity/mortality) and maternal risks (infection, hemorrhage). Offer options (expectant management with intensive surveillance vs. termination where legal/available). Document counselling. Refer to neonatal team for anticipated care planning. Consider maternal risk-reduction measures; evidence for interventions to prolong pregnancy is limited.

B. PPROM from viability to <34+0 weeks (commonly 24+0 – 33+6) — usual pathway

Expectant management is recommended if no maternal/fetal contraindication (active labour, fetal compromise, clinical chorioamnionitis, placental abruption).

Admission or close outpatient follow-up per local resources; continuous assessment for infection/abruption/labour.

Latency antibiotics (recommended): use the Eunice Kennedy Shriver NICHD MFMU regimen that has the best trial evidence:

IV ampicillin 2 g q6h + erythromycin 250 mg q6h for 48 hours, then oral amoxicillin 250 mg q8h + erythromycin 333 mg q8h for 5 days (total 7 days). If erythromycin unavailable or not tolerated, azithromycin may be used per local policy. Avoid co-amoxiclav/amoxicillin-clavulanate for prophylaxis (linked to neonatal NEC). (RCOG favours erythromycin; regimens vary — use local antibiogram/allergy considerations).

Antenatal corticosteroids: give when birth is imminent between 24+0 and 34+6 weeks (single course) to reduce neonatal morbidity; consider earlier (from ~24+0) after multidisciplinary discussion in borderline gestations. For planned delivery in the late-preterm (34+0–36+6), a single course may be considered in selected patients (see local policy).

Magnesium sulfate (fetal neuroprotection): give when birth is imminent <30–32 weeks per local guideline (many bodies recommend up to 30 wk; consider up to 32 wk in selected cases). Follow local protocol for dosing/monitoring.

Tocolysis: generally not recommended with PPROM (may increase infection risk). Short use only if required to allow steroids or neonatal transfer and no infection/contraindication.

C. Late preterm (34+0 to 36+6) with PROM

Shared decision-making: ACOG supports either expectant management or delivery after counselling about maternal and neonatal risks/benefits. If expectant management chosen, do not prolong beyond 37+0 weeks. For planned delivery in late preterm, consider a single dose of betamethasone in selected women who have not previously received steroids. If in active labour or infection, manage accordingly (deliver).

D. Term PROM (≥37+0 weeks)

Induce labour/promote delivery rather than prolonged expectant management because risks (chorioamnionitis, cord prolapse, abruption) increase with latency. If GBS colonised or unknown and in labour, give intrapartum GBS prophylaxis per local protocol. Mode of delivery based on obstetric indications.

4. Intrapartum / immediate actions

If clinical chorioamnionitis suspected: expedite delivery and start broad-spectrum IV antibiotics (treat maternal infection) — do not await culture results. Common signs: fever, maternal tachycardia, uterine tenderness, foul-smelling liquor, fetal tachycardia.

GBS: obtain vaginal/rectal swab if indicated; give intrapartum penicillin/ampicillin or penicillin-allergy alternative when in labour per local GBS prevention policies.

If in labour at any gestation and considered for neonatal survival focus, involve neonatology and use neonatal resuscitation protocols as appropriate.

5. Monitoring during expectant management

Maternal: temperature, pulse, uterine tenderness, vaginal discharge; CBC/CRP as clinically indicated (not necessarily scheduled weekly). Frequency typically q4–8h for observations in admitted patients. Avoid routine weekly cultures unless clinical indication.

Fetal: CTG or intermittent auscultation per gestation and local practice; fetal biophysical assessment as indicated.

Document all counselling, antimicrobial choices, steroid/magnesium administration, and plan for delivery.

6. Antibiotic specifics & cautions

Latency regimen (evidence-based option): IV ampicillin + erythromycin for 48 h → oral amoxicillin + erythromycin 5 d (total 7 d). RCOG recommends erythromycin (10 days) — local formularies may vary. Do not give co-amoxiclav for prophylaxis in PPROM (increased neonatal NEC risk). Adjust for allergies.

7. Special situations

Suspected placental abruption, fetal compromise, heavy bleeding, or maternal sepsis: immediate delivery regardless of gestational age.

HSV active primary infection: consider delivery planning and antiviral therapy; discuss neonatal transmission risk and management with infectious disease/obstetric team.

8. Counselling & documentation

Explain maternal risks (infection, hemorrhage), fetal/neonatal risks by gestational age, available neonatal care (survival/long-term outcomes), and alternatives. Document risk discussion and informed shared decision. When feasible, involve neonatology and senior obstetrics in counselling for <34 wks and previable cases.

9. Practical checklist for PROM (quick)

Confirm ROM (speculum, nitrazine/ferning/AmniSure).

Accurate gestational age. Contact neonatology if <34 wks or periviable.

Give latency antibiotics if expectant management for PPROM <34 wks (per regimen above) — avoid co-amoxiclav.

Give corticosteroids if birth likely <34+6 (consider late-preterm indications).

Give MgSO₄ for neuroprotection if imminent birth <30–32 wks (local policy).

If signs of chorioamnionitis, expedite delivery and start IV antibiotics.

If ≥37 wks, induce/deliver; do GBS prophylaxis in labour as indicated.

10. Sources used (primary)

1. RCOG Green-top Guideline No.73 — Care of women presenting with suspected preterm prelabour rupture of membranes (GTG 73).

2. ACOG Practice Bulletin No.217 — Prelabor rupture of membranes (2020 update/Practice Bulletin).

3. Indian FOGSI / ICOG practice materials & AICOG conference documents (national practice algorithms / GCPR elements relevant to PPROM management).

4. OGSB Standard Clinical Management Protocols (Bangladesh) — PROM management flowcharts/protocol.

5. WHO / Global guidance on management of preterm prelabour rupture of membranes (supporting monitoring and infection criteria).