**Antenatal corticosteroid (ACS) — concise protocol (Bangladesh) and how major bodies recommend it worldwide**

Below is a practical, evidence-based protocol you can use in Bangladesh (based on national/OGSB standard clinical management protocols used in EmONC facilities) followed by the current positions from WHO, RCOG and ACOG — with key references.

1) Bangladesh — commonly used national / OGSB protocol (practical summary)

Indication

Women at risk of imminent preterm birth when gestational age can be accurately assessed and delivery is expected before 34+0 weeks (many Bangladesh protocols state up to <34 weeks). Give when no clinical evidence of maternal infection.

Drugs & regimen (either):

Betamethasone 12 mg IM × 2 doses, 24 hours apart (total 24 mg), OR

Dexamethasone 6 mg IM × 4 doses, 12 hours apart (total 24 mg).

These are the standard regimens in national clinical protocols.

Timing / target window

Best if birth occurs within 7 days of administration; give when preterm birth is considered imminent and GA is accurate.

Repeat dosing

Accelerates fetal lung maturity

Stimulates type II pneumocytes → ↑ surfactant synthesis (lecithin, phosphatidylglycerol).

Reduces risk of Respiratory Distress Syndrome (RDS) by improving alveolar stability.

Enhances antioxidant enzyme activity → protects against oxygen free radicals postnatally.

Promotes structural lung changes → increases alveolar epithelial cell maturation, thinning of alveolar walls.

Stabilizes cerebral vasculature → ↓ risk of intraventricular hemorrhage (IVH).

Reduces inflammatory mediators → ↓ necrotizing enterocolitis (NEC).

Improves cardiovascular stability → enhances myocardial contractility and blood pressure regulation.

A repeat (rescue) course may be considered if >7 days have passed since the initial course and there is ongoing high risk of delivery within the next 7 days (follow local neonatal capacity and guidelines).

Contraindications / cautions

Do not give if there is clinical chorioamnionitis or overt maternal infection. Ensure maternal/facility capacity for neonatal care when using ACS.

Other notes in Bangladesh protocols

ACS is recommended in cases of preterm labour, antepartum haemorrhage where delivery is anticipated <34 wk, and when transfer to an appropriate neonatal facility is planned if needed. Local guidance references WHO and international guidelines.

2) International guideline positions — short summary & comparison

WHO (2022 update)

Recommendation: ACS are recommended for women at risk of preterm birth when accurate gestational age assessment is possible, birth is imminent, and adequate childbirth and newborn care are available at the facility (or by referral). The 2022 WHO guideline updates and clarifies earlier guidance, and emphasizes appropriate facility capacity and careful selection of women.

Regimens: WHO acknowledges standard regimens — betamethasone 12 mg IM x2 24 h apart or dexamethasone 6 mg IM q12h x4.

RCOG (Green-top Guideline No. 74; reviewed 2025)

Recommendation: Strong evidence that ACS reduce neonatal respiratory morbidity and mortality — recommend ACS for women at risk of preterm birth (typical window 24+0 to 34+6 weeks, with guidance around thresholds and late preterm considered in specific scenarios). RCOG provides detailed practical guidance on timing, repeat (rescue) doses, and special circumstances. (See full guideline for specifics on borderline gestations, cesarean at term, multiple pregnancy).

ACOG (Committee Opinion No. 713 — 2017)

Recommendation: A single course of ACS is recommended for pregnant women between 24+0 and 33+6 weeks who are at risk of delivery within 7 days; consider ACS starting at 23+0 weeks in selected cases depending on parental wishes about resuscitation. ACOG discusses late-preterm (34–36+6 wk) use — may be considered in selected cases (guidance updated since 2017 in some statements). Betamethasone is frequently recommended as the preferred preparation in the U.S., but dexamethasone is an accepted alternative.

Supporting evidence from trials (example)

Large trials in low-resource settings showed benefit of maternal dexamethasone for preterm birth outcomes when given under appropriate facility conditions — supports cautious programmatic use with facility neonatal capacity. (NEJM ACT trial).

3) Practical checklist for bedside use (one-page)

1. Confirm accurate gestational age (ideally by early US or reliable LMP).

2. Confirm imminent preterm birth (cervical change, regular contractions, decision to deliver, APH with likely delivery, preterm PROM with imminent delivery).

3. Ensure no clinical maternal infection (chorioamnionitis) — if infection suspected, do not give ACS.

4. Confirm facility/newborn capacity to care for preterm infant (or plan urgent transfer) — follow WHO criteria.

5. Choose regimen:

Betamethasone 12 mg IM × 2 doses 24 h apart OR

Dexamethasone 6 mg IM × 4 doses q12h.

6. If birth delayed >7 days and mother remains at high risk, consider rescue dose after re-assessment per local policy and guideline.

4) Special situations (brief)

Multiple pregnancy: ACS recommended same as singleton when risk of preterm birth imminent.

Preterm prelabour rupture of membranes (PPROM/PROM): ACS indicated when <34 wk and no chorioamnionitis; give and manage per local PROM guidance.

Late preterm (34+0–36+6 weeks): Some bodies (e.g., ACOG/others) may consider ACS in selected cases (e.g., planned early delivery, high risk of respiratory distress) — check latest local / national policy.

5) Key references (clickable sources used)

1. RCOG Green-top Guideline No. 74: Antenatal Corticosteroids to Reduce Neonatal Morbidity and Mortality (2022).

2. ACOG Committee Opinion No. 713: Antenatal Corticosteroid Therapy for Fetal Maturation (Reaffirmed 2024).

3. WHO Recommendations on Antenatal Corticosteroids for Improving Preterm Birth Outcomes (2022 update).

4. NICE Guideline [NG25]: Preterm labour and birth (updated 2023).

5. Roberts D, Brown J, Medley N, Dalziel SR. Antenatal corticosteroids for accelerating fetal lung maturation for women at risk of preterm birth. Cochrane Database Syst Rev. 2017;3:CD004454.