**Protocol for Maternal Collapse in Pregnancy and Puerperium**

(Based on RCOG, ACOG, WHO and Bangladesh National Guidelines)

**Definition**

Maternal collapse is the acute loss of consciousness with absence of effective circulation in pregnancy or within 6 weeks postpartum, requiring immediate resuscitation.

**Common Causes**

(Remember the 4Hs & 4Ts)

Cardiac: Myocardial infarction, arrhythmia, cardiomyopathy, congenital heart disease, cardiac arrest.

Respiratory: Massive PE, amniotic fluid embolism (AFE), severe asthma, anaphylaxis, aspiration.

Hemorrhage: Antepartum, postpartum hemorrhage (PPH), uterine rupture, trauma.

Hypertensive: Severe pre-eclampsia/eclampsia, intracranial bleed, stroke.

Sepsis: Chorioamnionitis, puerperal sepsis.

Metabolic: Hypoglycemia, electrolyte disturbance.

Others: Trauma, anesthesia-related events.

Initial Response (First Responder)

A–E approach with maternal–fetal considerations

1. Call for Help → Activate Maternal Emergency Team.

Alert senior obstetrician, anesthetist, neonatologist, ICU.

Inform blood bank.

2. Airway → Maintain airway patency. Insert airway if needed.

Give 100% oxygen via face mask.

Consider early intubation by skilled anesthetist.

3. Breathing → Assess chest rise, SpO₂, respiratory rate.

Bag–mask ventilation if inadequate.

Rule out aspiration, bronchospasm, PE, AFE.

4. Circulation

Check pulse, BP, ECG, IV access (2 large bore).

Start IV fluids (crystalloids).

Send blood: FBC, group cross-match, coagulation, ABG, electrolytes.

Control hemorrhage: bimanual compression, uterotonics, balloon tamponade.

If shock → follow WHO maternal near-miss emergency protocol.

5. Disability → Check GCS, pupils, seizure activity.

If eclampsia → IV Magnesium sulfate.

6. Exposure → Look for bleeding, trauma, rash, uterine rupture.

Keep warm (blankets/warmer).

**Cardiac Arrest in Pregnancy**

Start CPR immediately:

* High-quality chest compressions (100–120/min, depth 5 cm).
* Hand position slightly higher on sternum.
* 30:2 compression–ventilation ratio if no advanced airway.

Manual left uterine displacement (LUD) if uterus >20 weeks.

Avoid supine hypotension.

Defibrillation: Use standard energy (no change for pregnancy).

Drugs: Standard adult doses (adrenaline, amiodarone).

**Perimortem Cesarean Section (PMCS)**

Indication:

Maternal cardiac arrest, uterus >20 weeks, no ROSC within 4 minutes.

Action:

Perform resuscitative hysterotomy by 5 minutes.

Aim: Improve maternal venous return & fetal survival.

Location: Do not transfer; perform at site of arrest.

**Definitive Management Based on Cause**

PPH: Uterotonics (oxytocin, misoprostol, ergometrine, tranexamic acid), balloon tamponade, B-Lynch, hysterectomy.

Eclampsia/HTN: IV MgSO₄, antihypertensives, stabilize BP.

Sepsis: IV broad-spectrum antibiotics, fluids, source control.

Anaphylaxis: IM Adrenaline, airway, fluids, antihistamine, steroids.

PE/AFE: Supportive, anticoagulation (PE), ECMO (where available).

MI/Arrhythmia: ACLS protocols, cardiology input.

Team Roles in Bangladesh Context

Team Leader: Senior obstetrician/anaesthetist.

Airway & Breathing: Anaesthetist.

Circulation & IV Access: Obstetric SHO/nurse.

Monitoring & Documentation: Midwife/nurse.

Neonatal resuscitation: Pediatrician.

Blood & OT arrangement: Junior doctor/nurse.

Post-Resuscitation Care

Transfer to ICU/HDU.

Monitor vitals, urine output, ABG, electrolytes.

Psychological support, family counseling.

Debrief team for clinical learning.

References

RCOG Green-top Guideline No. 56: Maternal Collapse (2022).

ACOG Committee Opinion: Cardiopulmonary Resuscitation in Pregnancy.

WHO Maternal Near-Miss Approach (2019).

Bangladesh National Guidelines on Maternal Health (DGHS, updated 2022).