Abnormal Uterine Bleeding (AUB) — Clinical Protocol (PALM-COEIN framework)

1. Definition & classification (quick)

AUB = bleeding from the uterus that is abnormal in frequency, regularity, duration, or volume (outside pregnancy). Use FIGO PALM-COEIN classification for etiology: Polyp, Adenomyosis, Leiomyoma, Malignancy/hyperplasia (structural) — Coagulopathy, Ovulatory dysfunction, Endometrial, Iatrogenic, Not yet classified (non-structural).

2. Triage / initial priorities (all settings)

Urgent if very heavy bleeding with haemodynamic instability, syncope, chest pain, severe anaemia (Hb < 7 g/dL or symptomatic), or rapidly ongoing blood loss — stabilise first (ABC), large-bore IV access, fluids, blood crossmatch, oxygen, ECG. Follow local massive transfusion / PPH protocols if needed.

3. History & examination (key items)

Menstrual history: pattern, duration, volume (use menstrual pictogram / patient report), impact on quality of life, contraception, pregnancy tests.

Bleeding pattern: heavy regular periods (HMB), intermenstrual/metrorrhagia, post-coital, postmenopausal.

Red flags: postmenopausal bleeding, persistent intermenstrual bleeding, rapid enlargement of uterus, atypical PV discharge, weight loss, palpable pelvic mass, family history of bleeding disorders or endometrial/cervical cancer.

Exam: vitals, abdo/pelvic exam, speculum and bimanual exam (if not too unstable). Document uterine size, adnexal masses, cervical lesions.

4. Initial investigations (according to severity & age)

All with AUB (non-urgent): pregnancy test (urine/serum), full blood count, thyroid function if clinically suspected, coagulation if bleeding disorder suspected, cervical screening as per age, consider STI testing if IMB.

If HMB/anaemia: ferritin, transferrin saturation, iron studies.

If structural suspected: pelvic ultrasound (transvaginal if possible).

If PMB or suspicion of hyperplasia/malignancy: endometrial sampling (pipelle) or hysteroscopy ± directed biopsy.

5. Acute medical control of heavy bleeding (first 24–48 h)

Options depend on whether patient is stable and wishes fertility:

A. Stabilise first (fluids, transfuse as indicated).

B. Medical agents to rapidly reduce bleeding (choose per contraindications):

High-dose tranexamic acid (e.g., 1 g PO/IV every 8 hours, per local protocol) — reduces menstrual blood loss.

High-dose combined oral contraceptive (COC) — e.g., 30–50 µg ethinylestradiol with progestin for immediate control (loading regimen) — if no contraindication.

High-dose oral progestogens (e.g., medroxyprogesterone acetate 10–20 mg TDS) or norethisterone — for ovulatory AUB.

Levonorgestrel-releasing intrauterine system (LNG-IUS) (Mirena) — most effective long-term medical therapy for HMB; consider as first-line long-term option for those not seeking pregnancy.

C. Second-line / adjuncts:

GnRH analogues (short-term) for large fibroids or pre-op optimization.

Ulipristal acetate — note safety/availability concerns and regulatory advice (follow NICE/EMA advice if considered).

6. Further diagnostic pathway (one-stop approach)

If initial treatment fails or structural pathology suspected: perform pelvic ultrasound → outpatient hysteroscopy ± polypectomy if intracavitary lesion → endometrial biopsy if abnormal endometrium or >45 y (or risk factors).

Consider MRI if adenomyosis suspected and ultrasound inconclusive.

7. Surgical options (if medical therapy fails or not desired)

Hysteroscopic polypectomy / myomectomy for intracavitary polyps/fibroids.

Endometrial ablation (for completed childbearing; check uterine size/shape & contraindications).

Uterine artery embolisation — for fibroid-related HMB if fertility not desired / multidisciplinary decision.

Hysterectomy — definitive; reserved for failed conservative measures or uterine pathology requiring removal.

8. Special populations & considerations

Adolescents: consider congenital bleeding disorders (vWD); liaise haem/paediatrics.

Perimenopausal/postmenopausal: low threshold for endometrial sampling to exclude hyperplasia/ca malignancy.

Desire fertility: prefer conservative treatments (medical, hysteroscopic resection, myomectomy).

Contraindications: check thromboembolism risk before COC; hepatic disease for some meds; contraindications to LNG-IUS (active PID etc.).

9. Bangladesh / low-resource adaptations (practical)

Promote one-stop menstrual clinic model: history, Hb testing, pregnancy test, ultrasound access and outpatient hysteroscopy where possible (RCOG/UK one-stop model useful).

Strong emphasis on screening and treating iron deficiency anaemia early (oral iron or IV iron if severe) and linking with community/primary care for follow-up. (High prevalence of AUB-related anaemia locally.)

Where LNG-IUS is limited by availability/cost, use oral tranexamic acid, progestogens, and COC as effective, low-cost alternatives while advocating for access to LNG-IUS.

Ensure referral pathways for blood transfusion, surgical facilities, and histopathology services (sample transport & reporting).

10. Follow up & safety netting

Re-assess Hb/iron after 4–6 weeks if treated medically.

If persistent bleeding despite two lines of therapy or red-flag symptoms → urgent referral to gynecology clinic for imaging ± hysteroscopy.

Document informed consent for treatments, discuss fertility implications, and provide contraception counselling where relevant.

Key evidence / guideline sources (selected)

NICE: Heavy menstrual bleeding: assessment and management (NG88, 2018).

ACOG: Practice Bulletin — Diagnosis of AUB in reproductive-aged women (Practice Bulletin No. 128) and acute AUB management guidance.

RCOG / UK: RCOG educational resources and joint RCOG/BSGE/BGCS guidance (useful one-stop clinic model).

FIGO / PALM-COEIN classification & review literature.

ESHRE: guideline documents (refer to ESHRE site for specific fertility-sparing recommendations).

Bangladesh literature: regional articles and surgical/pathology series highlighting local prevalence and need for anemia management.