Protocol for PCOS Management

1. Bangladesh Context (OGSB / DGHS practice-based protocol)

PCOS is common in reproductive-aged women in Bangladesh; management is adapted to resource settings and affordability.

Diagnosis (Based on Rotterdam Criteria – 2003, adopted in Bangladesh)

Need ≥2 of 3:

1. Oligo/anovulation (oligomenorrhea, amenorrhea).

2. Clinical/biochemical hyperandrogenism (hirsutism, acne, alopecia).

3. Polycystic ovaries on ultrasound (≥12 follicles, 2–9 mm, or ovarian volume >10 ml).

Exclude other causes (thyroid disease, hyperprolactinemia, non-classical CAH, androgen-secreting tumor).

Management – Stepwise

1. General measures (first line)

Weight reduction (diet, exercise, lifestyle modification).

Even 5–10% weight loss improves cycle regularity and fertility.

2. Menstrual irregularity / endometrial protection

Combined oral contraceptive pill (COCP): 1st line if not seeking pregnancy.

Cyclic progestogen every 1–3 months if COCP contraindicated.

3. Hirsutism / acne

COCP first line.

Add antiandrogens (spironolactone, finasteride) if inadequate response (with contraception).

4. Infertility

Lifestyle measures first.

First-line ovulation induction: Letrozole (preferred over clomiphene).

Clomiphene citrate if letrozole unavailable.

Metformin can be used in women with glucose intolerance, obesity, or when resistant to ovulation induction.

Laparoscopic ovarian drilling in resistant cases.

Referral for ART/IVF if needed.

5. Metabolic risk

Screen for glucose intolerance, dyslipidemia, hypertension.

Treat insulin resistance: Metformin 500–1000 mg/day (step up gradually).

2. RCOG Guidance (Green-top & consensus, UK)

Lifestyle modification = cornerstone (diet, physical activity, weight management).

COCP recommended for cycle control, acne, and hirsutism.

Metformin:

Not for routine use in all women.

Recommended in women with BMI >25 and impaired glucose tolerance or high metabolic risk.

Infertility:

Letrozole first-line ovulation induction.

Clomiphene as alternative.

Gonadotropins or ovarian drilling if resistant.

Long-term risks:

Monitor for diabetes, CVD, endometrial hyperplasia/cancer risk (if oligomenorrhea untreated).

3. ACOG Practice Bulletin (U.S.)

Emphasis on lifestyle modification (calorie restriction, weight loss, exercise).

Menstrual irregularity: COCP or cyclic progestins for endometrial protection.

Hirsutism/acne: COCP first line; add antiandrogens if inadequate response.

Infertility:

Letrozole preferred over clomiphene as first-line.

Metformin is not first-line for ovulation induction, but may be used if glucose intolerance or metabolic features are present.

Screening:

Check BP, BMI, lipids, OGTT (75 g).

Depression and sleep apnea screening.

Adolescents: Caution in early diagnosis (wait 2 years post-menarche unless severe symptoms).

4. WHO (Global guidance)

WHO does not have a single “PCOS guideline,” but follows International Evidence-Based Guideline for the Assessment and Management of PCOS (2018; updated 2023), endorsed by WHO, ESHRE, ASRM, RCOG, etc.

Key principles:

Lifestyle first line: dietary advice, physical activity, behavioral support.

COCP for irregular cycles and hyperandrogenism.

Metformin recommended mainly for metabolic features, impaired glucose tolerance, and as second-line for cycle control if COCP not tolerated.

Infertility: Letrozole first line, clomiphene/metformin alternatives, gonadotropins or ovarian drilling second line, ART third line.

Mental health: Screening for anxiety, depression, eating disorders.

Adolescents: Delay diagnosis unless persistent features; treat symptoms.

Comparison Table (Quick View)

Aspect Bangladesh (OGSB/DGHS) RCOG ACOG WHO / International Guideline

Diagnosis Rotterdam Rotterdam Rotterdam Rotterdam (with adolescent caution)

First-line therapy Lifestyle + COCP Lifestyle + COCP Lifestyle + COCP Lifestyle + COCP

Infertility (first-line) Letrozole (or clomiphene) Letrozole Letrozole Letrozole

Metformin Commonly used (glucose intolerance, obesity, ovulation induction) Selective (BMI>25, IGT, metabolic risk) Not first-line for ovulation, used for IGT/metabolic For IGT, metabolic risk; second-line for cycles

Hirsutism/acne COCP → antiandrogens COCP → antiandrogens COCP → antiandrogens COCP → antiandrogens

Screening OGTT, BP CVD risk, DM, endometrial risk OGTT, lipids, depression, sleep apnea OGTT, CVD risk, mental health

Adolescents Based on symptoms + USG Careful, delay Dx Careful, delay Dx Avoid early Dx, treat symptoms

✅ Updated Management Recommendations (2023 PCOS Guideline)

Here are the evidence-based management strategies, with what the guideline “strongly recommends” or “could consider”.

Management domain What 2023 Guideline Recommends

Lifestyle Intervention Always first-line. Healthy diet, increase physical activity, weight management. Help prevent weight gain, minimize excess weight.

Mental Health / Psychological Support Screen all women for psychological features (depression, anxiety, eating disorders, quality of life). Offer psychological therapy (e.g., CBT) when indicated.

Menstrual Irregularity / Hyperandrogenism Use combined oral contraceptive pills (COCPs) in reproductive-aged adults for cycle regulation and hirsutism/acne. Low- vs high-dose estrogen: no clear advantage of ≥30 µg ethinylestradiol vs <30 µg for hirsutism.

Fertility / Ovulation Induction Letrozole remains first-line for ovulation induction. Safer, more cost-effective options prioritized. ART/treatments with fewer risks recommended.

Metabolic & Cardiovascular Risk Assess and monitor: BMI, waist circumference, blood pressure, lipids, glucose. Screen for type 2 diabetes (OGTT), dyslipidaemia, sleep apnoea.

Preconception / Pregnancy Care Recognize PCOS as high-risk in pregnancy (gestational diabetes, preeclampsia, etc.), ensure risk factors optimized before conception. Single embryo transfer recommended in ART to reduce risk.

Use of Metformin and Other Drugs Metformin: recommended especially in women with impaired glucose tolerance, metabolic risk; less so for cycle/hirsutism unless metabolic features present. Anti-androgens may be added if hyperandrogenism not controlled by COCPs.

Adolescents In adolescents: require both hyperandrogenism and ovulatory dysfunction for diagnosis; avoid ultrasound and AMH. Use low dose COCP for menstrual regulation and hyperandrogenism; lifestyle interventions; psychological care.

📌 References

1. OGSB/DGHS. Bangladesh National Protocols for Management of PCOS (based on Rotterdam, EmONC guidelines).

2. Teede HJ et al. International evidence-based guideline for the assessment and management of PCOS. Hum Reprod 2018; update 2023.

3. RCOG. Green-top Guidelines (PCOS, fertility treatment).

4. ACOG Practice Bulletin: Polycystic Ovary Syndrome (2018).

5. WHO / FIGO endorsement of International PCOS guideline.

6.2023 Evidence based guidelines for PCOS