STANDARD OPERATING PROCEDURE

Antenatal Care & Antenatal Complications

Department of Health, Special Region (1)

Version: 1.0

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Review Date: Every 2 Years

Approved by: Obstetrics & Gynaecology Unit

1. Routine Antenatal Care

> **Objective**
>
> To conduct routine antenatal care according to standard guidelines for every pregnant woman. Responsible care-givers: all Obstetricians and Gynaecologists, assistant surgeons in the antenatal clinic, and midwives in the community.

First Visit: Use standardized Antenatal record.

1.1 History

- Complete history: to identify risk factors
- Menstrual History: LMP, EDD, Gestational Age and confirm maturity

1.2 Examination

1.2.1 General Examination

- Measure body weight in kilogram and height in meter to calculate BMI (BMI = Kg/m²) if woman is in first trimester
- Perform a thorough physical examination to detect medical diseases including anaemia
- Measure BP, look for pallor, pedal oedema

1.2.2 Obstetric Examination

- To confirm pregnancy and its maturity
- Fundal height, measure SFH in cm after 20 weeks
- Number of fetus, lie, presentation, and FHS by Pinard fetal stethoscope or Doppler
- Pretest counseling for PMCT – HIV in group and individual
- Assess the woman's risk factors for venous thromboembolism at the first antenatal (booking) appointment
- At the first antenatal (booking) appointment and again in the second trimester, assess the woman's risk factors for pre-eclampsia, and advise those at risk to take aspirin
- Arrange for antenatal investigations

Investigation	Details
Blood grouping and rhesus typing	Essential for all pregnant women at booking

Blood for full blood count (FBC)	Screen for anaemia
Urinalysis – urine RE	At every visit
Urine protein	Dip test at every visit
Screening for Diabetes	2-hour 75 g OGTT at 24–28 weeks if risk factors present
HBs antigen, HCV antibody	Screening for hepatitis
STS/VDRL	Confirm by TPHA test if VDRL is positive
HIV antibody test	After VCCT under PMCT program
Routine dating scan	Between 11+2 and 14+1 weeks to determine gestational age, detect multiple pregnancy, and screen for Down's, Edwards' and Patau's syndromes if opted

1.3 Health Education

- Counselling and give information on diet and lifestyle changes (e.g., stop smoking), postpartum birth spacing and sterilization if necessary
- Give information on danger signs (Antenatal record – Annex 1)

1.4 Intervention

- Folic acid supplementation (400 µg/day up to 12 weeks)
- Injection tetanus toxoid for 2 doses with at least one month interval
- Prescribe iron after first trimester when morning sickness is relieved

1.5 Follow-Up Visit

- Arrange next visit at 1–4 weeks depending upon gestational age
- Refer to Specialist Consultants / specialist centre if the pregnancy is high risk

1.6 Second Visit

- Review, discuss and record results of all investigations
- Post-test counselling on VCCT results
- Measure BP and urine protein (Dip Test)
- Obstetric examination

- Finalize EDD by history and clinical examination, USS
- Identify abnormal finding and treat accordingly, e.g.:
    - If Hb < 11 g/dL, treat according to anaemia in pregnancy guideline
    - UTI to be treated with Amoxicillin 500 mg TDS for 5 days or Cephalosporin 500 mg TDS for 5 days if no contraindication. Re-check 1 week after antibiotics or change antibiotics if not responding well. Urine for C & S before starting antibiotics, if facility is available
    - PMCT post-test counselling – reassuring and give advice to remain negative if test result is negative. If test positive, treat according to guideline on PMCT

1.7 Subsequent Visits

Provide routine antenatal care during follow-up visits: **monthly till 28 weeks**, **every 2 weeks till 36 weeks**, and **weekly thereafter**.

Timing	Actions
18+0 to 20+6 weeks	Offer ultrasound scan to screen for fetal anomalies and determine placental location
28 weeks	Offer anti-D prophylaxis (single dose of anti-D immunoglobulin 1500 IU at 28–30 weeks) for non-sensitized Rh-negative women
After 28 weeks	Discuss and give information on: • Preparing for labour and birth, including coping in labour and creating a birth plan • Recognising active labour • The postnatal period: care of the new baby, feeding, vitamin K prophylaxis, newborn screening, postnatal self-care (including pelvic floor exercises), awareness of mood changes and postnatal mental health
34 weeks	Recheck placental localization if low-lying in previous scan; second dose of prophylactic anti-D (500 IU)
36 weeks	Check presentation and inform senior if any abnormal presentation; counsel regarding breastfeeding, birth plan and neonatal care
38 weeks	Discuss mode of delivery and prolonged pregnancy management options
40 weeks	To be seen by senior for counseling about post-date complications. Note fetal kick count; ask to return if fetal movements reduce. Plan transfer where induction is feasible
41 weeks	Admit for induction of labour according to guideline (see IOL guideline)

1.8 Risk Factors Requiring Additional Care

Women with risk factors who may need additional care — to be seen by senior / referred to Specialist Centre.

Present Pregnancy Risk Factors

- Associated medical diseases (need joint care with physicians) including those who need PMCT (when HIV screening is positive)
- Extreme of age under 18 or over 40 years; BMI > 30 or < 18 kg/m²
- Short stature < 4 feet 7 inches (145 cm)
- Discrepancy between maturity by USG report, uterine size and by LMP
- Antenatal complications – Gestational hypertension, PE, abnormal lie/presentation, twins, APH, placenta previa

Previous History

Maternal Complications

- Previous PE or eclampsia
- Previous caesarean section or any uterine scar (myomectomy, etc.)
- Two or more miscarriages
- Previous psychiatric illness or puerperal psychosis

Neonatal Complications

- Previous preterm birth or mid-trimester loss
- Previous neonatal death or stillbirth, congenital anomalies
- Previous small or large for gestational age
- Family history of genetic disorder

1.9 Prevention

In endemic area, preventive antihelminthic treatment is recommended for pregnant women after first trimester as part of worm infection reduction programme. Single dose **albendazole 400 mg** or **mebendazole 500 mg** is recommended.

2. Management of Antenatal Complications

2.1 Minor Ailments of Pregnancy

A number of minor and physiological changes to body function occur during pregnancy causing minor symptoms which need to be differentiated from more serious conditions.

Gastrointestinal

Nausea and Vomiting

Usually resolve by 20 weeks and not associated with adverse outcome. Antihistamine and P6 acupressure may help. The efficacy and safety of Vitamin B6 and B12 is doubtful.

Hyperemesis Gravidarum

Severe intractable form of nausea and vomiting causing fluid and electrolyte imbalance, malnutrition, physical and psychological debility such as Wernicke's encephalopathy, Mallory Weiss oesophageal tears and adverse pregnancy outcome including preterm birth and low birth weight baby.

Treatment: Fluid replacement, thiamine supplementation, antiemetics:

Drug	Dose	Route	Line
Phenothiazines	12.5–25 mg TDS	Oral	First line
Cyclizine	50 mg	Oral	
Chlorpromazine	10–25 mg	IM or IV	Second line
Metoclopramide	5–10 mg	IM	
Domperidone	10 mg	IM	
Ondansetron	4–8 mg	IM	

Heartburn

Gastroesophageal reflux due to pressure effect of pregnant uterus and hormone-induced relaxation of oesophageal sphincter, increases with pregnancy. Smoking cessation, frequent light meals and lying with the head propped up at night are helpful. Simple antacids, histamine 2 receptor antagonists (ranitidine) and proton pump inhibitors (omeprazole) can be used safely if simple measures fail. Severe refractory dyspeptic symptoms warrant referral to gastroenterologist.

Constipation

Common in pregnancy due to mechanical and hormonal factors causing slow gut motility. Reassurance and advice regarding high-fibre diet and mild osmotic (non-stimulant) laxatives such as lactulose can be

suggested.

Cardiovascular

Headaches

Headaches and fainting can occur as the body adapts to increasing blood volume and fall in vascular resistance. Simple analgesics such as paracetamol can help. Persistent headache in late second trimester and third trimester may indicate pre-eclampsia – BP and proteinuria should be checked.

Palpitations

Physiological increase in heart rate can lead to palpitations and need reassurance.

Supine Aorto-Caval Hypotension

Avoid supine position in third trimester.

Varicose Veins

Avoid standing for long periods, frequent short period of rest, lying laterally with legs elevated, support stockings and simple analgesics may help. Vulval and vaginal varicosities are uncommon but may cause trauma at delivery.

Haemorrhoids

Result from effects of progesterone and pressure on superior rectal veins by gravid uterus and increased circulating volume, resolved after delivery. Conservative approach is usually advocated – local anaesthetic/anti-irritant creams, mild laxatives and high-fibre diet. Warning symptoms of tenesmus, mucus, blood mixed with stool and anal discomfort may suggest rectal carcinoma; a rectal digital examination should be carried out.

Respiratory

Dyspnoea / Breathlessness

Dyspnoea of pregnancy may increase with pregnancy; reassurance and rest in propped up position is helpful. Significant breathlessness should be checked to exclude infection, asthma, heart failure and pulmonary embolism.

Musculoskeletal

Backache

Often develops in third trimester due to hormone-induced laxity of spinal ligaments, shift in the centre of gravity as uterus grows, additional weight gain causing exaggerated lumbar lordosis. Pregnancy can exacerbate symptoms of prolapsed intervertebral disc. Advice to maintain correct posture, avoid lifting heavy objects, avoid high heels, regular physiotherapy and simple analgesia (paracetamol or paracetamol-codeine

combination). Advise women to avoid going to sleep on their back after 28 weeks and to consider using pillows to maintain their position while sleeping.

Leg Cramps

May increase at night. Deep vein thrombosis must be excluded if calf pain persists.

Carpal Tunnel Syndrome

Compression neuropathies occur in pregnancy due to soft tissue swelling causing numbness, tingling and weakness of thumb and forefinger with severe pain at night. Simple analgesia and splinting of the affected hand is helpful.

Symphysis Pubis Diastasis

Loosening of symphysis pubis joint causing the two halves of pelvis to rub on one another on walking and moving, resulting in severe pain. Improves after delivery; needs stronger analgesia, physiotherapy and low stability belt.

Genitourinary

Frequency of Micturition

Common as term approaches due to pressure of the fetal head on the bladder. Presence of dysuria indicates urinary infection and needs urine RE and culture.

Vaginal Discharge

Physiological discharge is common and mucoid. Profuse watery discharge needs to be distinguished from liquor leakage. Vulval irritation or itchiness indicates candidiasis, trichomoniasis or bacterial vaginosis and requires appropriate treatment. If a sexually transmitted infection is suspected, consider arranging appropriate investigations. Offer vaginal imidazole (such as clotrimazole or econazole) to treat vaginal candidiasis in pregnant women. Consider oral or vaginal antibiotics to treat bacterial vaginosis in pregnant women.

Skin

Chloasma and Striae Gravidarum

Due to hyperpigmentation, abdominal distention and hormonal changes; they usually fade after delivery.

Rashes and Irritations

Minor rashes and irritations are common. Pruritus is a symptom of cholestasis and liver function should be tested. Skin infection such as scabies needs to be treated accordingly.

Oedema

Common finding in 80% of all pregnancies due to soft tissue swelling and increased capillary permeability. Fingers, toes and ankles are worst affected and aggravated by hot weather. Frequent periods of rest with leg elevation and occasionally support stockings are indicated. Generalized oedema may be a feature of pre-eclampsia and BP, urine for protein needs to be checked. Severe generalized oedema may suggest cardiac failure or nephrotic syndrome.

Other Minor Disorders

Insomnia, epistaxis, gum bleeding, altered taste sensation, breast soreness, urinary incontinence are transient and should be reassured, given symptomatic treatment or referred if they persist and if necessary.

References

1. Obstetrics and Gynaecology Myanmar Management Guidelines, 2024.
2. Kenny LC (2017). Antenatal Obstetrics Complications. In: Baker PN & Kenny LC (eds) *Obstetrics by Ten Teachers*, 20th edition, Hodder Arnold, London. 13–27.
3. McEwan A (2017). Antenatal care. In: Baker PN & Kenny LC (eds) *Obstetrics by Ten Teachers*, 20th edition, Hodder Arnold, London. 48–60.
4. National Institute for Clinical Excellence (2021). Antenatal Care. NICE clinical guideline 62.
5. Nelson-Piercy C (2020). Hyperemesis Gravidarum. *Handbook of Obstetric Medicine*, 6th edition. Boca Raton: CRC Press, Taylor and Francis Group, 236–245.
6. WHO Antenatal Care Guidelines (2008) WHO, Geneva.