

COMPREHENSIVE ANTENATAL CARE: A KEY TO IMPROVING MATERNAL AND FETAL OUTCOMES

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ABSTRACT:

Background:

Antenatal care (ANC) is essential for ensuring the health and well-being of both the mother and fetal during pregnancy. Regular antenatal visits help in early detection and management of complications.

Aim:

To review the components, schedule, and importance of antenatal care in improving maternal and foetal outcomes.

Methods:

This is a review-based article using standard guidelines from WHO, Government of India publications, and obstetric textbooks.

Results:

Adequate antenatal care with a minimum of eight visits improves maternal and neonatal outcomes and reduces perinatal mortality.

Conclusion:

Effective antenatal care plays a crucial role in ensuring safe pregnancy and childbirth.

Keywords: *Antenatal care, pregnancy, maternal health, foetal wellbeing, ANC visits.*

INTRODUCTION:

Antenatal care (ANC) refers to the systematic supervision of a pregnant woman during pregnancy to monitor the progress of fetal growth and maternal health. Regular antenatal care improves outcomes for both mother and baby by identifying and managing complications early.

DEFINITION

Antenatal care is the comprehensive care provided to a pregnant woman from conception until the onset of labour to ensure the best possible health outcomes for mother and foetus.

ANTENATAL VISIT SCHEDULE:

Trimester	Weeks of gestation
First	1: < 12 weeks
Second	2: 20 weeks
	3: 26 weeks
Third	4: 30 weeks
	5: 34 weeks
	6: 36 weeks
	7: 38 weeks
	8: 40 weeks
Post term	9: 41 weeks
	10: 42 weeks

COMPONENTS OF ANTENATAL CARE:

- Health promotion
- Screening and diagnosis
- Treatment of complications
- Nutritional support
- Counselling and education

AIMS:

- The primary aim of ANC is to promote and protect the health of women and their unborn babies during pregnancy.
- To achieve at the end of a pregnancy a healthy mother and a healthy baby.
- To identify and manage complications early.
- To assess the well-being of mother and foetus.
- To provide health education and counselling.



- It is advised to have at least eight antenatal appointments in order to prevent complications, detect them, and take the necessary treatment.
- At 41 and 42 weeks, or earlier if they exhibit warning signals, women who have not delivered by the anticipated due date should go back for antenatal care.

FIRST TRIMESTER: (<12weeks)

History:

- Confirm pregnancy and calculate EDD
- Assess for significant symptoms
- Take complete medical, obstetric, psychosocial, family history
- Ask about vaccination status and recent medications
- Ask about exposure to tobacco, second- hand smoke, use of alcohol or other substances
- Risk assessment e.g., GDM, venous thrombosis, and depression
- Past illness/complications during previous pregnancy

Examine:

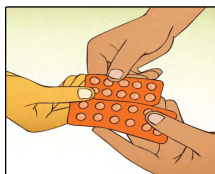
- Vital Signs
- Weight and height
- General examination (pallor, edema, jaundice)

Screening:

- Urine test (protein, sugar, infection)
- Blood tests (Hb, blood group, Rh, HIV, VDRL, HBsAg)
- RDK test for Malaria (in endemic areas)

Preventive measures:

- Tablet Folic acid – 400 µg daily
- Antibiotics for women with asymptomatic bacteriuria
- Two doses of Td (Tetanus-diphtheria) vaccination four weeks apart whenever pregnancy is detected



Counseling:

- Healthy eating and being physically active
- Self - care, safe sex, rest, adequate sleep
- Avoid using tobacco, alcohol or other substances
- Limit caffeine
- HIV prevention
- Intervention for common physiological symptoms
- **Information for pregnant woman and her family:**
 - Fill up MCP Card and ANC register
 - Give filled up MCP Card and Safe Motherhood booklet to the woman
 - Encourage institutional delivery
 - Explain entitlement under JSSK & JSY
 - Identify the nearest functional PHC/FRU for delivery

SECOND TRIMESTER: (13–26 WEEKS)

History:

- Previous complications and treatments

Examine:

- Vital Signs
- Physical Examination focused on weight gain
- Assess for signs of:
 - Anemia
 - Pre- eclampsia
 - Urinary tract/ other infections
 - Threatened preterm labour
 - Antepartum hemorrhage
 - Miscarriage/ stillbirth
 - GDM
- Fetal Examination:

- Check for fetal heart rate
- Measure symphysis- fundal height from 24 week
- Ask about fetal movements

Screening:

- Urine analysis (proteinuria, glucosuria and bacteriuria)
- Hemoglobin estimation
- At 24–28 weeks blood sugar (OGCT) – 2nd or 3rd visit

OGTT FINDINGS FOR GESTATIONAL DIABETES		
FASTING	1 HOUR	2 HOURS
≥ 92 mg/dL <small>(Fasting Plasma Glucose)</small>	≥ 180 mg/dL <small>(1 Hour Plasma Glucose)</small>	≥ 153 mg/dL <small>(2 Hour Plasma Glucose)</small>
Gestational Diabetes Mellitus (GDM) is diagnosed if ANY ONE of these values is abnormal.		

Preventive measures:

- Iron and folic acid
- Calcium supplementation
- Vitamin C supplements
- Deworming (Albendazole single dose)

THIRD TRIMESTER: (27–40 WEEKS)

History:

- Previous complications and treatments

Examine:

- Blood pressure
- Weight
- Assess for significant symptoms of:
 - Anemia
 - Pre- eclampsia
 - Urinary tract/ other infections
 - Threatened preterm labour
 - Antepartum hemorrhage
 - Fetal compromise/ death
 - GDM
- Fetal Examination:
 - Listen and count fetal heart rate

- Measure symphysis- fundal height from 24 week
- Ask about fetal movements
- Palpate for malposition from 34 weeks

Screening:

- Urine for proteinuria, glucosuria and bacteriuria
- Blood for hemoglobin

Preventive measures:

- Iron and Folic acid
- Calcium Supplement
- Antibiotics for women with asymptomatic bacteriuria
- Anti - D prophylaxis for Rh- negative women from 28 weeks

Counseling:

- Birth and emergency plan
- Infant feeding
- Postpartum care from 34 weeks
- Birth spacing and contraception from 34 weeks
- Healthy eating and being physically active
- Intervention for common physiological symptoms

TESTS DURING PREGNANCY:

First Trimester (1- 12 Weeks)	Second Trimester (13- 26 Weeks)	Third Trimester (27- 40 Weeks)
Beta HCG	GTT (Glucose tolerance test)	USG Scan (Growth Scan)
HIV screening	USG Level 2 Scan (Anomaly Scan)	Doppler
NT scan	Triple/Quad test	Fetal echo
Blood tests	Hb test	GBS Test
Early USG	Amniocentesis/ NIPT	Doppler

DANGER SIGNAL DURING PREGNANCY

- Generalized weakness
- Breathlessness
- Severe abdominal pain
- Fever
- Convulsions
- Edema
- Vaginal bleeding

DISCUSSION

Antenatal care plays a vital role in reducing maternal and neonatal morbidity and mortality. The updated recommendation of at least eight antenatal visits ensures better monitoring, early diagnosis of complications, and timely interventions. Increased contact with healthcare providers improves maternal awareness and health-seeking behaviour. The World Health Organization recommends a minimum of eight antenatal contacts to improve pregnancy outcomes.

CONCLUSION

The updated guidelines emphasize increasing antenatal visits from four to eight to improve pregnancy outcomes. Regular antenatal care significantly reduces perinatal mortality by

enabling early detection and management of complications. Ensuring access to quality antenatal services is essential for achieving safe motherhood.

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