

## MIDWIERY LED APPROACHES IN ANTENATAL CARE & MANAGEMENT

### Abstract

Antenatal care is the term used to describe systematic monitoring of a woman during pregnancy. It includes careful history taking, examination and guidance to the pregnant woman. The objectives are to ensure a healthy pregnancy, Preventing, detecting, and treating pregnancy-related complications such as pre-eclampsia, eclampsia, and hemorrhage. WHO recommends atleast 4 antenatal visits at 16, 24, 32, 36 weeks. History taking involves collecting data about vital statistics, any complaints, history of present illness and present pregnancy, past obstetrical history, menstrual history, previous medical history, past surgical history, family history, personal history and previous gynecological problems. Physical examination involves general appearance, vital signs, systemic examination, obstetrical examination, Routine investigation of blood and urine and special investigation like serological test, ultrasonography examination and maternal serum alpha-fetoprotein. Antenatal examination includes inspection, palpation such as fundal palpation, lateral palpation, pawlicks grip and pelvic palpation. Advice to the pregnant woman includes diet, antenatal hygiene and immunization. It is also necessary to check for any high-risk conditions at every antenatal visit and treat at the earliest. Throughout the course of a pregnancy, antenatal care is aimed at preventing potential health issues and promoting a healthy lifestyle for both mother and child.

**Keywords:** Antenatal care, history taking, examination, antenatal visits, guidance, healthy pregnancy.

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## **I. INTRODUCTION**

Every year, an estimated 200 million pregnancies occur around the world. Each of these pregnancies poses a risk to the woman and her unborn child.

While risks cannot be completely eliminated, they can be mitigated by providing effective and acceptable maternity care.

Health care should begin early in pregnancy and continue at regular intervals to be most effective.

## **II. MEANING**

Antenatal (Prenatal) care is the term used to describe systematic monitoring (examination and guidance) of a woman during pregnancy. Depending on the needs of the individual, the supervision should be ongoing and regular.

### **Antenatal care comprises of:**

1. Careful history taking and examination (general and obstetrical)
2. The advice given to the pregnant woman

## **III. DEFINITION**

1. Antenatal care is the term used to describe the treatment provided to an expectant mother from the time of confirmation of conception to the start of labor.
2. Planned examination and observation for the woman from conception until the beginning of labor.

## **IV. AIMS AND OBJECTIVES OF ANTENATAL CARE**

### **Antenatal care's objectives are:**

1. Locating "high risk" situations.
2. Preventing or detecting and treating complications as soon as possible.
3. To provide ongoing risk assessment and primary preventive health care.
4. To allay anxiety and enhance psychology by teaching the mother about the anatomy of pregnancy and labor through examples, graphs, and diagrams.
5. Discuss the location, time, and mode of delivery with the couple, as well as newborn care.
6. Educate the couple on the importance of family planning and provide appropriate advice to a couple seeking services.

## **V. OBJECTIVE**

1. To ensure a healthy pregnancy.
2. Preventing, detecting, and treating pregnancy-related complications such as pre-eclampsia, eclampsia, and hemorrhage.
3. Medical disorder prevention, early detection, and treatment such as anemia and diabetes.

4. Early detection of malpresentation, malposition, and disproportion that may influence labor decision.
5. Educate the pregnant woman regarding proper hygiene, diet, and warning signs.
6. Laboratory studies of parameters such as blood group, Rh typing, toxoplasmosis, and syphilis may have an effect on the fetus.

## **VI. CRITERIA OF A NORMAL PREGNANCY**

A normal pregnancy is one that results in the delivery of a single healthy child at term (38–42 weeks), with a fetus weighing 2.5 kg or more and no difficulties for the mother.

## **VII. FREQUENCY OF ANTENATAL VISITS**

1. Generally a check-up is done at an interval of 4 weeks upto 28 weeks, at an interval of 2 weeks upto 36 weeks and thereafter weekly till delivery.
2. WHO recommends the visit may be curtailed to at least 4 visits,  
1<sup>st</sup> visit – around 16 weeks  
2<sup>nd</sup> visit – Between 24 -28 weeks  
3<sup>rd</sup> visit – around 32 weeks  
4<sup>th</sup> visit – around 36 weeks

## **VIII. PROCEDURE AT THE FIRST VISIT**

The first visit should not be referred beyond the second missed period.

## **IX. OBJECTIVES OF ANTENATAL VISIT**

1. To assess the mother's and fetus's health.
2. To determine the gestational age of the fetus and to conduct a baseline inquiry.
3. To identify pregnancies "at risk" and create a plan for future care.

## **X. HISTORY TAKING**

### **1. Vital statistics**

- General Examination of the Mother- name, age, gravida, parity, expected date of delivery.
- Period of gestation
- Gravida refers to a pregnant state, both current and previous, regardless of gestation period.
- Parity refers to the state of a previous pregnancy following the viability period.
- Marriage duration- This is important for determining fertility or fecundity. Low fecundity refers to a pregnancy that occurs many years after marriage without the use of contraception, whereas high fecundity refers to a pregnancy that occurs soon after marriage.
- Religion
- Occupation - It aids in the interpretation of fatigue symptoms caused by excessive physical work or occupational stress. These women should be advised to limit their participation in such activities.

- **Husband's occupation**
    - To determine the patient's socioeconomic status,
    - Must be prepared for problems like anemia, pre-eclampsia, premature birth, and other things that are related to poor social position.
    - As part of family planning counseling, provide reasonable and realistic antenatal advice.
  - **Gestational period:** A pregnancy is counted in completed weeks, with any portion of a week lasting more than three days being considered a full week. In the early stages of pregnancy, it is calculated from the first day of the last normal menstrual period (LNMP), and in the later months, from the anticipated delivery date.
2. **Complaints:** Even if there is no complaint, questions concerning sleep, eating habits, bowel habits, and urination should be asked.
  3. **History of present illness:** The major complaints are elaborated in terms of their onset, duration, severity, medication use, and progression.
  4. **History of present pregnancy**
    - Last menstrual dates – Calculate expected date of delivery
    - Cycle regularity
    - History of recent oral contraceptive pill use
    - Early ultrasound assessment of gestational age.
    - The current pregnancy's significant difficulties, such as hyperemesis and threatening abortion in the first trimester, pyelitic characteristics in the second trimester, and anaemia, pre-eclampsia, and antepartum haemorrhage in the third trimester, should be carefully documented. It is necessary to document immunization status, medical and surgical occurrences, drug use and radiation exposure must all be recorded while pregnant.
  5. **Past obstetrical history:** Inquire about specifics such as the date of pregnancy, the outcome, the gestation period, the baby's weight and gender, and his or her current state of health, labor or pregnancy complications, delivery mode.
  6. **Menstrual history:** Inquire about age at menarche, frequency, duration and amount of flow, premenstrual symptoms, dysfunctional uterine bleeding. The estimated date of delivery (EDD) is calculated using Naegele's method by adding the first day of the last period by nine calendar months and seven days. As an alternative, one can calculate the anticipated delivery date by going back 3 calendar months from the start day of the previous period and then adding 7 days.
  7. **Previous medical history:** A history of prior medical illness, such as a urinary tract infection or tuberculosis, must be obtained.
  8. **Past surgical history:** Any previous pregnancy, whether general or gynaecological, should be investigated.
  9. **Family history:** A family history of twinning, congenital fetal malformations, diabetes, hypertension, tuberculosis, multiple pregnancies, and non-hereditary diseases must be obtained.
  10. **Personal history**
    - About the nutrition, morning sickness, weight gain.
    - Rest and sleep 8 hours during night and 2 hours during day time.
    - Activity and exercise.
    - Habits such as alcoholism, smoking, tobacco chewing.

- Marital, any consanguineous marriage and duration of marriage.
- Contraception such as pills or intra uterine devices.
- Drugs during pregnancy.
- Sexual history- any intercourse during pregnancy.
- Elimination- Frequency of micturition, Constipation.

**11. Previous gynecological problems:** Inquire about any previous sexual transmitted infections, endometriosis, infertility, surgery, polycystic ovarian diseases.

## **XI. PHYSICAL EXAMINATION**

### **1. General appearance**

- Build-obese, average weight, and thin.
- Nutrition- Excellent, average, or poor.
- Height- A narrow pelvis is probably responsible for short stature.
- Weight- In all cases, weight should be taken using an accurate weighing machine. Weight checking should be done in the same weighing machine on each subsequent visit.
- Pallor- Look for it in the nailbeds, tongue's dorsum, and the lower palpebral conjunctiva.
- Jaundice- The hard palate skin, underside of the tongue, and bulbar conjunctiva should be observed.
- Glossitis and stomatitis show evidence of malnutrition in the tongue, teeth, gums, and tonsils. Any infection in the mouth must be eradicated.
- Neck- Neck veins, thyroid gland, lymph glands are looked for any abnormality.
- Edema of the legs- Both the legs are to be examined, the sites are over the medial malleolus and internal surface of the lower 1/3rd of the tibia.

**2. Vital Signs:** Assess the pulse, BP, respiration and temperature.

### **3. Systemic examination:**

- Heart, lungs, Liver and spleen- are to be check for any abnormality.
- Breast- Nipples should be checked (Cracked or depressed and skin condition areola).
- Eyes- Pallor, Jaundice
- Breast-Nipple cracked/ depressed, symmetry, secondary areola, montgomery's tubercle

### **4. Obstetrical examination:**

- Abdominal Examination – Assess for abdominal muscle tone, any previous incisional scar.
- Vaginal Examination

### **5. Routine investigation**

- Examination of the blood
- Urine is examined routinely for protein, Sugar and pus cells.

### **6. Special investigation**

- Serological tests for rubella and hepatitis B virus

- Ultrasonography examination
- Maternal serum alpha-fetoprotein

#### 7. Booking should be done.

- **Procedure at the subsequent visits:** Generally check up is done at interval of 4 weeks up to 28 weeks, at interval of 2 weeks up to 36 weeks and there after weekly till the expected date of delivery. In the developing countries, as per WHO recommendation, the visit may be curtailed to at least 4; first in second trimester around 16 weeks, second between 24-28 weeks, the third visit at 32 weeks and fourth visit at 36 weeks.
- **Objectives of subsequent visit:** To assess-
  - Health of the fetus.
  - The number, lie, presentation, and position of fetuses.
  - Fetal growth, preeclampsia, amniotic fluid volume, and anemia.
  - Detect and treat conditions such as diabetes and cardiac disease.
  - To decide whether to do an ultrasound amniocentesis or chorionic villous biopsy when necessary.
- **History collection:** History to be collected regarding appearance of any new complaints, quickening, lightening.
- **General examination:** Weight, pallor, oedema of legs, BP monitoring
- **Abdominal examination:**
  - 1<sup>st</sup> trimester: Height of the fundus
  - 2<sup>nd</sup> trimester: External ballotment, fetal movements, palpation of the fetal parts, fundal height.
  - 3<sup>rd</sup> trimester: Identify lie, presentation, position, growth pattern, engagement, girth of the abdomen, fundal height.



**Figure 1: Figure showing Antenatal Examination**

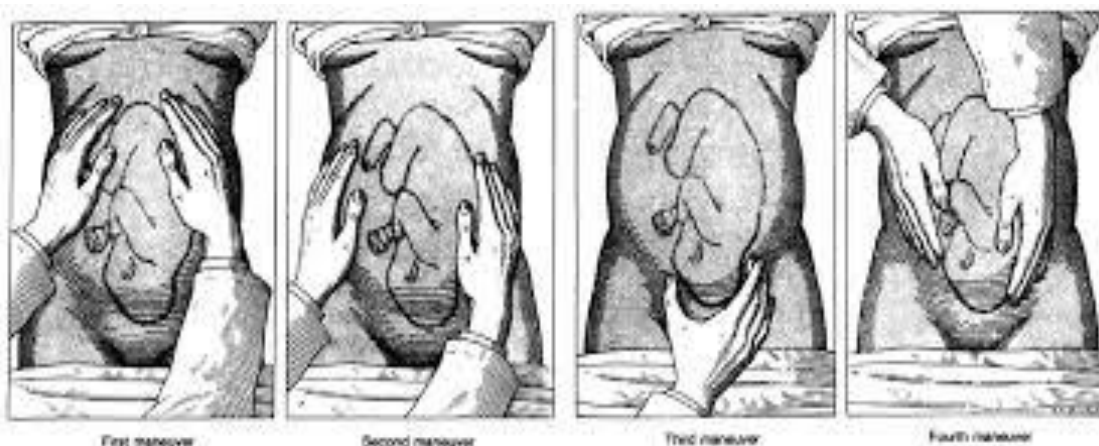
Uncover the patient's abdomen from the xiphisternum to the pubic hairline, ensuring adequate exposure while allowing for patient modesty. Abdominal wall relaxation is maximized by the patient resting her arms alongside her abdomen, rather than behind her head. The patient's legs may also be slightly flexed at the hips to aid relaxation.

- **Inspection:** The presence of an abdominal mass arising from the pelvis consistent with pregnancy, scars, pigmentation or other skin lesions are noted. Fetal movements may be observed.

- **Palpation**

<b>Fundal Palpation (First Maneuver)</b>	<ul style="list-style-type: none"> <li>• Fundal palpation can be done using the finger tips or palmar surface of the fingers.</li> <li>• First nurse should face towards the women head.</li> <li>• To determine which fetal pole is in the fundus, the entire fundal area is palpated with both hands flat on the skin.</li> <li>• Palpate the fundus to feel for the fetal portion to check its size, shape, consistency, and mobility.</li> </ul>	<ul style="list-style-type: none"> <li>• The head is represented with a rounded, firm, easily movable portion that can be balloted between the fingers of both hands.</li> <li>• A breech is indicated by an irregular, bulky, less hard, poorly defined, or moveable portion.</li> <li>• Neither head nor breech suggests a transversal lie.</li> </ul>
<b>Lateral Palpation (Second Maneuver) or Umbilical grip</b>	<ul style="list-style-type: none"> <li>• Maintain your gaze on the side of woman's head.</li> <li>• Put your hands on either side of the uterus, roughly halfway between the fundus and the symphysis pubis.</li> <li>• Press one hand against the uterine side, pushing the fetus to the other side and stabilize there.</li> <li>• Using smooth pressure and rotator movements, palpate the other side abdomen with the examining finger from the midline to the lateral side and from the fundus.</li> <li>• Repeat the process for the inverse.</li> </ul>	<ul style="list-style-type: none"> <li>• A smooth, curved, hard resistant surface indicate back.</li> <li>• Small, knob irregular parts or modules indicate limb.</li> </ul>
<b>Pawlicks grip (Third Maneuver)</b>	<ul style="list-style-type: none"> <li>• Maintain your gaze on the woman's head side.</li> <li>• The woman should be</li> </ul>	<ul style="list-style-type: none"> <li>• The foetal head is easily mobile and ballotable if it is above the brim; if it is</li> </ul>

	<p>positioned with her knee bent.</p> <ul style="list-style-type: none"> <li>• Grab the region of the lower abdomen directly above the symphysis pubis with the thumb and middle finger of one hand.</li> </ul>	<p>not ballotable, the head is engaged.</p>
<p><b>Pelvic Palpation (Fourth Maneuver)</b></p>	<ul style="list-style-type: none"> <li>• The nurse should face the woman's feet, and the woman should be seated with her knees bent.</li> <li>• With the palms slightly below the umbilicus and the fingers pointed toward the symphysis pubis, place the hands on the sides of the uterus.</li> <li>• Your fingertips should be pressed firmly into the lower abdomen and moved in the direction of the pelvic inlet.</li> <li>• Hands should be covering the presenting part while the head is not engaged.</li> </ul>	<ul style="list-style-type: none"> <li>• The engagement of the head is determined by this maneuver.</li> <li>• If the head is present, one hand's fingers will feel the occiput, while the other hand's fingers will feel the cephalic prominence.</li> </ul>



**Figure 2: Figure Showing Techniques of Abdominal Palpation**

**FHR monitoring:** A Normal fetal heart rate is 110-160 beats per minute. With a pinard stethoscope in particular, the fetal heart may be heard over the fetal back.

- **Per vaginal examination:** Early in pregnancy, a vaginal exam is beneficial.
  - To establish the diagnosis of pregnancy
  - To decide whether the pregnancy is uterine or extra uterine.

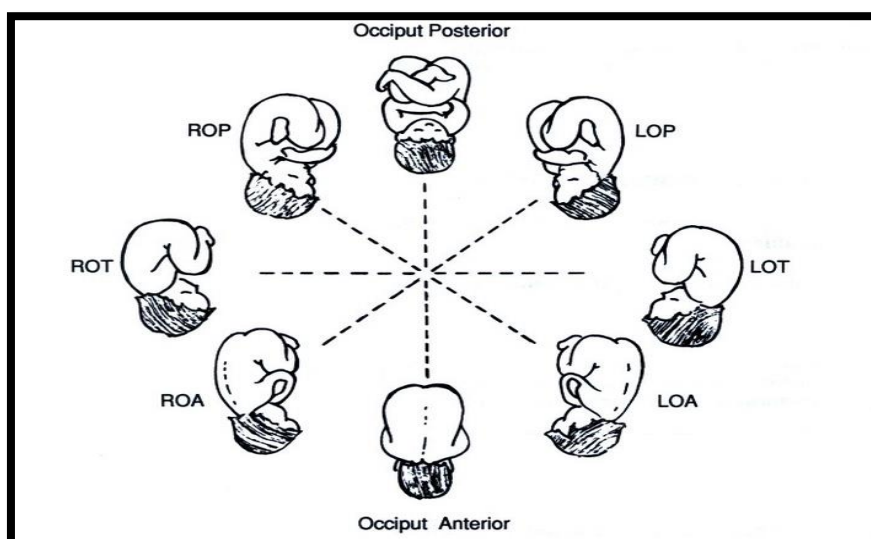


- To ascertain whether there are any tumors or abnormalities in the genital tract complicating pregnancy.

It helps with the diagnosis of the fetus's presentation and position in the later weeks and particularly close to delivery, as well as the evaluation of the pelvis. Because there is always a chance of infection from a casual vaginal inspection, the procedure should be done using only antiseptic solution.

- **The fetus – in - Utero**

- **Lie:** The relationship of the fetus long axis to the long axis of the uterus or maternal spine is referred to as the lie. The lie can be longitudinal (99% of the time), transverse, or oblique.
- **Presentation:** The part of the fetus that occupies the uterine lower pole. There is a chance for cephalic (96%), podalic (3%), shoulder (0.5%), and other (0.5%) appearances.
- **Presenting part:** The area of the presentation that can be seen above the external os. The vertex (commonest), brow, or face are the parts that present in cephalic presentation depending on how far the head is flexed.
- **Attitude:** The relationship between the various parts of the fetus. Flexion is the most common attitude.
- **Denominator:** The maternal pelvic quadrants are represented by this arbitrary bony fixed point. The following are the commonalities among the various presentations Acromion in the shoulder, mentum in the face, frontal eminence in the brow, sacrum in the breech, and occiput in the vertex.
- **Position:** It is the relationship between the denominator and the various pelvic quadrants. To insert the denominator in each section, the pelvis is divided into equal segments at 45 degrees. There are therefore 8 positions, each displaying a different portion, such as LOA, LOP, LOT, ROA, ROP, and ROT for the cephalic presentation and LMA, LMP, LMT, RMA, RMP, and RMT for the facial presentation.



**Figure 3: Figure Showing Position of Fetus**

## XII. MIDWIFERY SERVICES IN ANTENATAL CARE:

1. **Diet:** During pregnancy, the diet should be adequate to ensure:

- good maternal health
- optimal fetal growth;
- the strength and vitality required during labor; and
- successful lactation.

Pregnancy increases the body's need for calories since the mother's tissues, the foetus, the placenta, and her basal metabolic rate all grow larger.

The amount of calories needed increases by 300 over the pre-pregnancy level during the second half of pregnancy. In general, the pregnant woman's diet should be her choice in terms of both quantity and type. Women with a normal BMI should consume enough calories to reach the proper weight (11 kg). Women who are obese (BMI greater than 29) should gain less weight, whereas overweight women with a BMI of 26 to 29 should keep their weight gain to no more than 7 kg. The risk of antepartum and intrapartum problems, like foetal macrosomia, is increased by excessive weight growth.

2. **Antenatal hygiene:** The following are recommendations for maintenance of antenatal hygiene :

- **Rest and sleep:** The patient is able to carry on with her regular activities while pregnant. On the other hand, excessive and demanding employment should be avoided, especially during the first trimester and the last four weeks of pregnancy. As long as she feels comfortable, recreational activity is acceptable.
- **Bowel:** In the bowel, constipation is extremely typical. Pain in the back and the abdomen are potential side effects. Regular bowel movements can be aided by consuming lots of water, vegetables, and milk as well as by taking stool softeners before night. The hardness of the stool may lead to haemorrhoids, painful fissures, or rectal bleeding.
- **Bathing:** Daily bathing is recommended for the patient, who should take care not to fall in the bathroom due to imbalance. The patient is allowed to carry on with her regular activities while pregnant. On the other hand, excessive and demanding work should be avoided, especially during the first trimester and the final four weeks.
- **Clothing, shoes, and belt:** Dress the patient comfortably and loosely. When the pregnant centre of balance shifts, high heels should be avoided. Avoid wearing belts that are too tight.
- **Dental care:** It is critical to maintain good dental and oral hygiene. A dentist should be consulted if necessary. If necessary, the caries tooth can be extracted or filled during the second trimester.
- **Breast health care:** In late pregnancy, breast enlargement can be painful. A properly fitting brassiere can offer comfort.

- **Coitus:** In general, coitus is permitted throughout pregnancy. During coitus, prostaglandins and oxytocin may be released, which could cause uterine contractions. If their uterus is hyperactive, women who are more likely to experience miscarriage or early delivery should refrain from coitus.
  - **Travel:** Avoid riding in jerky cars as much as possible, especially in the first trimester and the last six weeks. The lengthy trip need to be kept to the second trimester, at most. The train travel option is preferable to the bus. It is safe to fly in pressurized aeroplanes for up to 36 weeks. Flying should be avoided if you have sickle cell disease, pre-eclampsia, severe anaemia, or placenta praevia.
  - **Smoking and alcohol:** It is important to avoid smoking not only during pregnancy but also after because it is bad for one's health. Heavy smokers are more likely to have an abortion and have premature birth. Alcohol use should be strongly restricted or avoided to prevent foetal maldevelopment.
- 3. Immunization:** Live virus vaccines (rubella, measles, mumps, and yellow fever) should not be given to a pregnant women but Rabies, Hepatitis A and B vaccines, and Tetanus toxoids can be given to pregnant women .

### **XIII. GENERAL ADVICE**

On the appointed day, the patient needs to be convinced to come in for a prenatal checkup. If any unexpected symptoms such as a strong headache, disturbed sleep with restlessness, urinary issues, epigastric discomfort, vomiting, or sparse urination appear, she is recommended to call the doctor as soon as possible.

It is recommended that pregnant women visit the hospital to be admitted if they experience

1. Every ten minutes or less, for at least an hour, painful uterine contractions that are suggestive of the beginning of labour.
2. A sudden gush of watery fluid from vagina.
3. In case of vaginal bleeding, no matter how minor.

### **XIV. RISK APPROACH OF OBSTETRICAL NURSING CARE AND SCREENING OF HIGH RISK PREGNANCY:**

High risk pregnancy is one in which mother, fetus and new born is or will be at increased risk for mortality and morbidities due to problems and complication during pregnancy.

The risk approach strategy is expected to have far-reaching consequences for the entire MCH/FP service organization, leading to improvements in health care coverage and quality at all levels, particularly primary health care. Maximum utilization of all resources is inherent in this approach, including some human resources that are not traditionally involved in such care, such as traditional birth attendants, community health workers, and women's groups.

**1. Risk approach of obstetrical nursing care:** A high-risk pregnancy is one in which some condition puts the mother, the developing fetus or both at higher-than-normal risk for complications during or after the pregnancy and birth.

## **2. High risk mothers**

### **The high risk mothers are:**

- Women in their first trimester who are under 18 or over 35.
- Women who have given birth and/or had four or more pregnancies.
- Elderly grandmultiparas.
- Women who had a history of previous CS, instrumental delivery.
- Short statured primi(140 cm and below)
- Malpresentation like breech, transverse lie, shoulder presentation etc.
- Antepartum haemorrhage
- Preeclampsia and eclampsia
- Anemia
- Twins, hydraminos
- Manual removal of placenta
- Previous stillbirth, intrauterine death and Abortion.
- Prolonged pregnancy(14 days – after expected date of delivery)
- Pregnancy associated with medical disease like cardiac disease, epilepsy, psychiatric illness, thyroid disorder, spinal injury, kidney disease, hypertension, diabetes, tuberculosis, liver disease etc.
- Unmarried mother of low economic status.
- Those who have practiced less than 2 years or more than 10 years of birth spacing.
- Obstructed labor
- Congenital abnormalities of fetus.
- Those with cephalo pelvic disproportion(CPD).
- The mother's blood type is Rh-negative.
- Those who are overweight or undernourished.

**3. Maternal risk factors:** The likelihood of suffering a serious harm as a result of pregnancy or childbirth is known as maternal risk. The likelihood of problems and complications arising varies. Some depend on different risk variables and are more at danger than others. These are discussed as under:

- **Young Primi (those under the age of 19):** Because the teenage mother:
  - Is still developing and is not prepared to handle pregnancy and labour, there is a serious risk to the mother and the unborn child. A growing number of factors contribute to suboptimal breastfeeding, including insufficient breast development, early labour, low birth weight, and poor uterine function during pregnancy.
  - Is unprepared for the obligations of marriage, childbirth, and raising children. The family became tense and strained as a result.
  - Has expanding nutritional needs as a result of her own development, and the developing foetus is at higher risk for anemia, malnutrition, and low birth weight babies.

- **Elderly primi, or those over 30 years old:** The risk of difficulties during pregnancy and labour increases with delayed childbirth, which can include:
  - Heavy bleeding before and after child birth.
  - Malpresentation resulting in difficult labor.
  - Aggravated blood pressure
  - Forceps delivery or by caesarean operation
  - Delay in expulsion of placenta.
  - Low birth weight babies.
  
- **Increasing number of children:** Due to repeated pregnancies and labour, a mother who has more than three children is at a significant risk of acquiring health issues. This result from the mother's weakening of tissues, depletion of nutrients, and general poor physical health brought on by multiple pregnancies. Among the issues brought on by multiparity are:-
  - Malnutrition leading to anaemia.
  - Antepartum and postpartum haemorrhage
  - Difficult and obstructed labor resulting in perineal tear, uterine rupture involving immediate surgical intervention.
  - Prolapse of uterus
  - Still birth
  - Neonatal death
  - Premature delivery
  - Low birth weight baby
  
- **Having close-spaced pregnancies:** When there is fewer than three years between pregnancies, it can cause complications since the mother did not have the time to fully heal from the stress and strain of the prior pregnancy. When the number of children being born also rises, repeated pregnancies at close intervals might result in nutrient inadequacy, anemia, low birth weight babies, and all the other issues listed previously.

Pregnancy at short intervals not only affects the health of the mother and child being born but also the health of other children in the family because they get neglected as mother cannot give her attention to them.

- **Associated health issues:** This includes:
  - Heart disease
  - High blood pressure
  - Kidney disease
  - Tuberculosis
  - Diabetes
  - Repeated attacks of malaria
  - Hepatic disorder
  
- **Other maternal conditions**
  - Among other factors, mothers who are low in stature, or who are under 145 cm, have a small and inadequate pelvis. These mothers frequently have difficult labours and require a caesarean section to deliver their babies safely.

- Mothers who weigh less than 40 kg are more likely to experience pregnancy difficulties since they are typically malnourished and anemic.
- Mothers who weigh more than 70 kg experience labor difficulties. While under anesthesia, they may also experience respiratory difficulty and issues. Mother's life may be lost occasionally.
- Mothers who are underweight and anemic. Some mothers struggle to cope with the stress and pressure of pregnancy and childbirth due to their fragility.
- **Previous abnormal obstetrical history:** These includes history of: -
  - Antepartum bleeding and possible abortion.
  - Preeclampsia and eclampsia
  - Malpresentations, twins, hydramnios.
  - Intrauterine death, stillbirth, manual removal of placenta.
  - Instrumental or caesarean delivery.
  - These conditions can pose serious problem to the life of both mother and baby. These can be reduced considerably with adequate proper care and timely medical attention.

#### 4. Prevention of High Incidence of High Risk Pregnancies

- By improving women's prenatal health.
- Giving excellent prenatal care.
- Screening for high-risk pregnancies in all pregnancies.
- Specialists should deliver prompt clinical and technological care.
- MCH-FP care health education.

#### 5. Screening of high risk pregnancy

- **Biophysical Assessment**
  - Ultrasonography
  - Radiology in Obstetrics
  - Magnetic Resonance Imaging
- **Biochemical Assessment**
  - Amniocentesis
  - Alpha-fetoprotien (AFP)
  - Percutaneous Umbilical Blood Sampling (PUBS) or Cordocentesis
  - Chrionic Villus Sampling
  - Maternal Blood Assessments
  - Placental Biopsy
- **Electronic Monitoring**
  - Nonstress test
  - Contraction Stress Tests/ Oxytocin Challenge test
  - Daily Fetal Movement Count (DFMC) or Kick Counts.

## XV. CONCLUSION

Antenatal care is preventive healthcare provided during pregnancy. During pregnancy, it is critical that the pregnant woman receives proper care, regular check-ups, and has all necessary tests performed on time. Throughout the course of a pregnancy, antenatal

care is aimed at preventing potential health issues and promoting a healthy lifestyle for both mother and child.

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