Antenatal care is the mainstay of health care for pregnant women.

**Purpose**

Its purpose is to maintain the best positive state of health of mother and fetus by screening for actual and potential problems as early as possible and by instituting appropriate referral or management. It is also essential that those involved in antenatal care ensure that advice is made available to the woman and her partner.

**Responsibility**

In most poor countries, antenatal care is provided in the public sector by community clinics and hospitals. Despite this, the GP is often the first provider of antenatal care. Large numbers of women, particularly in South Africa, consult a GP to confirm pregnancy and by implication to obtain advice on health care during pregnancy, labour and the puerperium. The GP, therefore, has the responsibility to discuss with women the choices of care available, the place of birth and the pattern of antenatal supervision. Antenatal care may be shared between the GP and specialist and/or public sector facility. Even if the GP does not provide routine antenatal services, he/she must take the window of opportunity to fulfil the components of the basic standard of antenatal care, particularly as most women in poor countries attend a doctor for the first time when they are pregnant.

**Components of basic antenatal care**

The undernoted should be regarded as a basic standard of care and the GP should initially provide advice and information, do a general examination and initiate routine screening tests:

- Early clinical assessment of the mother and identification of risk factors.
- Confirmation of pregnancy by history, examination and urine test, if appropriate.
- Ultrasound, if available, for assessing gestational age, excluding gross fetal abnormalities and multiple pregnancies.
- Counselling and screening for detectable congenital abnormalities.
- Regular visits shared between health professionals. In most cases in South Africa, deliveries occur in hospitals. The GP may be able to check on blood pressure values regularly, do urine tests for proteinuria and glycosuria, and follow up the mother and baby in the puerperium.
- Regular examination to detect impaired fetal growth and obstetric and medical disorders.
- An active health education programme and advice on a healthy lifestyle.

The GP might not be able to do all of the above, but should take the opportunity to assess and perform the following investigations:

**Blood pressure** should be measured and should be below 140/90 mmHg.

**Urine** should be tested for protein and sugar. Glycosuria is common, but if persistent or recurrent a glucose tolerance test should be performed. When protein is detected, contamination and infection should be excluded.

**Haemoglobin.** The haemoglobin level should be estimated at the first visit and again between 30 and 34 weeks. Levels below 10 g/dl are indicative of anaemia, regardless of gestation.

**Rhesus testing.** Rhesus-negative women are identified at the booking visit. If the rhesus test is negative, rhesus antibody testing must be done.

**Syphilis testing.** A rapid plasma reagin is the standard screening test,
and in general titres of 1:8 and greater are managed immediately, i.e. the women and her partner are informed, advised, and treated.

HIV testing. Pregnant women should be offered voluntary counselling and testing.

Common complaints
Subjective complaints
Fatigue, somnolence, headache, and/or ‘blackouts’ are often noticed in the early months, but their cause is uncertain. Hypotension, secondary to peripheral vasodilatation, may be responsible for feelings of faintness. Reassurance, explanation and advising the patient to rest are probably the best measures.

Morning sickness
Nausea and vomiting, probably due to the effects of large amounts of circulating steroids, especially oestrogens or human chorionic gonadotrophin (HCG), seldom last after the 16th week. They can occur at any time of the day and are aggravated by cooking and fatigue. Mild cases are treated by a light carbohydrate diet (biscuits and milk) in the morning and sometimes by anti-emetics. If the condition worsens, it becomes hyperemesis gravidarum and is best treated in hospital.

Constipation
This is due primarily to the relaxing effect of progesterone on smooth muscle. A bowel motion every 2nd or 3rd day is perfectly consistent with good health, but sometimes laxatives are required. Any of the commonly used laxative drugs may be taken with safety.

Heartburn
The enlarging uterus encourages oesophageal reflux of gastric acid. Sleeping in a semi-recumbent position is helpful. Antacids or compound presentations with alginates can safely be prescribed.

Pelvic pressure
Pressure from the enlarged uterus gradually obstructs venous return and may lead to haemorrhoids and varicose veins of the legs and vulva. Support tights may be helpful for leg varicosities and suppositories are used for haemorrhoids. Varicosities of the vulva are treated by advising the patient to rest.

Vaginal discharge
Increased secretion of cervical mucus and the vascularity of the vagina combine to produce a fairly copious discharge in pregnancy. It should not be offensive or itchy and ordinary hygiene should be the only treatment required.

Infection with Candida albicans, however, is a common complication. This is encouraged by the warmth and moisture of the vulva and vagina together with the increased vaginal glycogen, which favours growth of the fungus. The complaints are discharge and constant irritation. A swab should be taken, which should indicate the characteristic plaques of yeast.

Trichomonads may also be seen.

Bacterial vaginosis is said to be common in pregnancy and may be associated with some cases of preterm labour.

Candidal and trichomonal infection are treated with clotrimazole pessaries. It may be difficult to eradicate in pregnancy, but treatment is desirable to relieve symptoms and to reduce the chances of infecting the fetus during its passage down the vagina.

Other issues
Over recent years, two main themes have developed in the provision of antenatal care:
- Recognition of mental illness during pregnancy and risk assessment of postnatal depression in the antenatal period and puerperium. A high index of suspicion must be maintained by all caring for pregnant women, who must be referred early if there is anxiety regarding this aspect of maternal health.
- Recognition of increased levels of domestic violence, which may be seen in pregnancy and in the puerperium. Often women will not make a complaint of any form of abuse, which makes helping them difficult. An empathic manner may enable them to express themselves and seek help. Again, all of those involved in the care of pregnant women must be alert to the possibility of domestic abuse and engage with those social services which may offer aid.

Pelvic joint pain
This can occur during pregnancy because the ligaments of the pelvic joints are softened and relaxed by steroid-induced fluid retention and the increased vascularity which occurs in all the soft tissues. The pelvis becomes less rigid, which may be of some advantage in labour. However, movements can now take place in joints which are normally immovable and various symptoms may arise.

Backache and sacro-iliac strain may occur because the softening of ligaments is aggravated by the postural change of pregnancy, a characteristic lordosis as the uterus grows.

Separation of up to 1 cm of the symphysis pubis is accepted as normal. However, it may go beyond this, and together with sacro-iliac pain can be crippling. The only treatment is support, bed rest and analgesics.

Carpal tunnel syndrome
The median nerve is compressed in the carpal tunnel under the flexor retinaculum. Pregnant women often complain of tingling pain in the fingers supplied by the median nerve. It is worst on waking, when the fingers feel lifeless. There is reduced pinprick sensation in the affected area, but little else is found on examination. The usual treatment is to immobilise the wrist with splinting. Occasionally diuretics are employed although they are not of proven value. In extreme cases, surgical management may be required.

In conclusion, GPs play an important role in antenatal care, particularly as women and children form a significant proportion of their patients. The GP needs a basic understanding of the diagnosis of pregnancy and its management during the antenatal period and the puerperium.