

# Basic Antenatal care



health

Department:  
Health  
REPUBLIC OF SOUTH AFRICA



# What can antenatal care achieve?

# Conditions that can be successfully detected and treated during the antenatal period

<b>Maternal condition</b>	<b>Worst effect on pregnancy</b>
Anaemia	More likely to bleed, smaller babies
Hypertension and pre-eclampsia	Convulsions, haemorrhage, maternal deaths, fetus/neonatal death
Medical diseases e.g. diabetes mellitus, epilepsy, heart disease	Maternal death; fetus/neonatal death
HIV/AIDS	Maternal death; preterm birth, growth impaired babies, HIV infected babies
Chronic infections e.g. tuberculosis	Maternal deaths; fetus/neonatal death
Urinary tract infections	Maternal kidney infection, preterm labour, fetus/neonatal death
Vaginitis and other sexually transmitted infections	Preterm labour, fetus/neonatal death
Malnutrition	Small babies

# Conditions that can be successfully detected and treated during the antenatal period

Fetal condition	Worst effect on pregnancy
Poor fetal growth	Fetus/neonatal death
Post-maturity	Meconium aspiration, fetus/neonatal death
Congenital infections e.g. syphilis	Fetus/neonatal death
Congenital abnormalities	Fetus/neonatal death
Twins, triplets	Preterm labour, fetus/neonatal death
Abnormal fetal lie (Breech)	Ruptured uterus, fetus/neonatal death
Rhesus isoimmunisation	Anaemic or jaundiced neonate, fetus/neonatal death

# Effective interventions during the antenatal period.

<b>Problem</b>	<b>Prevention</b>	<b>Screen/diagnose</b>	<b>Treatment</b>
<b>Mother</b>			
<b>Anaemia</b>	Iron and folate prophylaxis	Check haemoglobin	Iron and folate or iron injections or blood transfusion
<b>Hypertension/pre-eclampsia</b>	Calcium supplementation	Check blood pressure, urine	Treat hypertension
<b>Syphilis</b>	As for STIs	RPR, VDRL	Penicillin
<b>Vaginitis</b>	As for STIs	Syndromic approach	Appropriate antibiotics
<b>Urinary tract infection</b>	Personal hygiene	Urine dipsticks or urine culture	Appropriate antibiotics

# Effective interventions during the antenatal period.

Problem	Prevention	Screen/diagnose	Treatment
<b>HIV/AIDS</b>	As for STIs	HIV counselling and testing	Antiretroviral therapy for mother, VTP for neonate
<b>Tuberculosis</b>	TB prophylaxis where indicated	TB symptom screen, sputum specimen	Anti TB drugs
<b>Malaria</b>	Prophylaxis	Blood testing	Anti malarial drugs
<b>Pre-existing medical conditions, Diabetes, heart disease, epilepsy</b>		History and examination	Refer
<b>Gestational diabetes mellitus</b>		Family history, previous baby's birth weights, Glycosuria	Investigate, Treat as necessary or refer
<b>Malnutrition</b>	Balanced protein/calorie supplementation, multivitamin supplementation	History, clinical examination (Body/mass index or MUAC)	Refer to social workers, Food supplementation

# Effective interventions during the antenatal period.

Problem	Prevention	Screen/diagnose	Treatment
<b>Fetus</b>			
<b>Poor fetal growth</b>	Balanced protein/calorie supplementation, Advice on smoking	Uterine growth (serial symphysis-fundus measurements)	Timely delivery
<b>Post-maturity</b>	Accurate gestational age	Calculate gestational age	Induce labour at 41 weeks gestation
<b>Multiple pregnancies</b>	Careful assisted reproduction	Uterine growth, Sonar	Refer
<b>Breech presentation</b>		Uterine palpation	External cephalic version/ Caesarean section
<b>Congenital abnormalities</b>	Peri-conception folic acid supplementation, Advice on alcohol consumption	Maternal age, previous history, Uterine growth, Sonar abnormalities	Refer to specialists
<b>Rhesus isoimmunisation</b>	Anti -D prophylaxis for Rh negative women in previous pregnancy	Rapid Rh, Coombs test for Rh negative women	Refer Rhesus negative women with anti-D antibodies
<b>Neonatal tetanus</b>	Tetanus Toxoid immunisation		

# What are the principles of antenatal care?



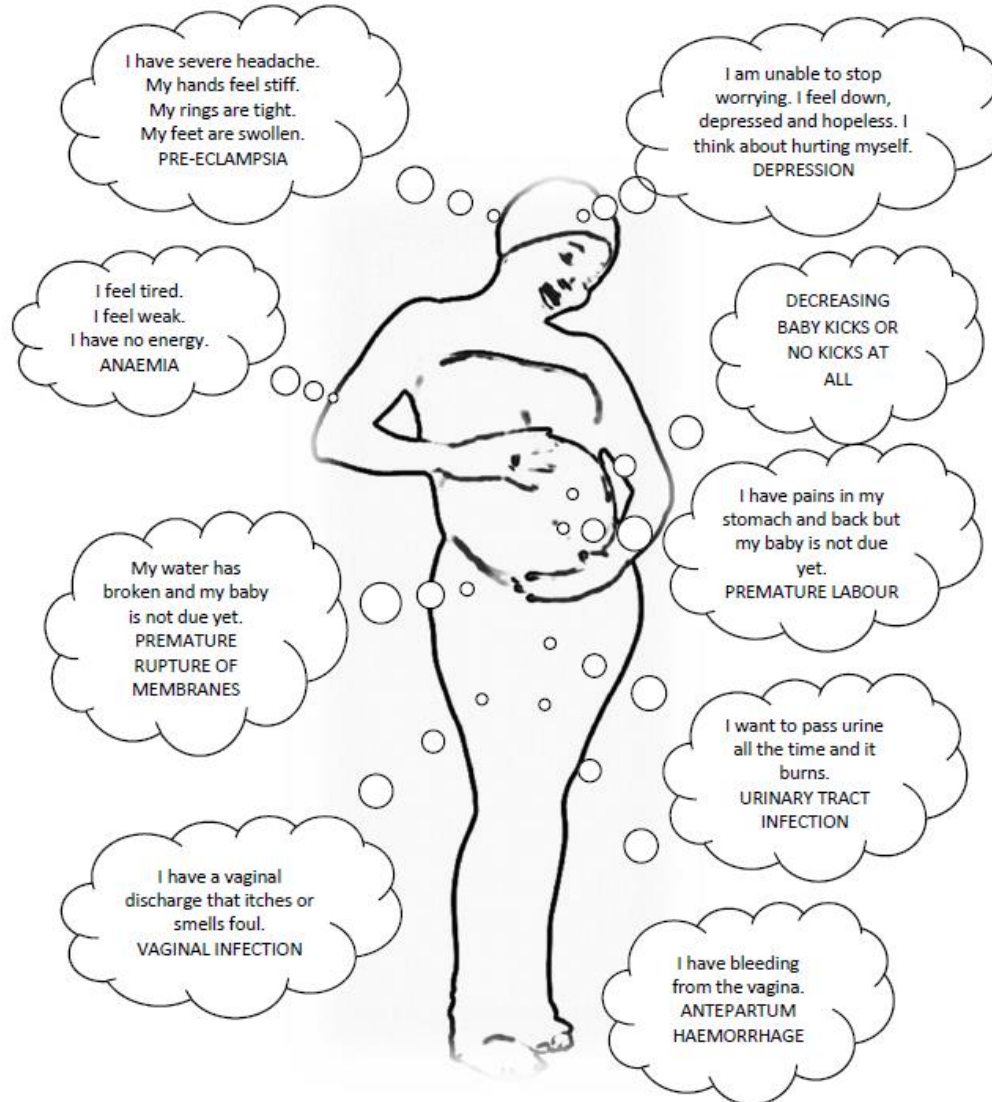
# The principles of Basic Antenatal Care Plus

- Identification of women with special health conditions and/or those at risk of developing complications using a simple checklist
- Those women with special health conditions or risk factors should be referred to higher levels of care. Care must be taken to ensure identification of all women with special health conditions or risk factors.
- Timing the visits such that the maximum benefit can be obtained, without wasting human resources.

# The principles of Basic Antenatal Care Plus

- Performing only examinations and tests that have been proven to be beneficial, and at the most appropriate time
- Wherever possible, rapid easy-to-perform tests should be used at the antenatal clinic or in a facility close to the clinic. The results should be available the same day so treatment can be initiated at the clinic without delay
- Health care providers should make all the pregnant women feel welcome at their clinic, and it should be convenient for the pregnant women to attend the clinic. This implies opening hours of the clinics should be as convenient as possible to the women to come to the clinic.

## Danger signs in pregnancy





# Determining gestational age

- LMP
- Ultrasound:
  - 1<sup>st</sup> trimester +/- 3 days
  - 2<sup>nd</sup> trimester +/- 2 weeks
  - 3<sup>rd</sup> trimester >3 weeks (too late)
- SF measurement
  - MacDonald's Rule
  - (Cm of fundal height ~ weeks gestation)

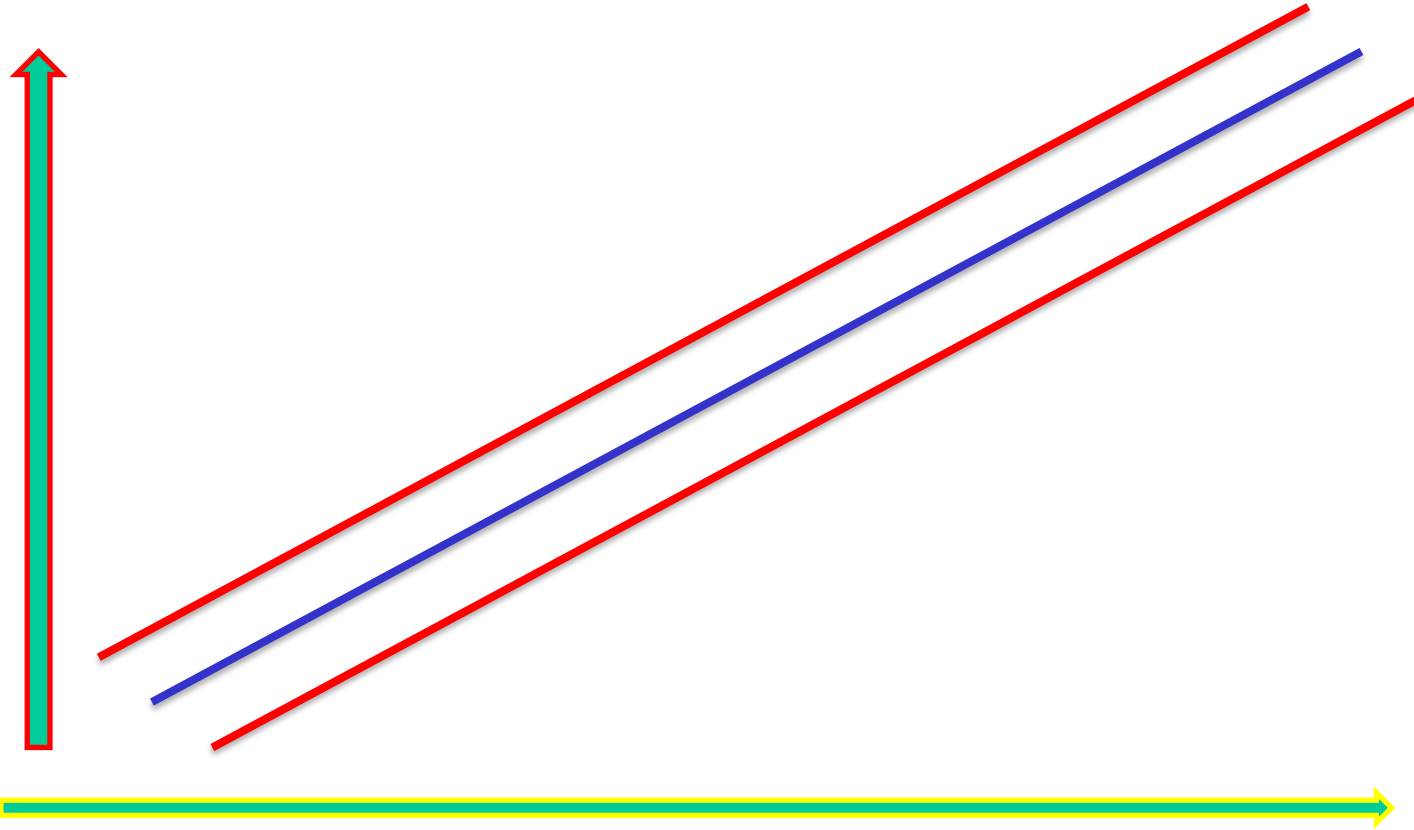
# How to measure the SF





# Graphs

Growth in  
centimetres

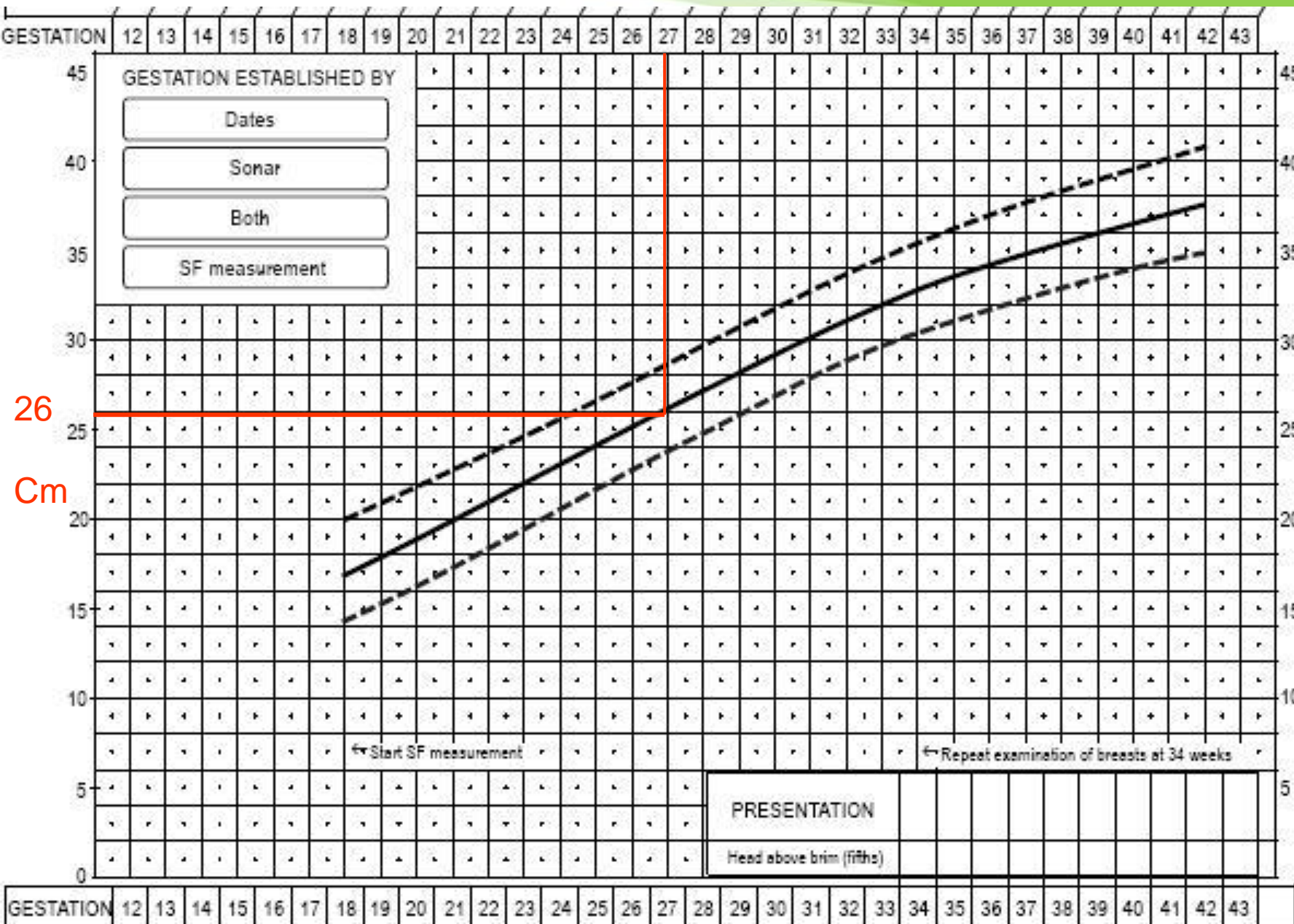


Time in weeks



27

Weeks

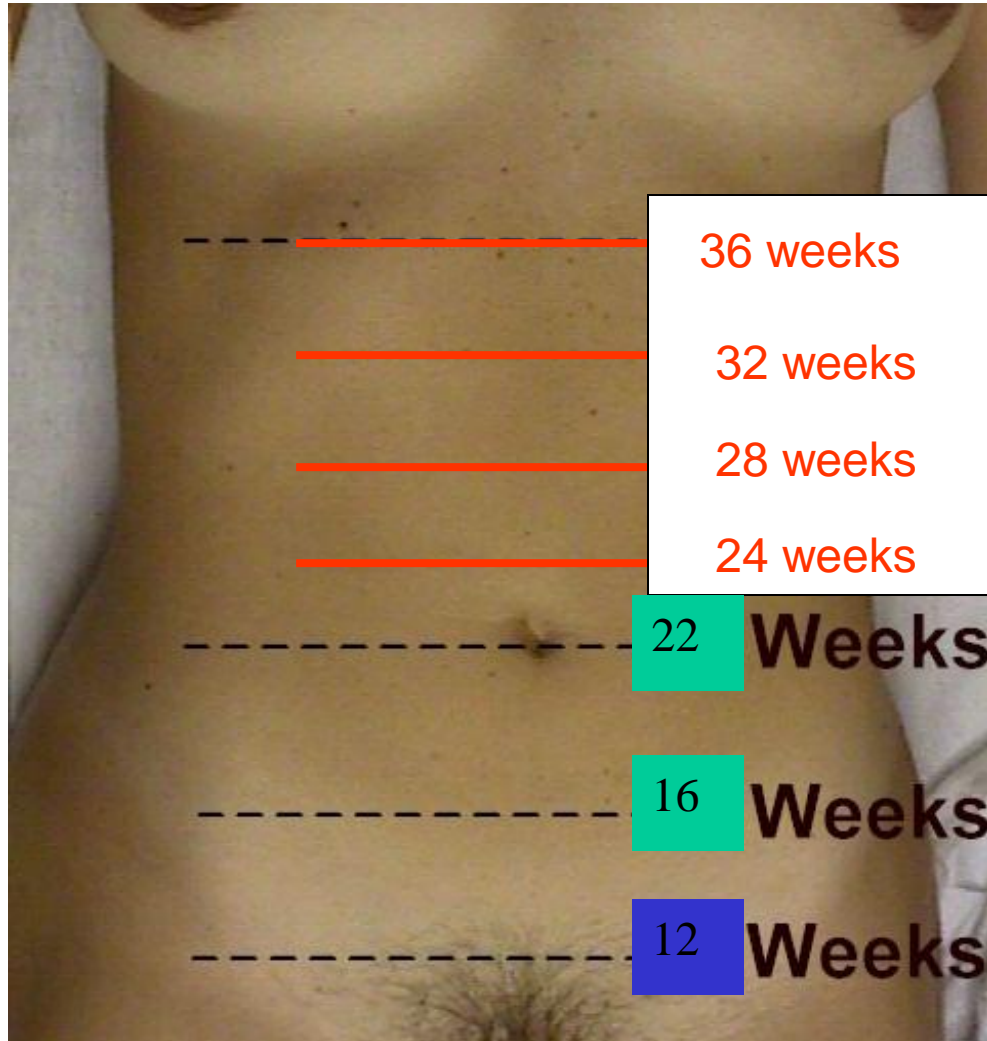


26  
Cm

# Determining gestational age

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- Clinical
- Dates (LMP)
- Confirmed by ultrasound <24 weeks (difference less than 2 weeks)
- SF measurement



# Determining gestational age

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- If ultrasound available <24 weeks-  
**USE ULTRASOUND!**
  - If BMI >35, can use sonar gestation up to 28 weeks

# Determining gestational age

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- If ultrasound not available
  - Work out gestation according to dates (in weeks)
  - Measure SF
  - Check on card, on 50%, how many weeks the SF would have made her
  - If difference small ( $< 4$  weeks), plot according to dates

# Determining gestational age

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- If unsure dates, no ultrasound
  - Measure SF
  - Plot on card, on 50<sup>th</sup> percentile
  - Refer for ultrasound

# Uterus smaller than expected

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**Wrong dates**

**IUGR**

**Oligohydramnios**

**IUD**

**ROM**

**→send to Fetal Evaluation Clinic or Doctor's clinic**

# Uterus bigger than expected

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**Wrong dates**

**Multiple pregnancy**

**Large fetus**

**Diabetes mellitus**

**Polyhydramnios**

**→ refer to FEC or Doctor's clinic**



# BANC plus clinic checklist – classifying (first) visit

Name of patient _____	Clinic record number						
Address _____							
<b>INSTRUCTIONS:</b> Answer all the following questions by placing a cross mark in the corresponding box							
<b>Obstetric History</b>							
	<b>No</b>	<b>Yes</b>					
1. Previous stillbirth or neonatal loss?	<input type="checkbox"/>	<input type="checkbox"/>					
2. History of 3 or more consecutive spontaneous miscarriages?	<input type="checkbox"/>	<input type="checkbox"/>					
3. Birth weight of last baby < 2500g?	<input type="checkbox"/>	<input type="checkbox"/>					
4. Birth weight of last baby >4500g?	<input type="checkbox"/>	<input type="checkbox"/>					
5. Last pregnancy: hospital admission for hypertension or pre-eclampsia/eclampsia?	<input type="checkbox"/>	<input type="checkbox"/>					
6. Previous surgery on reproductive tract (e.g. Caesarean section, myomectomy, cone biopsy, cervical cerclage)	<input type="checkbox"/>	<input type="checkbox"/>					
<b>Current pregnancy</b>							
7. Diagnosed or suspected multiple pregnancy	<input type="checkbox"/>	<input type="checkbox"/>					
8. Age < 16 years	<input type="checkbox"/>	<input type="checkbox"/>					
9. Age > 37 years	<input type="checkbox"/>	<input type="checkbox"/>					
10. Isoimmunisation [Rh (-) WITH ANTIBODIES] in current or previous pregnancy	<input type="checkbox"/>	<input type="checkbox"/>					
11. Vaginal bleeding	<input type="checkbox"/>	<input type="checkbox"/>					
12. Pelvic mass	<input type="checkbox"/>	<input type="checkbox"/>					
13. Systolic BP ≥140mmHg and/or diastolic BP 90 mmHg or more at booking, or known chronic hypertension	<input type="checkbox"/>	<input type="checkbox"/>					
<b>General medical</b>							
14. Diabetes mellitus on insulin or oral hypoglycaemic treatment	<input type="checkbox"/>	<input type="checkbox"/>					
15. Cardiac disease	<input type="checkbox"/>	<input type="checkbox"/>					
16. Renal disease	<input type="checkbox"/>	<input type="checkbox"/>					
17. Epilepsy	<input type="checkbox"/>	<input type="checkbox"/>					
18. Asthmatic on medication	<input type="checkbox"/>	<input type="checkbox"/>					
19. Tuberculosis (currently on treatment)	<input type="checkbox"/>	<input type="checkbox"/>					
20. Known 'substance' abuse (including heavy alcohol drinking)	<input type="checkbox"/>	<input type="checkbox"/>					
21. Any other severe medical disease or condition	<input type="checkbox"/>	<input type="checkbox"/>					
22. Mental health screen positive (only if suicide item is endorsed)	<input type="checkbox"/>	<input type="checkbox"/>					
23. Any severe mental health condition: bipolar affective disorder, schizophrenia, severe depression	<input type="checkbox"/>	<input type="checkbox"/>					
Please specify _____							
A yes to any ONE of the above questions (i.e. ONE shaded box marked with a cross) means that the woman is not eligible for the basic component of antenatal care and needs appropriate referral.							
Is the woman eligible (circle) <b>No</b> <b>Yes</b>							
If NO, she is referred to _____							
Date _____	Name _____	Signature _____					
(Staff responsible for antenatal care)							

# BANC plus checklist for subsequent antenatal visits

First visit for all women at first contact with clinics, regardless of gestational age. If first visit later than recommended, carry out activities up to that time	VISITS							
	1	2	3	4	5	6	7	8
DATE:								
Approximate gestational age (weeks)	<14	20	26	30	34	36	38	40
Classifying form indicating eligibility for BANC								
History taken								
Full clinical examination								
Estimated date of delivery calculated								
Blood pressure taken								
Maternal height/weight/MUAC/BMI								
Haemoglobin test								
Rapid syphilis test performed		Retest monthly if syphilis negative						
Urine tested for protein, sugar								
Rapid Rh performed								
Mental Health Screen		Screen in each trimester						
HIV counselling and testing		Retest monthly if HIV negative						
ART for HIV-infected women		Viral load monitoring as per guidelines						
Tetanus toxoid given		If needed						
Iron and folate supplementation provided								
Calcium supplementation provided								
Information for emergencies given								
Antenatal record completed and given to woman								
Prepare person for what to bring for labour and delivery (KMC wrap, woollen hat and booties)								
Link and arrange Ward Based Community Outreach Teams home visits								
Asked if fetal movements felt and normal		Do if 34 weeks						
TB symptom screen								
Clinical examination for anaemia								
Urine tested for protein								
Uterus measured for growth - twins, IUGR		Do if 34 weeks						
Instructions for delivery/transport to institution								
Recommendations for lactation and contraception								
Detection of breech presentation and referral								
Remind woman to bring MCR in labour								
Doctor or senior midwife to review gestational age								
Give hospital visit date at 41 weeks for induction								
Initials staff member responsible								

Assessment		BANC plus visits (weeks)							Concerns/Actions to be taken
		20	26	30	34	36	38	40	
Ask	How are you?	x	x	x	x	x	x	x	Identify mental health problems
	Is the baby moving?	x	x	x	x	x	x	x	Refer if no movements after 28 weeks
	Have you had any bleeding?	x	x	x	x		x		Refer (see chapter on APH)
	Have you any concerns/symptoms of?	x	x	x	x	x	x	x	
	• Vaginitis								Risk of ascending infections
	• Urinary tract infection								Risk of ascending infections
	• Cough, no weight gain, night sweats, fever								Tuberculosis, other chest infections
• Malnutrition								Chronic disease, poverty	
• HIV								Ensure proper management	
Check antenatal record									
	Calculate current gestational age	x	x	x	x	x	x	x	Check fetal growth and confirm at 40 weeks
	Syphilis testing	x	x	x	x		x	x	Check result and treat if necessary
	Haemoglobin			x			x		Check result and treat for anaemia if Hb low
	HIV counselling and testing	x	x	x	x		x		Check if retested, start ART if HIV positive
	HIV care and monitoring	x	x	x	x		x		Monitor viral load as per guidelines
	Booster dose Tetanus toxoid			x					Only if immunising for the first time
Previous visits concerns	x	x	x	x	x	x	x	Have these been solved?	
Examine (Look, feel, listen)									
	Pallor	x	x	x	x		x		Screen for anaemia, repeat Hb 30 & 38 weeks
	Blood pressure	x	x	x	x	x	x	x	Screen for hypertension
	Urine; protein/glucose	x	x	x	x	x	x	x	Screen for pre-eclampsia and diabetes
	Uterine growth (SFH)	x	x	x	x		x		Screen for IUGR
	Fetal presentation				x		x		Screen for abnormal lie, e.g. breech

<b>Fill in antenatal record and revise birth plan if needed</b>		x	x	x	x	x	x	x	
<b>Implement interventions</b>	Iron and folate supplementation for all women	x	x	x	x		x		To prevent anaemia
	Calcium supplementation to all women	x	x	x	x		x		To prevent hypertension
	If RPR positive – treat for syphilis	x	x	x	x	x	x	x	To prevent congenital syphilis and stillbirths
	Rh negative- send Coombs test		x		x				To identify Rh-isoimmunisation
	HIV-positive – start/continue ART	x	x	x	x	x	x	x	To support, treat and prevent transmission
	In malaria endemic areas: appropriate prophylaxis (see chapter on Malaria)	x	x	x	x		x		To prevent malaria
<b>General advice</b>	Safe sex	x	x	x	x		x		Prevent STIs
	Stop tobacco, alcohol	x	x	x	x		x		Prevent IUGR and congenital abnormalities
	Infant feeding advice	x	x	x	x		x		Prepare for feeding choice and vertical transmission reduction
	Plan for haemorrhage or warning signs	x	x	x	x		x		Early identification of complications
	Birth plan	x	x	x	x	x	x	x	Make sure there is a transport plan to get to the institution and which institution is to be used
	Contraceptive advice	x	x	x	x		x		Plan for future pregnancies and space children
<b>Questions and answers</b>		x	x	x	x	x	x	x	Enable woman to voice concerns
<b>Date next follow-up visit</b>		x	x	x	x	x	x	x	
<b>Maintain complete records</b>		x	x	x	x	x	x	x	Ensure antenatal care and clinic checklist completed