



**Federal Ministry of Health**

# **ANTENATAL CARE**

**An Orientation Package for Health Care Providers**

## **FOREWORD**

The World Health Organization (WHO) envisions a world where “every pregnant woman and newborn receives quality care throughout pregnancy, childbirth and the postnatal period”. In Nigeria, approximately 576 women per 100, 000 live births die as a result of pregnancy and childbirth-related complications (NDHS, 2013). International Human Rights Law includes fundamental commitments of States to enable women and adolescent girls survive pregnancy and childbirth as part of their sexual and reproductive health and rights.

Providing quality antenatal care (ANC) is critical in improving maternal and foetal outcomes throughout the life cycle. ANC through timely, appropriate and evidence-based actions related to health promotion, disease prevention, screening and treatment reduces complications from pregnancy and child birth, reduces still birth and perinatal deaths, and also promotes integrated service delivery throughout pregnancy. Antenatal care coverage in Nigeria however is not yet optimum with only 61 percent of women having at least one ANC visit, which is slightly lower than the African average of 67 percent (NDHS, 2013).

To achieve the full life saving potential that ANC promises, the 2016 WHO ANC Guidelines indicate that a minimum of eight (8) contacts is essential to provide a complete package of services, reduce perinatal mortality and improve women’s experience of care. Systematic reviews on increased frequency of maternal contacts showed evidence of improved safety from early detection of maternal and foetal complications as well as provision of support to women and their families during pregnancy.

To this end, the revised National 2017 ANC Model takes into cognisance our context as well as placing women at the centre of care to enhance their experience of pregnancy towards ensuring the best possible outcome for the newborn.

I therefore call on every stakeholder to help disseminate the Revised 2017 ANC Orientation Package for a Positive experience and orientate every health professional on the updated recommendations contained therein.

**Prof. Isaac F. Adewole FAS, FSPSP, FRCOG, DSc (Hons)**  
**Honorable Minister of Health**

## **ACKNOWLEDGMENTS**

The 2017 Antenatal Care (ANC) Orientation Package for a Positive Pregnancy Experience is a document that promises to herald change in the provision of antenatal care to ensure positive maternal and perinatal outcomes. It recognises that ANC is a critical aspect of the continuum of quality maternal and newborn care where specific evidence- based interventions for all women and their unborn children are carried out at specific time periods. This review also takes into account recent updates in the WHO ANC guidelines which prioritise-person centred health and well being and not only the prevention of death and morbidity.

I therefore wish to acknowledge the contributions of the staff of Family Health Department particularly the Reproductive Health Division who actively participated in the development of the 2017 ANC Orientation Package for Health Care Providers in Nigeria.

I must also thank our colleagues from the National Primary Health Care Development Agency, Medical and Dental Council of Nigeria, Society of Gynaecologist and Obstetricians of Nigeria, Nursing and Midwifery Council of Nigeria as well as the Community Health Practitioners Board Our special thanks go to the Lead Consultant, Prof Olufemi Oladapo for all the time and effort that went into the planning, research and write up of this 2017 ANC Orientation Package.

Finally, we thank the United States Agency for International Development (USAID) for providing financial and technical support through MCSP/Jhipiego which facilitated this review.

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Section C: Health Promotion		Section H: Case studies and Role Play	



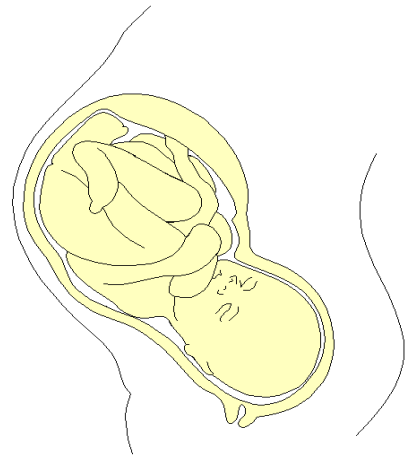
## What is an orientation package?

- A collection of materials and activities that aims to highlight KEY useful, practical points for health care providers.
- The orientation is done centrally (i.e. at the Federal level) while “echo” (cascade) sessions are organized at State and Local Government levels.
- Orientation package training sessions are short- generally lasting for approximately 1-2 days
- Materials usually include national guidelines/strategies, and critical information that providers need to remember in day-to-day practice which is compiled into Job-aids.
- Orientation packages also include exercises that help health care workers examine their values and attitudes.

## Learning Objectives

**By the end of this learning orientation, participants should be able to:**

- Describe New ANC Model for positive pregnancy experience 2016
- Understand the rationale for the New ANC Model for Positive Pregnancy Experience 2016.
- Outline components of the ANC Visits
- Describe healthy behaviours in pregnancy
- Promote healthy behaviours in pregnancy
- Describe the prevention of complications of pregnancy and childbirth
- Describe how to detect and promptly manage problems in pregnancy
- Describe how to help patients develop birth preparedness and complication readiness.
- Enhanced interpersonal communication skills for ANC
- List evidence-based best practices for ANC

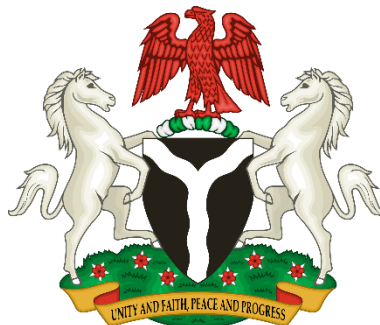


## Target Audience:

- Skilled birth attendants
  - Physicians



- Midwives
- Nurses
- CHEWs (trained on Modified Life Saving Skills (MLSS), Pre/In-service)
- Pre-service tutors



## **Section A**

### **Status of Antenatal Care Globally and in Nigeria**





## **BACKGROUND**

### **I. Traditional ANC Model evolved from the European countries but it was not evidenced based:**

- Was developed in the early 1900s
- Emphasized the number and frequency of visits
- Includes approximately 12 clinic visits, if the woman begins ANC in the first trimester (i.e., once a month for the first six months, once every two to three weeks for the next two months, and then once a week until birth).

**II. Focus ANC: This model developed in 2002 was a goal-oriented approach to delivering evidence-based interventions at four critical times during pregnancy.**

This approach achieved an increase in ANC in low-and middle-income countries (LMICs).

**III. New ANC Model for Positive Experience 2016 was introduced in 2016 because FANC was shown not to be promotive of ‘positive pregnancy experience’ and desired perinatal death reduction.**

It emphasizes contact rather than visit and recommends a total of 8-contacts instead of current 4-visits and the provision of quality care at each contact.

Contact implies an active connection between patients and their providers. Its value is set within the human-rights approach. It is to provide a positive experience defined as maintaining physical and sociocultural normality, maintaining a healthy pregnancy for mother and baby (including preventing or treating risks, illness and death), having an effective transition to positive labour and birth, and achieving positive motherhood (including maternal self-esteem, competence and autonomy).

		<b>WHO FANC model</b>	<b>2016 WHO ANC model</b>		
<b>2016 ANC</b>	<i>First trimester</i>				<b>WHO Model</b>
	Visit 1: 8-12 weeks	Visit 1: 8-12 weeks	Contact 1: up to 12 weeks	Contact 1: up to 12 weeks	
	<i>Second trimester</i>				
	Visit 2: 24-26 weeks	Visit 2: 24-26 weeks	Contact 2: 20 weeks	Contact 3: 26 weeks	
	<i>Third trimester</i>				
	Visit 3: 32 weeks	Visit 3: 32 weeks	Contact 4: 30 weeks	Contact 5: 34 weeks	
	Visit 4: 36-38 weeks	Visit 4: 36-38 weeks	Contact 6: 36 weeks	Contact 7: 38 weeks	
			Contact 8: 40 weeks	Contact 8: 40 weeks	
		Return for delivery at 41 weeks if not given birth.			

## SITUATION ANALYSIS

### A. Burden of Maternal, Newborn and Child Mortality

#### Maternal, Newborn and Child Deaths in Nigeria<sup>1</sup>

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Mothers	Nigeria	Global
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<sup>1</sup> 2013NDHS National Population Commission website, 2017

<b>Maternal mortality ratio per 100,000 live births</b>	<b>576</b>	<b>216<sup>2</sup></b>
<b>Annual number of maternal deaths</b>	<b>30,672</b>	<b>303,000<sup>2</sup></b>
<b>Babies</b>		
<b>Annual birth rates</b>	<b>7Million<sup>3</sup></b>	
<b>Stillbirth rate per 1,000 total births</b>		
<b>Annual number of stillbirths</b>	<b>314,400</b>	<b>NA</b>
<b>Neonatal mortality rate per 1,000 live births</b>	<b>37</b>	<b>19<sup>4</sup></b>
<b>Annual number of neonatal deaths</b>	<b>198,948</b>	
	<b>2.7m.<sup>4</sup></b>	
<b>Children</b>		
<b>Under 5 mortality rate per 1,000 live births</b>	<b>128</b>	<b>43<sup>4</sup></b>

#### **A. Pattern of ANC Uptake<sup>1</sup>:**

- i. Coverage of at least one antenatal care (ANC) visit with a skilled care provider reached 62% of women.
- ii. Only 45% make four or more ANC visits
- iii. Only 36% make their first ANC visit during the 1<sup>st</sup> 3-months

#### **B. Zonal pattern of ANC uptake:**

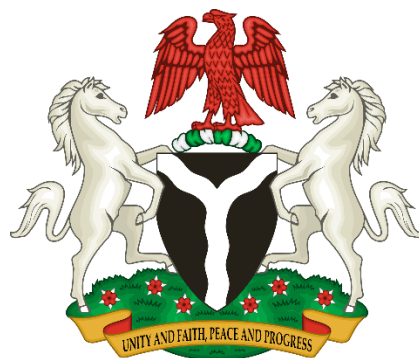
<sup>2</sup>WHO. Trends in Maternal Mortality, 1990-2015: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. 2015.

<sup>4</sup>UN Inter-Agency Group for Child Mortality Estimation. Levels and Trends in Child Mortality: Report 2015. [http://www.childmortality.org/files\\_v20/download/IGME%20report%202015%20child%20mortality%20final.pdf](http://www.childmortality.org/files_v20/download/IGME%20report%202015%20child%20mortality%20final.pdf)

a. North-central	67%
b. North-east	49.3%
c. North-west	41%
d. South-east	90.6%
e. South-south	73.0%
f. South-west	90.4%

### C. ANC Interventions Uptake<sup>1</sup>:

- i. Only 48.4% of mothers receive the recommended 2 or more doses of tetanus toxoid (TT)
- ii. Only 63.4 used Iron supplementation during pregnancy
- iii. Only 14.4% took Intestinal parasite drugs (anthelminthic-drugs)



## **Section B**

### **Benefits of ANC for Positive Experience**

#### **Definition**

Antenatal care (ANC) can be defined as the care provided by skilled health-care professionals to pregnant women and adolescent girls to ensure the best health conditions for both mother and baby during pregnancy<sup>5</sup>. The components of ANC include: risk identification; prevention and management of pregnancy-related or concurrent diseases; and health education and health promotion. (WHO-2016)

#### **The 4 Goals of Antenatal Care**

1. Health Promotion

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<sup>5</sup>WHO recommendations on antenatal care for a positive pregnancy experience. 2016.



2. **P**revention of complications of pregnancy and childbirth
3. Early **D**etection and prompt management of problems
4. Birth and Emergency **P**lanning

### **Why Do We Need to Refocus Antenatal Care in Nigeria?**

- All pregnant women are at risk of developing complications during pregnancy, childbirth and delivery.
- Benefits of ANC are undermined because many pregnant women in Nigeria:
  - Do not appreciate the importance and benefits of ANC.
  - Attend ANC just to obtain a registration card in case of unexpected emergency.
  - Book late for ANC.
  - Stay away from health facilities because of poor provider attitudes, unfriendly policies, (e.g compulsory blood donation for ANC services), inability to pay for services, inaccessibility and non-availability of services.

### **ANC promotes Maternal and Newborn Health and Survival**

- In many settings, ANC is the only time women contact the health care system and is a unique opportunity/platform for providing a variety of health services.
- ANC increases the likelihood that a skilled attendant will be present at birth.
- ANC provides a platform for critical health care functions such as health promotion, prevention, screening and diagnosis of diseases.
- ANC also provides an important opportunity to prevent and manage concurrent diseases through integrated service delivery.
- Enhances the woman's experience of pregnancy
- Ensures that babies have the best possible start in life
- Aligns with SDGs to expand care beyond survival
- Promotes a human rights-based approach to care.

**Exercise No.1: Why do some pregnant women fail to attend antenatal clinics?**

- Work in pairs
- Close your manuals
- List 5 reasons why some pregnant women in your State do not attend antenatal clinics
- You will share your listed items with the rest of the class

**Duration: 10 minutes**

**Exercise No. 2: Making ANC More User-Friendly**

- Work in pairs
- List 5 ways to make ANC services more user-friendly
- When you have finished, you will share your list with the class

**Duration: 10 minutes**

**How Can We Make ANC Services More User Friendly? (1)**

- By improving **Client-Provider Interaction** with emphasis on respecting the *Clients'* **Rights** which include the right to:
  - Be treated with dignity and respect
  - Full information
  - Access to all services
  - Privacy and Confidentiality
  - Comfort and Safety
  - Free expression of opinion
  - Continuity of care

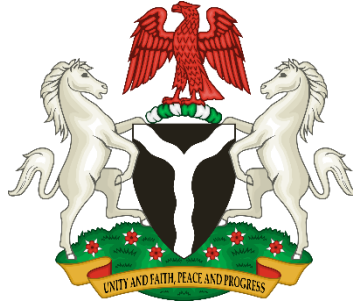
## **How Else Can We Make Antenatal Services More User Friendly? (2)**

- **By informing clients that we shall:**
  - **Avoid compulsory shaving of pubic hair, giving of routine enemas, routine episiotomies etc when they come to deliver**
  - **Allow flexibility in labour/delivery** (bedding, ambulation, oral fluids, delivery position, return of placenta to parents)
  - **Allow social support** in labour and in the postpartum period
  - **Promote harmless traditional practices** in the community

## **Remember the Pneumonic:**

What is PPDP

- Promotion
- Prevention
- Detection
- Planning



## **Section C**

### **Health Promotion**

#### **Learning Objectives**

At the end of the Session, participants should be able to:

- i. Define Health Promotion in Pregnancy
- ii. Discuss the different topics health promotion should cover
- iii. Discuss client's and providers rights
- iv. Recognize the danger signs in pregnancy

#### **Definition of Health Promotion in Pregnancy**

Health Promotion in pregnancy is a process of enabling a woman to increase control over her health and its determinant which will promote and maintain the physical, mental and social

health of a mother and her baby by providing education on key issues related to pregnancy and childbirth, and encouraging an appropriate health seeking behavior.

### **Purpose of Health Promotion in Pregnancy**

When given reliable information, women are likely to contribute to improved management and prevention of priority health conditions and early referral when indicated as experience in the past have shown their willingness to be involved in health actions which affect them.

The purpose of health promotion is to assure ‘The Five Rights x 2 + 1 which are

- Right Person  
AT THE
- Right Place  
AT THE
- Right Time  
DOING THE
- Right Thing in the
- Right Way

### **Client’s Rights and Providers’ Needs Must Be Respected At All Times**

- Respect the **Clients’ Rights** to:
  - information,
  - dignity,
  - comfort,
  - privacy,
  - confidentiality,
  - right of access to services,
  - choice of adopting, switching or discontinuing method,
  - safety,

- continuity and right of expression about the quality of services)
- Recognize and meet **Providers' Needs**:
  - respect and recognition,
  - knowledge and skill update,
  - adequate infrastructure and supplies,
  - standards and guidelines,
  - encouragement, feedback,
  - support supervision,
  - self-expression

### **What Topics Should Health Promotion Cover?**

- **Counsel** pregnant women on:
  - **Diet and nutrition** in pregnancy
  - **Rest** in pregnancy
  - **Exercise** in pregnancy
  - **Self care**
  - **Danger signs** in pregnancy and during childbirth
  - **Use of drugs** in pregnancy (e.g. effect of tobacco and alcohol)
  - Effects of **STIs/HIV/AIDS** on fetus and mother and role of VCT and MTCT
  - **Malaria** Control in Pregnancy (IPTp and LLINs, Prompt Case Mgt)
  - **Postpartum family planning (PPFP)**

### **Diet and nutrition**

A.1.1: <b>Counselling about healthy eating and keeping physically active during pregnancy</b> is recommended for pregnant women to stay healthy and to prevent excessive weight gain during pregnancy.	<b>Recommended</b>
A.1.2: In undernourished populations, <b>nutrition education on increasing daily energy and protein intake</b> is recommended for pregnant women to reduce the risk of low-birth-weight neonates.	<b>Context-specific recommendation</b>
A.1.3: In undernourished populations, <b>balanced energy and protein dietary supplementation</b> is recommended for pregnant women to reduce the risk of stillbirths and small-for-gestational-age neonates.	<b>Context-specific recommendation</b>
A.1.4: In undernourished populations, <b>high-protein supplementation</b> is not recommended for pregnant women to improve maternal and perinatal outcomes.	<b>Not recommended</b>

### Context specific recommendations

These recommendations are relevant to Most of our Pregnant Women in Nigeria

- Pregnancy places great demands on a woman's body, increasing her nutritional needs. In addition to eating extra servings, eating **adequate diet decreases the risk of having a low birth weight baby.**
- Placing Emphasis should be on Balanced Rather Than High Protein Diet
- Nutritional counselling as part of routine ANC should **emphasize:**
  - **At least one extra serving of staple food per day**
  - Eating **adequate diet** that contains beans, nuts, starchy foods, animal products, fruits, and vegetables as well as **foods rich in vitamins and minerals**
  - **Demystification of food taboos**

### Vitamin and mineral supplementation

A.2.1: **Daily oral iron and folic acid supplementation** with 30 mg to 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid is recommended for pregnant women to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth. **Recommended**

A.2.2: **Intermittent oral iron and folic acid supplementation** with 120 mg of elemental iron and 2800 µg (2.8 mg) of folic acid once weekly is recommended for pregnant women to improve maternal and neonatal outcomes if daily iron is not acceptable due to side-effects, and in populations with an anaemia prevalence among pregnant women of less than 20%. **Context-specific recommendation**

A.3: In populations with low dietary calcium intake, **daily calcium supplementation** (1.5–2.0 g oral elemental calcium) is recommended for pregnant women to reduce the risk of pre-eclampsia. **Context-specific recommendation**

A.4: **Vitamin A supplementation** is only recommended for pregnant women in areas where vitamin A deficiency is a severe public health problem, to prevent night blindness. **Context-specific recommendation**

- In areas that have endemic deficiencies, **supplementation with select vitamins and minerals improves health and survival** of mothers and their newborns.
  - **Vitamin A:** In areas of deficiency, supplementation has been associated with reduced pregnancy-related deaths (West et al. 1999) and reduced risk of anemia (Suharno et al. 1993).
    - Where deficiency is endemic, pregnant women should receive **10,000 IU of Vitamin A daily** or **25,000 IU weekly** during the second and third trimesters (WHO 1998)
    - Because of the risk of birth defects with higher doses, the dose should **never exceed 25,000 IU** and **should not be given during the first 60 days of pregnancy**.
  
- **Iron and folate:** Iron deficiency is an important cause of anemia, which increases a woman's risk of death from heart failure and makes her more susceptible to the effects of excessive bleeding during pregnancy and after childbirth.



- Women should:
  - Receive at least **60 mg iron plus 400 mcg\* of folate by mouth daily throughout pregnancy and for three months postpartum.**
  - Be encouraged to **eat foods rich in iron e.g. green leafy vegetables and vitamin C e.g. fruits (which aids iron absorption), and**
  - **avoid drinks** such as tea and coffee, **which may inhibit iron absorption.**

*\*In Nigeria 200mg iron tablets and 5mg folic acid tablets are commonly available*

- **Iodine:** Iodine deficiency is:
  - The leading cause of preventable retardation
  - Associated with increased miscarriages, stillbirths, and neonatal mortality
- Where iodine deficiency is endemic, women should receive **two to three capsules of iodine (400 mg to 600 mg) by mouth, or intramuscular (IM) injection of iodine (240 mg; 0.5 mL Lipiodol), as early in pregnancy as possible.**

A.5: **Zinc supplementation** for pregnant women is only recommended in the context of rigorous research. **Context-specific recommendation (research)**

A.6: **Multiple micronutrient supplementation** is not recommended for pregnant women to improve maternal and perinatal outcomes. **Not recommended**

A.7: **Vitamin B6 (pyridoxine) supplementation** is not recommended for pregnant women to improve maternal and perinatal outcomes. **Not recommended**

A.8: **Vitamin E and C supplementation** is not recommended for pregnant women to improve maternal and perinatal outcomes. **Not recommended**

A.9: **Vitamin D supplementation** is not recommended for pregnant women to improve maternal and perinatal outcomes. **Not recommended**

A.10: For pregnant women with high daily caffeine intake (more than 300 mg per day), lowering **daily caffeine intake** during pregnancy is recommended to reduce the risk of pregnancy loss and low-birth-weight neonates. **Context-specific recommendation**

### Self care

- **Pregnant women should use only medications or drugs that are prescribed by a skilled attendant.**

- Avoid potentially harmful substances
  - **Avoid smoking, alcohol**, local herbs, drug abuse.
  - Discuss any medications with a skilled attendant.
  - Use only medications/drugs prescribed by a skilled attendant.
  - Avoid caffeine containing drinks like coffee and caffeinated soft drinks
- **Infection prevention/hygiene.** Women should:
  - Wash hands.
    - Before eating, drinking, preparing food
    - After using toilet or touching contaminated object
  - Use safe drinking water.
  - Handle and store food safely.
  - Practice good dental hygiene.
- **Rest and activity.** Tell clients to:
  - Decrease the amount of heavy work and **increase rest time.**
  - Avoid lying on back late in pregnancy to prevent decreased blood supply to the placental site. Lie on side
  - Maintain good body posture and avoid overexertion.
- **Sexual relations and safer sex**
  - Reassure clients that sexual intercourse will not harm the fetus.
  - Have sexual relationship with only one partner who is free from HIV and STIs or practice abstinence if desirable
  - For those at risk of STIs and HIV, use condoms correctly and consistently.

### **Optimal Infant Feeding**

- **Tell the client about the benefits of Early and Exclusive Breastfeeding**
  - Easily digested
  - Efficiently used by baby's body
  - Protection against some infections
  - Some protection against allergies
  - Cost-effective/cheap

- Promotes mother-baby bonding
- Provides contraceptive (LAM) protection until menses returns or until six months
  - if full or nearly full\*
- **\*Full breastfeeding** is the term applied to both *exclusive breastfeeding* (no other liquid or solid is given to infant) and *almost exclusive breastfeeding* (vitamins, water, juice, or ritualistic feeds given infrequently in addition to breastfeeds). **Nearly full breastfeeding** means that the vast majority of feeds given to infants are breastfeeds.

### Family planning

- **Discuss postpartum contraceptive options** during pregnancy.
  - **“Three to five saves lives”**. Couples who space births three to five years apart increase chances of survival for babies:
    - They have lower risk of fetal death, preterm birth, small-for-gestational-age baby, newborn death, stunted or low birth weight baby.
  - Women with a **short birth interval** (6 to 14 months) have a **150% increased risk of maternal death** and a **70% increased risk of third trimester bleeding and premature rupture of membranes** (compared to women with a 2.5 to 3 year birth interval).
  - **Return of fertility is not entirely predictable**, and conception can occur before menstrual periods resume.

### Family planning

**Numerous safe contraceptive methods are available for the breastfeeding mother.**

**Contraceptives that are safe during breastfeeding include:**

- Lactational Amenorrhoea method (LAM)
- Condom
- IUD
- Vasectomy
- Tubal ligation
- Injectables (Depo-Provera/ Noristerat)
- Implants
- Progestin-only pill

### **Danger Signs in Pregnancy**

- Vaginal bleeding
- Fits or convulsions
- Loss of consciousness
- Severe headaches
- Blurred vision
- Swelling of the face, hands and legs
- Abdominal pains
- Fever and chills
- Severe vomiting
- Weakness, lethargy and breathlessness
- Decreased or absent fetal movements
- Dysuria and suprapubic pain
- Draining of liquor from vagina without labour
- Foul-smelling vaginal discharge
- Premature labour pains

### **Danger Signs in Labour**

- Excessive vaginal bleeding during or after delivery
- Placenta is undelivered more than 1 hour after the baby has been delivered

- Labour pains lasting more than 12 hours without delivery
- Draining of liquor without labour for more than 12 hours
- Convulsions/Fits or loss of consciousness
- Fever or foul-smelling vaginal discharge
- Severe abdominal pains
- Cord, arm or leg prolapse

### **Special Care Needs for Women with Female Genital Cutting (FGC)**

- **Women who have female genital cutting (FGC) need special care.**
  - If **uncomplicated Type I** (part or all of clitoris removed) or **Type II** (clitoris plus prepuce, and part or all of labia minora removed):
    - **Reassure** that cutting will not complicate childbirth
    - Counsel woman and her partner about potential harmful effects of FGC, especially if their baby is a girl
  - **If uncomplicated Type III** (as Type II plus stitching together of incised labia majora):
    - Optimal time for defibulation is during second trimester of pregnancy
    - Before defibulation, counsel about the procedure and the importance of not re-infibulating after childbirth, including the medical risks of infibulations

## **Exercises**

### **Exercise #3: Health Promotion Video**

- As a group, watch Audio-Visual materials to promote health
- **Individually make a list of:**
  - 5 positive observations and
  - 2 suggestions for improvement
- You will share your list with others during group discussion.

**Duration:** 30 minutes



## **Section D**

### **Prevention of Pregnancy Complications**

#### **Learning Objectives**

**At the end of the Session, Participants will be able to:**

- i. List different conditions that may cause pregnancy complications

- ii. Discuss the different preventive measures for preventing pregnancy complication
- iii. Describe the ANC Contact Schedule

**List of Conditions that may cause pregnancy complication**

- Malaria in Pregnancy
- Anaemia in Pregnancy
- Diabetes
- Urinary Tract Infection
- Malnutrition in Pregnancy
- Worm infestation
- Rhesus Iso-Immuneization
- HIV in Pregnancy
- Pre Eclampsia and Eclampsia

**Preventive Measures include**



<p>B.1.1: Full blood count testing is the recommended method for <b>diagnosing anaemia</b> in pregnancy. In settings where full blood count testing is not available, on-site haemoglobin testing with a haemoglobinometer is recommended over the use of the haemoglobin colour scale as the method for diagnosing anaemia in pregnancy.</p>	<p><b>Context-specific recommendation</b></p>
<p>B.1.2: Midstream urine culture is the recommended method for <b>diagnosing asymptomatic bacteriuria (ASB)</b> in pregnancy. In settings where urine culture is not available, on-site midstream urine Gram-staining is recommended over the use of dipstick tests as the method for diagnosing ASB in pregnancy.</p>	<p><b>Context-specific recommendation</b></p>
<p>B.1.3: <b>Clinical enquiry about the possibility of intimate partner violence (IPV)</b> should be strongly considered at antenatal care visits when assessing conditions that may be caused or complicated by IPV in order to improve clinical diagnosis and subsequent care, where there is the capacity to provide a supportive response (including referral where appropriate) and where the WHO minimum requirements are met.</p>	<p><b>Context-specific recommendation</b></p>

<p>B.1.4: <b>Hyperglycaemia</b> first detected at any time during pregnancy should be classified as either gestational diabetes mellitus (GDM) or diabetes mellitus in pregnancy, according to WHO criteria.</p>	<p><b>Recommended</b></p>
<p>B.1.5: Health-care providers should ask all pregnant women about their <b>tobacco use</b> (past and present) and exposure to second-hand smoke as early as possible in the pregnancy and at every antenatal care visit.</p>	<p><b>Recommended</b></p>
<p>B.1.6: Health-care providers should ask all pregnant women about their use of <b>alcohol and other substances</b> (past and present) as early as possible in the pregnancy and at every antenatal care visit.</p>	<p><b>Recommended</b></p>
<p>B.1.7: In high-prevalence settings, provider-initiated testing and counselling (PITC) for <b>HIV</b> should be considered a routine component of the package of care for pregnant women in all antenatal care settings. In low-prevalence settings, PITC can be considered for pregnant women in antenatal care settings as a key component of the effort to eliminate mother-to-child transmission of HIV, and to integrate HIV testing with <b>syphilis</b>, viral or other key tests, as relevant to the setting, and to strengthen the underlying maternal and child health systems.</p>	<p><b>Recommended</b></p>
<p>B.1.8: In settings where the <b>tuberculosis (TB)</b> prevalence in the general population is 100/100 000 population or higher, systematic screening for active TB should be considered for pregnant women as part of antenatal care.</p>	<p><b>Context-specific recommendation</b></p>

C.1: A seven-day antibiotic regimen is recommended for all pregnant women with <b>asymptomatic bacteriuria (ASB)</b> to prevent persistent bacteriuria, preterm birth and low birth weight.	<b>Recommended</b>
C.2: Antibiotic prophylaxis is only recommended to prevent <b>recurrent urinary tract infections</b> in pregnant women in the context of rigorous research.	<b>Context-specific recommendation (research)</b>
C.3: Antenatal prophylaxis with <b>anti-D immunoglobulin</b> in non-sensitized Rh-negative pregnant women at 28 and 34 weeks of gestation to prevent RhD alloimmunization is only recommended in the context of rigorous research.	<b>Context-specific recommendation (research)</b>
C.4: In endemic areas, <b>preventive anthelmintic treatment</b> is recommended for pregnant women after the first trimester as part of worm infection reduction programmes.	<b>Context-specific recommendation</b>
C.5: <b>Tetanus toxoid vaccination</b> is recommended for all pregnant women, depending on previous tetanus vaccination exposure, to prevent neonatal mortality from tetanus.	<b>Recommended</b>

- **Tetanus toxoid** immunization
- **Iron/folate** supplementation
- **Malaria prevention** intermittent preventive treatment (IPT) and insecticide treated nets (LLINs and prompt Case Mgt)
- **Presumptive hookworm treatment** for anemia prevention (in areas where hookworm prevalence is greater than 20%)
- **Vitamin A** supplementation (in areas of vitamin A deficiency)
- **Iodine** supplementation (in areas of iodine deficiency)

### **Tetanus Toxoid**

- Tetanus is responsible for approximately 15% of neonatal deaths.
- During the 1990s, 150,000 to 300,000 mothers died of tetanus. Therefore,
- **Give 5 doses of TT during Reproductive carrier, 4 weeks apart (1<sup>st</sup> dose at contact, 2<sup>nd</sup> dose weeks later, 3<sup>rd</sup> dose 6months later, 4<sup>th</sup> dose 1year after 3<sup>rd</sup> dose and 5<sup>th</sup> dose after 1 year)**

*Source: Zlidar et al. 2003*

## Significance of Anaemia in Pregnancy

- In pregnant women, the **consequences of anaemia include:**
  - Increased maternal death and disability,
  - Increased fetal death and disability and increased low birth weight.
- Approximately 44 million women are simultaneously pregnant and infected with hookworm. An estimated **three to five million of these pregnant women harbour hookworm infections that adversely influence intrauterine growth rates, prematurity, and birth weight, as well as anaemia and its consequences.**
- Hookworm causes loss of blood and, therefore, iron in the stools, resulting in maternal anaemia.

## Anaemia prevention

- Eat adequate diet rich in Iron, Folate and Vitamin C
- Avoid drinks that decrease iron absorption e.g. tea, coffee
- Provide micronutrient supplementation for up to 3 months after delivery
  - Minimum of 60 mg. of elemental Iron and 400 mcg of Folate daily
- Prevent malaria and hookworm infestation

## Hookworm prevention

- **Presumptive treatment of hookworm infection**
  - **For all women living where hookworm prevalence is greater than 20%,** if the woman has not received treatment in the past six months, or if is found by laboratory examination to have hookworm infection:
    - **Give mebendazole\* 500 mg by mouth once, OR**
    - **Prescribe mebendazole\* 100 mg by mouth twice daily for three days, OR**
    - Give albendazole 400 mg by mouth once

\*Mebendazole should be avoided in the first trimester

### Malaria During Pregnancy

C.6: In malaria-endemic areas in Africa, <b>intermittent preventive treatment with sulfadoxine-pyrimethamine (IPTp-SP)</b> is recommended for all pregnant women. Dosing should start in the second trimester, and doses should be given at least one month apart, with the objective of ensuring that at least three doses are received.	<b>Context-specific recommendation</b>
C.7: Oral <b>pre-exposure prophylaxis (PrEP)</b> containing tenofovir disoproxil fumarate (TDF) should be offered as an additional prevention choice for pregnant women at substantial risk of HIV infection as part of combination prevention approaches.	<b>Context-specific recommendation</b>

### Malaria in Pregnancy May Account for ...

- 2-15% of maternal anemia
- 11% of maternal mortality
- 8-14% of low birth weight newborns
- 8-36% of preterm births
- 13-70% intrauterine growth retardation
- 30% of “preventable” low birth weight newborns
- 5% congenital malaria in newborns
- 3-5% of newborn deaths
- 3-8% of infant deaths

### Significance of malaria during pregnancy

- Each year more than 30 million women living in malaria-endemic areas become pregnant and are at risk for malaria infection.
- Of the estimated 300 million malaria cases each year worldwide, more than 90% occur in sub-Saharan Africa.

- Malaria results in approximately 10,000 maternal deaths and 75,000 to 200,000 infant deaths each year.
- **Malaria accounts for 11% of maternal deaths in Nigeria**

*Source:* JHPIEGO/MNH Program 2003

### **Malaria prevention: Insecticide Treated Nets (LLINs and Prompt Case Mgt)**

- **Pregnant women in malaria-endemic areas should sleep under an insecticide-treated net.**
  - Consistently sleeping under an LLIN can:
    - Decrease severe malaria by 45%
    - Reduce premature births by 42%, and
    - Cut all-cause child mortality by 17% to 63%
- When LLIN coverage rates reach 80% or more in a community, those residents not sleeping under an LLIN also obtain a protective benefit.
- Also, advise concerning avoiding exposure to mosquitoes (dusk and dawn, clothes that cover body, avoiding areas with standing water, etc.)
- Use of IPTp-SP as outlined in the table of Recommendations.

### **ANC Contact Schedule**

ANC Contact Schedule and Proposed Time of IPTp-SP Administration <i>(To be adapted to country context, also considering disease burden and health needs)</i>		MiP-related Interventions and Considerations during ANC Contacts
Contact 1: Up to 12 weeks		<ul style="list-style-type: none"> <li>Register pregnant women, provide ITNs, and counsel on their use. Screen for HIV.</li> <li>Administer 30 to 60 mg of elemental iron and 400 µg (0.4 mg) of folic acid.</li> <li><b>Counsel to return for a visit at 13 to 16 weeks (see contact 1a below) to receive the first dose of IPTp-SP (as directed by national guidelines).*</b></li> <li>Counsel on prompt diagnosis and effective treatment/malaria case management during pregnancy.</li> </ul>
Additional contact (1a): <i>In moderate to high malaria transmission areas in Africa where IPTp-SP is policy, a contact should be made early in the second trimester (13 to 16 weeks) to administer SP as early as possible.</i>	IPTp-SP dose 1	<p>Remember:</p> <ul style="list-style-type: none"> <li>Do not administer IPTp-SP before week 13 of pregnancy.</li> <li>Administer the first IPTp-SP dose <b>as early as possible in the second trimester</b> to fully benefit from the protective capacity in this critical period of pregnancy.†</li> <li><b>Administer the second dose of IPTp-SP one month later.</b></li> <li>Administer the following doses of IPTp-SP starting from the scheduled contact at 20 weeks, <b>observing at least one-month intervals between SP doses.</b></li> <li>SP can be <b>safely</b> administered from the beginning of the second trimester until the time of delivery.</li> <li>One full dose of IPTp-SP consists of 1,500 mg/75 mg SP (i.e., three tablets of 500 mg/25 mg SP).</li> <li>Provide IPTp-SP by directly observed treatment.</li> <li>Pregnant women on co-trimoxazole should not receive IPTp-SP due to an increased risk of adverse events when both drugs are given in parallel.</li> <li>Continue to administer 30 to 60 mg of elemental iron and 400 mcg (0.4 mg) of folic acid.</li> <li>Continue counseling as above.</li> </ul>
Contact 2: 20 weeks	IPTp-SP dose 2	
Contact 3: 26 weeks	IPTp-SP dose 3	
Contact 4: 30 weeks	IPTp-SP dose 4	
Contact 5: 34 weeks	IPTp-SP dose 5	
Contact 6: 36 weeks	No SP administration if last dose was received at contact 5 in week 34	
Contact 7: 38 weeks	IPTp-SP dose 6 (if no dose was received at contact 6 in week 36)	
Contact 8: 40 weeks		

## HIV Pre-Exposure Prophylaxis in Pregnancy

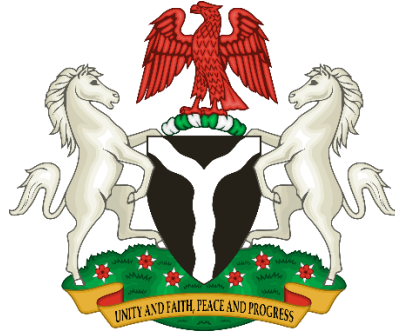
The pre-exposure prophylaxis (PrEP) is recommended for the following groups of people according to the National Integrated HIV Guideline –

1. Serodiscordant Couples
2. Female sex workers
3. Injecting Drug users
4. Those who engage in anal sex

**ANTI-D IMMUNOGLOBULIN IN RH-NEGATIVE UNSENSITIZED PREGNANT WOMEN AT 28-34 WEEKS GESTATIONAL AGE (NOT RECOMMENDED)**

No research to support this for now and due to the cost implications, it may deprive women of the necessary resources for other evidence-based interventions.

Post-Partum prophylaxis is well supported by evidence.



## **Section E**

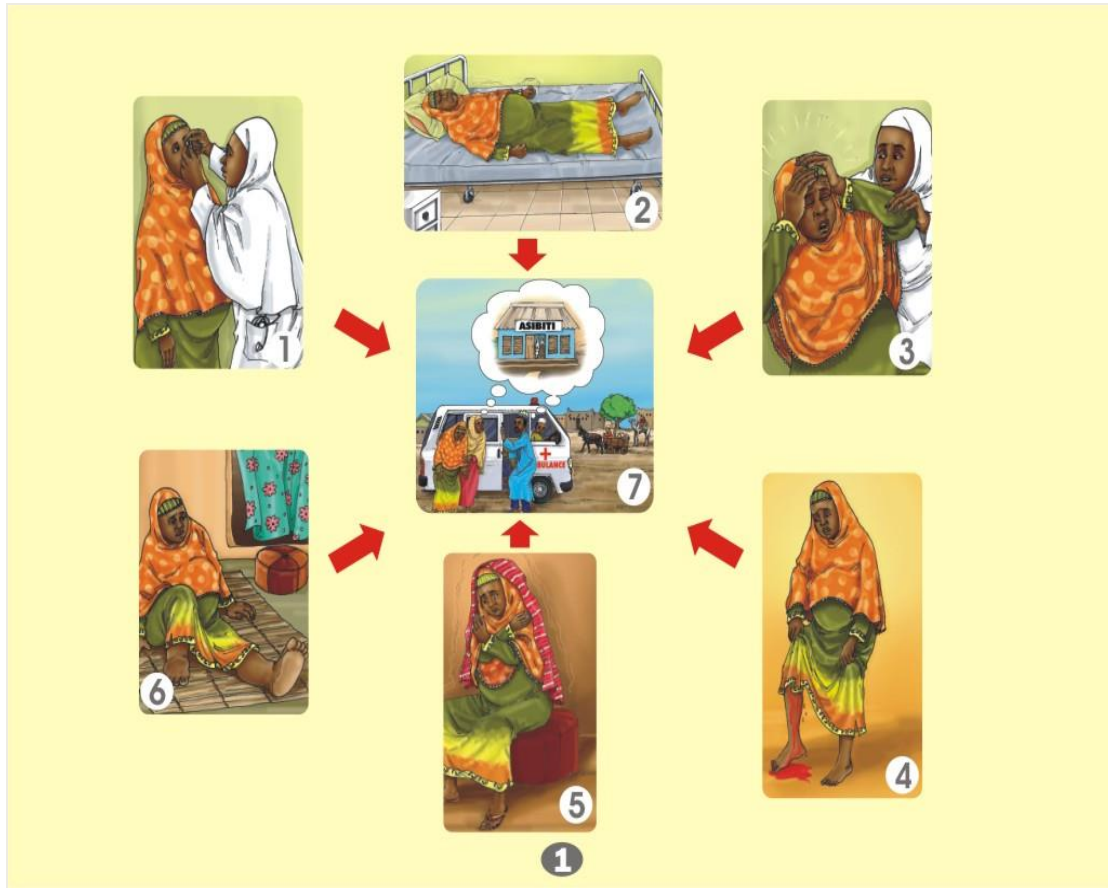
### **Early Detection and Prompt Treatment of Pregnancy Complications**

#### **Learning objectives**

At the end of the section participants should be able to:

- I. Define anaemia
- II. Know the signs, symptoms and treatment of anaemia
- III. Diagnose and treat malaria
- IV. Understand the counselling and testing of HIV and its management.





**Objective:** To detect and manage complications during pregnancy, whether medical, surgical or obstetrical

Some conditions in pregnancy are common and most of them do not require pharmacological treatment. Below is a summary of recommendations for these conditions.

Symptom	WHO Recommendation 2016 (Recommended in all settings) <i>All of these recommendations should be adapted and implemented based on women's preferences and available options.</i>
Nausea and vomiting	<b>D.1:</b> Ginger, chamomile, vitamin B6, and/or acupuncture for relief of nausea in early pregnancy
Heartburn	<b>D.2:</b> Advice on diet and lifestyle to prevent and relieve heartburn in pregnancy; antacid preparations for women with troublesome symptoms not relieved by lifestyle changes
Leg cramps	<b>D.3:</b> Magnesium, calcium, or nonpharmacological treatment options for relief of leg cramps in pregnancy
Low back/pelvic pain	<b>D.4:</b> Regular exercise throughout pregnancy to prevent low back and pelvic pain; different treatment options can be used, such as physiotherapy, support belts, and acupuncture
Constipation	<b>D.5:</b> Fibre supplements to relieve constipation in pregnancy if the condition does not respond to dietary modification
Varicose veins and oedema	<b>D.6:</b> Nonpharmacological options, such as compression stockings, leg elevation, and water immersion, for management of varicose veins and oedema in pregnancy

Chamomile: Have been known to cause uterine contraction that can invoke miscarriage. The US national institute of health recommends that pregnant and nursing mothers should not consume Chamomile.

Efficacy for ginger to address nausea and vomiting is inconclusive.<sup>6</sup>

## Anaemia in pregnancy

<sup>6</sup> Systematic review of randomised clinical trial, British Journal of Anaesthesia 84 (3), pg 367-371.

Roman chamomile medicen plus National institute of health 16- 2-2012.



### **Blood Elements**

- Blood elements are in a constant state of production and destruction
- Anaemia results when there is inadequate production (P) or excessive destruction (D)

### **Physiology of pregnancy**

- Increased Plasma Volume (45%)
- Increased Erythrocyte Volume (25%)



**Haemodilution  
(Physiologic Anaemia in pregnancy)**

### **Anaemia**

- A common medical condition in which the haemoglobin level falls below 10 g/dl
- Usually graded as:
  - Mild : 8 to 9.9 g/dl.
  - Moderate : 6.1 to 8.0 g/dl.
  - Severe : < 6 g/dl.
- Prevalence in pregnancy : up to 50% in developing countries

### Effect of anaemia on the foetus

- Increased incidence of Preterm Labour
- Fetal distress
- Low birth weight
- Increased risk of Perinatal Mortality

### Clinical features of anaemia

- **SYMPTOMS**
  - Malaise
  - Tiredness
  - Weakness
  - Dizziness
  - Breathlessness on mild exertion
  - Swelling of legs
  - fainting attack
  - anorexia
- **SIGNS**
  - **Pallor** (conjunctiva , tongue, gums, nail beds, palms and soles of feet)
  - Hepatomegaly
  - Splenomegaly
  - Pedal edema

### Addressing severe anaemia

- If haemoglobin is  $\leq 6$ g/dl, this is a life-threatening complication and urgent referral is needed : in order to
  - Transfuse with packed cells, if necessary.
  - Treat for any heart failure that has resulted from severe anaemia.
  - Manage as for severe/complicated malaria, if malaria is diagnosed.



**LBW**

**Normal**

- Treat for hookworm, if in endemic area.
- Provide iron (120 mg) daily and folate (5mg) by mouth daily for six months.

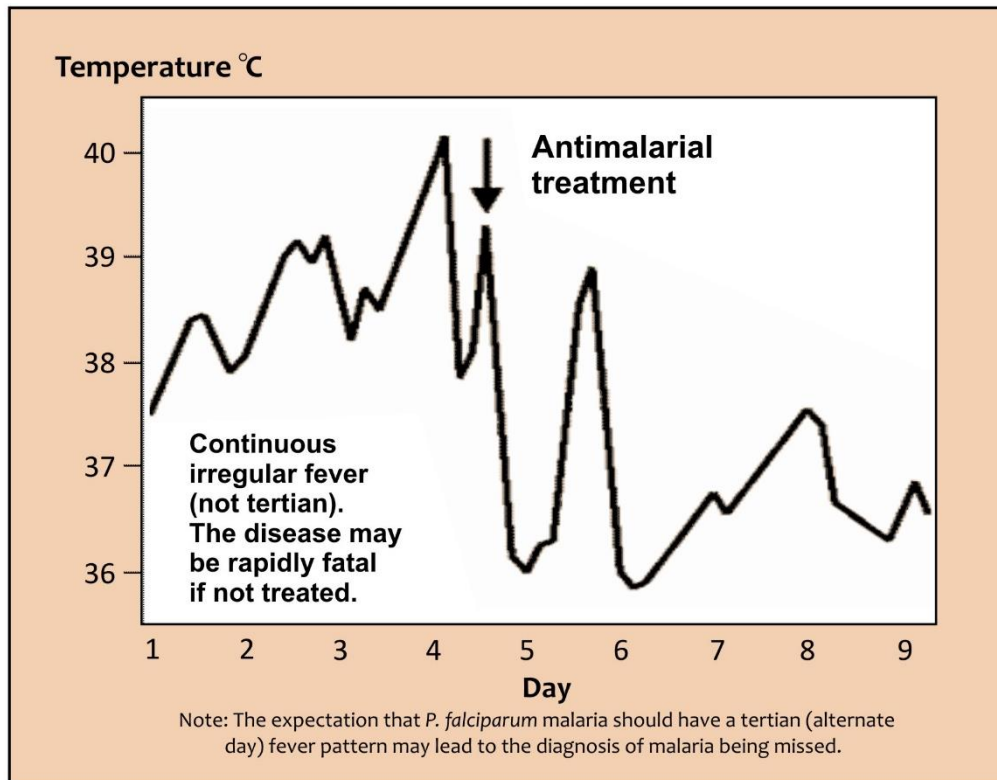
**Malaria case management**

**Malaria diagnosis**

**Diagnosis of malaria is based on clinical symptoms and signs and laboratory findings.**

**Clinical diagnosis**

**Malaria Temperature Pattern and Response to Antimalarial Treatment**



- Signs and symptoms of **uncomplicated malaria**

- Fever
  - Shivering/chills/ rigors
  - Headache
  - Muscle/joint pain
  - Nausea and vomiting
  - False labor pains
  - Enlarged spleen
  - Dizziness
  - General body weakness
  - Loss of appetite
- Signs and symptoms of **severe (life-threatening) malaria**
    - Symptoms and signs of uncomplicated malaria **plus**
      - Jaundice
      - Difficulty breathing or breathlessness
      - Sleepiness or drowsiness
      - Very dark urine
      - Confusion
      - Coma

### **Laboratory diagnosis**

- Laboratory examination of **thick and thin blood film** from a finger prick may show malaria parasites
- **Haemoglobin** estimation may show anaemia
- Rapid diagnostic tests (**RDTs**)

### **Case Management**

#### **Uncomplicated Malaria**

## **Case management involves dietary counselling and medications**

### **First trimester:**

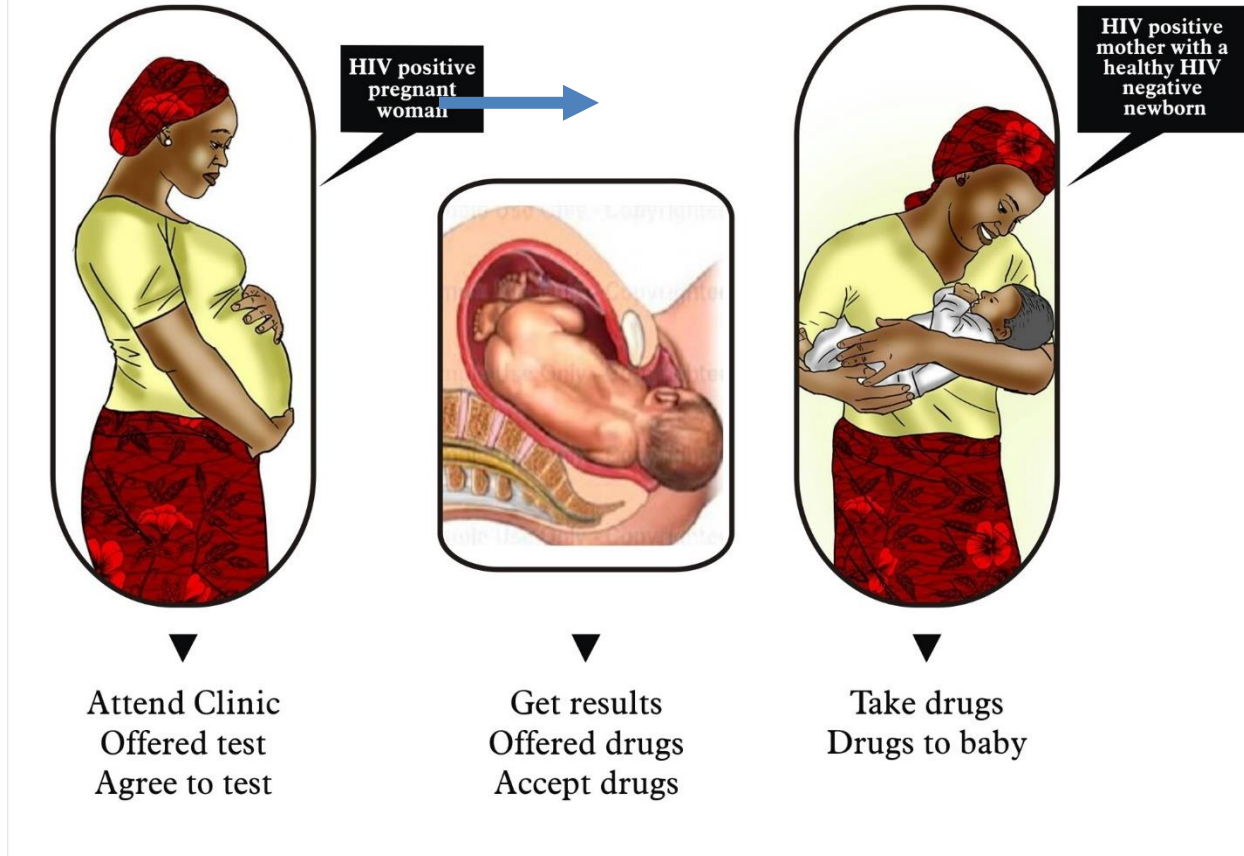
- Quinine 10 mg salt/kg body weight three times daily + clindamycin 10 mg/kg body weight twice daily for 7 days
  - If clindamycin is not available, use quinine only
- ACT can be used if it is the only effective treatment available

### **Second and third trimesters:**

- Artemether + Lumefantrine combination (4 tabs BD x 3 days), OR
- Artesunate + Amodiaquine HCL (600mg) daily for 3 days, OR
- Artesunate + clindamycin (10 mg/kg body weight twice daily) for 7 days, OR
- Quinine + clindamycin for 7 days

## **Prevention of Mother-to-Child-Transmission of HIV**

## MOTHER-TO-CHILD-TRANSMISSION OF HIV IS PREVENTABLE



### Approaches to HIV Testing and Counselling in PMTCT

#### “Opt-In”

- Explicit request to be tested
- Written or verbal informed consent

#### “Opt-Out”

- Testing routinely offered
- Clients not explicitly asked to be tested
- Client may refuse

#### Preferred Strategy: Opt-Out



## **Opt-Out approach**

- Normalizes HIV testing by integrating it into routine ANC care
- Increases the number of women who receive testing and PMTCT interventions
- May increase the uptake of PMTCT services including testing

## **Counselling and Testing in pregnancy**

- Begins with **Group education** about PMTCT
- **Pre-test counseling** (in clinics with low client load)
  - Confidential and private
  - Help assess individual risk factors
  - Discuss how virus is transmitted
  - Address local myths and rumors
  - Provide information about the test
  - Inform the pregnant woman that HIV testing will be provided to all women who do not "opt out"
  - Emphasize importance of receiving “same-day” results or returning for results.
- **Post-test counseling for a negative result**
  - **Provide results**
  - **Review individual risk factors**
  - **Reinforce risk reduction practices**
  - **Identify support for risk reduction (e.g., accessible source of condoms)**

### Post-test counseling for a positive result:

- Provide all the same elements of care that are provided to a woman who is HIV-negative
- Help woman identify her “support” system
- Help woman develop a strategy for discussing results with partner
- Encourage referral for HIV testing and risk reduction counseling for partner
- Discuss antiretroviral (ARV) options with her
- Counsel concerning newborn feeding options

- Reinforce the importance of skilled attendant, giving birth in a site where ARVs are available, and complication-readiness
- Encourage referral for STI testing for self and for partner
- Counsel on importance of postpartum family planning

### Antiretroviral therapy

- If a woman is already on ARV therapy (typically HAART\*), advise her to continue in consultation with her HIV specialist rather than discontinue in favor of short-term monotherapy.
- If woman is not on ARV therapy, follow local guidelines. Pregnant women who are clinically eligible for ART should be given priority in initiating therapy.

*\*Highly Active Anti-Retroviral Therapy*

### Laboratory Investigation During

#### ANC

Lab Test	At Booking/ First Presentation (Baseline)	Second Visit	Third Visit	Fourth Visit	Fifth Visit
Routine for all pregnant women					
PCV or FBC where available	X	X	X	X	X
HBsAg and HCV	X				
Syphilis test	X				
Urinalysis	X	X	X	X	X
MP	As clinically indicated				
Specific for HIV positive					
CD4+	X				X
Viral load	As recommended by chapter 3				
LFT	As clinically indicated				
E/U/Cr	As recommended by chapter 3				
Lipid Profile	As clinically indicated				

## Breast-feeding



### Breastfeeding decisions

- If the mother is HIV-negative, or if her HIV status is unknown, exclusive\* breastfeeding is recommended for the first six months.
- If the mother is infected with HIV:
  - She should breastfeed unless replacement feeding is *acceptable, feasible, affordable, safe, and sustainable* (AFASS).
  - However, if AFASS criteria cannot be met, she should breastfeed exclusively until replacement can be provided safely (meeting AFASS criteria), because exclusive breastfeeding, rather than mixed feeding, can reduce the risk of HIV transmission to the breastfeeding infant.

*\*"Exclusive breastfeeding" means that the infant only receives breast milk without any additional food or drink, not even water.*

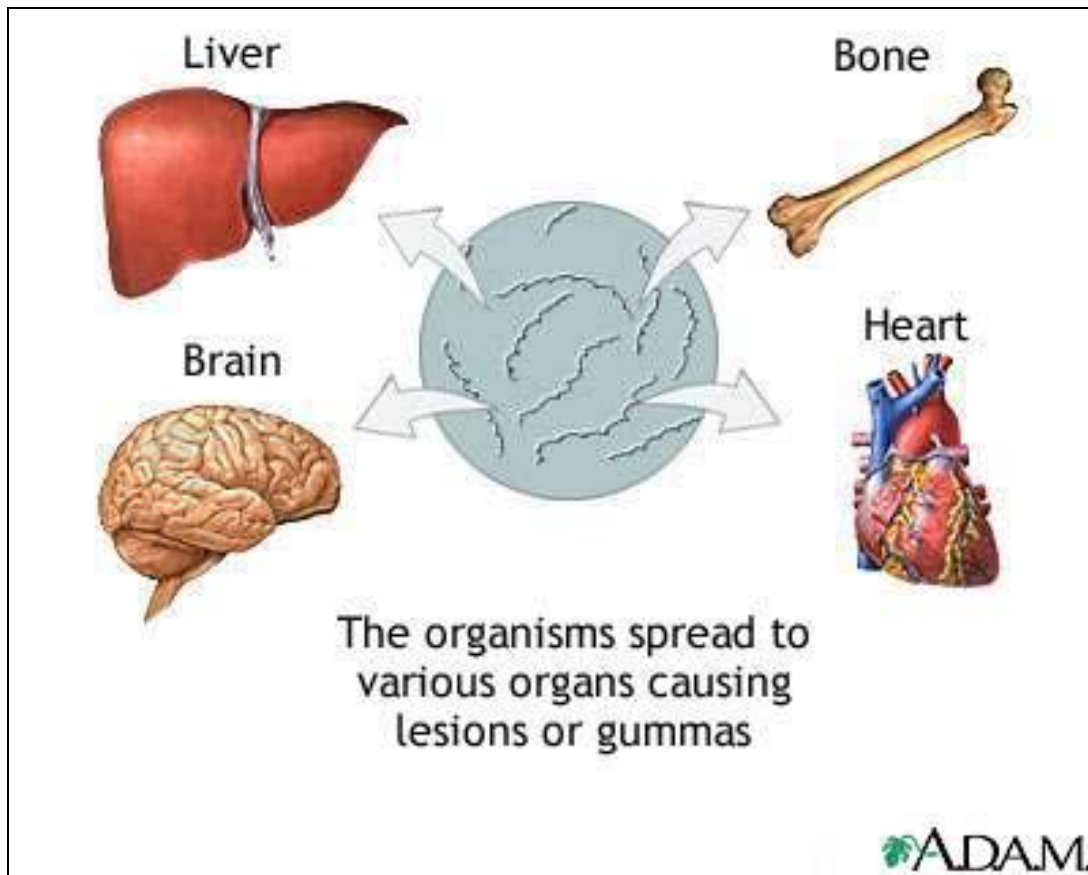
- Whatever the woman decides, support her decision.
- If the woman chooses to breastfeed:

- Teach proper latching-on techniques to prevent trauma to nipple.
  - Advise her to seek immediate attention if mastitis, breast abscess, fungal infection of the breast, or if oral thrush in the infant's mouth occurs.
  - Breastfeed exclusively for the first six month of life ,Introduce complementary feeding from six month while still breastfeeding for upto one year.
- If the woman chooses to stop breastfeeding, she should be counseled about appropriate and safe replacement feeding options.

### **Support and Networking**

- Support and networking groups can help a pregnant woman who is infected with HIV identify:
  - People in her life – friends, family, other people who are infected with HIV – who can:
    - Provide emotional and practical support
    - Help her secure resources and plan for the future
  - Community resources or a support group for people living with AIDS (PLWA), if possible

## Syphilis in pregnancy



### Significance of syphilis in pregnancy

- WHO estimates that 12 million people are infected with syphilis globally. (Walker 2003)
- At least two-thirds of all babies born to untreated women who have syphilis are infected. (Zenker and Rolfs 1989)
- Generally, in women with a history of untreated syphilis, early pregnancies end in abortion or stillbirth; later pregnancies end in full-term infants with syphilis. (Walker 2003)

## Syphilis Detection

- Building partnerships with community groups can aid in the detection of syphilis in pregnant women.
  - The test of choice for detecting syphilis is the RPR (rapid plasma reagin) test. The RPR is a quick, simple test that does not require a laboratory and that allows a woman to be tested and treated, if positive, on the same day.
  - If RPR is not available, the venereal disease research laboratory (VDRL) slide test may be used. However, it is a more complicated test that requires the patient to return for results and treatment.

## Syphilis Treatment

- A woman who reports a positive syphilis test (whether or not she has signs/symptoms of syphilis, and whether or not she has a record of the test), and has received no treatment or inadequate treatment, **MUST** be treated at this time. Her baby will also need evaluation and treatment immediately after birth.
- Exchange all information in a private setting.

## Treatment of Syphilis

- **Primary, Secondary or Tertiary**
  - Benzathine penicillin G, 2.4 million units IM per wk (1-3 weeks)
  - OR
  - Aqueous Procaine penicillin G, 0.6-1.2 million units IM daily x 10 days
- **For patients allergic to penicillin**, give Erythromycin, 500 mg. 6 hourly x 15 days

## Supportive therapy

- Provide emotional support.
- Counsel on mode of transmission, consequences of untreated disease, importance of having sexual partners tested and treated, and importance of consistent condom use.
- Teach woman to watch for signs and symptoms in her newborn and to have the newborn examined by a skilled attendant at birth whether or not it has signs/symptoms.

**Section F**  
**Birth Planning and Complication Readiness**

## **Learning objectives**

At the end of the section participants should be able:

- I. To define birth planning
- II. To describe the rationale for birth planning preparation.
- III. To state the importance of emergency preparedness and complication readiness
- IV. To recognise the Delays and how to avert them.
- V. To enumerate danger signs and describe their significance

## **The four Fatal Delays**

1. Delay in deciding to seek appropriate help (includes delay in recognizing the problem, delay in family concurrence on seeking care, and delay in deciding where to seek help).
2. Delay in reaching an appropriate facility: Lack of availability of – or funds for – transportation, services far from home
3. Delay in receiving help after reaching the service site
4. and prompt referral if need be.

## **Causes of Delay No. 3**

- **Staff may not:**
  - Know how to manage the problem
  - Have the necessary equipment or supplies
  - Be available at the facility
  - Be motivated enough to take emergency action
- **Family may:**
  - Lack funds to pay for services at the facility

*Sources:* Thaddeus and Maine 1994; Barnes-Josiah, Myntti, and Augustin 1998



## Birth Planning and Emergency Preparedness



### Exercise No. 4: Birth Planning and Complication Readiness

- Work in pairs.
- Make a list of key issues for birth planning and emergency readiness
- You will share your list with the class
- **Duration:** 10 minutes

### Why Is Birth and Emergency Preparedness Important?

- Most cultures in sub-Saharan Africa perceive childbirth to be a normal physiological event.
- Birth and emergency planning is, therefore, not widespread in the region
- Yet, 15% of pregnant women will develop life-threatening complications in pregnancy, during or after delivery.
- Risk-scoring approach has been very poorly predictive and cannot always identify those at risk of maternal mortality. Therefore,
- **“EVERY PREGNANCY IS AT RISK”**

## Components of Birth Planning and Emergency Preparedness

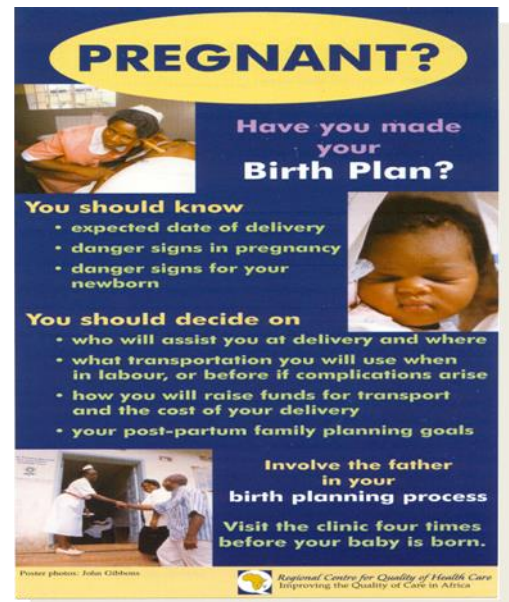
- What is the Expected Date of Delivery
- Where does the woman plan to deliver
- Who will attend delivery (stress importance of Skilled Birth Attendant)
- Who will support the woman in labour
- Transport arrangements when in labour or if complications arise
- Source of funds for hospital fees etc
- Who will donate “compatible” blood, if required
- Who will care for other children at home
- Warning (danger) signs to watch for

## Rationale for Preparation and Planning

- Every pregnant woman and her family should **have a plan in place prior to birth or any emergency** BECAUSE *all women are at risk of complications* and most complications cannot be predicted.
- In the case of an emergency, the time required to make arrangements – which could have been made before the emergency – may easily define the line between survival and death for the mother and newborn.

## Provision of a Skilled Attendant

- "A *skilled birth attendant* is an accredited health professional – such as a midwife, doctor, or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and in the identification, management, and referral of complications in women and newborns."\*\* (WHO/ICM/FIGO Joint Statement 2004)



### **Provision of a Skilled Attendant *contd***

- The term "skilled attendant" does not include traditional birth attendants (TBAs), even if they have had training. (WHO/UNFPA/UNICEF/World Bank Joint Statement 1999)
- However, "TBAs can become an important element in a country's safe motherhood strategy and can serve as key partners for increasing the number of births at which a skilled attendant is present." (WHO/ICM/FIGO Joint Statement 2004). They can help refer clients with complications.

### **Appropriate setting for birth**

- An appropriate setting for birth may be a **primary health care (PHC) or referral site**, or it may be in a birthing centre or home, as long as a skilled attendant is present

### **Items needed at birth**

- **Whether at home or in a facility, families are often expected to bring basic items of care. Depending on the setting or facility, these may include:**
- A waterproof plastic cover (to provide a clean surface)
- An unused razor blade or clean cutting instrument
- Soap
- Clean cord ties
- Placenta receptacle
- Sterile gloves
- Mucus extractor
- Clean cloths/perineal pads
- Beverages for hydration
- Blankets/towels for drying and covering the baby

## **Transportation**

- If there is no functional referral system, the woman and her **family will need to make arrangements for transportation** to an appropriate place of birth or to a referral facility in case of emergency.
- Some communities and facilities have **organized transport schemes** to support women and newborns.

## **Funds for Birth and Emergencies**

- The woman and her family need to set aside the necessary funds for a normal birth and to cover a potential complication.
- Families may have access to emergency funds through the community or the health care facility.

## **Decision-making in case of emergency**

- The woman and family should:
  - Discuss the birth and emergency plan
  - Consider how they make decisions, and
  - Decide how decisions will be made when labour occurs or when a complication or an emergency arises.

## **Emergency Blood Donors**

- In many places blood banks are not in place. So, the family should identify an appropriate blood donor (or donors) who will be available in case of emergency.
- Death from a postpartum haemorrhage can take less than two hours from onset of bleeding.
- So, the family cannot afford to lose time in making arrangements after the bleeding starts.

### Recognition and significance of Danger Signs

Danger sign	Possible condition
Vaginal bleeding in early pregnancy	Miscarriage, abortion, ectopic or molar pregnancy
Vaginal bleeding in late pregnancy	Placenta praevia, abruptio placenta, ruptured uterus
Fever (Temp. 38°C or more)	Malaria/ Infection/Sepsis
Breathing difficulty	Severe anaemia, heart failure, pneumonia, asthma, pulmonary oedema associated with PET

## Recognition and significance of Danger Signs

Danger sign	Possible condition
Abnormal vaginal discharge	Amnionitis, Drainage of liquor (premature rupture of membranes- PROM), candidiasis, trichomoniasis
Convulsions, loss of consciousness, headaches, epigastric pain	Eclampsia, cerebral malaria, epilepsy, meningitis, encephalitis, , ovarian cyst, peritonitis, severe preeclampsia.
Severe abdominal pain in early pregnancy	Ectopic pregnancy, pyelonephritis, ovarian cyst
Severe abdominal pain in late pregnancy	Preterm labour, abruptio placenta, ruptured uterus, amnionitis, pelvic abscess, cystitis, pyelonephritis, peritonitis, appendicitis, metritis,
Decreased or absent fetal movements	Fetal distress or fetal death
Draining of liquor but no sign of labour	Premature rupture of membranes (PROM)



## **Section G**

### **Implementing New Antenatal Care Model for Nigeria**

## Learning Objectives

At the end of the session, participants will be able to;

1. Conduct initial assessment of pregnant women at booking clinic
2. Provide standard investigations and treatment to pregnant women attending Antenatal clinic
3. Plan Antenatal care contacts using the New ANC model for Nigeria

## 2016 WHO ANC model

WHO FANC		2016 WHO ANC
B. Maternal and fetal assessment <sup>12</sup>	Recommendation	Type of recommendation
<b>B.1: Maternal assessment</b>		
Anaemia	<b>B.1.1:</b> Full blood count testing is the recommended method for diagnosing anaemia in pregnancy. In settings where full blood count testing is not available, on-site haemoglobin testing with a haemoglobinometer is recommended over the use of the haemoglobin colour scale as the method for diagnosing anaemia in pregnancy.	Context-specific recommendation
Asymptomatic bacteriuria (ASB)	<b>B.1.2:</b> Midstream urine culture is the recommended method for diagnosing asymptomatic bacteriuria (ASB) in pregnancy. In settings where urine culture is not available, on-site midstream urine Gram-staining is recommended over the use of dipstick tests as the method for diagnosing ASB in pregnancy.	Context-specific recommendation
Intimate partner violence (IPV)	<b>B.1.3:</b> Clinical enquiry about the possibility of intimate partner violence (IPV) should be strongly considered at antenatal care visits when assessing conditions that may be caused or complicated by IPV in order to improve clinical diagnosis and subsequent care, where there is the capacity to provide a supportive response (including referral where appropriate) and where the WHO minimum requirements are met. <sup>13,14</sup>	Context-specific recommendation
<b>Return for delivery at 41 weeks if not given birth.</b>		



<b>Recommendations integrated from other WHO guidelines that are relevant to ANC maternal assessment</b>		
Gestational diabetes mellitus (GDM)	<b>B.1.4:</b> Hyperglycaemia first detected at any time during pregnancy should be classified as either gestational diabetes mellitus (GDM) or diabetes mellitus in pregnancy, according to WHO criteria. <sup>11</sup>	Recommended
Tobacco use	<b>B.1.5:</b> Health-care providers should ask all pregnant women about their tobacco use (past and present) and exposure to second-hand smoke as early as possible in the pregnancy and at every antenatal care visit. <sup>11</sup>	Recommended
Substance use	<b>B.1.6:</b> Health-care providers should ask all pregnant women about their use of alcohol and other substances (past and present) as early as possible in the pregnancy and at every antenatal care visit. <sup>11</sup>	Recommended
Human immunodeficiency virus (HIV) and syphilis	<b>B.1.7:</b> In high-prevalence settings, <sup>12</sup> provider-initiated testing and counselling (PITC) for HIV should be considered a routine component of the package of care for pregnant women in all antenatal care settings. In low-prevalence settings, PITC can be considered for pregnant women in antenatal care settings as a key component of the effort to eliminate mother-to-child transmission of HIV, and to integrate HIV testing with syphilis, viral or other key tests, as relevant to the setting, and to strengthen the underlying maternal and child health systems. <sup>12</sup>	Recommended
Tuberculosis (TB)	<b>B.1.8:</b> In settings where the tuberculosis (TB) prevalence in the general population is 100/100 000 population or higher, systematic screening for active TB should be considered for pregnant women as part of antenatal care. <sup>13</sup>	Context-specific recommendation
<b>B.2: Fetal assessment</b>		
Daily fetal movement counting	<b>B.2.1:</b> Daily fetal movement counting, such as with 'count-to-ten' kick charts, is only recommended in the context of rigorous research.	Context-specific recommendation (research)
Symphysis-fundal height (SFH) measurement	<b>B.2.2:</b> Replacing abdominal palpation with symphysis-fundal height (SFH) measurement for the assessment of fetal growth is not recommended to improve perinatal outcomes. A change from what is usually practiced (abdominal palpation or SFH measurement) in a particular setting is not recommended.	Context-specific recommendation

### Context specific recommendations

Tuberculosis Screening is recommended due to the High Prevalence in Nigeria

Current Practice of SFH and abdominal palpation is recommended in our context

**How Frequently Should Women Be Seen in Pregnancy?**

<b>WHO FANC model</b>	<b>2016 WHO ANC model</b>
<i>First trimester</i>	
Visit 1: 8-12 weeks	Contact 1: up to 12 weeks
<i>Second trimester</i>	
Visit 2: 24-26 weeks	Contact 2: 20 weeks Contact 3: 26 weeks
<i>Third trimester</i>	
Visit 3: 32 weeks	Contact 4: 30 weeks Contact 5: 34 weeks
Visit 4: 36-38 weeks	Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41 weeks if not given birth.	

**Exercise No. 5**

- Divide into 8 groups.
- Each group should make a list of what should be done at the assigned ANC visit:
  - Group 1: Initial (booking) visit
  - Group 2: 2<sup>nd</sup> visit between 20 weeks
  - Group 3: 3<sup>rd</sup> visit at 26 weeks
  - Group 4: 4<sup>th</sup> visit at 30 weeks
  - Group 5: 5<sup>th</sup> visit at 34 weeks

- Group 6:6th visit at 36weeks
- Group 7:7th visit at 38weeks
- Group 8:8th visit at 40weeks
- **Duration: 30 minutes**

## **1<sup>st</sup> visit/Contact**

### **Goal: Baseline Assessment and Care**

- Establish a friendly atmosphere
- Complete the client Registration/Antenatal Card
- Obtain a Comprehensive History
- Perform a “Head-to-Toe” physical examination
- Request relevant laboratory investigations (Hb, RPR or VDRL, Blood group and Rhesus type, Urine analysis)
- Provide Iron/Folate according to guidelines
- Provide 1<sup>st</sup> dose of Tetanus Toxoid (if not immune)
- Provide Insecticide-Treated-Net (ITN) if available
- Educate and Counsel client (see topics in a later slide)
- Initiate discussion on Birth and Emergency Planning
- Complete client records
- Give appointment for the 2<sup>nd</sup> visit

## Goal-directed history taking

<b>Elements of focus</b>	<b>When to focus</b>
Personal information, including previous pregnancies and childbirth, transportation availability, problems and concerns, other caregivers	First visit
Last menstrual period and contraceptive plans	First visit
Present pregnancy, fetal movements and adjustment to pregnancy	Every visit
Daily habits and lifestyles, daily workload, dietary habits, living situation and exposure to violence, potentially harmful substances	First visit
Obstetric history, previous complications, previous breastfeeding experience	First visit
<b>Elements of focus</b>	<b>When to focus</b>
<b>Medical history, allergies, HIV, anaemia, syphilis, chronic disease, previous hospitalizations, current medications, tetanus immunization history</b>	<b>First visit</b>
<b>Interim history, problems or significant changes, change in other histories, ability to carry out previous plans</b>	<b>Return visits</b>

## Calculating EDD

- The following methods may be used to calculate EDD:
  - Gestational age calendar, such as the pregnancy wheel
  - Calendar method, based on the following formula
    - The date of the first day of the LMP + 7 days - 3 months = EDD
    - For example: 9 May + 7 days – 3 months = 16 February
    - Some prefer adding 9 months plus 7 days, but this is more cumbersome and may not be as accurate

- Major festivals (religious and traditional) can be used to date pregnancy when a woman does not remember her last menstrual period.

WHO Recommendation 2016	Key Considerations and Rationale
<b>Recommended in all settings</b>	
<b>B.1.2:</b> Midstream urine culture is the recommended method for diagnosing asymptomatic bacteriuria (ASB) in pregnancy. In settings where urine culture is not available, onsite midstream urine Gram-staining is recommended over the use of dipstick tests as the method for diagnosing ASB in pregnancy.	<ul style="list-style-type: none"> <li>• This recommendation must be considered alongside Recommendation C.1 (ASB treatment).</li> <li>• ASB is a priority research topic.</li> </ul>
<b>B.1.4:</b> Classify hyperglycaemia first detected at any time during pregnancy as either gestational diabetes mellitus (GDM) or diabetes mellitus in pregnancy, according to WHO criteria.	<ul style="list-style-type: none"> <li>• The WHO currently does not have a recommendation on whether or how to screen for GDM in all pregnant women; the usual window for diagnosing GDM is between 24 and 28 weeks gestation.</li> <li>• Uncertainties persist about the cost-effectiveness of screening strategies, the prevalence of GDM and diabetes mellitus in diverse populations, and the impact of earlier diagnosis on pregnancy outcomes.</li> <li>• Women with hyperglycaemia (diabetes mellitus, GDM) detected during pregnancy are at greater risk of adverse pregnancy outcomes, including macrosomia, preeclampsia/hypertensive disorders, shoulder dystocia. GDM treatment can reduce poor outcomes.</li> </ul>
<b>B.1.5:</b> Ask about tobacco use (past and present) and exposure to second-hand smoke as early as possible in pregnancy and at every antenatal care (ANC) visit.	<ul style="list-style-type: none"> <li>• Health care providers should routinely offer advice and psychosocial interventions for tobacco cessation and/or exposure to second-hand smoke.</li> <li>• Further guidance on strategies to prevent and manage tobacco use and second-hand smoke exposure can be found in the 2013 WHO recommendations, available at <a href="http://www.who.int/tobacco/publications/pregnancy/guidelinetobaccosmokeexposure/en/">http://www.who.int/tobacco/publications/pregnancy/guidelinetobaccosmokeexposure/en/</a>.</li> </ul>
<b>B.1.6:</b> Ask about use of alcohol and other substances (past and present) as early as possible in pregnancy and at every ANC visit.	<ul style="list-style-type: none"> <li>• Routinely asking about alcohol use is important, as some women are more likely to report sensitive information only after a trusting relationship is established.</li> <li>• Health care providers should be prepared to intervene.</li> <li>• Further guidance on interventions and strategies to identify and manage substance use and</li> </ul>

WHO Recommendation 2016	Key Considerations and Rationale
<b>Recommended in all settings</b>	
	substance use disorders in pregnancy can be found in the 2014 WHO guidelines, available at <a href="http://www.who.int/substance_abuse/publications/pregnancy_guidelines/en/">http://www.who.int/substance_abuse/publications/pregnancy_guidelines/en/</a> .
<b>B.1.7:</b> In high-prevalence settings, implement provider-initiated testing and counselling for HIV in all ANC settings. In low-prevalence settings, provider-initiated testing and counselling can be considered in ANC settings as a key component of the effort to eliminate mother-to-child transmission of HIV; integrate HIV testing with syphilis, viral, or other key tests, as relevant to setting; and strengthen underlying maternal and child health systems.	<ul style="list-style-type: none"> <li>• Availability of testing often determines a high level of knowledge of HIV status among women, thus expanding the benefits of antiretroviral treatment.</li> <li>• Further guidance on HIV testing can be found in the 2015 WHO guidelines, available at <a href="http://www.who.int/hiv/pub/guidelines/hiv-testing-services/en/">http://www.who.int/hiv/pub/guidelines/hiv-testing-services/en/</a></li> <li>• In addition, the 2015 guideline on when to start antiretroviral therapy and pre-exposure prophylaxis for HIV is available at <a href="http://www.who.int/hiv/pub/guidelines/earlyrelease-arv/en/">http://www.who.int/hiv/pub/guidelines/earlyrelease-arv/en/</a>.</li> </ul>
<b>B.2.4:</b> Provide one ultrasound scan before 24 weeks gestation (early ultrasound) to estimate gestational age (GA), improve detection of fetal anomalies and multiple pregnancies, reduce induction of labour for post-term pregnancy, and improve pregnancy experience.	<ul style="list-style-type: none"> <li>• A routine ultrasound scan after 24 weeks gestation is not recommended for pregnant women who have had an early ultrasound scan. However, stakeholders may consider a later ultrasound scan to identify number of fetuses, fetal presentation, and placental location if an early ultrasound scan has not been performed.</li> <li>• A correctly performed early ultrasound scan increases accuracy and precision of GA assessment, which can support appropriate management of threatened preterm birth and post-term pregnancies.</li> <li>• Health system support for a minimum standard of ultrasound services, appropriate referral, and management of complications identified by ultrasound is essential. See WHO 2016 ANC <i>Ultrasound Policy Brief</i> (reference to be added.)</li> </ul>

### Exercise No. 6: Calculating EDD

- Work individually and calculate EDD for the following clients:

1. Mrs. A tells you that her last normal menstrual period started on 10 October 2007.  
What is her EDD?
2. Mrs. B tells you that her last normal menstrual period started on 10 March 2007.  
What is her EDD?
3. Mrs. C tells you that her last normal menstrual period started on 13 November 2007. What is her EDD?
4. Mrs. D tells you that her last normal menstrual period started on 1 January 2008.  
What is her EDD?
5. Mrs. E tells you that her last normal menstrual period started on 25 May 2007.  
What is her EDD?

### Goal-directed laboratory tests

Elements of focus	When to focus
Haemoglobin	First visit and repeat at the 28-32 week visit
RPR or VDRL for syphilis	First visit
HIV test (after counselling if she does not “opt-out”)	First visit
Blood group and RH	First visit
Urinalysis	Every visit

### Routine Elements of Care at ALL Follow-up Visits

- Maintain a friendly atmosphere

- Ask about any complaints in the current pregnancy
- Check for anaemia (pallor of inner eyelids, tongue, hands)
- Check for hypertension (measure blood pressure)
- Check the uterine size and compare with gestational age
- Confirm presence of fetal heart sounds
- Check urine for protein and sugar
- Provide Iron/Folate according to national guidelines
- Educate and Counsel client (see topics in slide 39)
- Continue/conclude discussion on Birth and Emergency Planning
- Give appointment for the next follow-up visit

### Specific elements of care at EACH follow-up visit



Tetanus toxoid immunization with a pregnant woman

### Avoid Wasting Time on Unproven Practices

- There is no evidence that the following procedures are of value during antenatal care:

- Routine weighing of woman
- Measurement of woman's height
- Measurement of woman's shoe size
- Checking for LEG oedema (except when included in generalized oedema)
- Use the time saved to discuss the woman's Birth Plan and educate her on symptoms and signs of pregnancy complications or complications in labour

### **Exercise No. 6: Calculating EDD**

- Work individually and calculate EDD for the following clients:
  1. Mrs. A tells you that her last normal menstrual period started on 10 October 2015.  
What is her EDD?
  2. Mrs. B tells you that her last normal menstrual period started on 10 March 2016.  
What is her EDD?
  3. Mrs. C tells you that her last normal menstrual period started on 13 November 2016. What is her EDD?
  4. Mrs. D tells you that her last normal menstrual period started on 1 January 2017.  
What is her EDD?
  5. Mrs. E tells you that her last normal menstrual period started on 25 May 2016.  
What is her EDD?

### **Exercise No. 7:**

#### **Questions for Hot Potato Game**

1. What is WHO Model of antenatal care?
2. What are the goals of ANC?
3. List the recommended gestational ages for the four ANC visits.
4. When should a pregnant woman receive her first dose of SP for IPTp?
5. When should a pregnant woman receive her second dose of Tetanus Toxoid?
6. Describe the relationship between ANC attendance and Maternal Mortality Ratio in Nigeria
7. Which geopolitical zone in Nigeria has the highest maternal mortality ratio and why?



8. Enumerate 3 reasons why some women do not go for ANC
9. List 3 things that can be done to make ANC visits more user-friendly
10. List 3 laboratory investigations that should be done for pregnant women.

### **Using Interpersonal Communication Skills for ANC Service Provision**



#### **Skills needed for IPC**

**The skills needed for IPC can be summarized with a number of acronyms. They include:**

- **ROLES**
  - Relax
  - Open up
  - Lean forward
  - Eye contact
  - Smile, where necessary
- **KISS**
  - **Keep It Simple and Sensible**
- **CLEAR**
  - Clarify
  - Listen attentively
  - Explain
  - Acknowledge

- Repeat
- **GATHER**
  - Greet
  - Ask
  - Tell
  - Help
  - Explain
  - Return

### **What is GATHER?**

- Greet
- Ask
- Tell
- Help
- Explain and Examine
- Refer/Give Return appointment

### **G**

- **Greet the client:**
  - with respect and kindness
  - Introduce yourself
  - offer her a seat
  - ensure auditory and visual privacy
  - assure her of confidentiality of your discussions
  - encourage her to feel free to discuss any concerns she may have about her current pregnancy or future delivery

### **A**

- **Ask the client about:**
  - any complaints she may have about her current pregnancy
  - previous pregnancies (and their outcome)

- her family/home situation
- danger signals in pregnancy and during childbirth
- her birth plan (if any)
- what she would do if she developed an unexpected complication in pregnancy or during childbirth

## T

- **Tell the client about:**

- Appropriate **diet** and **nutrition** in pregnancy
- Importance of **personal hygiene/self care**
- **Rest and exercise** in pregnancy
- Effects of STIs/HIV/AIDS in pregnancy and the need for VCT and prevention of MTCT
- Importance of Tetanus Toxoid vaccination in pregnancy
- Importance of Intermittent Preventive Treatment (IPTp) of malaria in pregnancy (using 2 doses of SP, one month apart) and use of Insecticide-Treated Nets (ITNs or LLINs)
- Harmful traditional practices in the community
- Care of the breast and exclusive breastfeeding
- Danger signs in pregnancy and/or at childbirth, in newborn
- The importance of having a skilled birth attendant (SBA) at her delivery
- Mama kit and how and where to get one

## H

Help the client to make a Birth Plan



Advise the pregnant woman to involve the male partner in her birth planning process

## E

- **Examine the client to:**
  - Confirm that the uterine size is compatible with the gestational age and that the baby is alive
  - Detect abnormalities such as anaemia, hypertension, multiple pregnancy, abnormal lie/presentations, genital tract abnormalities, sexually transmitted infections (STIs)
- **Explain about:**
  - The benefits of goal-oriented ANC
  - Need to have some laboratory tests done
  - Importance of compliance with medications and health advice given
  - the importance of having a skilled professional attend her delivery
- **Refer the client:**
  - If she has a complication that cannot be managed at your facility

- For VCT if she is at risk of HIV/AIDS (and there is no VCT service in your facility)
- For laboratory investigations (haemoglobin, blood group and Rhesus status, urinalysis, RPR or VDRL) and others as needed
- If she requests to be referred
- **Reassure (share your findings on her progress)**
- **Give an appointment for her Return visit**

### **Illustrative indicators for monitoring ANC**

- The indicators chosen will depend upon the standards established and the local definition of performance standards.
- Although a wide variety of indicators may be appropriate for monitoring the quality of ANC services, the chart gives some illustrative indicators.

### **Supervision**

- Supervisors will want to use the data gathered during monitoring to assist providers in determining performance gaps and working to help close those gaps.
- The supervisor may want to work with a facility-based team to determine interventions that will bring actual performance closer to the standards set.
- The supervisor will be both a mentor and a support in improving performance.
- The supervisor will seek providers' input and give attention to providers' needs and motivation.



## **Section H**

### **Case Studies and Role Plays**

## Learning Objectives

At the end of this session, participants will be able to;

1. Take good clinical history
2. Conduct physical examination
3. Request for appropriate laboratory investigations to enable good diagnosis and treatment
4. Demonstrate good interpersonal and listening skills.

## Exercises

### Exercise No.8

#### Case Study Instructions

- Divide into 3 groups.
- Read and analyze the case study allocated to your group individually and then answer the questions as a group.
- The groups will then share their answers at plenary
- Duration: 30 minutes

#### Case Study #1

- Hawa is 24 years old. She is 4 months pregnant with her second child. Her last pregnancy was 2 years ago, and uneventful. She lives in a small town, about 5 km from the maternity clinic. She is a part-time teacher at a nursery school 3 km from her home. Her husband works 45 km away, and returns home late in the evening. Hawa arrives today for her first ANC visit with a complaint of slight dizziness. She has walked to the clinic.

**Question #1:** What will you include in your initial assessment of Hawa, and why?

**Question #2:** What particular aspects of Hawa's physical examination will help you make an evaluation or identify her problems/needs, and why?

**Question #3:** What screening procedures/ laboratory tests will you include (if available) in your assessment of Hawa, and why?

### Case Study #1

#### Evaluation

- You have completed your assessment of Hawa and your findings include the following:
  - Hawa’s temperature is 37° C, her blood pressure is 110/72 mm Hg, and her pulse is 84 beats per minute. Her hemoglobin is 11 g/dL. She states that she left home this morning without eating breakfast so that she would not be late for her ANC visit. She had slight nausea earlier in her pregnancy but this has stopped. She explains that she eats irregular meals due to her work and the distances she must walk. Hawa has felt fetal movement (quickening) for the last several days.
  - Her physical examination is normal, and the size of her uterus corresponds to her gestational age based on last menstrual period.

### Case Study #1

#### Diagnosis

##### Question #4

- Based on these findings, what is your diagnosis of Hawa’s condition, and why?

##### Question #5

- Based on your diagnosis, what is your plan of care for Hawa, and why?

##### Question #6

- Hawa has come back for her second ANC. She tells you she has been eating better and feels better. She confirms that she now sleeps under an ITN every night
- Based on these findings, what is your continuing plan of care for Hawa, and why?

### Case Study #2

- Biola is **19 years old** and has been **married for 1 year**. She arrives for her **first visit to the ANC clinic 20 weeks after her last menstrual period**. Biola’s husband works in a distant city and is home only on weekends. His mother lives nearby and comes often to



check on Biola. Her mother-in-law has already advised her son and Biola to have the traditional birth attendant, who lives very close by, attend the birth.

## Case Study #2

- **Question #1**
  - What will you include in your initial assessment of Biola, and why?
- **Question #2**
  - What particular aspects of Biola’s physical examination will help you make an evaluation or identify her problems/needs, and why?
- **Question #3**
  - What screening procedures/laboratory tests will you include (if available) in your assessment of Biola, and why?

## Case Study #2

- **Evaluation**
  - You have completed your assessment of Biola and your findings include the following:
    - Biola’s **history and physical examination** reveal **no abnormalities**. The **size of the uterus is compatible with the date** of her last menstrual period (20 weeks). Her **RPR is negative**, and her **hemoglobin is 10.5 g/dL**.

### Question 4

Based on these findings, what is Biola’s diagnosis, and why?

### Question #5

Based on your diagnosis, what is your plan of care for Biola, and why?

- **Follow up**
  - Biola returns to the antenatal clinic at 26 weeks of pregnancy, accompanied by her mother-in-law. She states that she feels well, and the results of her history and physical examination are normal. She is given another dose of SP (three tablets)

and observed while taking it. She uses ITNs every night. She is given second dose of Tetanus toxoid. She states that she and her mother-in-law have discussed the provider's suggestions about making a birth plan and using a skilled provider at the time of birth. Her mother-in-law would like to ask the provider some questions about these points.

### **Question #6**

- Based on these findings, what is your continuing plan of care for Biola, and why?

### **Case Study #3**

- Ngozi is **30 years old**. She is approximately **24 weeks pregnant** with her second baby. She comes to the antenatal clinic for her **first ANC visit complaining of severe headache, fever, and dizziness**. Ngozi and her family moved to the area 6 months ago. She has never suffered from malaria.

### **Case Study #3 contd.**

#### **Question #1**

- What will you include in your initial assessment of Ngozi, and why?

#### **Question #2**

- What particular aspects of Ngozi's physical examination will help you make an evaluation or identify her problems and needs, and why?

#### **Question #3**

- What screening procedures and laboratory tests will you include (if available) in your assessment of Ngozi, and why?

### **Case Study #3: Evaluation**

- **You have completed your assessment of Ngozi, and your main findings include the following:**
  - Ngozi states she has felt well during this pregnancy, and began having fever and headache yesterday morning. She states that she does not have other symptoms such as cough, difficulty urinating, abdominal pain, or drainage of liquor. She has not had convulsions or loss of consciousness. She has not taken any medication.

- Ngozi’s **temperature is 38.7° C**, her **blood pressure is 122/68 mm Hg**, **pulse rate is 92 beats per minute**, and her respiration rate is 18 breaths per minute. Ngozi is **pale**, her mouth and tongue are dry, and her eyes are mildly sunken. Her fundal height is 23 cm (which is compatible with the dates of her last menstrual period).
- Her **hemoglobin is 10.5 g/dl**; the **thick blood film test for malaria is positive**.
- **Question #4**
  - Based on these findings, what is Ngozi’s evaluation, and why?
- **Question #5**
  - Based on your evaluation, what is your plan of care for Ngozi, and why?

### Exercise No. 10: Role Plays

- **Directions**
  - Divide into groups of 3
  - Select role play #1 or #2
  - Two participants in each group will perform the following roles: *skilled provider* and *ANC client*. Participants should take a few minutes to prepare for the activity by reading the background information provided.
  - The third participant, who will observe and discuss the role play, should also read the background information.

### Role Play No1.

- **Roles**
  - **Skilled Provider:** The provider is an experienced provider who has good interpersonal skills.
  - **ANC Client:** Rose, a 21-year-old woman, who is pregnant for the first time. She is 28 weeks pregnant.

### Role Play No 1: Situation

- Rose has come to the antenatal clinic 5 days before her second antenatal appointment. She appears very anxious and explains that the midwife advised her to return if she had

any concerns. She tells the provider that she has several questions about changes and discomforts in her body. Rose describes the symptoms of one or two common discomforts of pregnancy (such as constipation or low back pain). The provider takes a targeted history and “performs” a targeted physical exam to rule out conditions requiring care beyond the scope of basic ANC. The provider determines that Rose has some common discomforts of pregnancy and gives her the information necessary to deal with her symptoms.

### **Role Play No.2: Participants’ roles**

- **Healthcare provider**
  - The healthcare provider is an experienced midwife who has good listening skills.
- **Client**
  - Mrs. A is 19 years old. This is her second pregnancy.

### **Role Play No. 2: Situation**

- Mrs. A is 20 weeks’ pregnant and generally healthy. This is her second antenatal visit for this pregnancy. She has not had any pregnancy-related problems so far. Her first pregnancy was uncomplicated. She is not comfortable about being at the clinic because the midwife who provided antenatal care in her first pregnancy did not listen to what she had to say. In addition, the midwife she saw 2 months ago on her first visit for this pregnancy was hurried and did not listen to her. However, her mother-in-law has sent her to the clinic today. The midwife senses the client's discomfort as she starts taking the interim antenatal history; she decides to use listening skills to make Mrs. A feel comfortable.

“To achieve the Every Woman Every Child vision and the Global Strategy for Women's Children's and Adolescents' Health, we need innovative, evidence based approaches to antenatal care.

I welcome these guidelines, which aim to put women at the centre of care, enhancing their experience of pregnancy and ensuring that babies have the best possible start in life.”



Ban Ki-moon  
UN Secretary-General  
2007 - 2016



## REFERENCES

1. Guideline: daily iron and folic acid supplementation in pregnant women. Geneva: World Health Organization; 2012 ([http://www.who.int/nutrition/publications/micronutrients/guidelines/daily\\_ifa\\_supp\\_pregnant\\_women/en/](http://www.who.int/nutrition/publications/micronutrients/guidelines/daily_ifa_supp_pregnant_women/en/), accessed 28 September 2016).
2. Guideline: intermittent iron and folic acid supplementation in non-anaemic pregnant women. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/75335/1/9789241502016\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/75335/1/9789241502016_eng.pdf), accessed 28 September 2016).
3. WHO recommendations for prevention and treatment of pre-eclampsia and eclampsia. Geneva: World Health Organization; 2011 ([http://apps.who.int/iris/bitstream/10665/44703/1/9789241548335\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44703/1/9789241548335_eng.pdf), accessed 29 September 2016).
4. Guideline: calcium supplementation in pregnant women. Geneva: World Health Organization; 2013 ([http://apps.who.int/iris/bitstream/10665/85120/1/9789241505376\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/85120/1/9789241505376_eng.pdf), accessed 28 September 2016).
5. Guideline: vitamin A supplementation in pregnant women. Geneva: World Health Organization; 2011 ([http://apps.who.int/iris/bitstream/10665/44625/1/9789241501781\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44625/1/9789241501781_eng.pdf), accessed 29 September 2016).
6. Guideline: vitamin D supplementation in pregnant women. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/85313/1/9789241504935\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/85313/1/9789241504935_eng.pdf), accessed 4 October 2016).
7. Responding to intimate partner violence and sexual violence against women: WHO clinical and policy guidelines. Geneva: World Health Organization; 2013 (<http://apps.who.int/rhl/guidelines/9789241548595/en/>, accessed 29 September 2016).
8. Diagnostic criteria and classification of hyperglycaemia first detected in pregnancy. Geneva: World Health Organization; 2013 (WHO/NMH/MND/13.2; [http://www.who.int/diabetes/publications/Hyperglycaemia\\_In\\_Pregnancy/en/](http://www.who.int/diabetes/publications/Hyperglycaemia_In_Pregnancy/en/), accessed 29 September 2016).
9. WHO recommendations for the prevention and management of tobacco use and second-hand smoke exposure in pregnancy. Geneva: World Health Organization; 2013 (<http://www.who.int/tobacco/publications/pregnancy/guidelinestobaccosmokeexposure/en/>, accessed 29 September 2016).
10. Guidelines for the identification and management of substance use and substance use disorders in pregnancy. Geneva: World Health Organization; 2014 ([http://www.who.int/substance\\_abuse/publications/pregnancy\\_guidelines/en/](http://www.who.int/substance_abuse/publications/pregnancy_guidelines/en/), accessed 29 September 2016).
11. Consolidated guidelines on HIV testing services 2015. Geneva: World Health Organization; 2015 ([http://apps.who.int/iris/bitstream/10665/179870/1/9789241508926\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/179870/1/9789241508926_eng.pdf), accessed 29 September 2016).
12. Systematic screening for active tuberculosis: principles and recommendations. Geneva: World Health Organization; 2013 ([http://www.who.int/tb/publications/Final\\_TB\\_Screening\\_guidelines.pdf](http://www.who.int/tb/publications/Final_TB_Screening_guidelines.pdf), accessed 29 September 2016).
13. Guideline: preventive chemotherapy to control soil-transmitted helminth infections in high-risk groups. Geneva: World Health Organization; 2016 (in press).
14. Maternal immunization against tetanus: integrated management of pregnancy and childbirth (IMPAC). Standards for maternal and neonatal care 1.1. Geneva: Department of Making Pregnancy Safer, World Health Organization; 2006 ([http://www.who.int/reproductivehealth/publications/maternal\\_perinatal\\_health/immunization\\_tetanus.pdf](http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/immunization_tetanus.pdf), accessed 28 September 2016).
15. Guidelines for the treatment of malaria, third edition. Geneva: World Health Organization; 2015 ([http://apps.who.int/iris/bitstream/10665/162441/1/9789241549127\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/162441/1/9789241549127_eng.pdf), accessed 28 September 2016).
16. Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. Geneva: World Health Organization; 2015 ([http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565_eng.pdf), accessed 29 September 2016).
17. WHO recommendations on community mobilization through facilitated participatory learning and action cycles with women's groups for maternal and newborn health. Geneva: World Health Organization; 2014 ([http://www.who.int/maternal\\_child\\_adolescent/documents/community-mobilization-maternal-newborn/en/](http://www.who.int/maternal_child_adolescent/documents/community-mobilization-maternal-newborn/en/), accessed 29 September 2016).
18. WHO recommendations: optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting. Geneva: World Health Organization; 2012 ([http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/77764/1/9789241504843_eng.pdf), accessed 28 September 2016).
19. Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations. Geneva: World Health Organization; 2010 (<http://www.who.int/hrh/retention/guidelines/en/>, accessed 28 September 2016).
20. Okonofua, F., Ogu, R., Agholor, K., Okike, O., Abdus-Salam, R., Gana, M., Randawa, A., Abe, E., Durodola, A., & Galadanci, H. 2017. Qualitative assessment of women's satisfaction with maternal health care in referral hospitals in Nigeria. *Reprod.Health*, 14, (1) 44 available from: PM:28302182

## APPENDIX 1: BIRTH PREPAREDNESS AND COMPLICATION READINESS PLAN

### PREGNANCY

POLICY MAKER	FACILITY	PROVIDER	COMMUNITY	FAMILY	WOMAN
<p><i>Creates an environment that supports the survival of pregnant women and newborn</i></p> <p>Ensures that skilled antenatal care policies are evidence based, in place and politically endorsed.</p> <p>Uses evidenced based information to support systems that routinely update service delivery and</p>	<p><i>Is equipped, staffed, and managed to provide skilled care for the pregnant woman and newborn</i></p> <p>Has essential drugs and equipment</p> <p>Follows infection prevention principles and practices</p> <p>Has a functional emergency system, including:</p>	<p><i>Provides skilled care for normal and complicated pregnancies, birth, and the postpartum period</i></p> <p>Provides skilled antenatal care, including:</p> <ul style="list-style-type: none"> <li>• Detecting and managing complications</li> <li>• Promoting health and preventing disease including:                             <ul style="list-style-type: none"> <li>○ Provision of iron/folate and tetanus toxoid</li> <li>○ Vitamin A and iodine in areas with deficiencies?</li> </ul> </li> </ul>	<p><i>Advocates and facilitates preparedness and readiness action.</i></p> <p>Supports and values the use of antenatal care</p> <p>Encourages special care for women during pregnancy</p>	<p><i>Has a plan that supports woman during pregnancy, child birth and post partum period.</i></p> <p>Advocates for skilled healthcare for woman</p> <p>Adjusts responsibilities to allow her access health care services</p>	<p><i>Prepares for birth, values and seeks skilled care during pregnancy, childbirth and the postpartum period.</i></p> <p>Visit provider/facility as soon as she suspects pregnancy.</p> <p>Attends at least four antenatal visits.</p> <p>Has access to funds for ANC visits and</p>

POLICY MAKER	FACILITY	PROVIDER	COMMUNITY	FAMILY	WOMAN
<p>cadre- specific guidelines</p> <p>Supports a functioning system that regularly review reports of maternal and neonatal morbidity and mortality from the health facilities</p> <p>Supports a functioning system that regularly ensures that adequate levels of resources (financial, material, human) are dedicated to supporting antenatal care and an emergency referral system</p> <p>Encourages and facilitates participation in policy-making and resource allocation for safe childbirth and emergency referral services by communities, families, individuals, and</p>	<ul style="list-style-type: none"> <li>• Communication</li> <li>• Transportation</li> <li>• Safe blood supply</li> <li>• Emergency funds</li> </ul> <p>Has service delivery guidelines on appropriate management during the antenatal period</p> <p>Has job aids to assist providers in performing appropriate antenatal care</p> <p>Ensures availability of a skilled provider 24 hours a day, 7 days a week.</p> <p>Is gender and culturally sensitive, client-centered and friendly</p>	<ul style="list-style-type: none"> <li>○ Presumptive treatment of malaria and worms in areas of prevalence</li> <li>○ Encourages use of Insecticide Treated Nets (ITN).</li> </ul> <ul style="list-style-type: none"> <li>• Screening for and managing HIV/AIDS, tuberculosis, STIs</li> <li>• Assisting the woman to prepare for birth including: <ul style="list-style-type: none"> <li>○ Items needed for clean birth</li> <li>○ Identification of skilled provider for the birth</li> <li>○ Plan for reaching provider at time of delivery</li> <li>○ Identification of support people to help with transportation, care of children / household, and companion to health facility</li> <li>○ Complication Readiness Plan in case of emergency:</li> <li>○ Emergency funds transportation, blood donors and decision making.</li> </ul> </li> <li>• Counseling/educating the</li> </ul>	<p>Recognizes danger signs and supports implementing the Complication Readiness Plan</p> <p>Supports Women and Children Friendly Health Services (WCFHS)</p> <p>Has a functional transportation infrastructure for woman to reach care when needed</p> <p>Supports the woman and her family for home delivery if this is her choice</p>	<p>Makes plan with woman for normal birth or complications</p> <p>Identifies a skilled provider/facility for childbirth and knows how to contact or reach the provider/facility</p> <p>Plans with the woman and provides necessary support for Home delivery if this is the woman's choice</p> <p>Recognizes danger signs and implements the Complication Readiness Plan.</p>	<p>other expenses</p> <p>Make plan with provider, husband and family for normal birth or complications</p> <p>Makes plan for Home delivery if this is the woman's choice</p> <p>Identifies a skilled provider/facility for birth and knows how to contact or reach the provider/facility</p> <p>Recognizes danger signs and implements the Complication Readiness Plan.</p>



<b>POLICY MAKER</b>	<b>FACILITY</b>	<b>PROVIDER</b>	<b>COMMUNITY</b>	<b>FAMILY</b>	<b>WOMAN</b>
<p>advocacy groups.</p> <p>Coordinates donor support to integrate birth preparedness and complication readiness into antenatal services</p> <p>Has a national policy document that include specific objectives for reducing maternal and newborn deaths</p> <p>Ensures that protocols are in place for clinical management, blood donation, anesthesia, surgical interventions, and infection prevention.</p> <p>Advocates birth</p>	<p>Ensures community participation in quality of care</p> <p>Reviews case management of maternal and neonatal morbidity and mortality</p> <p>Ensures proper record keeping and management</p>	<p>woman and family on danger signs, nutrition, family planning, breastfeeding, HIV/AIDS</p> <ul style="list-style-type: none"> <li>• Informing woman and family of the need to have emergency funds</li> <li>• Referring to higher level of care when appropriate</li> <li>• Guiding the pregnant woman to take informed decision</li> </ul> <p>Respects community's expectations and works within that setting</p> <p>Educates community members about birth preparedness and complication readiness</p> <p>Promotes concept of birth preparedness and dispels misconceptions and harmful practices that could prevent birth preparedness and complication readiness</p>	<p>Facilitates the process of blood donation</p> <p>Has a functional community financing plan for obstetric emergencies</p> <p>Dialogues with providers to ensure quality of care and expectations</p> <p>Supports the facility that serves the community</p> <p>Educates members of the community about birth preparedness and complication readiness</p> <p>Advocates for policies</p>	<p>Knows transportation systems, where to go in case of emergency, and support persons to accompany and stay with family.</p> <p>Supports provider and woman in reaching referral site, if needed.</p> <p>Knows the supplies to bring to facility or have in the home</p> <p>Has personal savings for costs associated with emergency care or</p>	<p>Knows transportation system, where to go in case of emergency, and support persons to accompany and stay with family.</p> <p>Speaks out and acts on behalf of her and her child's health, safety and survival.</p> <p>Recognizes the need for blood transfusion in case of emergency.</p> <p>Recognizes the need to know her HIV status.</p>

<b>POLICY MAKER</b>	<b>FACILITY</b>	<b>PROVIDER</b>	<b>COMMUNITY</b>	<b>FAMILY</b>	<b>WOMAN</b>
<p>preparedness and complication readiness through all possible venues (e.g. national campaigns, press conferences, community talks, and local coalitions).</p> <p>Ensures improved access to ARV therapy for HIV positive pregnant women</p> <p>Ensures adequate provision and accessibility of functional infrastructure and other amenities.</p>		<p>Ensure proper documentation and record keeping</p> <p>Educates community members on breastfeeding options for HIV positive mothers</p>	<p>that support skilled healthcare</p> <p>Promotes concept of birth preparedness and dispels misconceptions and harmful practices that could prevent birth preparedness and complications readiness.</p>	<p>normal delivery.</p> <p>Knows how to access community emergency funds.</p> <p>Knows how to access community blood donor system</p>	<p>Has personal savings that she can access in case of need</p> <p>Knows that community emergency funds are available.</p>

<b>POLICY MAKER</b>	<b>FACILITY</b>	<b>PROVIDER</b>	<b>COMMUNITY</b>	<b>FAMILY</b>	<b>WOMAN</b>

# LABOUR AND CHILDBIRTH

POLICY MAKER	FACILITY	PROVIDER	COMMUNITY	FAMILY	WOMAN
<p><i>Creates an environment that supports the survival of pregnant women and newborns.</i></p> <p>Promotes improved care during labour and childbirth</p> <p>Ensures that skilled care policies for labour and childbirth are evidence based, in place and politically endorsed.</p> <p>Uses evidence based</p>	<p><i>Is equipped, staffed, and managed to provide skilled care for the pregnant woman and newborn.</i></p> <p>Has essential drugs and equipment</p> <p>Follows infection prevention principles and practices.</p> <p>Has appropriate space for birthing</p> <p>Has a functional emergency system,</p>	<p><i>Provides skilled care for normal and complicated pregnancies, births and the postpartum period.</i></p> <p>Provides skilled care during labour and childbirth including:</p> <ul style="list-style-type: none"> <li>Assessing and monitoring women during labour using the partograph</li> <li>Providing emotional and physical support through labour and childbirth</li> <li>Conducting a clean and safe delivery including</li> </ul>	<p><i>Advocates and facilitates preparedness and readiness actions.</i></p> <p>Supports and values use of skilled provider at childbirth</p> <p>Supports implementing the woman's Birth Preparedness Plan.</p>	<p><i>Has a plan that supports pregnant woman during pregnancy, childbirth and the postpartum period</i></p> <p>Advocates for skilled healthcare for woman</p> <p>Recognizes labour signs and facilitates implementing Birth Preparedness Plan.</p> <p>Supports woman in reaching facility and</p>	<p><i>Prepares for birth, values and seeks skilled care during pregnancy, childbirth and the postpartum period.</i></p> <p>Chooses provider and where to deliver during antenatal period.</p> <p>Recognizes labour signs and implementation Birth Preparedness Plan</p> <p>Recognizes danger signs and understands</p>

<p>information to support systems that routinely update service delivery and cadre-specific guidelines</p> <p>Supports policies for management of complications based on appropriate epidemiological, financial and sociocultural data</p> <p>Ensures that adequate levels of resources (financial, material, human) are dedicated to skilled care at birth and an effective emergency referral system</p> <p>Encourages and facilitates participation in policy-making and resource allocation for safe</p>	<p>including:</p> <ul style="list-style-type: none"> <li>▪ Communication</li> <li>▪ Transportation</li> <li>▪ Safe blood supply</li> <li>▪ Emergency funds.</li> </ul> <p>Has service delivery guidelines on appropriate management of labour and childbirth</p> <p>Has job aids to assist providers in performing labour and childbirth procedures</p> <p>Ensures availability of a skilled provider 24 hours a day, 7 days a week</p>	<p>active management of 3<sup>rd</sup> stage of labour.</p> <ul style="list-style-type: none"> <li>• recognizing complications and providing appropriate management</li> <li>• referring to higher levels of care when appropriate</li> </ul> <p>Respects community's expectations and works within that setting.</p> <p>Educates community about birth preparedness and complication readiness</p> <p>Promotes concept of birth preparedness</p>	<p>Makes sure that the woman is not alone during labour, childbirth and immediate postpartum period</p> <p>Supports the woman in reaching facility and provider of her choice by providing timely transportation</p> <p>Facilitates the process of blood donation.</p> <p>Recognizes danger signs and supports implementing the complication Readiness Plan</p> <p>Supports Women and Children Friendly</p>	<p>provider of her choice</p> <p>Supports provider and woman in reaching referral site, if needed</p> <p>Recognizes danger signs and facilitates implementing the Complication Readiness Plan.</p> <p>Discusses with and supports woman's labor and birthing decisions</p> <p>Knows transportation systems, where to go in case of emergency and support persons to stay with family</p>	<p>Complication Readiness Plan.</p> <p>Knows transportation systems, where to go in case of emergency and support persons to stay with family.</p> <p>Has personal savings that she can access in case of need.</p> <p>Can access community emergency funds</p>
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<p>childbirth and emergency referral services by communities, families individuals, and advocacy groups</p> <p>Coordinates donor support for improved management of labour and childbirth</p> <p>Ensures that protocols are in place for clinical management, blood donation, anaesthesia, surgical interventions, and infection prevention. .</p> <p>Advocates birth preparedness and complication readiness through all possible venues (e.g. national campaigns, press conference, community talks, and local coalitions.</p>	<p>Is gender and culturally sensitive, client-centered and friendly</p> <p>Ensures community participation in quality of care</p> <p>Reviews case management of maternal and neonatal morbidity and mortality</p> <p>Ensures proper record keeping and management.</p>	<p>and dispels misconceptions and</p> <p>Harmful practices that could prevent birth preparedness and complication readiness.</p> <p>Ensures proper documentation and record keeping.</p>	<p>Health Services (WCFHS)</p> <p>Has a functional financing plan for emergencies.</p> <p>Promotes community norms that emphasize priority of transportation for pregnant women</p> <p>Dialogues and works together with provider on expectations and quality of care</p> <p>Supports the facility that serves the community</p>	<p>Has personal savings for costs associated with emergency care or normal birth.</p> <p>Knows how to access community emergency funds</p> <p>Purchases necessary drugs or supplies</p> <p>Knows how to access community blood donor system</p>	
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<p>Ensures improved access to ARV drug/therapy for HIV positive pregnant women</p> <p>Reviews reports of maternal and neonatal morbidity and mortality from the facilities</p> <p>Ensures adequate provision and accessibility of functional infrastructure and other amenities.</p>			<p>Advocates for policies that support skilled healthcare.</p> <p>Promotes concepts of birth preparedness and dispels misconceptions and harmful practices that could prevent birth preparedness and complication readiness.</p>		
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## POSTPARTUM AND NEWBORN

POLICY MAKER	FACILITY	PROVIDER	COMMUNITY	FAMILY	WOMAN
<p><i>Creates an environment that supports the survival of pregnant women and newborns.</i></p> <p>Promotes improved postpartum and newborn care</p> <p>Ensures that skilled postpartum and newborn care policies are evidence based, in place and politically endorsed.</p> <p>Uses evidence based</p>	<p><i>Is equipped, staffed, and managed to provide skilled care for the pregnant woman and newborn</i></p> <p>Has essential drugs and equipment</p> <p>Follows infection prevention principles and practices</p> <p>Has a functional emergency system including:</p> <ul style="list-style-type: none"> <li>• Communication</li> <li>• Transportation</li> <li>• Safe blood supply</li> </ul>	<p><i>Provides skilled care for normal and complicated pregnancies, births, and the postpartum period.</i></p> <p>Provides skilled newborn and postpartum care including:</p> <ul style="list-style-type: none"> <li>• Recognizing complications in the newborn and postpartum woman and providing appropriate management</li> <li>• Promoting health and preventing disease in the woman, including: <ul style="list-style-type: none"> <li>▪ Provision of</li> </ul> </li> </ul>	<p><i>Advocates and facilitates preparedness and readiness actions.</i></p> <p>Supports and values use of skilled provider for postpartum period and newborn care</p> <p>Supports appropriate and healthy norms for women and newborns during</p>	<p><i>Has a plan that supports woman during postpartum period and newborn care</i></p> <p>Advocates for skilled healthcare for woman and newborn.</p> <p>Adjusts responsibilities to allow her access health care services</p> <p>Recognizes complication signs and facilitates</p>	<p><i>Seeks skilled care for self and newborn</i></p> <p>Seeks postpartum and newborn care at 2 weeks (if discharged early) and 6 weeks</p> <p>Has access to funds for drugs and transportation</p>



<p>information to support systems that routinely update service delivery and cadre-specific guidelines.</p> <p>Supports policies for management of postpartum and newborn complications using appropriate epidemiological, financial and socio- cultural data.</p> <p>Ensures adequate levels of resources (financial, material, human) are dedicated to supporting the skilled management of postpartum and newborn care and the effectiveness of an emergency referral system.</p> <p>Encourages and facilitates</p>	<ul style="list-style-type: none"> <li>● Emergency funds</li> </ul> <p>Has service delivery guidelines on care of newborn and mother postpartum</p> <p>Has job aids to assist providers in performing appropriate postpartum and newborn care</p> <p>Ensures availability of a skilled provider 24 hours a day, 7 days a week.</p> <p>Is gender and culturally sensitive, client-centered and friendly</p> <p>Ensures community</p>	<p>iron/folate and or tetanus toxoid.</p> <ul style="list-style-type: none"> <li>▪ Vitamin A and iodine in areas of deficiencies</li> <li>▪ Encouraging use of insecticide treated nets for the woman and newborn in areas of malaria prevalence.</li> <li>▪ Provision of contraceptive counseling and services.</li> </ul> <ul style="list-style-type: none"> <li>● Promoting health and preventing disease in the newborn including: <ul style="list-style-type: none"> <li>▪ Thermal protection</li> <li>▪ Promotion of breastfeeding</li> <li>▪ Eye care</li> <li>▪ Cord care</li> <li>▪ Immunizations</li> </ul> </li> <li>● Providing appropriate counseling and education for the woman and family about danger signs and self-care for the</li> </ul>	<p>the postpartum period</p> <p>Ensures that the woman is assisted during the postpartum period</p> <p>Recognizes danger signs and supports implementing the Complication Readiness Plan</p> <p>Supports Women and Children Friendly Health Services (WCFHS)</p> <p>Supports timely transportation of</p>	<p>implementing the complication Readiness Plan</p> <p>Knows transportation systems, where to go in case of emergency and support person to stay with family</p> <p>Supports provider, woman and newborn in reaching referral site, if needed</p> <p>Has family savings for costs associated with postpartum and newborn care</p> <p>Knows how to access community</p>	<p>Recognizes danger signs and implements the Complication Readiness Plan</p> <p>Speaks out and acts on behalf of her and her child’s health, safety and survival</p> <p>Knows transportation systems, where to go in case of emergency, and support persons to stay with family.</p> <p>Has personal savings that she can access in case of need</p> <p>Can access community emergency funds</p>
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<p>participation in policy-making as well as resource allocation for safe childbirth and emergency referral services by communities, families, individuals and advocacy groups.</p> <p>Coordinates donor support for improved postpartum and newborn care</p> <p>Ensures that protocols are in place for clinical management, blood donation, anesthesia, surgical interventions and infection prevention.</p> <p>Ensures adequate provision and</p>	<p>participation in quality of care</p> <p>Reviews case management of maternal and neonatal morbidity and mortality</p> <p>Ensures proper record keeping and management</p>	<p>postpartum woman and newborn.</p> <ul style="list-style-type: none"> <li>• Informing woman and family of the need to have emergency funds</li> <li>• Referring to higher levels of care when appropriate</li> </ul> <p>Respects community's expectations and works within that setting</p> <p>Educates community about complication readiness</p> <p>Promotes concept of birth preparedness and</p> <p>Dispels misconceptions and harmful practices that could prevent birth preparedness and complication readiness.</p>	<p>woman and newborn to referral site, if needed</p> <p>Facilitates the process of blood donation</p> <p>Has a functional financing plan for emergencies.</p> <p>Supports the facility/provider that serves the community</p> <p>Educates community members about complication readiness</p>	<p>emergency funds</p> <p>Purchases drugs or supplies needed for normal or emergency postpartum and newborn care</p> <p>Knows how to access community blood donor system</p>	
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<p>accessibility of functional infrastructure and other amenities.</p> <p>Advocates birth preparedness and complication readiness through all possible venues (e.g. national campaigns, press conferences, community talks and local coalitions)</p>			<p>Advocates for policies that support skilled health care</p> <p>Dispels misconceptions and practices that could be harmful to the mother and newborn</p>		
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## **APPENDIX 2: Communication, resource and social mobilization at the community**

World Health Organization has recommended community-based interventions to improve communication and support services that are complementary to antenatal care.

Members of Ward Development Committees (WDC) will be oriented on providing support, strengthening community health systems as a foundation for the delivery of primary health care and complementary services to antenatal care. Also, Community health workers (CHWs) will be trained as agents of change through counseling of pregnant women and caregivers in the community to promote maternal, newborn and child health as part of the strategy to expand access to maternal and child health services. WDCs and CHWs should jointly carry out the following mobilization activities to support service delivery at the community level, and effective referral to the health facilities. These shall include:

- Carry out social mobilization activities that would create awareness among women of child bearing age, about the benefit of early antenatal care, postnatal care, reproductive health care services and family planning.
- Provide malaria information at the community level on malaria interventions (LLINs, IPTp, ACTs, RDTs) and their high safety profile and effectiveness that would promote their acceptability by health workers and community members.
- Identify pregnant women and refer them to attend ANC, postnatal and family planning clinics to access available services
- Make use of all relevant community mobilization channels such as town criers, churches, mosques, land lord associations, women and men associations and the other community media to explain the benefits and uptake and use of maternal health services, preventive and treatment practices.
- Highlight the partnerships and linkages available by introducing community members to partners who will be visiting and working in the communities
- Work with community based organizations to create demand for maternal, child health services, malaria prevention and treatment commodities (LLINs, IPTp, ACT) as well as acceptability of malaria diagnosis using RDTs.
- Carry out community visit(s) specifically for the purpose of:
  - Promoting early antenatal care visits
  - Encourage healthy living and child spacing among community members
  - LLINs ownership and use, at every opportunity, particularly during community meetings and special events.
  - Encourage pregnant women to demand for IPTp during antenatal care contact

This Orientation Package is made possible by USAID and the Maternal and Child Survival Program and does not reflect the views of USAID or the United States Government.

