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FOREWORD

Many problems in pregnant women can be detected, prevented, and treated during antenatal care contacts with trained health care providers. WHO recommends a minimum of eight antenatal contacts comprising interventions such as nutritional intervention, maternal and foetal assessment, interventions for common physiologic conditions of pregnancy, preventive measures and health systems strengthening. According to Tanzania Demographic and Health Survey 2015/16, antenatal visits at least once during pregnancy was 98% and only 51% of pregnant women had received the recommended four or more antenatal visits as per the previous Focused antenatal care regimen. This is an increase in the use of antenatal care services, but large expansion in antenatal care coverage is still needed.

To achieve wide coverage of antenatal care, including increase in the percentage of the recommended minimum of eight antenatal contacts, the following are recommended in this guideline:

- Organize Antenatal Care (ANC) services, including scheduling clinic attendance where appropriate to ensure that all pregnant women in the country can access the services. Work with community leaders, community health workers and other influential parties, to ensure that the community understands the benefit of ANC, especially the need for early ANC booking.
- Apply accurately all components of the national antenatal care guidelines and record them in the antenatal care registers.
- Provide appropriate health education to all pregnant women, their partners and families on healthy life style, healthy diet, physical activity, substance abuse and alcohol cessation where required, preparation for parenthood and preparation of a woman for the process of birth
- Ensure that antenatal care is conducted in a suitable environment, that afford privacy
- Refer all pregnant women requiring specialized medical care and all women with signs of complications of pregnancy
- Record the findings on the maternal antenatal card and registers

It is my sincere expectation that, all health care providers at the antenatal clinics will find this document useful, and use it effectively to improve the quality of care and pregnancy outcome of our women.

Dr.Mpoki M. Ulisubisya

PERMANENT SECRETARY
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The Ministry of Health Community Development Gender Elderly and Children (MOHCDGEC) appreciates the efforts of the Reproductive and Child Health Section (RCHS) and specifically the Safe Motherhood Unit and its partners in the development of policies, guidelines and competency-based training materials to improve the quality of maternal and newborn services in Tanzania. Many partners and stakeholders of the MOHCDGEC, including Jhpiego, United States Agency for International Development in Tanzania (USAID), World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), Association of Gynaecologists and Obstetricians of Tanzania (AGOTA), National AIDS Control Program (NACP) and other Non-Governmental Organizations (NGOs) worked hard to prepare the revised National Antenatal Care (ANC) Guidelines.

Along with the revised ANC Learning Resource Package, this National ANC guideline undertakes to ensure clients receive quality ANC. The development of the National ANC guidelines was made possible through the commitment, technical assistance and material and logistical contributions of the following organizations and individuals:

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MOHCDGEC CONTRIBUTORS

Dr. Koheleth Winani National coordinator- Safe Motherhood Initiative
Dr. Phineas Sospeter Program Officer- Safe Motherhood Initiative
Ms. Leyla Bungire Program Officer-Safe Motherhood Initiative
Ms. Martha Shakinyau    Program Officer-Safe Motherhood Initiative
Ms. Dhamira Mongi       Program Officer- Management Information System
Ms. Mary Mang’ enya     Program Officer-Newborn and Child Health
Dr. Clement Kihinga     National Coordinator–Health Management Information System
Mr. Machumu Miyeye      Pharmacist
Dr. Sixbert Mkude       Head, Malaria Case Management, National Malaria Control Program
Dr. Ally Mohamed        Program manager-National Malaria Control Program
Ms. Bupe A. Ntoga       Senior Research Officer- Tanzania Food and Nutrition Center
Dr. Lusasi Abdallah    Senior Program officer-National Malaria Control Program

WORLD HEALTH ORGANIZATION

Dr. Theopista J. Kabuteni Senior Medical Officer- Reproductive Maternal, Neonatal and Child Health country office
Dr. Nancy Kidula        Medical Officer- Reproductive and Women's Health Africa regional office

USAID Boresha Afya

Dr. Chrisostom Lipingu   Senior Technical Advisor- Reproductive Maternal, Neonatal and Child Health
Dr. Goodluck Mwakitosha  Applied Health Policy Senior Advisor
Ms. Jasmine Chadewa      National Midwifery Advisor
Dr. Zahra Mkomwa        Malaria Advisor
Dr. Michael Kimario      Technical Officer, Malaria Case Management
Mr. Emmanuel Lesilwa     Technical Officer, Malaria Case Management

TANZANIA MIDWIVES ASSOCIATION

Dr. Sebalda Leshabari   Secretary General

PAEDIATRIC ASSOCIATION OF TANZANIA

Dr. Martha Mkony        Paediatrician, Council member

PROF. Muhammad Bakari Kambi

CHIEF MEDICAL OFFICER
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<td>3TC</td>
<td>Lamivudine</td>
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<tr>
<td>AGOTA</td>
<td>Association of Gynaecologists and Obstetricians of Tanzania</td>
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<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Virus</td>
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<td>ANC</td>
<td>Antenatal Care</td>
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<tr>
<td>APH</td>
<td>Ante partumHaemorrhage</td>
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<td>ART</td>
<td>Antiretroviral Therapy</td>
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<tr>
<td>ASB</td>
<td>Asymptomatic Bacteriuria</td>
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<tr>
<td>BMI</td>
<td>Body Mass Index</td>
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<tr>
<td>BP</td>
<td>Blood Pressure</td>
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<tr>
<td>CEmONC</td>
<td>Comprehensive Emergency Obstetric and Neonatal Care</td>
</tr>
<tr>
<td>CTC</td>
<td>Care and Treatment Clinic</td>
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<tr>
<td>DHIS-2</td>
<td>Demographic and Indicator Survey-2</td>
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<tr>
<td>DOT</td>
<td>Direct Observed Treatment</td>
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<tr>
<td>EDD</td>
<td>Expected Date of Delivery</td>
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<tr>
<td>EFV</td>
<td>Efavirencel</td>
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<tr>
<td>EmONC</td>
<td>Emergency Obstetric Neonatal Care</td>
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<td>FA</td>
<td>Folic Acid</td>
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<tr>
<td>FANC</td>
<td>Focused Antenatal Care</td>
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<td>FBC</td>
<td>Full Blood Count</td>
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<td>FBO</td>
<td>Faith-based Organizations</td>
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<td>FP</td>
<td>Family Planning</td>
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<tr>
<td>GDM</td>
<td>Gestational Diabetes Mellitus</td>
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<td>Hb</td>
<td>Haemoglobin</td>
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<td>HDN</td>
<td>Haemolysis Disease of the Newborn</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<tr>
<td>HMIS</td>
<td>Health Management Information System</td>
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<tr>
<td>IPT</td>
<td>Intermittent Preventive Therapy</td>
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<tr>
<td>IPV</td>
<td>Intimate Partner Violence</td>
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<tr>
<td>IUFD</td>
<td>Intrauterine Foetal Death</td>
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<tr>
<td>IUGR</td>
<td>Intrauterine Growth Retardation</td>
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<td>LLIN</td>
<td>Long Lasting Insecticide treated Net</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>LNMP</td>
<td>Last Normal Menstrual Period</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
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<tr>
<td>MOHCDGEC</td>
<td>Ministry of Health, Community Development, Gender, Elderly and Children</td>
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<tr>
<td>mRDT</td>
<td>Malaria Rapid Diagnostic Test</td>
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<tr>
<td>MSU</td>
<td>Midstream Urine</td>
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<tr>
<td>MTCT</td>
<td>Maternal to Child Transmission</td>
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<tr>
<td>NBS</td>
<td>National Bureau of Statistics</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organizations</td>
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<tr>
<td>PITC</td>
<td>Provider Initiated Testing and Counselling</td>
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<tr>
<td>PLA</td>
<td>Participatory Learning and Action</td>
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<tr>
<td>PMTCT</td>
<td>Prevention of Mother-to-Child Transmission of HIV</td>
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<tr>
<td>PPH</td>
<td>Postpartum Haemorrhage</td>
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<tr>
<td>PR</td>
<td>Pulse Rate</td>
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<tr>
<td>PROM</td>
<td>Premature Rupture of Membranes</td>
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<tr>
<td>R&amp;R</td>
<td>Report and Request</td>
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<tr>
<td>RAM</td>
<td>Rapid Assessment and Management</td>
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<td>RCH</td>
<td>Reproductive and Child Health</td>
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<tr>
<td>RDT</td>
<td>Rapid Diagnostic Test</td>
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<tr>
<td>Rh</td>
<td>Rhesus</td>
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<tr>
<td>RPR</td>
<td>Rapid Plasma Reagin</td>
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<tr>
<td>RTI</td>
<td>Respiratory Tract Infection</td>
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<tr>
<td>SCD</td>
<td>Sickle Cell Disease</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goals</td>
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<tr>
<td>SFH</td>
<td>Symphysis-Fundal Height</td>
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<tr>
<td>SP</td>
<td>Sulphadoxine Pyrimethamine</td>
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<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
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<tr>
<td>TAMA</td>
<td>Tanzania Midwives Association</td>
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<tr>
<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>TBA</td>
<td>Traditional Birth Attendant</td>
</tr>
<tr>
<td>TDF</td>
<td>Tenofovir</td>
</tr>
<tr>
<td>TDHS MIS</td>
<td>Tanzania Demographic and Health Survey-Malaria Survey Index</td>
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<tr>
<td>TDHS</td>
<td>Tanzania Demographic and Health Survey</td>
</tr>
<tr>
<td>TFNC</td>
<td>Tanzania Food and Nutritional Centre</td>
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<tr>
<td>TRUST</td>
<td>Toluidine Red Unheated Serum Test</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<td>--------------</td>
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<tr>
<td>TT</td>
<td>Tetanus Toxoid</td>
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<tr>
<td>TV</td>
<td>Television</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children Fund</td>
</tr>
<tr>
<td>URT</td>
<td>United Republic of Tanzania</td>
</tr>
<tr>
<td>USS</td>
<td>Ultra Sound Scan</td>
</tr>
<tr>
<td>UTI</td>
<td>Urinary Tract Infection</td>
</tr>
<tr>
<td>VDRL</td>
<td>Venereal disease Research Labor</td>
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<td>WHO</td>
<td>World Health Organization</td>
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EXECUTIVE SUMMARY

The Ministry of Health, Community Development, Gender, Elderly and Children, through its Reproductive and Child Health Section, strives to ensure equitable provision of comprehensive reproductive, child birth, and child health services, along the continuum of care to all of its citizens. Much of the emphasis is on improving health status of women and children.

This antenatal care guidelines has been developed with the overall aim of providing high quality antenatal care to women and their partners/families based on equity and human rights approaches. It is designed to be used by supervisors, managers, health care providers and everyone taking care of pregnant women in Tanzania.

This guideline is based on the 2016 WHO antenatal care model, where a minimum of 8 visits is recommended for a positive pregnancy experience. Among the new recommendations it includes:

- **Nutritional interventions:** All pregnant women should be counselled on health eating and physical exercise for a healthy pregnancy. They should receive iron and folic acid supplementation, calcium supplementation where required, restrict caffeine intake and regulate alcohol consumption.

- **Maternal and foetal assessment:** All pregnant women should be screened for anaemia, asymptomatic bacteriuria, Gender Based Violence, Gestational Diabetes Mellitus, Tobacco use, Substance use, HIV, syphilis, malaria and Tuberculosis. One ultrasound scan should be done at 20 weeks of gestation if there is no indication for an earlier or later ultrasound scan.

- **Preventive measures:** Should be instituted for women diagnosed to have asymptomatic bacteriuria; Rhesus negative women who have given birth to rhesus positive newborns; antihelmintic drugs, Tetanus toxoid, Intermittent Preventive Treatment for malaria should be given to all women, HIV treatment should be given to all HIV positive pregnant women

- **Interventions for common physiological conditions including nausea and vomiting, heartburn, leg cramps, lower back and pelvic pain, oedema and varicose veins.**

- **Health systems strengthening to improve quality and utilization of antenatal care services like women-held case notes, community based interventions to improve communication and support, task shifting, recruitment and retention of staff in rural and remote areas and 8 antenatal care contact schedule.**

Additional chapters on Infection Prevention and Control and Counselling will also help to remind the reader on the best practices for a good pregnancy outcome.
The current guidelines will serve as the main document for antenatal care to pregnant women in Tanzania mainland. This guidelines are expected to solve the existing challenges in provision of antenatal care services, as a result improve maternal and perinatal outcome.
INTRODUCTION

Background and Context

The Government of Tanzania priority is to ensure universal, quality, comprehensive and equitable health services to all of its citizens, with much emphasis on improving health status of women and children.

Globally recent estimates indicate that 303,000 women died from pregnancy and delivery related causes in the year 2015. This estimates further show that, two thirds of the deaths occurred in sub-Saharan Africa where there is only 17% of the world population. While the overall global decline in maternal mortality ratio between 1990 and 2005 was 5.4%, the annual decline was less than 1% in Africa. The situation was noted to be worse in sub-Saharan Africa where the decline was 0.1%. It is worth noting that in the region the number of maternal deaths increased between 1990 and 2005, probably due to high prevalence of HIV infection.

Tanzania, like most developing countries could not attain the millennium development goal (MDG) number five, aimed to reduce maternal mortality to 193 maternal deaths per 100,000 live births by 2015. The National demographic surveys show that maternal mortality ratios have not changed over the past 15 years, 2005 (578 deaths per 100,000 live births) to 2010 (454 deaths per 100,000 live births), and in 2015-2016 (556 deaths per 100,000 live births). Which are all within the same confidence interval.

Majority of the maternal deaths are due to direct obstetrics causes including obstetric haemorrhage, 28%; abortion complications, 19%; hypertension in pregnancy, 17%; obstructed labour, 11% and sepsis, 11%. Death due to the direct obstetric causes can be prevented by availability of timely and quality emergency obstetric and newborn care services. The indirect causes of maternal deaths including non-communicable diseases, malaria and HIV are in the increase.

Tanzania has reported a significant progress to reduce under five mortality between 1990 and 2015 with overall under-five mortality dropping from 166 to 67 per 1,000 live birth, the infant mortality

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2National Road Map Strategic Plan, 2008-2015
3TDHS-MIS 2016
4The world report,2005
has dropped from 99 to 43 per 1,000 live birth. Despite this achievement the neonatal mortality shows to be minimally reduced from 40 to 25 per 1,000 live births. Neonatal mortality contributes significantly to the under five mortality (40%). Up to a half of the neonatal deaths occur in the first 24 hours of life, with over 75% occurring during the first week of life\(^5\). By the fact that these deaths occurs in the first week of life, it is a good indication that they are associated with pregnancy, labour and delivery thus, there is need to improve the quality of care during antenatal period and labour and delivery.

The TDHS of 20115/16 shows that 98% of women attend antenatal care (ANC) at least once however only 63% delivered in health facilities; and 64% of delivery were attended by a skilled attendant.

**Rationale for the Guideline**

In the year 2002, Tanzania adapted the WHO recommendation on Focused Antenatal Care (FANC) in which individualized goal-oriented four visits were targeted with the aim to improve care given to pregnant mothers in a comprehensive manner (URT, 2003)\(^6\). FANC intended to align all-important services and care that promotes the early detection of complications and the initiation of early and appropriate treatment, including, if necessary timely referral. There is a growing evidence that a minimum of eight contacts for antenatal care can reduce perinatal deaths by up to 8 per 1000 births when compared to a minimum of four visits (WHO, 2016)\(^7\). Furthermore, there is no important differences in maternal and perinatal health outcomes between ANC models that included at least eight contacts and ANC models that included 11 to 15 contacts.

Recently, WHO recommended increasing antenatal care visits from four to eight. Under this recommendations, the first contact is recommended before 12 weeks of gestation, the second and third contacts at 20 and 26 weeks respectively. The fourth, fifth, sixth, seventh and eighth contacts are at 30, 34, 36, 38 and 40 respectively. It is as well stated that pregnant women not delivered beyond 40 weeks should have contact at 41 weeks. The new guidelines also provide details on the care/services that should be provided during each of the eight visits.

\(^5\)TDHS-MIS, 2016  
\(^6\)URT, 2003  
\(^7\)WHO, 2016
The change from 4 to 8 visits has been made because there is evidence suggesting that:

- There is increased perinatal deaths in 4-visit ANC model
- There is improved safety during pregnancy through increased frequency of maternal and foetal assessment to detect complications
- There is improved health system communication and support around pregnancy for women and families
- More contact between pregnant women and respectful, knowledgeable health care workers is more likely to lead to a positive pregnancy experience

Despite the reduction of maternal and newborn deaths, the current levels are still unacceptably high for Tanzania to contribute achieving Sustainable Development Goals (SDGs) 3 aimed at reducing global maternal mortality ratio to less than 70 per 100,000 live births, and reducing neonatal mortality to at least as low as 12 per 1,000 live births by 2030. Ninety eight percent of pregnant mothers receive antenatal care from skilled provider at least once but only 51% make four or more visits. Increasing frequent visits will provide critical opportunity for health care providers to give information and support to the mother and family, detect complications and deliver interventions aimed at preventing adverse pregnancy outcomes.

Hence, the MOCDGEC has embarked on the acceleration of reduction in maternal and newborn mortality by the end of 2020, with clear Impact Indicators outlined in ONE PLAN II (2016), the follows:-

1. Reduce maternal mortality from 432 to 292 per 100,000 live births by 2020
2. Reduce neonatal mortality rate from 21 to 16 per 1,000 live births by 2020
3. Reduce infant mortality rate from 45 to 25 per 1,000 live births in 2020
4. Reduce under-five mortality from 54 to 40 per 1,000 live births by 2020

In addition to several interventions, the MOCDGEC revised the guideline to set standards in the provision of antenatal care to be used countrywide to increase the proportion of pregnant women

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8TDHS-MIS, 2016
9ONE PLAN II (2016)
receiving high-quality care, and to be able to track indicators for monitoring the progress of this care.

**Aim and objectives**

The aim is to provide high quality antenatal care to women and their partners/families based on equity and human rights approaches. The specific objectives are:-

- To provide high quality and equitable antenatal care for better wellbeing and survival of Tanzanian women and their partners/families (at least eight comprehensive visits in which all components of appropriate care are provided at defined time intervals)
- To provide antenatal care tailored to the needs of women and their partners, families and communities
- To provide antenatal care aiming at disease detection and not risk categorisation (all pregnant women are at risk)
- To promote evidence based practices at all levels of antenatal care provision in the country based on human rights principles
- To promote and support community engagement in service provision, including male involvement as part of the broader multi-sectoral support to care provision at all levels

**Target audience**

This antenatal care guidelines is designed to be used by supervisors, managers and health care providers and all those taking care of pregnant mothers at all levels of the health care in the Public, Private, Non-Governmental Organizations (NGOs) and Faith Based Organizations (FBOs), health facilities. The aim is to ensure uniform implementation of the antenatal care services using the guidelines and standards for high quality services, as all stakeholders will be informed and accountable to the services provided.

**Scope of the guideline**

Improve coverage of high quality and culturally appropriate antenatal care, with emphasis on detection of pregnancy-related complications and prevention of concurrent diseases at routine antenatal care visits. This is not a clinical guideline, but a technical document guiding on provision of routine antenatal care to all pregnant women, their unborn foetuses and newborns. It does not
provide details of management or referral of women with complications or diseases, thus it has to be complemented by other existing guidelines including Malaria, Prevention of maternal to child transmission (PMTCT) of HIV, basic and comprehensive emergency obstetric and neonatal care and any other relevant clinical guidelines.

**Methodology, review and updating of the recommendations**

A stakeholders meeting was conducted in Dodoma, Tanzania from 3rd to 7th October, 2017; with the main aim of reviewing the antenatal care guideline. The stakeholders, that included policy makers from the MOHCDGEC, WHO, Jhpiego, TAMA, TFNC, and AGOTA sat together and went through the 2016 WHO recommendations for a positive pregnancy experience. They then decided on the recommendations that fit well with the Tanzanian context; and together with the best practices from the previous antenatal care guideline, this antenatal care guideline was developed.

**Guiding principles for operationalization of the guideline**

This guideline should be used after training of the health care providers and their supervisors. The trainings will be conducted by trainers approved by the MOHCDGEC, using the MOHCDGEC antenatal care Learning Resource Package. The use of this document should be complemented with the annexes therein and other MOHCDGEC guidelines in management of diseases specific in pregnancy and in general terms. The other important documents include the *National Operational Guidelines for Integration of Maternal, Newborn, Child Health, and HIV/AIDS Services*; the *National Malaria for Diagnosis and Treatment Guidelines, management of STI*, and other relevant guidelines. For cases in which one of these specific resources should be referenced, that resource is indicated in the relevant section of this document. This antenatal care guidelines of 2018 provides general principles, guidance, and descriptions of antenatal care provision at all health-facility levels.
**Organization of the antenatal services**

The antenatal clinic should have a waiting area for the clients, a place for registration, a place for taking physical measurements, and enough rooms for consultations. The infrastructure should allow a small laboratory and pharmacy/dispensing room. The services should be organized in such a way that the client gets all the services under one roof, and within the shortest time possible.

Once the client arrives, registration is done and a rapid assessment is performed to identify any danger signs that may warrant emergency treatment. When a client is found to have danger signs, emergency treatment should be given immediately and she can be referred/transferred to the ward for definitive treatment. Later physical measurements will be taken, followed by a performance of the routine investigations for respective gestational age. After the client has received the investigation results, she will be managed accordingly including a thorough history taking and physical examination. Depending on what will be diagnosed, she will be treated or referred for further management. *(See antenatal clinic flow chart below)*
FIGURE 1. ANTENATAL CLINIC FLOW DIAGRAM

Client

Registration → Rapid client assessment → Daner sign present

Natore

Counselling and Group Health Talk

Check, Nurse

History taking (personal, family &Obstetric)

Performs a Physical examination

Risk No identified

Yes

Risk No identified

No

Follow up as per 8 visits schedule → Pharmacy/ dispensing

Antenatal card issued

Antenatal card updated

Clinician (CA, CO, AMO, MO)

Review History &Investigation results, Performs a Physical examination

Referr "Yes/No identified"

Additional interventions based on risk

Follow up on client condition according to available management

Refer client to the next level of care (Emergency, Urgent or Regular)

Clinical record updated

Antenatal card updated

External referral
Rapid Assessment and Management (RAM)

A quick check is performed by a health care service provider to identify pregnant women who need immediate attention. It is done through:

- Assessment of general condition of the woman immediately on arrival at antenatal clinic by observing the general appearance of the woman eg facial appearance and expression, pallor, sweating, shivering, difficulty in breathing, etc.
- Asking general screening questions such as:
  - Why did you come to clinic today?
  - How old is your pregnancy?
  - What is your concern?
  - Record all information given

If the woman is very sick and cannot respond, talk to her companion.

- Ask, look and feel if the woman is/has:
  - Bleeding vaginally
  - Headache and visual disturbance
  - Severely pale
  - Severe vomiting
  - Convulsing
  - Looking very ill (lethargic, drowsy)
  - Having fever
  - Unconscious
  - Severe pain
  - Having severe difficulty in breathing
  - In labour
  - Imminent delivery

In case of any problem, stabilize, treat and/or refer the woman immediately.

The health talk: This should cover all the necessary topics for counselling pregnant women including:

- Diet, Nutrition and use of minerals and vitamins supplementation
- Physical activity
- Personal hygiene including clothing
- Danger signs in pregnancy
• Individual Birth Plan
• Emergency preparedness and complication readiness
• Use of medicines and immunization
• Protection from malaria (use IPTp, LLINs and other protective measures)
• Family Planning
• Breastfeeding
• Avoiding harmful habits
• Prevention from STIs/HIV (safer sex)

Clinic set up

General

• Auditory and visual privacy is provided: Using simple partitions e.g. Curtains, wood panels
• Confidentiality is respected and assured
• Clinic days are scheduled to ensure that the clients, their partners and the community are able to utilize services maximally
• Clinic set up promotes partner/support person participation

Waiting area

• There is comfortable waiting area, which is clean, well ventilated and has enough sitting for all clients and their support persons
• A simple diagram is available that describes the client flow, so that clients know what to expect
• There is access to clean and well maintained client and staff toilets with running water and soap
• The waiting area can be equipped with useful client educational audio-visual materials on pregnancy, childbirth and newborn care such as posters, radio and TV/video
• There is supply of clean water (from tap or from potable container with tap) and cups

Consulting rooms

• The rooms are clean and well ventilated
• There is reliable source of light (artificial or natural)
• Have guaranteed privacy and confidentiality
• Comfortable sitting for provider, client and companion in such a way that good eye contact can be maintained
• The writing table should not be positioned to form a barrier between client and provider (as in the office setting)
• Examination couches or table is comfortable and easy for pregnant woman to get on and off

Emergency care treatment Point

There is an equipped screened off area for management of acute emergencies.

Related services

Services such, basic laboratory services and dispensing unit must be preferably located within the antenatal clinic set up or within very easy reach of the clinic

Guideline on workplace and administrative procedures

❖ Work place

• Service hours should be clearly posted
• Available services should be posted
• Ensure flow pattern is clear and not confusing to clients, e.g. put notice on doors or guide all clients to appropriate services
• Comfortable waiting area with adequate sitting space, free from rain or direct sun
• Keep the facility clean by regular cleaning
• Availability of clean toilets and hand washing facilities, i.e. water and soap
• Separate toilets for clients and the staff
• Availability of safe drinking water
• Occupy clients with reading materials, video shows, health education talks etc.
• Serve clients first come first served
• Before beginning the service, check if the equipment is clean and functioning and that supplies and drugs are in place
• At the end of the services:
  o Discard waste and sharps safely
o Prepare for disinfection, clean and disinfect equipment
o Replace linen, prepare for washing
o Replenish supply and drugs
o Ensure routine cleaning of all areas

- Hand over essential information to the colleague who follows on duty if needed
- A suggestion box should available, with a pen and papers at the client's disposal

❖ Daily and occasional Administrative activities

- Establish staffing list and schedules
- Ensure availability of suggestion box
- Ensure updates by sharing information, conducting on job training and supporting each other
- Supportive supervision of staff / co-workers
- Maintain RCH policy guidelines and standards for service provision
- Keep record of equipment, supplies, drugs and vaccine (Set up an Inventory)
- Set regular time for equipment check-up and maintenance.
- Check availability and ascertain functioning equipment (order stocks and supplies, drugs vaccine and other important material before they run out)
- Works on comments from suggestion box for service improvement
- Monitor and evaluate facility activities
- Organize regular meetings at least once per month
MAIN CONTENT OF ANTENATAL CARE

1. Nutritional interventions

A pregnant woman needs to get a healthy diet to provide the necessary nutrients for the wellbeing of both the mother and the growing foetus. She also needs to build enough reserve of the necessary nutrients to be used during lactation. A healthy diet consists of five food groups;

1. Cereals, green bananas, roots and tubers
2. Pulses, nuts and animal-source foods
3. Fruits
4. Vegetables
5. Sugar, honey, fats and oils.

Often times, pregnant women do not get the required daily amounts of the necessary nutrients and as a result succumb to a number of ailments caused by their deficiency. Anaemia in pregnancy is a clinical conditions caused by a lack of iron and folic acid in the diet. In Tanzania, the prevalence of any anaemia in pregnancy is very high, being 57% in pregnancy; and 46% in breastfeeding women\textsuperscript{10}. In these conditions, it is important for the pregnant woman to take supplements to meet the growing needs of her body and the foetus.

The weight gain for the whole duration of pregnancy depends on the pre-pregnancy BMI.

\textbf{Table 1. Recommended weight gain during pregnancy}\textsuperscript{11}

<table>
<thead>
<tr>
<th>Pre-pregnancy BMI (kg/m2)</th>
<th>Recommended weight gain (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.5 (underweight)</td>
<td>12.5 -18</td>
</tr>
<tr>
<td>18.5-24.9 (normal weight)</td>
<td>11.5-16</td>
</tr>
<tr>
<td>25-29.9 (overweight)</td>
<td>7-11.5</td>
</tr>
<tr>
<td>&gt;30 (obese)</td>
<td>5-9</td>
</tr>
</tbody>
</table>

\textsuperscript{10}TDHS-MIS 2015/16
\textsuperscript{11}Institute of Medicine Classification
The prevalence of underweight in women of reproductive age in Tanzania has remained static at 10%, while that of overweight/obesity has shown an increase of 10% in the last ten years. Women who are undernourished have a risk of delivering low birth weight neonates. Therefore, pregnant women in our setting need to be counselled about healthy eating and physical activity during pregnancy in order to have a good pregnancy outcome.

The following are important to be undertaken during the antenatal period, in each antenatal contact:

1.1 Dietary interventions: Counselling about healthy eating and keeping physically active during pregnancy is recommended for pregnant women to stay healthy and to prevent excessive weight gain during pregnancy. Having three meals that contains a healthy balanced diet, with healthy snacks in between meals is recommended. A balanced diet should contain all the necessary nutrients (carbohydrates, proteins, fat, vitamins and minerals) in required amounts. Healthy snacks include nuts, yoghurt, fruits etc.

1.2 Iron and Folic acid supplements: During pregnancy, there is an increased demand of iron and folic acid. Because of high prevalence of anaemia in Tanzania, daily oral iron and folic acid supplementation with 30 mg to 60 mg of elemental iron and 400 microgram (0.4 mg) of folic acid is recommended for pregnant women to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth. Therefore, every pregnant woman should be given 200mg of Ferrous sulphate and 0.4 mg of Folic acid daily.

1.3 Calcium supplements: Pregnant women with calcium deficiency have a risk of developing eclampsia/pre-eclampsia. According to Pembe et al, 2014 and Mahande et all in 2016, 20% of maternal deaths in Tanzania are caused by eclampsia/pre-eclampsia. This being a significant problem in our setting, daily calcium supplementation (1.5–2.0 g oral elemental calcium) is recommended for pregnant women to reduce the risk of pre-eclampsia. (however this is not provided routinely to all pregnant women in Tanzania)

1.4 Restricting caffeine intake: A high caffeine intake (>300mg/day) is associated with higher risk of pregnancy loss and low birth weight. In Tanzania, the prevalence of low birth weight is 7%,

12TDHS-MIS 2015/16
and is among the major causes of perinatal morbidity and mortality (TDHS 2015/16). For pregnant women with high daily caffeine intake (more than 300 mg per day; equivalent to 6 cups of instant coffee), lowering daily caffeine intake during pregnancy is recommended to reduce the risk of pregnancy loss and low-birth-weight neonates.

Other micronutrients: Other micronutrients like zinc, vitamins A, D, E, C, B6 (pyridoxine) and other multiple micronutrient supplements are not recommended to be taken during pregnancy.
2. Maternal and foetal assessment

The major goal of antenatal care is to ensure that at the end of the pregnancy we have a healthy mother and newborn. Assessment should be aimed at recognizing signs of diseases/ailments in order to start the required interventions in time to get a good outcome for both mother and the newborn.

2.1 Maternal assessment

Health care provider must do thorough assessment (detailed history and physical examination) to every pregnant woman in order to make a proper diagnosis.

_History taking_

Health care providers should take a thorough history from every pregnant woman in order to ascertain the duration of pregnancy, to find out any medical or surgical history that may have implications in the pregnancy, and to find out other risk factors from the social history (Low socioeconomic status, Gender Based Violence etc)

_Physical examination_

When conducting physical examination, the woman may remain seated or lying down and relaxed.

_General examination:_

The following should be checked:

- General appearance of the patient, nutritional status, Facial puffiness
- Blood pressure, weight, height, pulse rate, temperature (if indicated) and respiration rate. The Body Mass Index (BMI), calculated as height (cm)/weight (m)² taken early in the first trimester may be used as a baseline for follow up of the maternal weight gain during pregnancy
- Pallor (conjunctiva, palms, tip of the tongue, gums)
- Breasts and lymph nodes
Note: The human body as a mirror should be examined concurrently on both sides (for structures that appear one on each side)

Abdominal examination

- Inspection (scars, movement with respiration, shape of the abdomen)
- Palpation and measure for fundal height, lie, presentation and descent of presenting part (lie and presentation are only important after 36 weeks)
- Listen and count foetal heart rate for one full minute

Pelvic examination

Pelvic examination should be done only when indicated. It may help to diagnose women who have vaginal bleeding, with abnormal vaginal discharge, sores and swellings.

Antenatal screening

Every pregnant woman must be screened for the following conditions, and these can be coupled with necessary laboratory investigations as outlined below:

Anaemia: Full blood count (FBC) 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 haemoglobin machine can be performed. The haemoglobin level must be checked at 12 (or during booking), 26 and 34 weeks of gestation. Women who are diagnosed to have anaemia in pregnancy should be treated and will need to be checked at least once every month during the whole period of pregnancy.

Asymptomatic bacteriuria: All pregnant women must have a midstream urine culture done at 12 (or during booking), 26 and 34 weeks of gestation to diagnose asymptomatic bacteriuria (ASB) in pregnancy. In facilities where the urine culture is not possible to do, a gram stain should be done. Women diagnosed to have ASB must have the test repeated after treatment, and then at 26 and 34 weeks as above.

Gender Based Violence (GBV): Clinical enquiry about the possibility of GBV including Intimate Partner Violence (IPV) and other forms of violence should be strongly considered at each antenatal
care contact when assessing conditions that may be caused or complicated by GBV in order to improve clinical diagnosis and subsequent care.

**Gestational Diabetes Mellitus:** Gluco stick in urine for glucosuria should be done to all pregnant women at 12 (or first antenatal care contact), 26 and 34 weeks of gestation. Hyperglycaemia first detected at any time during pregnancy should be classified as either gestational diabetes mellitus (GDM) or diabetes mellitus in pregnancy, and should be treated immediately according to the Tanzania Standard Treatment Guideline.

**Albuminuria:** Albunin stick in urine for albuminuria should be done to all pregnant women at 12, or first antenatal contact, 26, and 34 weeks of gestation or any time that may be seen necessary.

**Tobacco use:** 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. Pregnant women who are current smokers or recent tobacco quitters should be offered counselling and psychosocial interventions for tobacco cessation.

**Substance use:** 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. Women found to be dependent on alcohol or drugs should be counselled to cease the substance use and refer them to medical assisted therapy services.

**HIV:** Provider-Initiated Testing and Counselling (PITC) for HIV should be done to all pregnant women attending antenatal care for the first time (booking visit), in order to eliminate mother-to-child transmission of HIV. The test should be repeated at 34 weeks of pregnancy. Women who are found to be HIV positive should be started on treatment according to the existing HIV treatment guidelines.

**Syphilis:** During the booking visit, pregnant women should also be tested for syphilis. If found positive the woman should be treated together with her partner. The newborn of a mother who was positive for syphilis should also be treated.

**Note:** Where facilities permit, HIV and syphilis testing should be done together as one test (dual testing).
Malaria: All pregnant women must be screened for malaria with mRDT at first ANC contact and whenever they have a history or signs of fever. Treatment should be started promptly once found to have malaria in pregnancy.

Tuberculosis (TB): All pregnant women should be actively screened for active TB. Pregnant women infected with TB should start treatment immediately, and the baby once delivered should be given preventive treatment. Screening should be done at 12 (the first antenatal care contact), 26 and 34 weeks.

2.2 Foetal assessment
During pregnancy, it is important to examine foetal wellbeing through examination of a pregnant woman as follows;

Symphysis-Fundal Height (SFH) measurement
To assess the foetal growth, SFH should be measured at each antenatal visit from 12 weeks of gestation. Abdominal palpation may also be done in place of the SFH measurement in case the tape measure is not available. Abdominal palpation for other parameters of examination of the pregnant uterus should also be done.

Ultrasound scan (USS)
One ultrasound scan should be done preferably at 20 weeks of gestation. This ultrasound will help to estimate gestational age, localize the pregnancy and reduce induction of labour for post-term pregnancy, to improve detection of foetal anomalies and multiple pregnancies, and improve a woman’s pregnancy experience. More early or late USS may be done if indicated. There is no added advantage of an additional USS when there is no indication.
3. Preventive measures

During antenatal care, it is important to assess the woman for conditions that may lead to a poor pregnancy outcome as follows

3.1 Asymptomatic bacteriuria

Asymptomatic bacteriuria is a condition in which there is presence of bacteria in the urine, in the absence of urinary symptoms. Pregnant women with asymptomatic bacteriuria are at an increased risk of preterm birth, low birth weight and perinatal mortality. A seven-day antibiotic regimen is recommended for all pregnant women with asymptomatic bacteriuria (ASB) to prevent persistent bacteriuria, preterm birth and low birth weight.

Women who are diagnosed to have asymptomatic bacteriuria should be treated with Amoxicillin for seven days as the first line drug, and a combination of Nitrofurantoin and Amoxicillin +Clavulanic acid for seven days as second line drugs. After completion of treatment, a follow up culture or gram stain should be done one week after completion of treatment as a test of cure.

3.2 Antenatal anti-D immunoglobulin administration

Rhesus (Rh) D negative women who deliver an Rh D positive baby or who are otherwise exposed (previous birth or abortion) to Rh D positive red cells are at risk of developing anti-D antibodies. Rh D positive foetuses/neonates of these mothers are at an increased risk of developing haemolytic disease of the newborn (HDN), which can be associated with serious morbidity or mortality. Babies born to women who are Rhesus negative should be tested once delivered to check their Rhesus status. If they are positive, the mother should be given anti-D immunoglobulin to prevent RhD alloimmunization. It should be given within 72 hours post-delivery or within 72 hours after abortion if the spouse is Rh positive.

3.3 Preventive anti-helminthic treatment

All pregnant women should be given preventive anti-helminthic treatment after the first trimester as part of worm infection reduction programmes.

- Give Mebendazole 500mg to every woman once in 6 months, from the second trimester of pregnancy.
- If Mebendazole is not available, Albendazole may be used (400mg). Antihelminthic drugs should
be given in an empty stomach.

• For a tablet with 500mg give 1 tablet stat
• For a Tablet with 100mg give 5 tablets stat

Note: DO NOT give antihelminthic drugs in the first trimester

3.4 Tetanus toxoid
Tetanus toxoid vaccination is recommended for all pregnant women, depending on their previous tetanus vaccination exposure, to prevent neonatal mortality from tetanus.

• All women who are due for their TT vaccine should be immunized
• Check the woman’s tetanus toxoid (TT) immunization status by card or history:
  o If immunization status is unknown, give TT1
  o Plan to give TT2 in 4 weeks

3.5 Malaria in Pregnancy

Malaria Prevention Strategies
WHO currently recommends a three-pronged approach to reduce the burden of malaria infection among all pregnant women. They include:

• Long lasting Insecticide-treated Nets (LLINs)
• Use of Intermittent Preventive Treatment (IPTp)
• Prompt diagnosis and effective treatment of malaria cases

Use of Long Lasting Insecticide-Treated Nets (LLINs)
Sleeping under LLINs is probably the most effective method for preventing mosquito bites at night when the pregnant woman is asleep. All pregnant women should be educated to use LLIN’s correctly.

Use of Intermittent Preventive Treatment (IPTp)
Intermittent preventive treatment (IPT) of malaria during pregnancy is based on the assumption that every pregnant woman living in areas of high malaria transmission has malaria parasites in her blood or placenta, whether she has symptoms of malaria or not. Pregnant women with malaria
infection who do not present with clinical symptoms still suffer health consequences such as anaemia, low birth weight and foetal death. Providing intermittent treatment for malaria in these settings has been shown to improve both maternal and foetal health outcomes.

The best available method to clear placental malaria infections and its resulting complications is Sulfadoxine-Pyrimethamine (SP).

**The recommended WHO policy on IPTp**: A minimum of 3 doses of SP are now recommended instead of 2 doses, to provide continuous preventive effects. Furthermore the administration time is now based on ANC visits in the second and third trimester instead of pre-determined periods of gestation age.

- The first IPTp-SP dose (3 tablets) should be given as early as possible during the 2nd trimester of gestation and at each scheduled visit provided they are 4 weeks apart
- The last IPTp with SP can be administered late after 36 weeks (up-to the time of delivery) without safety concerns. It is also safe to be given on an empty stomach
- Folic acid at daily dose equal or above 5 mg should **NOT** be given together with SP, as this counteracts its efficacy as an antimalarial
- Pregnant women who are known to have hypersensitivity to sulphonamides should not receive SP for IPTp. Always ask about allergy to sulfa drugs before giving SP. In cases of known allergy to sulfa drugs and no available alternatives to SP for IPTp, the use of LLINs is strongly advised
- Pregnant women should take SP with clean and safe drinking water, under Directly Observed Treatment (DOT) at the antenatal clinic. Infection prevention measures should be adhered to (use clean cups for each client)
- If the pregnant woman vomits SP within 30 minutes, the dose should be repeated.
- After giving SP record on the antenatal card and in the register HMIS Book 6
- If malaria is confirmed any time after administration of IPTp with SP, a full treatment with anti-malarials should be given according to the national guidelines
- Explain to the woman the importance of returning for the next scheduled ANC visit, and thus the second dose of SP, four weeks apart being the minimum period required
• All pregnant women should be counselled on danger signs that indicate malaria infection, as well as other pregnancy related problems

Note:

• *Pregnant woman with Sickle Cell Disease: Malaria infection may lead to life threatening complications with severe consequences as it may precipitate sickle cell crisis*

• *Pregnant woman with sickle cell disease should take SP, however she should stop taking 5 mg Folic acid for seven days*

• *SP is contraindicated in HIV-women receiving cotrimoxazole prophylaxis.*

3.6 Prevention of Mother to Child Transmission of HIV (PMTCT)

In the developed countries, the rate of MTCT is less than 2% because there are various interventions including access to anti-retroviral therapy (ART). Generally if in the absence of any intervention, the risk of an HIV-infected mother passing the virus to her infant during pregnancy is about 30-40 %during the antenatal period.

A pregnant woman identified to be HIV positive should be offered all services as other pregnant women.

*MATERNAL NUTRITIONAL COUNSELLING AND SUPPORT*

HIV positive women will need advice on a healthy diet and may need nutritional support during pregnancy. Advice on healthy diet (depends on availability, cost, cultural considerations and HIV-related symptoms). They should be advised to eat small frequent meals to increase absorption.

All pregnant women who are HIV positive should be given ART immediately after being diagnosed, according to the PMTCT guidelines.

3.7 Iron and folic acid supplementation

Tanzania has a high prevalence of anaemia during pregnancy and postpartum period. Every pregnant woman must be given daily oral iron and folic acid supplementation with 200 mg of Ferrous sulphate and 0.4 mg of folic acid to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth.
Note:
Iron and folic acid should be given to all pregnant women:

- Routinely once daily in pregnancy and until 3 months after delivery
- Twice daily as treatment for anaemia (double dose) until the Hb rises back to normal, then continues with once daily dosing
- Check woman’s supply of iron and folic acid at each visit and dispense 3 months supply

<table>
<thead>
<tr>
<th></th>
<th>All women</th>
<th>Women with anaemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose of Ferrous sulphate</td>
<td>200mg once a day</td>
<td>200 mg twice a day</td>
</tr>
<tr>
<td>In pregnancy</td>
<td>Throughout the pregnancy</td>
<td>Until Hb rises to normal Then continue with once daily dosing</td>
</tr>
</tbody>
</table>

3.8 Management of Sickle cell disease in pregnancy

**Preconception care**

When managing patients with SCD considering pregnancy the following measures need to be instituted

- Folic acid supplementation from 1mg to 5mg per day
- Immunization against pneumococcus & influenza where possible
- Assessment for:
  - Frequency of crisis
  - End organ damage (nephropathy, heart failure, stroke)
  - Pulmonary hypertension (This is associated with 30-50% increase in maternal mortality thus pregnancy is not advised).
**Management of sickle cell disease during pregnancy**

- Good antenatal care, must be hospital based; and it should aim at prevention of severe anaemia, infection, effective treatment of other medical and obstetric complications, and proper management of other sickling complications
- Folic acid supplementation - 5mgs once daily
- Due to the risk of iron overload, iron treatment should be reserved for haematologically proven iron deficiency. The aim is to maintain the hematocrit level at 0.22-0.25 in HbSS, and over 0.3 in all other forms of sickle cell disease
- Antimalarial prophylaxis (IPT with SP) is also important to avoid additional haemolytic effects of malaria which can lead to megaloblastic anaemia. **However she should stop taking 5 mg Folic acid for seven days**
- Haemoglobin estimation must be done at every visit and the results known before the woman leaves the clinic

**3.9 Syphilis in pregnancy**

Syphilis still affects large numbers of pregnant women worldwide. It continues to be an important cause of adverse outcomes of pregnancy. Syphilis is a sexually transmitted bacterial infection caused by the spirochetes *Treponema pallidum*. It can be acquired through contaminated blood products and also can be spread by skin or mucosal contact with an infectious lesion (through non sexual direct contact such as skin or kissing). During pregnancy, infected women may cause vertical transmission from mother to foetus. Syphilis infection can result in premature birth, low birth weight, foetal death in- utero, perinatal death and congenital syphilis with physical malformations in the foetus. It enhances the transmission of Human Immune-deficiency Virus (HIV), especially in its primary stage.

**Antenatal Syphilis Screening**

All women should have **syphilis serological testing (VDRL or RPR- depending on what is available)** performed during the first trimester or at the first antenatal visit.

**Treatment**

*Treatment of the Mother According to Stage of Disease*
**Early syphilis** (less than 2 years duration, based on serology results) can be primary, secondary or latent (asymptomatic).

| Benzathine penicillin 1.8g (2.4 million units) IM as single dose is a drug of choice OR Procaine penicillin 1.5g IM, daily for 10 days |

For patients who are hypersensitive to penicillin give Erythromycin orally 500mg 3times daily for 7 days in early syphilis.

### 3.10 Tuberculosis (TB) screening

In Tanzania 62,180 cases of TB notification were made, of these 79% having pulmonary TB (WHO TB profile, 2015). In order to reduce TB transmission active case finding should be done in antenatal clinic as well. Every pregnant woman should be screened for TB at 12 (booking), 26 and 34 week contacts. TB should be suspected at each subsequent contacts if the patient complains of cough for more than 2 weeks, accompanied with fever, night sweats and weight loss.
4. **Interventions for common physiological conditions**

Pregnant women may experience a number of discomfords and complications as a result of the pregnancy and associated hormonal changes. The commonest physiological conditions include nausea and vomiting, heartburn, leg cramps, lower back and pelvic pain, increased urinary frequency, constipation, oedema and varicose veins. Health care providers should assess for danger signs. Once they are satisfied that there are no danger signs, they should reassure women that these are normal physiological changes and as much as possible encourage the women to use natural remedies to alleviate these ailments.

**General Principles for diagnosing and managing the common discomforts of pregnancy**

- Assess the woman to determine if her symptoms are within the normal anatomic/physiological range of changes in pregnancy.
- If they are present:
  - Reassure her that her symptoms are normal
  - Explain in simple language the anatomic/physiological reasons for her symptoms
  - Counsel her on prevention and/or relieving measures
  - Advise her to come back for additional care or referral if symptoms remain troublesome or worsen. (Educate her on danger signs during pregnancy)
5. Health systems interventions to improve the utilization and quality of ANC

Maternal mortality ratio in Tanzania is 556/100,000 live births\(^{13}\), which is unacceptably high. The high maternal mortality can be reduced if pregnant women have adequate contacts to antenatal care providers and more births are attended by a skilled provider. If all pregnant women make the required antenatal care contacts during their pregnancy, most risk factors to life threatening conditions will be identified and appropriately managed, such that they enter into labour and delivery healthy and strong, which will ensure positive outcome for both mother and the newborn. In Tanzania, approximately 98% of pregnant women come into contact with antenatal care at least once during pregnancy. Unfortunately, this percentage declines with subsequent visits. There is need of devising interventions to improve utilization of quality antenatal care including women-held case notes, community-based interventions to improve communication and support, task shifting components of antenatal care delivery, recruitment and retention of staff in rural and remote areas and antenatal care contact schedules.

5.1 Women-held case notes

During pregnancy, each pregnant woman should carry her own antenatal card and discharge summary (if she was admitted during pregnancy) containing all the relevant information to improve continuity, quality of care and her pregnancy experience. In health facilities using electronic formats it is advised that both antenatal card and electronic record of service printout be given to the mother.

5.2 Community-based interventions to improve communication and support

A. Facilitated participatory learning and action (PLA) cycles with women’s groups

The implementation of community mobilization through facilitated participatory learning and action (PLA) cycles with women’s groups is recommended to improve maternal and newborn health, particularly in rural settings with low access to health services. Participatory women’s groups represent an opportunity for women to discuss their needs during pregnancy, including barriers to reaching care, and to increase support to pregnant women.

B. Community involvement and antenatal home visits

\(^{13}\)TDHS & MIS, 2015-6
Packages of interventions that include household and community mobilization and antenatal home visits are recommended to improve antenatal care utilization and perinatal health outcomes, particularly in rural settings with low access to health services. To facilitate this it is advised to have a register of all pregnant women in the community, and follow up made up to six weeks after delivery.

5.3 Task shifting components of antenatal care delivery
Task shifting is the promotion of health-related roles for maternal and newborn health, to a broad range of cadres, including community health workers, medical attendants, nurses, midwives and doctors to provide services such as recommended nutritional supplements and intermittent preventive treatment in pregnancy (IPTp) for malaria prevention.

5.4 Recruitment and retention of staff in rural and remote areas
Policy-makers should consider educational, regulatory, financial, personal and professional support interventions to recruit and retain qualified health workers in rural and remote areas.

5.5 Antenatal care contact schedules
Antenatal contact is an antenatal care visit in which there is an active connection between a pregnant woman and a health care provider. Pregnant women should have a minimum of 8 contacts with health care provider during the whole period of pregnancy. The eight contacts coupled with quality services are expected to reduce maternal and perinatal morbidity and mortality than the four visits in FANC.
Table 2. Antenatal contact schedule

<table>
<thead>
<tr>
<th>Trimester</th>
<th>Week of contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>First trimester</td>
<td>Up to 12 weeks</td>
</tr>
<tr>
<td>Second trimester</td>
<td>20 weeks</td>
</tr>
<tr>
<td></td>
<td>26 weeks</td>
</tr>
<tr>
<td>Third trimester</td>
<td>30 weeks</td>
</tr>
<tr>
<td></td>
<td>34 weeks</td>
</tr>
<tr>
<td></td>
<td>36 weeks</td>
</tr>
<tr>
<td></td>
<td>38 weeks</td>
</tr>
<tr>
<td></td>
<td>40 weeks</td>
</tr>
</tbody>
</table>

Return for delivery at 41 weeks if not given birth
<table>
<thead>
<tr>
<th>CONTACT</th>
<th>TIMING OF CONTACT</th>
<th>GOALS</th>
<th>EXAMINATION</th>
<th>LABORATORY INVESTIGATION</th>
<th>HEALTH PROMOTION</th>
<th>ACTIONS</th>
</tr>
</thead>
</table>
| FIRST CONTACT | Before 12 weeks | - Ensure best practices in ANC initiated  
- Comprehensive patient assessment  
- Plan for ANC as a positive pregnancy experience  
- Give health education  
- Start preventive interventions  
- Develop birth and emergency plan | - LMP  
- Confirm EDD and gestation age  
- Quick check (danger signs)  
- Obstetric  
- Contraceptive use  
- Medical  
- Surgical  
- STI  
- Screen for TB  
- Social: smoking, alcohol/drugs; | - General exam including BP, PR, weight, height, (calculate BMI)  
- Breast exam *(opt)*  
- Assess uterine size (symphysis-fundal height/abdominal palpation)  
- Pelvic exam *(opt)* | - Syphilis test *(RPR)*  
- HIV test  
- Check urine for albumin, glucose  
- Check Hb  
- Determine blood & Rhesus group  
- MRDT  
- MSU for culture and sensitivity OR gram stain | - Educate on ANC  
- Address any observed or volunteered problems  
- Involve husband/support person in ANC as desired by client  
- Develop birth and emergency plan  
- Teach danger signs during pregnancy  
- Discuss STI/HIV/AIDS and condom use  
- After HIV test, provide counselling. If HIV positive, ask to come back at 14 weeks to begin ARV for PMTCT | - Give TT1  
- Give iron/folic acid, calcium  
- HIV counselling, testing and post-test counselling  
- If HIV +, begin PMTCT at 14 weeks gestation  
- If BP > 140/90 give antihypertensive  
If has asymptomatic bacteriuria, give antibiotics | - If has glucose in urine, do more tests to diagnose or rule out GDM or DM in pregnancy.  
- If has malaria, give anti-malarials  
- If Rhesus negative, test the spouse, explain to them that the newborn may need to be tested and mother to be given anti-D within 72 hours after delivery | - Treat any problems |
| SECOND CONTACT | 20 weeks | - Provide evidence based individualized care  
- Continue preventive interventions  
- Check maternal wellbeing and foetal growth  
- Give health education | intimate partner violence  
- Social support | - Discuss and advice on common pregnancy discomforts, sexual relations, self care  
- Counsel on healthy eating, physical activity and restricting caffeine intake  
- Provide LLIN and counsel on uses | - Counsel woman  
- Set appointment for next contact  
- Record all findings  
- Give the woman the antenatal card to carry home.  

**NB:** If not yet 13 weeks schedule contact at 13 weeks to begin IPTp-SP.

|  |  | - Quick Check  
- Ask date of first foetal movements  
- Interval history  
- Social: smoking, alcohol/drugs; intimate partner violence  
- Social support | - Measure BP, weight  
- Assess uterine size (symphysis-fundal height/abdominal palpation)  
- Abdominal exam  
- Check foetal heartbeat | - Obstetric ultrasound scan | - Address any observed or volunteered problems  
- Involve husband/support person in ANC as desired by client  
- Update birth and emergency plan  
- Review danger signs in pregnancy  
- If HIV-positive, counsel on PMTCT  
- Counsel on LLIN use  
- Advise on common discomforts of pregnancy  
- Give TT2  
- Refill iron/folic acid, calcium  
- Give IPTp-SP if 1 month has passed since previous dose  
- Give mebendazole  
- If HIV+, PMTCT  
- Treat any problems  
- Counsel woman  
- Record all findings  
- Set appointment for next contact  
- Give the woman the antenatal card to carry home. |
| THIRD CONTACT | 26 weeks | - Provide evidence based individualized care  
- Continue preventive interventions | - Quick Check  
- Interval history  
- Social: smoking, alcohol/drugs; intimate partner violence | - Measure BP, weight  
- Assess uterine size (symphysis-fundal height/abdominal palpation)  
- If BP > 140/90, check urine for albumin  
- Check urine for glucose  
- Check Hb | - Counsel on healthy eating and physical activity  
- Address any observed or volunteered problems  
- Involve husband/support person in ANC as desired by client  
- Update birth and emergency plan  
- If BP > 140/90 give antihypertensive  
- Refill iron/folic acid, calcium  
- Give IPTp-SP if 1 month has passed since previous dose  
- If HIV+, PMTCT  
- If has asymptomatic bacteriuria, give antibiotics |
| FOURTH CONTACT | 30 weeks |  - Provide evidence based individualized care  
  - Continue preventive interventions  
  - Check maternal wellbeing and foetal growth  
  - Give health education |  - Quick Check  
  - Interval history  
  - Social: smoking, alcohol/drugs; intimate partner violence  
  - Social support |  - Measure BP, weight  
  - Assess uterine size (symphysis-fundal height/abdominal palpation)  
  - Abdominal exam |  - If BP > 140/90, check urine for albumin  
  - Check Hb if has Symptoms of anaemia |  - Address any observed or volunteered problems  
  - Review danger signs in pregnancy  
  - Discuss labour  
  - Update birth and emergency plan  
  - Discuss family planning  
  - If HIV-positive, counsel on PMTCT |  - If BP > 140/90 give antihypertensive  
  - Refill iron/folic acid, calcium  
  - Give IPTp-SP if 1 month has passed since previous dose  
  - If HIV+, PMTCT -  
  - Counsel to use dual protection for FP/HIV  
  - Record all findings  
  - Set appointment for next contact  
  - Give the woman the antenatal card to carry home. |
<table>
<thead>
<tr>
<th>- Check and count foetal heartbeat</th>
<th>- Counsel on LLIN use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Advise on common discomforts of pregnancy</td>
</tr>
<tr>
<td></td>
<td>- Counsel on healthy eating and physical activity</td>
</tr>
</tbody>
</table>
| FIFTH CONTACT | 34 weeks | - Provide evidence based individualized care  
  - Continue preventive interventions  
  - Check maternal wellbeing and foetal growth  
  - Give health education | - Quick Check  
  - Interval history  
  - Social: smoking, alcohol/drugs; intimate partner violence  
  - Social support | - Measure BP, weight  
  - Assess uterine size (symphysis-fundal height/abdominal palpation)  
  - Assess foetal lie and presentation  
  - Abdominal exam  
  - Check and count foetal heartrate | - If BP > 140/90, check urine for albumin  
  - Check urine for glucose  
  - Check Hb  
  - MSU for culture and sensitivity OR gram stain  
  - Repeat HIV test  
  - Address any observed or volunteered problems  
  - Review danger signs in pregnancy  
  - Discuss labour and danger signs in labour  
  - Update birth and emergency plan  
  - Teach PMTCT in labour, birth, postpartum  
  - Counsel on LLIN use  
  - Re-discuss FP and HIV prevention  
  - Teach about postpartum care and danger signs  
  - Teach care of newborn: danger signs in newborn, early and exclusive breastfeeding, thermal care, cord care  
  - Advise on common discomforts of pregnancy  
  - Counsel on healthy eating and physical activity  
  - If BP > 140/90 give antihypertensive  
  - Refill iron/folic acid, calcium  
  - Give IPTp-SP if 1 month has passed since previous dose  
  - If HIV+, PMTCT  
  - If has asymptomatic bacteriuria, give antibiotics  
  - If has glucose in urine, do more tests to diagnose or rule out GDM or DM in pregnancy, treat or refer.  
  - Treat any problems  
  - Counsel to use dual protection for FP/HIV prevention during the postpartum period  
  - Counsel woman  
  - Record all findings  
  - Set appointment for next contact  
  - Give the woman the antenatal card to carry home. |
| SIXTH CONTACT | 36 weeks | - Provide evidence based individualized care  
- Continue preventive interventions  
- Check maternal wellbeing and foetal growth  
- Give health education  
- Quick Check  
- Interval history  
- Social: smoking, alcohol/drugs; intimate partner violence  
- Social support  
- Measure BP, weight  
- Assess uterine size (symphysis-fundal height/abdominal palpation)  
- Assess foetal lie and presentation  
- Abdominal examination  
- Check and count foetal heartrate  
- If BP > 140/90, check urine for albumin  
- Check Hb if has Symptoms of Anaemia (or was treated for anaemia during this pregnancy)  
- Address any observed or volunteered problems  
- Review danger signs in pregnancy  
- Discuss labour and danger signs in labour  
- Update birth and emergency plan  
- Teach PMTCT in labour, birth, postpartum  
- Re-discuss FP and HIV prevention  
- Teach about postpartum care and danger signs  
- Review care of newborn: danger signs, early and exclusive breastfeeding, thermal care, cord care  
- Advise on common discomforts of pregnancy  
- If BP > 140/90 give antihypertensive  
- Refill iron/folic acid, calcium  
- Give IPTp-SP if 1 month has passed since previous dose  
- If HIV+, PMTCT  
- Treat any problems  
- Counsel to use dual protection for FP/HIV prevention  
- Record all findings  
- Set appointment for next contact  
- Give the woman the antenatal card to carry home |
| SEVENTH CONTACT | 38 weeks | - Provide evidence based individualized care  
- Continue preventive interventions  
- Check maternal wellbeing and foetal growth  
- Give health education | - Quick Check  
- Interval history  
- Social: smoking, alcohol/drugs; intimate partner violence  
- Social support | - Measure BP, weight  
- Assess uterine size (symphysis-fundal height/abdominal palpation)  
- Assess foetal lie and presentation  
- Abdominal exam  
- Check and count foetal heartrate | - If BP > 140/90, check urine for albumin  
- Check Hb if has Symptoms of anaemia  
- Address any observed or volunteered problems  
- Review danger signs in pregnancy  
- Discuss labour and danger signs in labour  
- Update birth and emergency plan  
- Teach PMTCT in labour, birth, postpartum  
- Counsel on LLIN use  
- Re-discuss FP and HIV prevention  
- Teach about postpartum care and danger signs  
- Review care of newborn: danger signs, early and late | - Counsel on healthy eating and physical activity  
- If BP > 140/90 give antihypertensive  
- Refill iron/folic acid, calcium  
- Give IPTp-SP if 1 month has passed since previous dose  
- If HIV+, PMTCT  
- Treat any problems  
- Counsel to use dual protection for FP/HIV prevention  
- Record all findings  
- Set appointment for next contact  
- Give the woman the antenatal card to carry home |
| EIGHTH CONTACT | 40 weeks | - Provide evidence based individualized care  
- Continue preventive interventions  
- Check maternal wellbeing and foetal growth  
- Give health education | - Quick Check  
- Interval history  
- Social: smoking, alcohol/drugs; intimate partner violence  
- Social support | - Measure BP, weight  
- Assess uterine size (symphysis-fundal height/abdominal palpation)  
- Assess foetal lie and presentation  
- Abdominal exam  
- Check and count foetal | - If BP > 140/90, check urine for albumin  
- Check Hb if has Symptoms of anaemia (or was treated for anaemia during this pregnancy)  
- Address any observed or volunteered problems  
- Review danger signs in pregnancy  
- Discuss labour and danger signs in labour  
- Update birth and emergency plan  
- Teach PMTCT in labour, birth, postpartum  
- Counsel on LLIN use  
- Re-discuss FP and HIV prevention | - If BP > 140/90 give antihypertensive  
- Refill iron/folic acid, calcium  
- Give IPTp-SP if 1 month has passed since previous dose  
- If HIV+, PMTCT  
- Treat any problems  
- Counsel to use dual protection for FP/HIV prevention during postpartum period  
- Record all findings  
- Set appointment for next contact  
- Give the woman the antenatal card to carry home |
If the woman has not delivered by the end of the 40 weeks, she will be required to come back to the clinic at 41 weeks.
6. Managing common obstetric complications in pregnancy

Pregnant women may suffer a number of obstetric conditions that may impair both the maternal and foetal outcome. It is important for health care providers to diagnose these conditions early and offer immediate management. These patients should not follow the routine antenatal care schedule.

6.1 Pre-Eclampsia and Eclampsia

Hypertensive disorders in pregnancy is among the common complications encountered in pregnancy, and contributes significantly to maternal and perinatal morbidity and mortality. A pregnant woman with gestational hypertension (without proteinuria or pathological oedema), pre-eclampsia (hypertension and proteinuria with or without pathological oedema), eclampsia (pre-eclampsia complicated with convulsions and/ or coma), chronic hypertension or pre-eclampsia/eclampsia superimposed on chronic hypertension warrants a very close antenatal follow up.

Once the diagnosis has been made, hypertension should be controlled by antihypertensive drugs and corticosteroids should be given to hasten lung maturity from 28 weeks of pregnancy, if delivery is expected within 48hhrs (as they are at an increased risk for premature delivery). It is important for them to deliver at a hospital which can provide care to premature babies, therefore the mother should be referred with a baby in-utero to this facility.

6.2 Preterm labour and Premature Rupture of Membranes

Preterm labour is defined as labour that starts before 37 completed weeks of gestation, counting from the first day of the last menstrual period. Preterm labour is a significant cause of perinatal morbidity and mortality.

Premature rupture of membranes (PROM) is when there is rupture of membranes anytime beyond the 28th week of pregnancy but before the onset of labour. Aseptic speculum examination should be done to confirm leaking of amniotic fluid through the cervix.

Women with preterm labour and with PROM should be given antenatal corticosteroids for foetal lung maturity, if delivery is expected within 48 hrs.
6.3 Rh incompatibility
Rhesus negative women who give birth to Rhesus positive newborns should be given anti D immunoglobulin within 72 hours of delivery to prevent isoimmunization.

6.4 Antepartum haemorrhage
This is bleeding from or into the genital tract after 28 weeks of gestation, but before the birth of the baby. The commonest causes of APH are placenta praevia and abruptio placenta and at times vasa praevia or local lesion in the birth canal. Abruptio placenta is associated with abdominal pain while placenta praevia is painless.

Women with placenta praevia may be identified early before the onset of the bleeding by a routine USS at 20 weeks. Women who are suspected to have abruptio placenta often times the clinical presentation is enough to make a diagnosis and an ultrasound scan may not be required. For women who are actively bleeding at the time of diagnosis, immediate management with enough intravenous fluids (about 3 litres in 1 hour) is important (in order to replenish the circulating blood volume), a urinary catheter should be inserted to monitor input and output ; and an immediate referral to a hospital with blood transfusion services should be made.

6.5 Diabetes mellitus in pregnancy
Diabetes mellitus is a chronic metabolic disorder due to either insulin deficiency or due to peripheral tissue resistance to the action of insulin, that results in hyperglycaemia. Women who develop hyperglycaemia for the first time during pregnancy are termed to have Gestational Diabetes mellitus.(GDM)

Patients with GDM need more frequent antenatal supervision with periodic check-up of fasting blood glucose levels. The control of high blood glucose is done with restriction of diet, exercise with or without insulin.
7. Care of women with special needs

Women with special needs are women with mental or physical disability. Examples of women with special needs include adolescents, survivors of Gender Based Violence (GBV), women in humanitarian crises and women with physical disabilities. These women may need help in the following areas:

- Communication
- Movement
- Self care
- Decision-making

Important points for provision of care to pregnant women with special needs

It might be necessary when providing antenatal care to refer women with special needs to other level of care or to support group(s). However, if this is not possible, counselling and support should be provided at the antenatal clinic. This may be in the form of:

- **Emotional support**
  
  When giving emotional support to a woman with special needs, it is particularly important for the health care provider to observe counselling skills and respectful care.

- **Other Possible Sources of Support**
  
  The key role of the health care provider is to link health services with the community and other support services available. Existing links should be maintained and, when possible, needs and alternatives for support should be explored.

7.1 Special considerations for supporting the woman living with violence

Gender Based Violence against women affects women’s physical and mental health, including their reproductive health. Women may disclose violence to you or you may see unexplained bruises and other injuries which make you suspect she may be suffering abuse. Health care worker should provide appropriate care and support.

**Support the health service response to needs of women living with violence**

- Help raise awareness among health care staff about violence against women and its prevalence in the community the clinic serves.
• Find out if training is available to improve the support that health care staff can provide to those women who may need it.
• Display posters, leaflets and other information that condemn violence, and information on groups that can provide support.
• Make contact with organizations working to address violence in your area. Identify those that can provide support for women in abusive relationships. If specific services are not available, contact other groups such as churches, women’s groups, elders, or other local groups and discuss with them support they can provide or other roles they can play, like resolving disputes. Ensure you have a list of these resources available.

7.2 Supporting pregnant women in humanitarian crises

Humanitarian crisis is defined as a singular event or a series of events that are threatening in terms of health, safety or wellbeing of a community or large group of people. It may be an internal or external conflict and usually occurs throughout a large land area. Local, national and international responses are necessary in such events. Natural disasters are also part of humanitarian crises. Pregnant women in humanitarian crises live in fear and uncertainty. They may not have enough to eat, and may have lost family members who used to take care of them. Health care provider should provide appropriate care and support.

7.3 Support for women with disability

This is a special group which is often forgotten even when designing infrastructures for service delivery. They include women with physical and mental disability who require special attention as a motivation to go through pregnancy well. In some instances, such women require companions to navigate the challenges in the health system to receive the required care timely. Therefore care for these women should be tailored to suite each individual as they have the right to exercise their reproductive rights.

Note: Special considerations should be made when managing women with special needs.
8. **Counselling**

Counselling is interpersonal communication (face to face conversation) where one person helps another to make an informed decision and to work on it. It can be individualized (when the provider speaks with only one client with or without her partner) or group counselling (as is the case of health talk in the antenatal clinic with more than one pregnant woman). It is important to use good communication skills when counselling the client.

- Counselling targets both the pregnant woman and her partner during the ANC visits. It aims at assisting them in developing the individual birth plan and complication preparedness
- Advise on health promotion aspects such as nutrition, use of LLINs, personal hygiene, etc.
- Effective counselling follows the GATHER steps reinforced by CARE skills

- **When counselling a pregnant woman in the antenatal clinic, the following information should be discussed:**
  - Nutrition
  - Physical activity
  - Self care and hygiene
  - Substance abuse/alcohol
  - Family Planning
  - Gender Based Violence
  - Routine and follow up care
  - Danger signs
  - Work
  - Air travel
  - Car travel
  - Medication
  - Rest
  - Sexual activity
  - Development of an Individual Birth Plan
• Emergency preparedness and complication readiness
• Advice on labour signs
• Prescribing and recommending treatment and preventive measures for the woman and/or her baby
9. Infection prevention and control

Standard Precautions and Cleanliness
Observe these precautions to protect the woman and you as a health provider, from infection with bacteria and viruses including HIV.

Wash hands
- Wash hands with soap and water:
  - Before and after caring for a woman
  - Before and after procedure
  - After contact with blood or body fluids
  - After removing gloves
  - After changing soiled bed sheets or clothing
  - After using the toilet
  - After taking specimens to the laboratory.
- Keep nails short

Wear gloves
- Wear sterile gloves when:
  - Handling and cleaning instrument
  - Performing sterile procedures
  - Handling contaminated waste
  - Cleaning blood and body fluid spills
  - Drawing blood

Protect yourself from blood and other body fluids
- Wear gloves and other personal protective gears like apron, goggles, mask
- Cover any cuts or broken skin with waterproof bandage
- Take care when handling any sharp instruments and practice safe sharps disposal

Practice safe sharps disposal
- Keep safety box nearby when performing a procedure
- Use syringe and needle only once
• Don’t recap the needles or break the needle after you have given an injection.
• Drop all used needles, plastic syringes and blades directly into the safety box without recapping and without passing to another person
• Empty or send for incineration when the safety box is three quarters full.

Practice safe waste disposal

• Dispose of all materials that have come in contact with blood, body fluids, secretions or excretions carefully so that they do not pose a risk to members of the community
• Burn or bury contaminated solid waste
• Wash hands after disposal of infectious waste

Sterilize and clean contaminated equipment

• Make sure that instruments which penetrate the skin (such as needles) are adequately sterilized or that single use instruments are disposed after one use
• Thoroughly clean or disinfect any equipment which comes into contact with blood or body fluids
• Use bleach (JIK) for cleaning contaminated instrument by the following process:
  
  **DECONTAMINATION**: Soak in 0.5% chlorine solution for 10 minutes, thoroughly wash with soapy water and rinse with CLEAN water

Once decontamination is complete, the following may be done:

<table>
<thead>
<tr>
<th><strong>PREFERRED METHODS OF STERILIZATION</strong></th>
<th><strong>ACCEPTABLE METHODS (HLD)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical-Soak</td>
<td>Chemical</td>
</tr>
<tr>
<td>- 10 min in Glutaraldehyde or</td>
<td>- Chlorine 0.1%</td>
</tr>
<tr>
<td>- 24 hrs in Formaldehyde</td>
<td>Boil or Steam for 20min</td>
</tr>
<tr>
<td>Autoclave-106kpa,121c[250F]</td>
<td>Glutaraldehyde 2-4%</td>
</tr>
<tr>
<td>- 20min unwrapped</td>
<td>Formaldehyde 8%</td>
</tr>
<tr>
<td>- 30min wrapped</td>
<td>Hydrogen peroxide 30%</td>
</tr>
<tr>
<td>Dry heat-170c,60min</td>
<td></td>
</tr>
</tbody>
</table>
Sterilized or HLD instruments may be used immediately or stored in a cool, well covered containers. Instruments that have not been used for 7 days will need to be sterilized or HLD again before use.
10. Monitoring and evaluation framework

Vital health information management system data are essential to inform service provision, including informing resource prioritization for quality and effective care at all levels of service provision and administration. Data completeness and timeliness is thus important.

Monitoring and Evaluation of ANC services

Data Collection Tools: Data on services provided during routine ANC services at every health facility in Tanzania Mainland must be captured onto three data collection tools in real time (once the service has been provided). These tools are **Client Card RCH 4, Register Number 6, and Daily Tally Sheets Number 6**. At the end of the month, data collected using the Daily Tally Sheets is summarized onto **Monthly Summary Form Number 6**. Moreover, information on commodity stock levels is collected daily using ledger book number 4 and summarized monthly using Reporting and Requesting (R&R) Form.

Service Delivery data elements currently being recorded in data collection tools: Age of the client, Gestation Age, Previous Pregnancies History (Gravidity, Parity, Abortions, stillbirths, early perinatal deaths, live births, age of last child), Key information (height, haemoglobin level, previous caesarean section scar, Tetanus Toxoid vaccination (TT1, TT2+), any pregnancy at age below 20 years, first pregnancy at age above 35, Sugar in urine; Syphilis screening results (client, spouse/partner), Management of syphilis infection (client, spouse/partner), HIV screening counselling (client, spouse/partner), HIV screening results (client, spouse/partner), Post HIV screening Counselling (client, spouse/partner), Second HIV screening results (client, spouse/partner), Counselling on feeding options, mRDT results, given LLIN, Intermittent Preventive Treatment of Malaria (IPT 1, IPT 2, IPT 3, IPT 4), supply of Iron/Folic Acid (I, FA, I/FA), Number of ANC Visits, and Referrals.

Indicators that can be currently calculated using data elements collected: Percent of clients aged below 20 years, Percent of clients aged above 35 years at first pregnancy, Percent of clients making first visit at below 12 weeks gestation, Percent of clients making first visit at 12 or more weeks gestation, Percent of clients received TT2+, Percent of first visit clients with positive mRDT results, IPTp coverage, ANC coverage by contact, Percent screened for Syphilis (client, spouse/partner), Percent tested positive for Syphilis (client, spouse/partner), Percent of clients treated for Syphilis (client, spouse/partner), Percent of clients Counselling for HIV screening,
Percent screened for HIV (client, spouse/partner), Percent tested positive for HIV (client, spouse/partner), Percent tested positive after second HIV screening (client, spouse/partner), Percent of clients Counselling after HIV screening, Percent of couples that are discordant, Percent of clients given LLIN, Percent of clients given Iron/Folic Acid, Percent of clients receiving IPT 1, IPT 2, IPT 3 or IPT 4, Percent of clients making 4, 5, 6, 7 or 8+ visits, and Percent of clients referred.

**New Service Delivery data elements that need to be recorded in data collection tools:** Corticosteroid uptake, antenatal FP counselling.

**New Indicators that can be calculated using data elements collected:** corticosteroid uptake rate, antenatal FP counselling rate.

**Indicator calculation procedure:** Adhere to specific indicators’ standard definition, then use numerator from among data elements in HMIS/DHIS2; and denominator from National Bureau of Statistics projections or from among data elements in HMIS/DHIS2.

All clinical records and other documentation must be maintained and filed appropriately.

Some ANC M&E framework indicators related to ANC are highlighted below:

**Table 6: Some ANC related indicators in Tanzania**

<table>
<thead>
<tr>
<th>Indicator name</th>
<th>Definition</th>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teenage pregnancies</td>
<td>Percent of clients aged below 20 years</td>
<td>Number of pregnant women aged below 20 years x 100</td>
<td>Estimated number of pregnant women</td>
</tr>
<tr>
<td>Elderly primigravida</td>
<td>Percent of clients aged above 35 years at first pregnancy</td>
<td>Number of pregnant women aged above 35 years at first pregnancy x 100</td>
<td>Estimated number of pregnant women</td>
</tr>
<tr>
<td>Antenatal care coverage</td>
<td>Percentage of pregnant women who start ANC before 12 weeks of gestational age</td>
<td>Number of pregnant women who start ANC before 12 weeks of gestational age x 100</td>
<td>Estimated number of pregnant women</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of pregnant women who start ANC at or above 12 weeks of gestational age</td>
<td>Number of pregnant women who start ANC at or above 12 weeks of gestational age x 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of pregnant women who attended antenatal care 5,6,7,8, 8+ times in a given time period.</td>
<td>Number of pregnant women who attended antenatal care 5,6,7,8, 8+ times in a particular month x 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referral rate</td>
<td>Percent of clients referred.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT coverage</td>
<td>Percent of clients received TT2+,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of malaria in first contact</td>
<td>Percent of first visit clients with positive mRDT results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage of IPTp-SP use among pregnant women</td>
<td>Percentage of pregnant women who received IPTp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage of antenatal syphilis screening</td>
<td>Percentage of pregnant women who tested for syphilis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant women tested positive for syphilis</td>
<td>Percentage of pregnant women tested positive for syphilis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Calculation</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Pregnant women treated for syphilis</td>
<td>Number of pregnant women treated for syphilis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage of antenatal HIV screening</td>
<td>Number of pregnant women counselled for HIV x 100</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>Coverage of antenatal HIV testing</td>
<td>Number of pregnant women tested for HIV x 100</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>HIV positive pregnant women</td>
<td>Number of pregnant women tested positive for HIV x 100</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>HIV positive pregnant women after second HIV screening</td>
<td>Number of pregnant women tested positive after second HIV screening x 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV discordant couples</td>
<td>Number of couples that are discordant x 100</td>
<td>Number of couples who tested for HIV</td>
<td></td>
</tr>
<tr>
<td>Coverage of LLIN among pregnant women</td>
<td>Number of pregnant women using given LLINs x 100</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>Use of Iron/ Folic acid</td>
<td>Number of clients given Iron/Folic Acid x 100</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>Coverage of hospital use of antenatal</td>
<td>Number of pregnant women given Folic given</td>
<td>Estimated number of pregnant women.</td>
<td></td>
</tr>
<tr>
<td>Antenatal counselling</td>
<td>Corticosteroids for the prevention of prematurity-related complications among newborns</td>
<td>Corticosteroid to reduce morbidity and mortality due to preterm birth</td>
<td>Corticosteroid to reduce morbidity and mortality due to preterm birth</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>Percentage of pregnant women receiving antenatal FP counselling</td>
<td>Number of pregnant women receiving antenatal FP counselling x 100</td>
<td>Estimated number of pregnant women</td>
<td></td>
</tr>
</tbody>
</table>

**RESEARCH**

For research purposes, group antenatal care and other practices not mentioned in this guideline will be allowed. The results of which will give more data to inform the necessary authorities.

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