ANC GUIDELINES FOR A POSITIVE PREGNACY EXPERIENCE

FOREWORD

The Government of the Republic of Zambia recognizes that the antenatal period is a critical period for the provision of life saving interventions as it provides an ideal platform for the provision of integrated, quality services for pregnant women and adolescents. It is for this reason that the Ministry of Health is making concerted efforts to scale-up high impact maternal and neonatal interventions that have the potential to significantly decrease maternal, newborn and child mortality. These efforts include the development of the ANC guidelines for a positive pregnancy experience that are presented in this document.

These guidelines are part of the Government's wider efforts to redesign ANC into an integrated service delivery point (including malaria, HIV, tuberculosis) and to strengthen health systems across the Country. They are aligned to the World Health Organisation (WHO) 2016 recommendations on routine antenatal care (ANC) contacts for pregnant women and adolescent girls that provide a framework for the provision and experience of care that facilitates a positive pregnancy experience.

Research has shown that a woman's experience during pregnancy, childbirth and postpartum period is key to transforming ANC and creating thriving families and communities. These guidelines therefore, present a robust agenda that responds to identified areas of ANC that are critical to saving lives, improving health care ultilisation and quality of care. By focusing on timing and content of ANC, strategies and interventions for scaling up known effective practices in ANC are recommended with the ultimate goal to enhance the quality of ANC services in order to improve maternal, foetal and newborn outcomes related to ANC in Zambia.

This document therefore provides comprehensive guidance on routine antenatal care (ANC) for pregnant women and adolescent girls in Zambia and as such I urge all health care providers (including obstetricians, midwives, nurses, and general medical practitioners) who are responsible for providing ANC at all levels of the health care provision strata, especially in resource constrained settings to use these guidelines as part of their efforts to contribute to improved maternal and neonatal outcomes in Zambia.

Hon. Dr. Chitalu Chilufya (MP)

MINISTER OF HEALTH

KEY MESSAGE

*The Government is committed to **Making Pregnancy a Positive Experience for Women and Adolescents in Zambia** by providing ANC services that are respectful, individualized and person-centred in a conducive environment of care.*

ACKNOWLEGEMENTS

I gratefully acknowledge the contributions that many individuals and organisations have made towards the development of this Antenatal Care Guideline for a Positive Pregnancy Experience. The rigorous stakeholder engagement that circumscribed the development of this guideline ensured that the recommendations presented in this document are reflective of the unanimous aspirations of improving maternal and neonatal outcomes in Zambia.

My gratitude goes to our various colleagues and cooperating partners who supported and participated in the stakeholder consultations and provided feedback and critical review of the guidelines. I particularly pay tribute to Dr. Angel Mwiche, Ms.Caren Chizuni, Dr. Sarai Malumo, Dr. Maurice Bucagu and Ms.Maria Barreixt for spearheading the guideline development process and providing technical backstopping at every stage of the processes. Special thanks to the authors Dr. Muriel Syacumpi and Dr. Malunga Syacumpi for their assistance and collaboration in preparing, updating, and putting together this guideline.

It is my hope that this ANC guideline will facilitate the actualisation of the national aspiration of **making pregnancy a positive experience for women and adolescents in Zambia.**

Dr. Kennedy Malama

Permanent Secretary - Technical Services

MINISTRY OF HEALTH

CONTENTS

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
BANC	Basic Antenatal Care
BP	Blood Pressure
CHA	Community Health Assistants
CTG	Cardiotocography
EmONC	Emergency Obstetric and Newborn Care
FANC	Focused Antenatal Care
GRZ	Government of the Republic of Zambia
HCV	Hepatitis C
HIV	Human Immunodeficiency Virus
IPTp	Intermittent Preventive Treatment in Pregnancy
IPV	Intimate Partner Violence
MCH	Maternal and Child Health
MLCC	Midwife-led Continuity of Care
MNCH	Maternal Neonatal and Child Health
MoH	Ministry of Health
NHC	Neighbourhood Health Committee
PHC	Primary Health Care
PHO	Provincial Health Office
PMTCT	Prevention of Mother to Child Transmission
PLA	Participatory Learning Action
SGBV	Sexual and Gender Based Violence
SMAG	Safe Motherhood Action Group
TB	Tuberculosis
TBA	Traditional Birth Attendants
WHO	World Health Organisation

INTRODUCTION

The past few decades have seen considerable progress towards the reduction of maternal and neonatal mortality in Zambia. However, the mortality rates still remain considerably high with maternal mortality estimates at 398 deaths per 100,000 live births and neonatal mortality of 24 deaths per 1000 live births with factors such as limited access to and low ultilisation of skilled birth attendants being identified as contributing factors. Other factors that contribute to poor MNH outcomes include delays in seeking care, delays in reaching care and delays in receiving adequate care.

Therefore, the Government through the Ministry of Health has committed to scaling up interventions aimed at improving maternal and neonatal outcomes. It envisions a situation in which every pregnant woman will receive quality care throughout the pregnancy, childbirth and the postnatal period. The plan is to achieve this through a continuum of reproductive care and antenatal care (ANC) strategy that provides a defined package of services across all levels of the health delivery system stratum. This will also include the strengthening of referral systems and feedback mechanisms between health facilities to improve continuum of care.

Particular emphasis is being laid on ANC as it is important for monitoring pregnancy and the reduction of the risk of morbidity and mortality for the mother and baby during pregnancy, delivery and the immediate post-partum period. This is based on the recognition that the pregnancy and antenatal period presents an opportunity in which focused care and interventions can be implemented to safeguard the health and wellbeing of the mother and the baby. The antenatal period is therefore ideal for the provision of integrated services that will contribute to better ANC designs and health systems strengthening thus improving maternal and neonatal outcomes in Zambia.

This is a comprehensive guideline on routine ANC for pregnant women and adolescent girls that lays emphasis on providing effective communication about psychological, biomedical, behavioural and socio-cultural issues, and effective support, including social, cultural, emotional and psychological support, to pregnant women and adolescent girls in a respectful way. The development of these guidelines has been informed by extensive stakeholder consultations and research that revealed that a woman's experience of care is key to transforming ANC and creating thriving families and communities. Therefore the aim of these guidelines is to redesign and realign health systems to provide pregnant women and adolescents with a **positive pregnancy experience.**

A positive pregnancy experience is defined as **maintaining physical and sociocultural normality, maintaining a health pregnancy for mother and baby (including preventing or treating risks, illness and death), having an effective transition to positive motherhood (including maternal self-esteem, competence and autonomy).**

By focusing on eight (8) key areas of intervention, these guidelines provide recommendations on the provision of **respectful, individualized, person-centred care at every ANC contact,** through providing effective clinical practices (**Medical assessments and management),** relevant and timely information (**Health information)** and psychosocial and emotional support (**Intra-personal support).** These guidelines are intended to complement other existing protocols on ANC at all levels of the health delivery stratum

KEY MESSAGE

A positive pregnancy experience is defined as maintaining physical and sociocultural normality, maintaining a healthy pregnancy for mother and baby (including preventing or treating risks, illness and death), having effective transition to positive labour and birth and, achieving positive motherhood (including maternal self – esteem, competence and autonomy)

SECTION 1: SCALING UP PROVISION OF ANC SERVICES

Scaling up the provision of Antenatal care (ANC) is recommended to facilitate a ***positive pregnancy experience for all pregnant women and adolescent***s. ANC is one of the recommended interventions to reduce maternal and neonatal mortality. It is defined as a package of regular medical and nursing care services recommended during pregnancy that comprise of preventative strategies aimed at providing regular checkups that allow skilled personnel to identify, treat, and prevent potential health problems throughout the progression of pregnancy while promoting a healthy lifestyle**.**

ANC is defined as a package of regular medical and nursing care services recommended during pregnancy that comprise of preventative strategies aimed at providing regular checkups that allow skilled personnel to identify, treat, and prevent potential health problems throughout the progression of pregnancy while promoting a healthy lifestyle.

ANC reduces maternal and perinatal morbidity and mortality both directly, through detection and treatment of pregnancy-related complications, and indirectly, through the identification of women and girls who are at increased risk of developing complications during labour and delivery, thus ensuring referral to an appropriate level of care. It (ANC) also provides an important opportunity to manage concurrent diseases, including HIV, tuberculosis (TB) and malaria, through integrated service delivery.

Therefore, scaling up of ANC services entails enhancing the provision of known effective ANC interventions and delivering them in a personalized client centred manner. This can be achieved through the establishment of a model of care strategy that includes **health information, medical assessment and intra-personal support** that is adapted to the local context and is cognizant of the individuality of each pregnant woman or adolescent as proposed in the ***Integrated ANC Package*** (see annex 1) .

The integrated ANC package comprises of a mix of known effective interventions that are linked to other services in order to safeguard and prioritise the health and wellbeing of the pregnant person and growing foetus. Facility level operationalization of the integrated ANC package requires scaling up of eight (8) key areas of ANC service delivery. These include:- 1. ANC service provision; 2. Community engagement; 3. Organisation of ANC services; 4. Essential practices in ANC; 5. Ailment Prevention; 6. Nutrition; 7. Complication management; and 8. ANC monitoring and evaluation systems.

Focus on these 8 key areas will result in well-coordinated, equipped and managed maternity units that will provide **a positive pregnancy experience for all pregnant women and adolescents**.

KEY MESSAGE

Scaling up of antenatal care (ANC) services at all levels of health service delivery is recommended to facilitate a positive pregnancy experience for all pregnant women and adolescents and contribute to the reduction of maternal, newborn and child deaths.

BOX 1: INTERVENTIONS FOR SCALING UP ANC SERVICES

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Midwife-led continuity of care (MLCC)	In MLCC models a midwife (or team of midwives) supports a woman throughout the antenatal, intrapartum and postnatal period to facilitate a healthy pregnancy and childbirth, and healthy parenting practices. It is designed for healthy women with uncomplicated pregnancies and comprises of continuity of care, monitoring the physical, psychological, spiritual and social wellbeing of the woman and family throughout the child bearing cycle.	• Set up a midwife led ANC unit • Provide individualized ANC including education and counseling. • Provide ongoing support during the postpartum period. • Be present during labour, birth and the immediate postpartum period. • Identify, refer and coordinate care for women who require obstetric and other specialist attention (complicated pregnancies).	• Adequate number of midwives at each facility at every level of care • Midwife mentorship and internships programmes • Multidisciplinary networks in which consultations and referrals to other care providers can be made. • Mechanisms for monitoring midwife case loads	• Midwives are the primary providers of care in many ANC settings, hence they must actively engage with the client to improve ultilisation and quality of ANC, and improve maternal and neonatal outcomes. • MLCC approach helps build rapport and continuity of care as the same midwife/ group of midwives is responsible for the woman's ANC. Throughout the pregnancy cycle.
Women held case notes	It is recommended that each pregnant woman carries her own case notes during pregnancy to improve continuity, quality of care and her pregnancy experience.	• Provide each pregnant woman and adolescents with (an ANC Card/ MCH Handbook). • Update the card at each contact and the appropriate registers. • Counsel the client on safe keeping of ANC card and the need to carry it for ANC contact and any other visit to the health facility	• Commodity management system (ANC card / MCH Hand book, registers) • Resources for sustained production of cards and registers • Methods for retaining a facility copy (Consider digitalizing the card/ MCH Handbooks) • Durable and waterproof case note carriers	• Women held case notes are essential to continuity of ANC as they may be an effective tool to improve health awareness and client provider communication. In addition, they help improve the availability of medical records especially in situations where poor infrastructure and resources hamper efficient record keeping. In addition, the practice may facilitate more accurate estimation of gestational age which is integral to decision making.
Community based interventions to improve communication and support	Community mobilisation through facilitated (health care providers and midwives) participatory learning within the community can be used to create awareness on ANC to increase support to pregnant women and improve ANC uptake and attendance.	• Train staff in group facilitation, convening public meetings and communication techniques. • Establish relationships with key stakeholders within the community (eg. Traditional leadership, influential people, traditional doctors, traditional counselors) • Train community volunteers/ CHAs to identify pregnant women in the community and encourage their attendance.	• Culturally appropriate educational materials (including job aids) • Trained CBVs (SMAGs) • CHA • Adequate number of trained facilitators per zone and resources to support them	• Access to appropriate communication and support is a key element of quality ANC services hence it is essential to actively engage with the community to increase awareness on ANC to improve uptake. • Community demographics and cultural norms
ANC contact schedules	The 2016 WHO ANC model recommends a minimum of 8 ANC contacts with the first contact scheduled to take place in the first trimester, two contacts in the second trimester and five contacts scheduled in the third trimester.	• Increase the number of ANC contacts to a minimum of 8 contacts and provide appropriate sensitisation. • Integrate pregnancy screening with other curative services • Build capacity for pregnancy testing at various levels • Engage pre-service training institutions and professional bodies on change of guidelines (8 Contacts) • Reorganize ANC services to improve efficiency and reduce waiting time	• Provider training and supervision for newly introduced interventions (eg. Ultra sound). • Updated job aids that reflect changes. • Updated ANC curricula and clinical manuals • Ongoing supervision, monitoring and mentorship. • Well-equipped maternity waiting homes.	Increased ANC contacts will enable regular and close contact between pregnant women and midwives for improved service delivery and pregnancy monitoring. The aim is to reduce preventable morbidity and mortality through systematic monitoring of maternal and foetal wellbeing, particularly in relation to hypertensive disorders and other complications that may be asymptomatic but detectable.

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	RATIONALE
Referral mechanisms	To ensure positive maternal and neonatal outcomes, referral mechanisms must be strengthened to make them more effective and efficient in order to ensure continuity of care for all ANC clients from one health care provider to another and from one facility to the next level of service delivery. The Zambian referral system is structured according to the service levels with the following structures; community, health post, health centre, level 1,2,3 and specialized hospitals, including ambulance services.	• Identify, refer and coordinate care for women who require obstetric and other specialist attention • Conduct training on emergency response procedures, including which facilities to refer clients to for Emergency Obstetric and Newborn Care (EmONC) • Establish information exchange and feedback mechanisms within and between health facilities	• Next level of care contact details, including which facilities provide EmONC • Feedback and follow up mechanisms • Reliable and readily available well equipped ambulance services • Adequate number of EmONC trained staff • Up to date protocols for referrals and emergency management	• Timely and appropriate referrals to higher levels of ANC is key to saving the pregnant woman and unborn child and can significantly contribute to achieving positive maternal and neonatal outcomes. • Up-to-date referral protocols and guidelines are necessary to ensure that every patient receives timely, appropriate care and that unnecessary complications are avoided. • **A**ppropriate information exchange and feedback mechanisms within and between health facilities improves patient care, increases motivation of health care workers, helps learning from experience and leads to improved patient care.

SECTION 2: COMMUNITY ENGAGEMENT FOR ANC

Community engagement in ANC is recommended for the improvement of ANC utilization and perinatal outcomes. Community involvement in ANC creates a platform on which health care providers can actively interact with the community to identify, prioritise and address problems women face around pregnancy, childbirth and after birth and empower women to seek care and choose healthy pregnancy and newborn care behaviours.

By involving the community in ANC, the aim is to improve maternal and neonatal outcomes and facilitate **a positive pregnancy experience for all pregnant women and adolescents.** Additionally, community participation in ANC is necessary for equitable distribution of health services and improved health outcomes for all in the community.

Community engagement and participation in ANC can be achieved through multi-level community mobilisation strategies that include advocacy with community stakeholders (community leaders, teachers, and other respected members), TBA, husbands or partners, and households. This should include appropriately packaged group educational sessions on key knowledge and behaviours around pregnancy and early neonatal care including the importance of each component of ANC. Particular emphasis should be on how the community can support pregnant women in facilitating a **positive pregnancy experience.**

Though the current primary health care (PHC) approach already lays emphasis on people's participation in addressing health problems within their own community by using a proactive approach to promotion of good health, disease prevention and control, curative services, rehabilitation and palliative care within the community, it can be strengthened by including an ANC component.

The ANC component should be aimed at creating awareness on pregnant women's rights to attend ANC for their health and wellbeing and the health of the unborn child, the importance and role of male involvement in pregnancy, promotion of sexual and reproductive rights, partnerships with TBAs, birth preparedness and complication readiness, including community participation in quality of care.

COMMUNITY SENSITISATION FOCUS AREAS
Women's right to attend ANC
Male involvement in pregnancy
Promotion of sexual and reproductive rights
Partnerships
Birth preparedness and complication readiness
Community participation in quality of ANC services

These can be implemented through strengthening existing networks at outreach posts, health posts, health centres, and district hospitals which are linked to the communities through NHCs. This should be supported by a well-functioning referral system across the health delivery stratum if community mobilisation is to contribute to improved maternal and neonatal outcomes and contribute to facilitating a ***positive pregnancy experience for all pregnant women and adolescents***.

KEY MESSAGE

ANC programmes that include household and community mobilisation are recommended to improve ANC utilization and perinatal health outcomes

BOX 2: INTERVENTIONS FOR COMMUNITY AWARENESS AND ENGAGEMENT FOR ANC

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Community Mobilisation	• Community demographics and cultural norms • The key stakeholders in the community • Nature and type of community health groups and volunteers within the community .	• Train facilitators in group facilitation, convening public meetings, and communication techniques. • Train community volunteers/ lay health workers to identify pregnant women in the community and encourage their ANC attendance • Coordinate with other healthcare providers and community health groups • Establish links or relationships with key stakeholders within the community (eg. Traditional leadership, influential people, traditional doctors, traditional counselors, TBA) etc	• Group spaces to hold meetings • Culturally and educationally appropriate educational material, e.g. videos, flip charts, pictorial booklets and/or cards • Ongoing supervision and monitoring of facilitators • Resources, e.g. additional staff, transport and budget for material, for community mobilization initiatives • Register of Religious leaders, traditional leaders, alangizi, traditional healers • Advocacy strategy to engage community leadership.	• Whether meetings should include men and women together or separately • Offering women a range of opportunities for communication and support, so that their individual preferences and circumstances can be catered for • Implementing health system strengthening interventions, such as staff training, and improving equipment, transport, supplies, etc. • Participatory women's groups as they present an opportunity for women to discuss their needs during pregnancy including barriers to reaching care and to increase support to pregnant women.
Antenatal home visits	Antenatal home visits are an advocacy strategy aimed at promoting maternal health education, ANC attendance and other health seeking behaviour. They can provide, early intervention and primary prevention in the antenatal period and may be useful for ensuring continuity of care across the antenatal, intrapartum, and postnatal period. However, antenatal home visits do not replace the recommended 8 ANC contacts	• At least one home visit should be conducted during the pregnancy. • Asses the social and environmental factors prevailing at home and give necessary advice and suggestions. • Provide referral to other ANC services if necessary • Link ANC home visits to maternity shelters.	• Lay health workers or community volunteers with a strong linkage to the health facility to manage this component. • Standards TORs for management of maternity shelters and making them part of the health facility. • Health system strengthening interventions, such as staff training, and improving equipment, transport, supplies, etc to support the home visits.	• Offering women a range of opportunities for communication and support, so that their individual preferences and circumstances can be catered for • Home visits must be implemented in a manner that respects and facilitates women's need for privacy as well as their choice and autonomy in decision making.
Male involvement in ANC	Interventions to promote male involvement in pregnancy are aimed at facilitating support and improved self-care of women, improved home care practices for women and newborns, and improved use of skilled care during pregnancy, childbirth and postnatal period.	• Ensure that the individual woman's preferences are respected, e.g. with regard to partner involvement. • Interventions to engage male partners/ husbands to support women to make health choices during pregnancy are recommended. • Encourage men to be involved in ensuring that all ANC appointments are attended.	• Culturally and educationally appropriate educational material, e.g. videos, flip charts, pictorial booklets and/or cards. • Advocacy strategy to engage men in ANC.	Men are an important support system in pregnancy as they are with their partners every day and may notice changes in their pregnant partners that others may not see. Further, male involvement is recommended in order to facilitate and support improved care for women, and children, improved use of skilled care during pregnancy, childbirth and postnatal period for women and newborns.

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Strengthen existing community outreach programmes	Community outreach programs form an integral component of the public health service delivery system , hence strengthening processes and coverage provides a platform for incorporation of community engagement in ANC.	• Strengthen existing partnerships with community based CHAs, NHCs, and SMAGs, • Coordinate ANC activities/ programs with other healthcare providers and community health groups • Establish linkages between facility level activities and community outreach programmes. • Incorporate ANC outreach into existing community outreach programmes (e.g. Child health,	• Resources, e.g. additional community volunteers, transport and budget for material, for community outreach activities. • Register of existing community outreach programs • Strengthen coordination, organisation and general management of outreach programmes • Standardize organisation of outreach programmes	Community outreach programmes act as an entry point into the public health care system at the community level hence strengthening their delivery could significantly contribute to positive maternal and neonatal outcomes.
Involve the community in quality of services. awareness and engagement for ANC	Involvement of the community in quality of ANC services ensures accountability of healthcare services and providers.	• Different groups should be asked to provide feedback and suggestions on how to improve the ANC services. • Introduce opinion/suggestion boxes at the health care facility • Conduct periodic client satisfaction surveys.	• Mechanisms in place to actively engage with the community to enable them provide constructive feedback.	Community involvement in quality improvement processes is necessary for the improvement of quality of ANC services as it provides feedback from the perspectives of women, communities and health care providers.

SECTION 3: ORGANISATION OF ANC SERVICES

A minimum of eight (8) ANC contacts are recommended throughout the pregnancy period in order to reduce perinatal mortality and improve women's experience of care. The first contact should take place in the first trimester (up to 12 weeks of gestation), two contacts scheduled in the second trimester (at 20 and 26 weeks of gestation) and five contacts scheduled in the third trimester (30, 34, 36, 38, and 40 weeks). The timings of the 8 contacts are aimed at optimizing the delivery of specific interventions in order to achieve maximum impact of ANC. This new model, presents a shift from the focused antenatal care (FANC) model which recommended 4 visits.

WHO FANC Model	*2016 WHO ANC model*
First Trimester	
Visit 1: 8 – 12 weeks	Contact 1: Up to 12 weeks
Second Trimester	
Visit 2: 24 – 26 weeks	Contact 2: 20 weeks Contact 3: 26 weeks
Third Trimester	
Visit 3: 32 weeks ***Visit 4: 36 – 38 weeks***	Contact 4: 30 weeks Contact 5: 34 weeks Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41weeks if not given birth	

The 2016 WHO ANC model is supported by strong evidence that suggests that systematic monitoring of maternal and fetal well-being particularly in relation to hypertensive disorders and other complications that may be asymptomatic, as can be achieved through more visits (especially in the third trimester), is key in reducing preventable morbidity and mortality.

It should also be noted that within this new model of ANC the word **"contact"** is used instead of **'visit'** to emphasise an active connection between the pregnant woman and the health-care provider that is not implicit with the word **"visit".** An active engagement can be established through the provision of an essential package of ANC that is characterized by effective clinical practices (interventions and tests), and the provision of relevant and timely information, and psychosocial and emotional support with good clinical and interpersonal skills within a well-functioning health system.

Each ANC contact comprises of three key elements : 1. ***Health information***; 2. ***Medical assessment***; and 3. ***Intra-personal support***

CONTACT COMPONENTS	*FOCUS*
Health Information	Provision of relevant and timely ANC information
Medical Assessment	Implementation of effective clinical practices (including interventions and tests)
Intra-personal Support	Provision of psychosocial and emotional support

The proposed interventions at each contact and by whom (see Box 3) are not meant to be prescriptive but rather adaptable to the individual woman and the local context to allow for flexibility in the delivery of ANC. This allows for the provision of a personalized, respectful service that focuses on facilitating a **positive pregnancy experience for all pregnant women and adolescents.**

KEY MESSAGE

***A minimum of eight (8) ANC contacts are recommended throughout the pregnancy period*. This allows for an active engagement between the pregnant woman and health care provider and facilitates increased maternal and fetal monitoring and assessments to support a healthy pregnancy and early detection of problems**

BOX 3: ANC CONTACT INTERVENTIONS

CONTACT	GESTATION PERIOD	FOCUS*	NEED TO DO**	NEED TO HAVE	BY WHOM
Contact 1	Up to 12 Weeks	• ANC counseling (Nutrition, birth preparedness and danger signs and pregnancy to be introduced early enough) • Medical assessment and management • Clinical inquiry on IPV/SGVB	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Enquiry and make appropriate referral of IPV/SGVB	• Counseling kits, Guidelines, test kits(HIV, RPR, urinistix), Medical equipment(BP machines, bathroom scales, glucometers, glucostix, haemacue and microcuvettes, reagents) • Good interpersonal and counseling skills	• SMAGs and CHAs to do counseling only and refer appropriately • Nurses, midwives, Cos, MLs, MOs (each health provider to perform roles applicable to their scope of practice)
Contact 2	13 to 20 Weeks	• ANC counseling including birth plan and preparedness, danger signs in pregnancy (Family planning should be introduced at this stage. All the available methods should be taught for a women to have a wider choice) • Medical assessment and management	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Ultra Sound scan • Home visits • Enquiry and referral of IPV/SGVB	• Guidelines, counseling kits test kits, Medical equipment (BP machines, bathroom scales, tape measure, glucometers, glucostix, haemacue and microcuvettes, reagents), • Ultra Sound machine • Good interpersonal and counseling skills	• Nurses, midwives, Cos, MLs, MOs, EHTs, CHAs, SMAGs (Each health provider to perform roles applicable to their scope of practice) • Ultrasonographer for ultra sound
Contact 3	21 to 26 Weeks	• ANC counseling including birth plan and preparedness, danger signs in pregnancy • Medical assessment and management • Counseling for Family Planning and breast feeding • Management of pain during labour	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Home visits • Enquiry and referral of IPV/SGVB • Ultra Sound scan if not done in second contact	• Guidelines, test kits, Medical equipment(BP machines, bathroom scales, tape measure, glucometers, glucostix, haemacue and microcuvettes, reagents), • Good interpersonal and counseling skills	• Nurses, midwives, Cos, MLs, MOs, EHTs, CHAs, SMAGs (Each health provider to perform roles applicable to their scope)
Contact 4	27 to 31 Weeks	• ANC counseling including birth plan and preparedness, danger signs in pregnancy • Medical assessment and management • Counseling for Family Planning and breast feeding • Management of pain during labour	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Home visits • Enquiry and referral of IPV/SGVB	• Guidelines, counseling kits test kits, Medical equipment(BP machines, bathroom scales, tape measure, glucometers, glucostix, haemacue and microcuvettes, reagents), • Home visit bag and accessories • Good interpersonal and counseling skills	• Nurses, midwives, Cos, MLs, MOs, EHTs, CHAs, SMAGs (Each health provider to perform roles applicable to their scope)

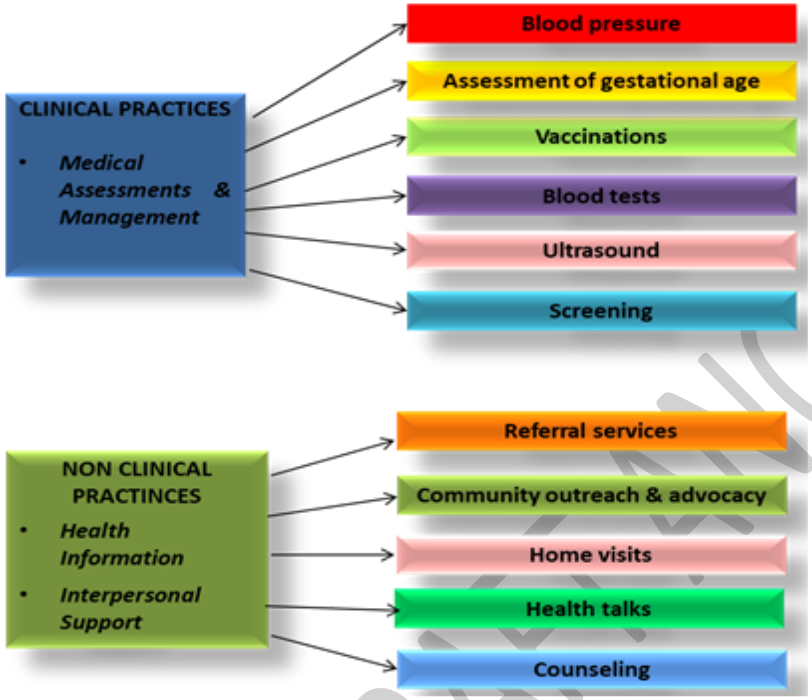
CONTACT	GESTATION PERIOD	FOCUS*	NEED TO DO**	NEED TO HAVE	BY WHOM
Contact 5	30 to 33 Weeks	• ANC counseling • Medical assessment and management • Counseling for Family Planning and breast feeding • Management of pain during labour	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Home visits • Enquiry and referral of IPV/SGVB	• Guidelines, counseling kits test kits, Medical equipment(BP machines, **bathroom scales,** tape measure, glucometers, glucostix, haemacue and microcuvettes, reagents), • Home visit bag and accessories • Good interpersonal and counseling skills	• nurses, midwives, Cos, MLs, MOs, EHTs, CHAs, SMAGs (Each health provider to perform roles applicable to their scope**)**
Contact 6	34 to 35 Weeks	• ANC counseling including birth plan and preparedness and danger signs • Medical assessment and management • Counseling for Family Planning and breast feeding • Management of pain during labour	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Home visits • Enquiry and referral of IPV/SGVB	• Guidelines, test kits, Medical equipment(BP machines, bathroom scales, tape measure, glucometers, glucostix, haemacue and microcuvettes, reagents), • Home visit bag and accessories • Good interpersonal relationship	• Nurses, midwives, Cos, MLs, MOs ,EHTs, CHAs, SMAGs (Each health provider to perform roles applicable to their scope**)**
Contact 7	36 to 37 Weeks	• ANC counseling including birth plan, preparedness and danger sins • Medical assessment and management • Counseling for Family Planning and breast feeding • Management of pain during labour	• Counseling • Medical assessment and management/ referral for • Create rapport with clients • Home visits • Enquiry and referral **of** IPV/SGVB	• Guidelines, test kits, Medical equipment(BP machines, bathroom scales, tape measure, glucometers, glucostix, haemacue and microcuvettes, reagents), • Good interpersonal relationships	• Nurses, midwives, Cos, MLs, MOs, EHTs, CHAs, SMAGs (Each helath provider to perform roles applicable to their scope)
Contact 8	38 to 40 Weeks	• ANC counseling including birth plan and preparedness and danger signs • Medical assessment and management • Counseling for Family Planning and breast feeding • Management of pain during labour	• Counseling • Medical assessment and management/ referral • Create rapport with clients • Home visits • Enquiry and referral of IPV/SGVB	• Guidelines, counseling kits test kits, Medical equipment(BP machines, bathroom scales, tape measure, glucometers**,** glucostix, haemacue and microcuvettes, reagents), • Good interpersonal relationship	• Nurses, midwives, Cos, MLs, MOs, EHTs, CHAs, SMAGs (Each health provider to perform roles applicable to their scope)

** Comprehensive details of activities at each contact are outlines in the integrated ANC package presented in annex 1*

***The list of interventions to be delivered at each contact and details about where they are delivered is and by whom are not meant to be prescriptive but rather adaptable to the individual woman and the local context to allow for flexibility in the delivery of the recommended interventions.*

SECTION 4: ESSENTIAL PRACTICES IN PROVISION OF ANC SERVICES

An integrated ANC package that comprises essential practices in ANC service provision is recommended to improve maternal and neonatal outcomes (See annex 1). It integrates both clinical and non-clinical interventions and delivers them in a manner that focuses on strengthening and improving the quality of ANC services while encouraging a continuum of care for all pregnant women.



The core clinical practices (medical interventions and tests) and non-clinical practices (counseling and interpersonal support) that must be provided at each of the recommended 8 routine ANC contacts are outlined with details of which health provider will perform it (CHA, SMAG, midwife, etc.), and at what health care delivery/facility level (i.e. home visit, primary care facility etc). Timeliness of implementation of each component of the package is therefore important as it has implications on the wellbeing of the pregnant woman and the growing feotus. It is for this reason that integrated ANC package provides for two opportunities to arrange and conduct early ultrasound scan before 24 weeks gestation as accurate gestational age is important in determining the exact timing of key ANC interventions especially related to malaria, tuberculosis and HIV. Further, accurate estimation of gestational age is important for the diagnosis and management of pre-term birth and pre-eclampsia. It is for this reason that accurate gestational age is vital to the successful implementation of the model and ensuring that all 8 contacts are attended.

Creating rapport between the client and the service provider and offering quality care is particularly important in encouraging ANC attendance as evidence has shown that if the quality of ANC is poor and the woman's experience of it is negative, that woman will not attend ANC irrespective of the number of contacts that are prescribed. Therefore respectful, individualized and person centered communication must be facilitated at all ANC contacts, to cover: presence of any symptoms; promotion of healthy pregnancies and newborns through lifestyle choices; individualized advice and support; timely information and tests, supplements and treatments; birth preparedness and complication readiness planning; postnatal family planning options; and the timing and purpose of ANC contacts. Topics for individualized advice and support can include healthy eating, physical activity, nutrition, tobacco, substance use, caffeine intake, physiological symptoms, malaria and HIV prevention, and blood test results and retests, alcohol and substance abuse, intimate partner violence foetal assessment, investigations (point of care, laboratory, radiological birth preparedness and complications including recognition of danger signs, and individualized birth plans.

Therefore effective communication and timely implementations of interventions is are key to facilitating a **positive pregnancy experience for all pregnant women and adolescents.**

KEY MESSAGE

Effective communication and timely implementation of essential clinical practices aim to provide person centred care in order to facilitate a positive pregnancy experience and improved outcomes for all pregnant women and adolescents.

BOX 4: ESSENTIAL PRACTICES IN THE PROVISION OF ANC

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Communication	Communication in ANC is an integral component of positive pregnancy experiences. It refers to the act of sharing information and, education with women about timely and relevant physiological, biomedical, behavioural and sociocultural issues. Effective communication helps reduce anxiety and builds rapport between the provider and the client.	• Counseling on birth plan and preparedness, exercise and diet, alcohol tobacco and substance abuse, balanced energy and protein supplementation, PMTCT, labour companion, malaria prevention, danger signs and family planning, • Inform women on their right to access quality ANC and make informed decisions on their sexual and reproductive health. • Provide support for women and their partners in addressing some of the challenges they may face in pregnancy • Community sensitisation activities to disseminate information about the importance of each component of ANC.	• Obstetricians, medical officers Nurses, Midwives, EHTs, SMAGs, CHAs Clinical officer, • Effective referral systems • Visual aids • Registers • Schedule for outreach and information sessions • Good counseling and interpersonal skills • Guidelines for referrals (eg IPV, SGBV) • Space to conduct individual or group counseling.	• Appropriate language and format of communication • Staff training • Offering women a range of opportunities for communication and support that take into consideration individual preferences and circumstances • Conducting group counseling for all topics and individual counseling according to the needs of a client and confidentiality required for the topic
Medical assessment and management	Medical assessment and management is important for the detection and treatment of pregnancy related complications, minor disorders and the identification of women and adolescents at risk of developing complications during pregnancy and/labour thus ensuring referral to an appropriate level of care.	• Measure weight, height, BP. • Estimate gestational age. • Conduct RPR,HIV test, TB screening, Hb, blood group and Rh factor, Hepatitis, urinalysis • prophylaxis for HIV prevention, • Treatment of minor disorders in pregnancy • Supply iron and folic acid, • Vaccination against tetanus, • Treatment of asymptomatic bacteriuria (ASB)	• Medical equipment, and supplies • Adequate skilled personnel • Job aids • Test kits • Essential drugs (ARV, antibiotics, vaccines, etc) • Clinical observation charts . Reliable ambulance services . Effective referral systems	• In-service training • Strategies to address staff turnover and/or inadequate staffing • Availability of test kits, drugs and medical supplies skilled labour,
Intra-Personal Support	Intra-personal support refers to the provision of social, cultural and psychological support throughout pregnancy. It provides emotional support to improve mental health and gives the pregnant woman a positive outlook and improves overall health outcomes for mother and baby	• Assess for signs of SGBV/IPV, counsel and refer, • Home visits • Prepare the woman psychologically for labour pain • Creating rapport between the provider and client	• Good interpersonal skills, • Good rapport with clients, • Guidelines for referrals	• Offering women a range of opportunities for communication and support that take into consideration individual preferences and circumstances

SECTION 5: PREVENTION OF AILMENTS IN PREGNANCY

Standard precautions for the prevention of ailments in pregnancy are recommended for the improvement of maternal and neonatal outcomes and contribute to a **positive pregnancy experience for pregnant women and adolescents**.

The occurrence of some infections and non- communicable diseases in pregnancy pose a risk to the health and wellbeing of the mother, feotus and newborn as they may lead to miscarriage, preterm labour, birth defects, small for gestational age newborns, and mortality. Some infections that occur during pregnancy primarily pose a risk to the mother while others can be transmitted to the baby through the placenta or during birth. Viral and bacterial infections in pregnancy are of particular concern as their effects tend to be more severe. Specific precautionary measures are recommended for identified infections at specified ANC contacts (see Integrated ANC Package in annex 1).

VIRAL/BACTERIAL INFECTIONS OF CONCERN	STANDARD PRECAUTION
Asymptomatic bacteriuria (ASB)	Test for ASB in all pregnant women
Helminthiasis	Administration of preventative anthelminthic treatment
Human immunodeficiency virus	Provider initiated testing and administration of pre exposure prophylaxis
Syphilis	Provider initiated testing
Tuberculosis	TB screening for all pregnant women
Urinary tract infections	Test for UTIs and provide antibiotic prophylaxis for recurrent UTIs.
Malaria	Intermittent malaria prophylaxis for all pregnant women
Tetanus	Administration of tetanus toxoid for all pregnant women

In the same vein non-communicable diseases or conditions that occur during pregnancy may also have negative maternal and neonatal effects, hence standard precautions measures to prevent or address them must also form part of the routine ANC implementation strategy.

NON-COMMUNICABLE DISEASES OF CONCERN	STANDARD PRECAUTION
Anaemia	• Full blood count/ on site haemoglobin testing • Check for iron deficiencies throughout pregnancy • Provide iron and folic acid (supplementation)
Gestational Diabetes Mellitus	• Test for gestational diabetes
Pre-eclampsia	• Monitor blood pressure throughout pregnancy • Urinalysis (Protein) at every contact • Physical examination (excessive weight gain and edema)
High Blood Pressure	Monitor blood pressure throughout pregnancy
Rh Disease	• Rhesus factor test on every pregnant woman at first contact. • Administration of anti D immunoglobulin to non-sensitized Rh-negative pregnant women at 28 and 34 weeks.

Early diagnosis and management (see section 7 for complication management) of ailments in pregnancy is key to prevention of maternal and neonatal mortality. These standard precautionary measures must however be supported by efficient and effective referral systems to ensure timely response. Doing so will contribute to facilitating a **positive pregnancy experience for women and adolescents.**

KEY MESSAGE

Standard measures to prevent ailments in pregnancy must be implemented at each routine ANC contact to facilitate positive pregnancy outcomes

BOX 5A: INTERVENTIONS FOR INFECTION PREVENTION IN PREGNANCY

*INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Antibiotics for ASB	ASB is a common urinary tract condition that is associated with increased risk of urinary tract infections in pregnant women. If left untreated, it may lead to stasis in the urinary tract and increase the likelihood of pyelonephritis, resulting in an increased risk of preterm birth. • Once detected, it can be actively managed with antibiotics	• Urine for microscopy • Midstream urine for culture • Dipstick test • Capacity building for providers • counseling on good hygiene and infection prevention	• Specimen bottles • Laboratory Forms • Antibiotics • Medical supplies • Guidelines and protocol on ASB including use of antibiotics in pregnancy	A high level of accuracy in detecting ASB is required to avoid treating women unnecessarily particularly in view of increasing antimicrobial resistance.
Antibiotic prophylaxis to prevent recurrent urinary tract infections	Recurrent UTIs are common in pregnancy and are associated with adverse pregnancy outcomes including preterm birth and small for gestational age newborns.	• Urine for microscopy • Counseling /IEC - hygiene need to complete treatment • counseling on good hygiene and infection prevention	• Specimen bottles • Medical supplies • Laboratory Forms • Antibiotics • Trained staff	Antibiotic prophylaxis is only recommended for recurrent UTIs
Antenatal anti-D immunoglobulin administration	Antenatal prophylaxis with Anti D immunoglobulin in non-sensitized Rh-negative pregnant women at 28 and 34 weeks of gestation is recommended to prevent RhD alloimmunisation. Usually first child is not affected	• Rhesus Factor test on every pregnant woman at 1st contact or at any other contact if it was not done at 1st contact • Administration of anti D immunoglobulin to non-sensitized Rh- negative pregnant women at 28 , at 34 weeks and within 72hrs of giving birth to an RH positive baby,	• Specimen bottles • Medical supplies • Laboratory Forms • Trained staff • Availability of blood-typing	Counseling and reminder in subsequent pregnancies as Rhesus negative mothers can develop RH antibodies if they have an RH positive newborn baby causing haemolytic disease of the newborn in subsequent pregnancies
Preventative anthelminthic treatment	Worm infestation in pregnancy can lead to anaemia, malnutrition and ill-health. In endemic areas preventive anthelmithic treatment is given to pregnant women after the 1st trimester	• Administration of preventative anthelminthic treatment • Stool for routine Examination • Counseling and Health education on Hygiene, eating habits, pica, cooking methods,	• availability of drugs • commodities management	• Affected women are often asymptomatic therefore the presence of soil based helminthiasis could influence the provision of preventative treatment. • Community based distribution
Tetanus toxoid vaccination	Tetanus is an acute disease caused by an exotoxin produced by clostridium tetani. Tetanus in pregnancy can lead to maternal, neonatal tetanus and death. Maternal tetanus can be caused by unclean delivery while neonatal infections is caused by unhygienic care of the umbilical cord or umbilical stump in babies. Neonates need to have received maternal antibodies via placenta to be protected at birth.	• Administration of tetanus toxoid for all women of child bearing age and pregnant women • Counseling for adherence	• Availability of the vaccine • Storage facilities • Medical supplies • Availability of TT card	• Non pregnant adolescents should also be vaccinated and issued with TT Cards to continue with during pregnancy, • TT Guidelines and protocols • A total of 5 doses is required to be fully immunized • Local prevalence of neonatal tetanus

*INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Intermittent preventative treatment of malaria in pregnancy (IPTp)	Malaria in pregnancy may lead to intense inflammation of the placenta which can lead to miscarriage, preterm labour and foetal infection	• Give intermittent malaria prophylaxis for all pregnant women once a month from 13 weeks until delivery with at least one month apart • Those with signs and symptoms of malaria, conduct Malaria Rapid Test (RDT) • Counseling on keeping surroundings clean, sleeping under treated mosquito nets and repellants	• constant supply of Drugs and reagents • Well informed pregnant women • Appropriate case management • Effective and efficient referral systems • IEC materials on prevention of malaria in pregnancy	• Strategies to ensure that women receive the first dose at 13 weeks • Those with signs and symptoms of malaria, conduct Malaria Rapid Test (RDT)
Pre-exposure prophylaxis (PrEP) for HIV prevention	Oral pre-exposure prophylaxis should be offered as an additional prevention choice for pregnant women at substantial risk of HIV infection as part of combination prevention approaches.	• Counseling on the risks, benefits and alternatives to continuing to use PrEP during pregnancy and breastfeeding • Capacity building for staff	• Commodities management • Time and space for counseling • Confidential dispensing • Providers to counsel and train • Availability of ARVs • Protocols and guidelines on dispensing and management	• Stigma associated with ARV use • Provider level training on how to initiate and follow up, how to recognise renal toxicity and when to discontinue PrEP.

* Because each of the prescribed intervention are important for maternal and foetal wellbeing, any intervention that is missed at an ANC contact, for whatever reason, should in principle be included at the next contact

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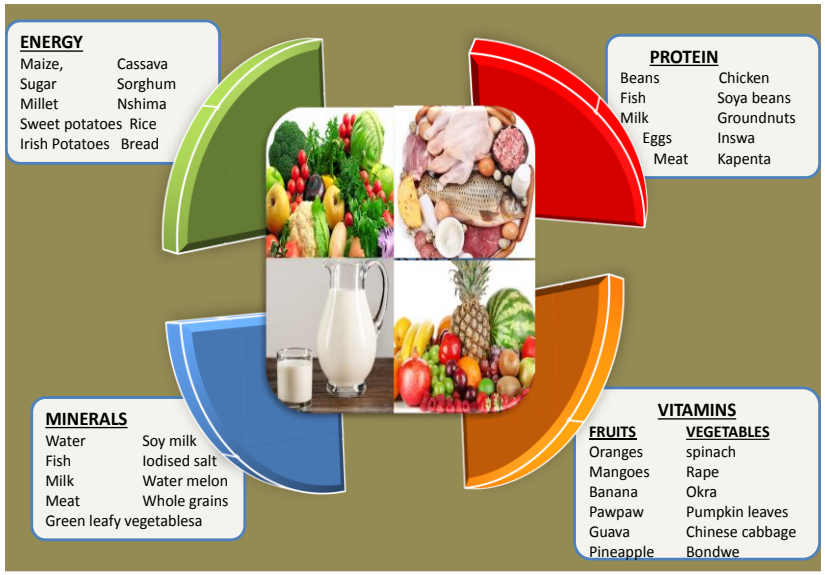
BOX 5B: INTERVENTIONS FOR PREVENTION 0F NON COMMUNICABLE DISEASES IN PREGNANCY

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Anaemia	• Anaemia is a common problem in pregnancy. It is associated with iron, folate and vitamin A deficiencies hence Iron and folic acid supplementation is recommended to improve maternal and neonatal outcomes • Major contributory factors to anaemia include parasitic infections such as malaria, hookworm, hence IPTp and preventative anthelminthic treatment also contribute to preventing anaemia.	• Checking for iron deficiencies throughout pregnancy • Counseling on good nutrition (Diverse diet) & adherence to treatment • Prevention of infections (eg malaria, hook worm, etc) • Daily oral iron and folic Acid supplementation with30mg -60mg of elemental iron	• Availability of Testing Kits • Availability of drugs, specimen bottles • Treatment options and effective referral systems • Supplementary feeding • Haemoglobinnometer/haemacue • Commodities for treatment	• Full blood count testing is the recommended method of diagnosing anaemia during pregnancy. However, on site haemoglobin testing with a Haemoglobinnometer is recommended in settings where full blood count testing is not available. • Availability of blood supplements such as HaemaUp, Inferon etc
Gestational diabetes mellitus	• Gestational diabetes mellitus is diabetes that develops during pregnancy. It can lead to pre-term labour, intra-uterine death, obstructed labour if not treated • Women with hyperglycaemia detected in pregnancy are at higher risk of adverse pregnancy outcomes including macrosomia, pre-eclampsia/ hypersensitive disorders in pregnancy, and shoulder dystocia.	• Counseling and Testing for gestational diabetes • History taking for signs and symptoms • Counseling on dietary intake • Counseling on nutrition and healthy lifestyle • Refer diagnosed GDM for treatment and management	• Testing kits and reagents • Broad range of drugs • Counseling spaces and skill • Adequate information for clients • Guidelines and protocols on GDM • Commodity management for oral glucose solution and testing supplies. • Efficient and effective referral systems	• Feasibility and acceptability of screening strategies • If Hyperglycaemia is detected at any time during pregnancy, should be classified either gestational diabetes mellitus or diabetes mellitus in pregnancy.
Pre-eclampsia	Pre-eclampsia is a serious medical condition that can lead to pre-term birth, maternal mortality, stillbirth and neonatal mortality. Symptoms include high blood pressure, blurred vision, severe headaches and protein in urine. While the exact cause is unknown some women are at an increased risk. Risk factors among others include;- • High blood pressure • Diabetes • Kidney disease • Obesity • Age (younger than 20 and older than 40 women	• Monitor blood pressure throughout pregnancy • Test urine for protein • Administer anti-hypertensive agents as appropriate • Proactive management with cortical steroids for preterm pregnancies if condition is stable • Counseling on diet and healthy lifestyle.	• Medical supplies/equipment • Oral and intravenous anti-hypertensive agents • Guidelines and protocols on the management of pre-eclampsia • Effective and efficient referral systems	• In-service training and regular refresher sessions on the management of pre-eclampsia. • Diagnosis and timely appropriate management of risk factors can drastically reduce the associated mortality and morbidity • Consider low dose aspirin for pregnant women with the risk factors

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
High blood pressure	High blood pressure can lead to preterm labour, placenta abruption, organ damage and impairment of baby growth if not controlled.	• Monitor blood pressure throughout pregnancy • Counseling on diet and healthy lifestyle • Weight monitoring.	• Adequate number of trained staff • Medical supplies/equipment • Oral and intravenous anti-hypertensive agents • Guidelines and protocols on the management of high blood pressure in pregnancy • Effective and efficient referral systems	• In-service training and regular refresher sessions on the management of high blood pressure in pregnancy. • Diagnosis and timely appropriate management of risk factors can drastically reduce the associated mortality and morbidity
Rh disease	Rhesus negative mothers can develop RH antibodies if they have an RH positive newborn baby causing haemolytic disease of the newborn in subsequent pregnancies. Rh disease can lead to jaundice, heart failure, organ enlargement	• Rhesus Factor test on every pregnant woman at 1st contact or at any other contact if it was not done at 1st contact • Administration of anti D immunoglobulin to non-sensitized Rh- negative pregnant women at 28 and 34 weeks.	• Test kits • Drugs • Functional laboratory • IEC/Couple counseling • Adequate number of trained staff	• Counseling and reminder in subsequent Pregnancies.

SECTION 6: NUTRITION IN PREGNANCY

A balanced energy and protein diet is recommended for pregnant women to contribute to positive maternal and neonatal outcomes. Pregnancy requires a healthy diet that includes an adequate intake of energy, protein, vitamins and minerals to meet maternal and foetal needs. A mixed diet is therefore essential for positive maternal and neonatal outcomes as it gives energy, builds the body and provides protection from diseases and infections.



Unfortunately for many pregnant women, dietary intake of vegetables, meat, dairy products and fruit is often not sufficient to meet the nutritional demands of pregnancy. Under nutrition in pregnancy results in conditions that are detrimental to maternal and neonatal wellbeing mainly due to protein energy and micronutrient deficiencies. Protein energy and micronutrient deficiencies contribute to high disease burden and less optimal maternal outcomes resulting in low birth weight babies and maternal mortality. Anaemia is associated with iron, folate and vitamin A deficiency, while calcium deficiency is associated with an increased risk of pre-eclampsia. Other nutritional deficiencies have also been cited as contributing to night blindness, impaired immunity, still births, small for gestational age neonates and pre term births among others.

Further, under nutrition in women results in reduced productivity, increased susceptibility to infections, slowed recovery from illness, and a heightened risk of adverse pregnancy outcomes. Nutritional deficiencies in pregnancies have been associated with poor maternal and neonatal outcomes.

DEFICIENCY	INDICATOR	MTERNAL/NEONATAL OUTCOME
Calcium	• Muscle cramps or spasms • Numbness • Tingling sensations • Poor appetite • Seizures	• Fractures • Bone deformities • Insufficient blood clotting • Osteoporosis • Growth and development delays in children • Heart problems involving blood pressure • Increased risk of pre-eclampsia
Iron	• Low Hb • Diminished physical capacity • Lethargy	• Prone to infection • Low birth weight • PPH • Preterm labour • Maternal mortality • Anaemia • Foetal neural tube defects
Vitamin A	• Dry skin • Dry eyes • Night blindness • Poor wound healing	• Miscarriage • Delayed growth

Nutrition counseling and related intra-personal support, is important in the promotion of healthy pregnancies as it contributes to optimizing maternal and neonatal health and facilitates a ***positive pregnancy experience for pregnant women and adolescents.***

KEY MESSAGE

Pregnancy requires a healthy diet that includes an adequate intake of energy, protein, vitamins and minerals to meet maternal and foetal needs

BOX 6: NUTRITIONAL INTERVENTIONS

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Nutritional counseling on healthy diet and physical activity	• Culturally appropriate healthy eating and exercise interventions to prevent excessive weight gain in pregnancy. • A healthy diet contains adequate energy, protein, vitamins and minerals that can be obtained through the consumption of various foods. • A healthy lifestyle includes exercise or physical activity aimed at maintaining a good level of fitness throughout pregnancy. Women should choose activities with minimal risk of loss of balance and foetal trauma	• Intervention needs to be woman centred and delivered in a non-judgmental manner to ensure appropriate weight gain. • Improve communications and support • Pregnant women should be counseled on suitable physical exercise • Demonstrate the type of exercises to be conducted by pregnant women such as taking walks, and activity of daily living. • Monthly body weight to determine weight gain. • Counsel pregnant women on mixed diet and general nutrition	• Standardized guidance on nutrition • Knowledge on local nutrition and cultural practices surrounding nutrition and exercise in pregnancy • Counseling skills • Designated time and place for counseling • Knowledge on nutritional content of various food items	• Normal gestational weight gain occurs after 20 weeks. However, take into consideration pre pregnancy weight and BMI. • Gender issues and cultural expectations of women. • Local food security • Training package for Health Care Providers on nutrition • Pregnancy may be an optimal time for behavior change interventions among women with a prevalence of overweight and obesity
Nutritional education on increasing daily energy and protein intake	• A balanced energy and protein diet is recommended for pregnant women to reduce the risk of still births and small for gestational age neonates. • Undernourishment is defined by a low Body Mass Index. Mid Upper arm circumference (MUAC) may also be used to identify protein energy malnutrition in pregnant women and to determine its prevalence in the population.	• Establish linkages with nutritional programmes within the community. • Further establish nutrition outreach programmes with community health workers • Community sensitisation and outreach programmes.	• Weighing scales • Counseling skills • Standardized guidance on nutrition in pregnancy • Strong linkages with nutritionists or nutrition programmes.	• Capacity building for ANC providers on nutrition counseling. • Group-based counseling • Task shifting • Complementary balanced protein and energy supplements
Energy and protein dietary supplements	knowledge on mixed diet and local available foods	• Counseling on local food stuff rich in Energy and Proteins	• Linkages with nutrition programmes • Counseling skills • Local grown food stuffs	• CBVs • Cooking Demonstrations

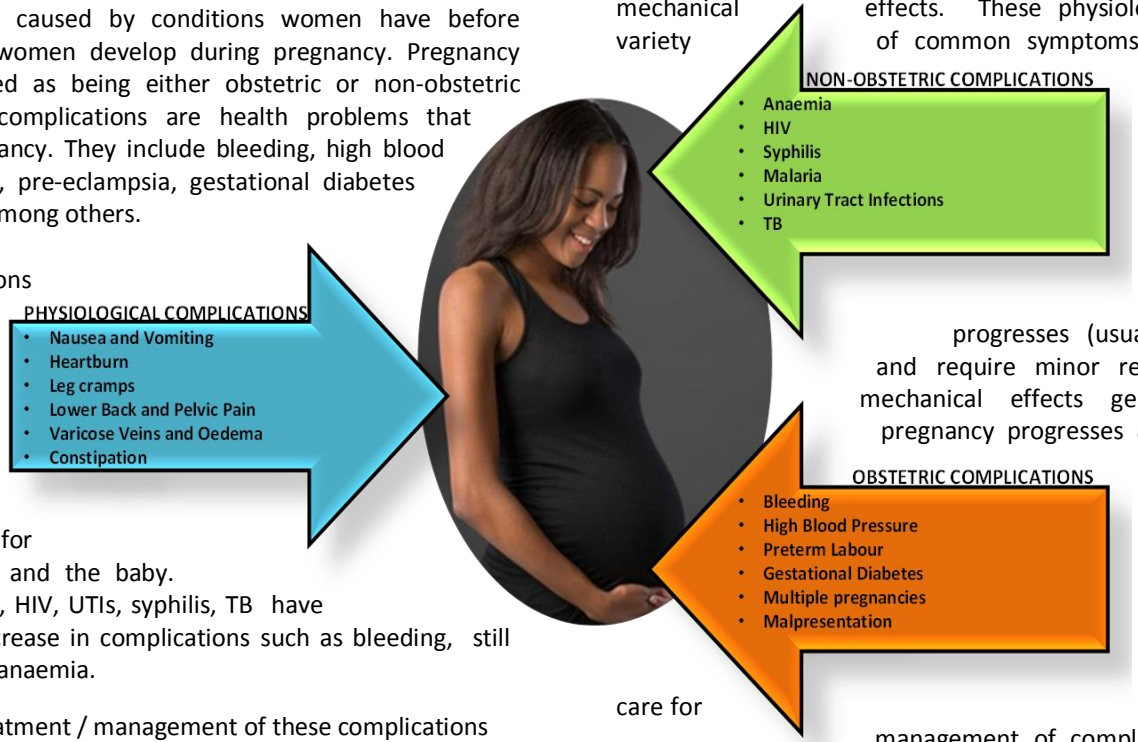
INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Iron and folic acid supplements	• Iron and folic acid supplementation is recommended to prevent anaemia in pregnancy • Daily oral Iron and folic acid supplementation with 30mg to 60 mg of elementary iron and 400ug(0.4 mg) of folic Acid once weekly is recommended for pregnant women to prevent maternal anaemia and puerperal sepsis, low birth weight and preterm birth.	• Counseling on folic acid and iron supplementation. • Dispensing • Folic acid should be commenced as early as possible to prevent defects	• Availability of drugs	• Intermittent oral iron and folic acid supplementation once weekly is recommended if daily iron is not acceptable due to side effects. • Some women experience unpleasant side effects with oral iron supplements, but these are not life threatening.
Restricting caffeine intake	• Lowering of caffeine intake is necessary to reduce the risk of pregnancy loss and low birth weight neonates. • Caffeine is a stimulant found in tea, coffee, soft drinks, , kola nuts and energy drinks	• Asses the caffeine intake of the pregnant woman (eg tea, coffee, energy drinks, etc • Counseling on side effects of caffeine	• Counseling skills • Time and space for counseling	• Gender issues and cultural norms for and expectations of women • Task shifting

SECTION 7: MANAGING COMPLICATIONS IN PREGNANCY

Interventions for managing complications in pregnancy are recommended for the improvement of maternal and neonatal outcomes and contribute to a **positive pregnancy experience for pregnant women and adolescents**

Complications in pregnancy are health problems that occur during pregnancy. They may be caused by conditions women have before pregnancy or conditions women develop during pregnancy. Pregnancy complications are classified as being either obstetric or non-obstetric complications. Obstetric complications are health problems that associated with the pregnancy. They include bleeding, high blood pressure, pre-term labour, pre-eclampsia, gestational diabetes and multiple pregnancies among others.

Non-obstetric complications are complications in pregnancy that occur as a result of infections in pregnancy. These are infections which could have occurred before or during the pregnancy and have serious consequence for a woman, her pregnancy and the baby. Infections such as, malaria, HIV, UTIs, syphilis, TB have been associated with increase in complications such as bleeding, still birth, pre-term labour and anaemia.



Early identification and treatment / management of these complications is recommended as if left untreated or not managed can lead to negative maternal and neonatal outcomes including mortality. Getting early and regular ANC can help reduce the risk for problems by enabling health care provider s to diagnose, treat, or manage conditions before they become serious.

Additionally, all pregnant women's bodies undergo substantial changes during pregnancy which are brought about by both hormonal and mechanical effects. These physiological changes lead to a variety of common symptoms – including nausea and vomiting, low back and pelvic pain, heartburn, varicose veins, constipation and leg cramps. Generally symptoms associated with hormonal changes settle as the pregnancy progresses (usually by second trimester) and require minor relief, while symptoms of mechanical effects generally worsen as the pregnancy progresses and require management. Physiological symptoms can be managed by a variety of non-pharmacological and pharmacological options.

Effective and high quality care for the prevention and management of complications in pregnancy are likely to significantly reduce maternal and neonatal morbidity and mortality.

KEY MESSAGE

Early diagnosis and referral of complications in pregnancy is important for reduction of maternal and neonatal morbidity and mortality.

BOX 7A: INTRVENTIONS FOR MANAGING PHYSIOLOGICAL SYMPTOMS IN PREGNANCY

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Nausea and Vomiting	Many pregnant women experience nausea and vomiting in the first trimester of pregnancy. However some women may experience nausea and vomiting beyond 20 weeks of gestation.	• Counseling on how to manage nausea and vomiting using non-pharmacological methods. • Inform women that symptoms of nausea and vomiting often resolve in the second half of pregnancy	• Knowledge on non-pharmacological methods that are unlikely to have harmful effects on mother and baby (eg. Ginger, chamomile, etc) • Time to counsel • Counseling skills,	Pharmacological treatments for nausea and vomiting should be reserved for those pregnant women experiencing distressing symptoms that are not relieved by non-pharmacological options under the supervision of a doctor.
Heart Burn	Heartburn is a common problem in pregnancy. It is often worse after eating and lying down. It can be self-treated with over the counter antacids.	• Counseling and advise on diet and lifestyle to relive or prevent heartburn.	• Time to counsel • Counseling skills	Antacid preparations can be used for women with symptoms that are not relieved by lifestyle and diet modifications, under the supervision of a doctor.
Leg Cramps	• Leg cramps often occur at night and can be very painful, affecting sleep and daily activities. • Magnesium, calcium and non-pharmacological therapies can be used for the relief of leg cramps in pregnancy.	• Counseling on how to relieve leg cramps • Dispense magnesium and calcium as appropriate	• Magnesium, calcium or non-pharmacological treatment options • Time to counsel • Counseling skills,	Magnesium, calcium or non-pharmacological treatment options can be based on a woman's preferences and available options.
Lower Back and Pelvic Pain	Regular exercise throughout pregnancy is recommended to prevent lower back and pelvic pain.	• Counseling on suitable physical exercise • Demonstrate the type of exercises to be conducted by pregnant women	• Time to counsel • Counseling skills	Though exercise may be helpful in relieving lower back pain, it could exacerbate pelvic pain associated with symphysis pubis dysfunction and is not recommended for this condition. Treatment for pelvic pain is based on severity. Mild pain will require rest, while severe cases mobility aids and strong analgesics
Constipation	Constipation in pregnancy can be managed by consuming foods that are high in fibre and drinking plenty of water	• Counseling and dietary advise • Promote intake of dietary fibre (found in vegetables, nuts, fruits and whole grains) and plenty of water	• Time to counsel • Counseling skills	Mild laxatives may be considered for use in situations where dietary modification or fibre supplementation has not been successful in relieving constipation.
Varicose Veins and Oedema	Varicose veins usually occur in the legs, but can also occur in the vulva ad rectum, and may be associated with pain, night cramps, aching and heaviness and worsen with long periods of standing.	• Inform women that symptoms may worsen as the pregnancy progresses. • Counseling and advise on rest and pain management	• Time to counsel • Counseling skills	Non pharmacological options such as compression stockings, leg elevation and water immersion can be recommended for management of varicose veins and oedema

BOX 7B: INTRVENTIONS FOR MANAGING OBSTETRIC COMPLICATIONS IN PREGNANCY

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Bleeding	Bleeding in pregnancy can happen anytime from conception to birth. However the timing and severity of bleeding could be indicative of a problem, hence all bleeding must be treated as serious and immediately attended to.	• Depending on gestational age, check foetal heart rate and ask about foetal movements. • Counseling on bleeding in pregnancy. • Examine and determine severity of bleeding • Refer accordingly	• Skilled/ trained staff • Medical supplies/equipment • Guidelines and protocol for managing bleeding in pregnancy • Effective and efficient referral systems	• Virginal bleeding during pregnancy does not always mean that a miscarriage. will happen or is happening. • Bleeding in the first trimester may not be a sign of problems • Bleeding in the 2nd and 3rd trimester can be a possible sign of problems.
High Blood Pressure	High blood pressure in pregnancy can result in reduced blood flow to the placenta which can slow down the growth of foetus and places the mother at great risk of pre-term labour, placenta abruption, organ damage and pre-eclampsia if not controlled. It is one of the major causes of maternal mortality, still birth and neonatal mortality.	• Monitoring of BP throughout pregnancy • Counseling and advise on diet and healthy lifestyle to manage BP • Dispensing of medication • Counseling on the importance of ANC attendance	• Skilled/trained staff • Medical supplies/equipment • Guidelines and protocol for managing high blood pressure in pregnancy • Blood pressure medication	• Continuation of monitoring, management and control for women who have high blood pressure before pregnancy • High blood pressure that develops in pregnancy typically occurs during the second half of pregnancy and goes away after delivery.
Preterm labour	Pre-term labour is labour that occurs after 20 weeks but before 37 weeks of pregnancy. Pre term labour can result in premature birth. And infants born before 37 weeks are at increased risk for health problems. The earlier premature birth occurs the higher the health risks for the baby.	• Early diagnosis and treatment/ management of risk factors • Take previous pregnancy history • Counseling and advise on diet and healthy lifestyle • Counseling on the importance of ANC attendance and signs of pre-term labour. • Asses for signs and symptoms of infection • Evaluate whether pre term birth is imminent or can be delayed	• Skilled/trained staff • Medical supplies/equipment • Guidelines and protocol for managing pre-term labour • Effective and efficient referral systems	• You might not be able to prevent preterm labour but a healthy lifestyle can go a long way in promoting a health full-term pregnancy • Appropriate management of imminent pre-term labour is imperative to reduce the associated risks to the baby, and improves the outcomes and survival of pre-term babies.
Multiple pregnancies	Multiple pregnancies often have a higher risk for complications. Common problems include:- • Preterm labour and birth • High blood pressure • Gestational diabetes • Anaemia • Birth defects.	• Counseling and advise on diet and healthy lifestyle • Monitoring of BP throughout pregnancy • Management of complications in multiple pregnancies • Refer accordingly	• Skilled/ trained staff • Medical supplies/equipment • Guidelines and protocol for managing multiple pregnancies • Effective and efficient referral systems	All multiple pregnancies must be treated as high risk and closely monitored through pregnancy.

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Gestational diabetes mellitus	• Gestational diabetes mellitus is diabetes that develops during pregnancy. It can lead to pre-term labour, intra-uterine death, obstructed labour if not treated • Women with hyperglycaemia detected in pregnancy are at higher risk of adverse pregnancy outcomes including macrosomia, pre-eclampsia/ hypersensitive disorders in pregnancy, and shoulder dystocia.	• Counseling and Testing for gestational diabetes • History taking for signs and symptoms • Counseling on dietary intake • Counseling on nutrition and healthy lifestyle • Refer accordingly	• Testing kits and reagents • Broad range of drugs • Counseling spaces and skill • Adequate information for clients • Guidelines and protocols on GDM • Commodity management for oral glucose solution and testing supplies. • Efficient and effective referral systems	• Feasibility and acceptability of screening strategies • If Hyperglycaemia is detected at any time during pregnancy, should be classified either gestational diabetes mellitus or diabetes mellitus in pregnancy.

BOX 7C: INTRVENTIONS FOR MANAGING NON OBSTETRIC COMPLICATIONS IN PREGNANCY

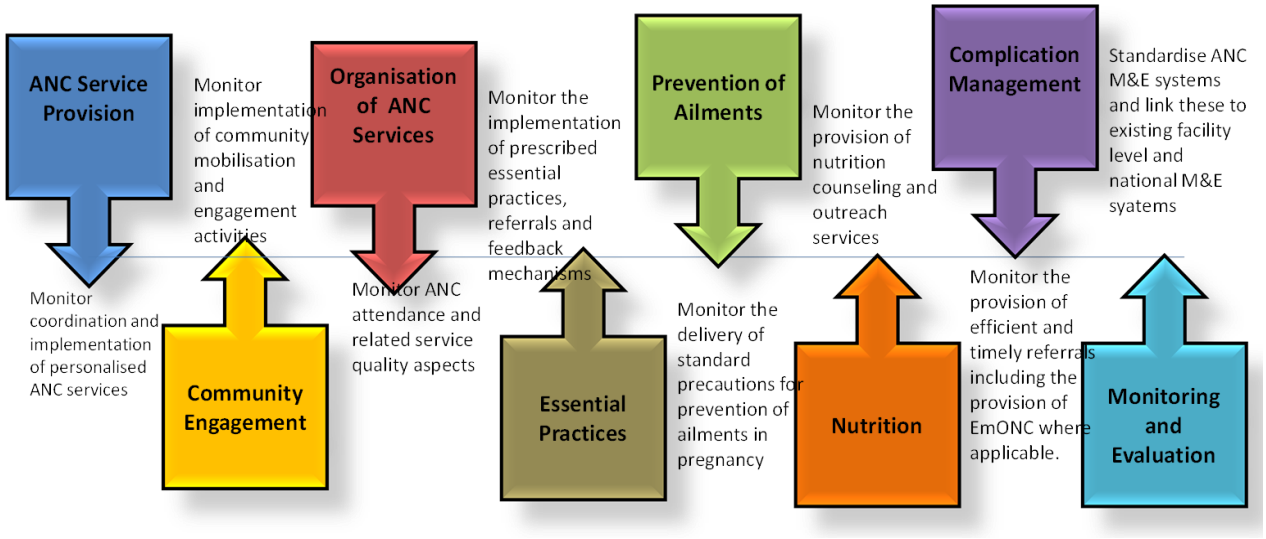
INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Anaemia	• Anemia in pregnancy is associated with iron deficiency. • Pregnant women with anaemia are at risk of pre-term labour, low birth weight, spontaneous abortion, IUFD, PPH etc	• Counseling and advise on diet and healthy lifestyle to improve Hb levels • Iron and folic acid supplementation • Monitoring of Hb levels • Treatment	• Skilled/ trained staff • Medical supplies/equipment • Guidelines and protocol for managing Anaemia in pregnancy • Effective and efficient referral systems	• Daily oral iron and folic Acid supplementation with30mg -60mg of elemental iron is recommended for pregnant women to prevent maternal anaemia. • Women with severe anaemia require further treatment hence routine testing for Hb must be done even if iron and folic acid supplementation is being provided
HIV	• Management of HIV in pregnanacy is aimed at reducing mother to child transmission. • ART is recommended for all HIV positive pregnant women regardless of CD4 count or viral load in order to reduce perinatal transmission.	• Counseling and advise on diet and healthy lifestyle to maintain good health • Dispensing of medication • Counseling on the importance of ANC attendance • ART and PMTCT counseling • Retest all HIV negative pregnant women in the 3rd trimester (for PMTCT	• Skilled/trained staff • Medical supplies/equipment • Guidelines and protocols for ART and PMTCT • Linkage to treatment • Facilities/ commodities for testing	• Continuation of monitoring • Task shifting,
Urinary Tract Infections	UTIs are common in pregnancy and are associated with adverse pregnancy outcomes including preterm birth and small for gestational age newborns.	• Urine for microscopy • Counseling /IEC - hygiene need to complete treatment • counseling on good hygiene	• Specimen bottles • Medical supplies • Laboratory Forms • Antibiotics • Trained staff	Antibiotic prophylaxis is only recommended for recurrent UTIs
Syphilis	Syphilis in pregnancy can cause miscarriage, stillbirth and mental and physical problems. Syphilis	• Skilled/trained staff • Medical supplies/equipment • Guidelines and protocols for treatment of syphilis in pregnancy • Linkage to treatment Facilities/ commodities for testing • Refer accordingly	• Skilled/trained staff • Medical supplies/equipment • Guidelines and protocols for syphilis • Linkage to treatment • Facilities/ commodities for testing	Antibiotics approved by an obstetrician can be used to prevent damage to the foetus

INTERVENTION	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Tuberculosis	TB increases the risk of pre-term birth, perinatal death and other pregnancy complications. Initiating treatment early is associated with better maternal and infant outcomes than late initiation.	• Systematic screening for TB • Initiate early treatment • Counseling and advise on diet and healthy lifestyle • Counseling on TB drug adherence	• Facilities/ commodities for testing • Time to counsel • Counseling skills • Guidelines and protocols for TB treatment in pregnancy • Linkage to treatment	• Consider TB clinics tack pregnancy as a Colum in the register to allow for better estimation of the local burden of TB in pregnancy • Pregnant women living with HIV should be periodical screened for active TB

SECTION 8: MONITORING AND EVALUATION OF ANC

Rigorous monitoring and evaluation (M&E) ensures the highest possible quality of ANC. A facility level M&E system must therefore be put in place in order to audit, monitor and evaluate ANC services in line with these guidelines and the integrated ANC package. The aim of the M&E system is to ensure that services delivered at the facility level are of quality, and are in line with facilitating a **positive pregnancy experience for all pregnant women and adolescents.**

By focusing on the integrated ANC package components of **health information**, **medical assessment** and **intra-personal support** recommended for each contact, the M&E system must be tailored towards collecting and analysing data based on indicators that define safeguarding and prioritising the health and wellbeing of the pregnant person and growing foetus.



The system must therefore comprise of a robust internal and external M&E plan. Internal M&E should be integrated into each of the eight (8) areas of ANC intervention and linked to the intended outcome of **a positive pregnancy experience for all pregnant women and adolescents** while the external M&E should be conducted for rigorous evaluation of the integrated ANC package to ensure effectiveness and economic efficiency.

This can be achieved by using three methods; 1: Collecting and collating routine ANC service statistics; 2. Documenting client information; and 3. Periodic internal and external evaluation. The routine data collected will be used to monitor implementation of the eight (8) areas of scaling up ANC. Client information is essential for documenting the number of clients seen, demographic information, number of contacts, services received and referrals made. Periodic evaluation should comprise of client and provider interviews, surveys, and observations.

The facility must therefore define procedures for ANC data management, operations research, sentinel surveillance and feedback mechanisms to inform programming, thus ensuring effective and efficient implementation of the guidelines and the Integrated ANC Package.

KEY MESSAGE

A robust monitoring and evaluation system for the implementation of the integrated ANC package is recommended

BOX 8: INTERVENTIONS FOR MONITORING AND EVALUATION OF ANC

INTERVENTIONS	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Data Management	The purpose of data collection and management is to provide information that can be analysed and used appropriately to provide feedback and improve service provision and outcomes.	• Regular data collection and aggregation (daily, weekly, monthly, quarterly, annualy) • Timely reporting (weekly, monthly, quarterly, etc.) • Analyze data and use it for decision making and quality of care improvements • Conduct regular data audits and hold data review meetings • Analysis of patterns or problems in services using statistics	• ANC registers and data collection tools • Monthly report forms • Data management skills • HMIS indicators manual • Health system procedure manual • Procedures and guidelines for using data for decision making • Safe motherhood activity sheet	• Training/ reorienting all staff on key health information data collection tools and procedures. • Training/ orientation on HMIS indicators and their related calculations • Periodic data management training and refresher courses
Operations Research	Operations research can be undertaken to assist in management of ANC services. The findings can be used to solve problems and influence decisions around ANC service provision.	• Client based exit interviews, observations and questionnaires • Provider based surveys • Facility level case reviews, observations and maternal death audits • Periodic special studies (client satisfaction, proximity of women to facility, cost, impact, etc)	• ANC registers and activity sheets • Clinical incident reviews and learning • data management skills • monthly HIA 2 • Use data for performance review and systems strengthening • scorecard indicators	Research findings can be used routinely to inform clinical and management decisions and improve quality of care.
Supervision	Facility managers/ staff supervisors need to provide supervision in routine monitoring and service provision, and give suitable recommendations or guidance where appropriate in order to maintain high standards of care.	• Observation of counseling and clinical services to assess quality of interactions with pregnant women. • Supervise data collection and ensure data completeness. • Monitor mid wife workload and burn out • Facility level spot checks and feedback	• Data checklist • Supervision schedule • Team building and people management skills of health care providers • Defined roles and responsibilities and lines of accountability for reporting • At least two annual meetings with stakeholders (eg. Community, service users, partners) to review its performance, identify problems and make recommendations for joint actions to improve quality.	• staffing levels • Creating a supportive work environment for the delivery of ANC services • Updating staff establishment for midwives to ensure all facilities have adequate numbers' • Good managerial and clinical leadership improves performance by showing direction and inspiring subordinates and creating an environment of support for staff in undertaking continuous quality improvement.

INTERVENTIONS	NEED TO KNOW	NEED TO DO	NEED TO HAVE	CONSIDER
Supply Chain	A well function logistics and supply chain system is necessary for the provision of quality services as it ensures regular supply of equipment and consumables	• Inventory of data management tools	• Strategies to improve supply chain management according to local requirements • Regular monitoring of stock levels and strengthening coordination and follow up for medicines and supplies required of ANC • Stock control cards for data management tools • Functional logistics system to ensure regular supply of equipment and consumables.	Assigning an officer for the management of all data collection tool.

ANNEX 1: INTEGRATED ANC PACKAGE

CONTACT	ACTIVITY	BY HEALTH PROVIDER	BY LEVEL	PHASING IF ANY
Contact 1 (up to 12 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, restricting caffeine intake, HIV testing and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under insecticide treated bednets and counseling on danger signs (If identified refer as appropriate)	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, syphilis screening, hepatitis B, urinary test for proteinuria, HIV testing, TB screening, Blood Hb measurement, blood group typing and Rh factor, blood sugar. Tetanus toxoid vaccination. Iron/folic acid dispensing, calcium supplements, gestational diabetes mellitus, Asymptomatic bacteriuria(ASB), management of pain during labour. Pre-exposure prophylaxis for HIV prevention, treatment for nausea and vomiting, heartburn, low back ache and pelvic pain, leg cramps, constipation, varicose veins,	Medical licentiates, Clinical Officers, Doctors, nurses and midwives. (CHAs, SMAGs, EHTs will give advise related to heart burn, leg cramps, varicose veins)	Health Post, Health center, hospitals	No phasing (if blood sugar is positive this can be repeated during other contacts).
	Intra-personal support: Clinical enquiry and referral of SGBV including Intimate Partner Violence(IPV), referral to other services	All health providers	All levels	No phasing
Contact 2 (13-20 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, HIV testing, safer sex and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under insecticide treated bednets and counseling on danger signs (If identified refer as appropriate)	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, urinary test for proteinuria, TB screening, Blood Hb measurement, tetanus toxoid vaccination. Iron/folic acid dispensing, Asymptomatic bacteriuria(ASB), management of pain during labour. Ultra sound (18-20 weeks).Pre-exposure prophylaxis for HIV prevention, treatment for nausea and vomiting, heartburn, low back ache and pelvic pain, leg cramps, constipation, varicose veins	Medical licentiate, Clinical Officer, Doctor, nurses and midwives(however, Nurses will not prescribe Antibiotics for ASB). CHAs, SMAGs, EHTs will give advise related to heart burn, leg cramps, varicose veins	Health Post, Health center, Hospitals	No phasing
	Intra-personal Support: Home visits/ outreach, referral to other services	Midwife, nurse, CHA	Health post, Health Centre	No phasing

CONTACT	ACTIVITY	BY HEALTH PROVIDER	BY LEVEL	PHASING IF ANY
Contact 3 (21-26 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, HIV testing, safe sex and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under insecticide treated bednets and counseling on danger signs(if identified refer immediately) counseling for breastfeeding and postpartum family planning	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, Foetal Heart Rate(FHR) urinary test for proteinuria, TB screening, Blood Hb measurement, tetanus toxoid vaccination. Iron/folic acid dispensing, Malaria prevention (IPTp), Antibiotics for asymptomatic bacteriuria(ASB), Ultrasound scan, management of pain during labour. Pre-exposure prophylaxis for HIV prevention, treatment for heartburn, low back ache and pelvic pain, leg cramps, constipation, varicose veins.	ML, CO, Doctor, nurses and midwives (however, nurses/midwives will not prescribe Antibiotics for ASB). CHAs, SMAGs, EHTs will give advice related to heart burn, leg cramps, varicose veins, Ultrasonographer for Ultrasound only.	Health Post (except ultra sound), Health center, hospitals	No phasing however, Ultrasound scan facilities can be phased country-wide. (see note below).
	Intra-personal Support: Home visits/ outreach, Clinical enquiry and referral of Intimate Partner Violence (IPV)/Sexual Gender Based Violence (SGBV), referral for emergencies, referral to other services	All health providers	All levels	No phasing
Contact 4 (27-31 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, HIV testing, safe sex and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under insecticide treated bednets and counseling on danger signs (if identified refer immediately), counseling for breastfeeding and postpartum family planning	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, Foetal Heart Rate(FHR) urinary test for proteinuria, TB screening, Blood Hb measurement, tetanus toxoid vaccination. Iron/folic acid dispensing, Malaria prevention (IPTp), Antibiotics for asymptomatic bacteriuria(ASB), Ultrasound scan (second scan at 28 weeks), management of pain during labour. Pre-exposure prophylaxis for HIV prevention, low back ache and pelvic pain, leg cramps, constipation, varicose veins	Medical Licentiate, Clinical Officer, Doctor, Midwife, Nurse	Health Post, Health center, Hospitals	No phasing. (Ultrasound can be done if not done earlier)
	Intra-personal Support: Home visits/ outreach, Clinical enquiry and referral of Intimate Partner Violence (IPV)/Sexual Gender Based Violence (SGBV), referrals for emergencies, referral to other services	All health providers	All levels	No phasing

CONTACT	ACTIVITY	BY HEALTH PROVIDER	BY LEVEL	PHASING IF ANY
Contact 5 (30-33 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, HIV testing, safe sex and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under treated bednets and counseling on danger signs (if identified refer immediately), counseling for breastfeeding and postpartum family planning	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, Foetal Heart Rate(FHR) urinary test for proteinuria, TB screening, Blood Hb measurement, tetanus toxoid vaccination. Iron/folic acid dispensing, Malaria prevention (IPTp), Antibiotics for asymptomatic bacteriuria(ASB), management of pain during labour. Pre-exposure prophylaxis for HIV prevention, low back ache and pelvic pain, leg cramps, constipation, varicose veins,	Medical licentiate, Clinical Officer, Doctor, Midwife, Nurse	Health Post, Health center, Hospitals	No phasing
	Intra-personal Support: Home visits/ outreach, Clinical enquiry and referral of IPV, referrals for emergencies, referral to other services	All health providers	All levels	No phasing
Contact 6 (34-35 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, HIV testing, safe sex and counseling (PITC), counseling on (Mixed diet)balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under treated bednets and counseling on danger signs (if identified refer immediately), counseling for breastfeeding and postpartum family planning	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, Abdominal palpation to detect breech, Heart Rate(FHR) urinary test for proteinuria, TB screening, Blood Hb measurement, tetanus toxoid vaccination. Iron/folic acid dispensing, Malaria prevention (IPTp), Antibiotics for asymptomatic bacteriuria(ASB), management of pain during labour. Pre-exposure prophylaxis for HIV prevention, low back ache and pelvic pain, leg cramps, constipation, varicose veins,	Medical licentiate, Clinical Officer, Doctor, Midwife, Nurse	Health Post, Health center, Hospitals	No phasing
	Intra-personal Support: Home visits/ outreach, Clinical enquiry and referral of IPV, referral for emergencies, referral to other services	All health providers	All levels	No phasing

CONTACT	ACTIVITY	BY HEALTH PROVIDER	BY LEVEL	PHASING IF ANY
Contact 7 (36-37 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, safe sex and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under treated bednets and counseling on danger signs (if identified refer immediately), counseling for breastfeeding and postpartum family planning	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, Abdominal palpation to detect breech, Foetal Heart Rate(FHR) urinary test for proteinuria, Blood Hb measurement, Iron/folic acid dispensing, management of pain during labour. Pre-exposure prophylaxis for HIV prevention, low back ache and pelvic pain, leg cramps, constipation, varicose veins,	Medical Licentiate, Clinical Officer, Doctor, Midwife, Nurse	Health Post, Health center, Hospitals	No phasing
	Intra-personal Support: Home visits/ outreach, Clinical enquiry and referral of SGBV and IPV, referrals for emergencies, referral to other services	All health providers	All levels	No phasing
Contact 8 (38-40 weeks)	**Health information**: Counseling on birth plan and preparedness, Counseling on diet and exercise, counseling on alcohol, tobacco and substance use, safe sex and counseling (PITC), counseling on balanced energy and protein supplementation, Labour companion, counseling on and encouraging sleeping under treated bednets and counseling on danger signs (if identified refer immediately), counseling for breastfeeding and postpartum family planning	All health providers	All levels	No phasing
	Medical assessment and management: Maternal weight/ height measurement, Blood pressure measurement, Clinical estimate of gestational age, abdominal palpation to detect breech, Foetal Heart Rate(FHR) urinary test for proteinuria, Blood Hb measurement, Iron/folic acid dispensing, management of pain during labour. Pre-exposure prophylaxis for HIV prevention, low back ache and pelvic pain, leg cramps, constipation, varicose veins,	Medical Licentiate, Clinical Officer, Doctor, Midwife, Nurse	Health Post, Health center, Hospitals	No phasing
	Intra-personal Support: Home visits/ outreach, Clinical enquiry and referral of SGBV and IPV, referrals for emergencies, referral to other services	All health providers	All levels	No phasing

KEY : **HEALTH PROVIDERS:** CHA – Community health assistant; CO - Clinical Officer; EH**T –** Environmental health technician; ML – medical licentiate;
FACILITIES: HP – health post; HC – health centre

ANNEX 2: EXPERTS INVOLVED IN THE PREPARATION OF THIS GUIDELINE

NO	NAME	ORGANISATION	DESIGNATION
1.	Ms. Esther Banda	Eastern Province PHO MOH	Acting PNO MNCH
2.	Mr. Stanley Banda	Ministry of Health (HQ)	Health Systems Strengthening
3.	Ms. Martha Chabinga	Ministry of Health (Central Province)	Registered Midwife
4.	Ms. Wajilovia Chilambo	Ministry of Health – NMEC	MFO
5.	Ms. Ms. Caren Chizuni	Ministry of Health (HQ)	Chief Safe Motherhood Officer
6.	Ms. Bertha Kaluba	Lusaka District Health Office	Senior Nursing Officer
7.	Ms. Purity Linyaku	Ministry of Health (HQ)	SHPO
8.	Dr. Victor Liyuma	Chipata Level 1 Hospital	Medical Superintendent
9.	Ms. Grace Malitino Sikazwe.	Kabwe Health Centre	Nursing Sister
10.	Dr. Sarai Bvulani Malumo	World Health Organisation	National Programme Officer/ MPS
11.	Ms. Mable Mfula	Ministry of Health (HQ)	Public Health Nurse
12.	Ms. Jenipher Mijere	UNFPA	Programme Officer
13.	Dr. Angel Mwiche	Ministry of Health (HQ)	Assistant Director – MNCH
14.	Dr. Gideons Mwiche	Women and Newborn Hospital – University Teaching Hospital	Senior Registrar/OBGY
15.	Dr. Christopher Ng'andwe	Churches Health Association of Zambia	Project Director
16.	Ms. Dorothy Sikazwe	Ministry of Health (HQ)	Chief Nutrition Officer
17.	Dr. Malunga Syacumpi	Lumia Consultancy	Consultant
18.	Dr. Muriel Syacumpi	WHO/Ministry of Health	Consultant
19.	Dr. Christopher Mlelemba	CRHE/MOH Center for Reproductive Health and Education	Programme Director
20.	Mr. Richard Tembo	Ministry of Health- Chibombo District Health Office	District Health Information Officer