

**EVALUATION OF HEALTH CARE WORKERS ADHERENCE TO FOCUSED
ANTENATAL CARE GUIDELINE IN MAGU DISTRICT**

By

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**A Dissertation Submitted in Partial fulfilment of Requirement for the Award of
Degree of Masters in Health Monitoring and Evaluation of Mzumbe University**

2017

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a thesis entitled “**evaluation of health care workers adherence to focused antenatal care guideline in Magu District**” in fulfilment of the requirements for award of the Masters of Science Health Monitoring and Evaluation.

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DEDICATION

I dedicate this work to my family for their patience, contribution and support throughout the study period

OPERATIONAL DEFINITION

Focused Antenatal Care (FANC): Is a goal oriented care which is provided to pregnant women emphasizing on woman's adherence to four ANC visits, preparation for health facility based child delivery, readiness for complication that may occur in pregnancy, labour, delivery and postpartum.

Preeclampsia: Preeclampsia is a pregnancy complication characterized by high blood pressure and signs of damage to another organ system, often the kidneys

Anemia: Anemia is a condition in which you don't have enough healthy red blood cells to carry adequate oxygen to your tissues

Perinatal death: is a fetal death (stillbirth) or an early neonatal death

Premature births: A premature birth is a birth that takes place more than three weeks before the baby is due

Health care worker: Is a person who provides service at antenatal care clinics at selected health facilities.

Low birth weight: is defined as a birth weight of a live born infant of less than 2,500 g regardless of gestational age.

Chorio amnionitis: is an inflammation of the fetal membranes (amnion and chorion) due to a bacterial infection.

Maternal deaths: is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Cerebral malaria: is the most severe neurological complication of infection with *Plasmodium falciparum*.

Adherence: the act of doing what is required by a rule, policy, guideline or belief

Perception: The way of feeling, putting value and thinking about a phenomenon or matter under debate.

Practice: Refers to the act of translating knowledge into action(Implementation)

ABBREVIATION

ANC	Antenatal care
BMI	Body Mass Index
CHMT	Council Health Management Team
FANC	Focused Antenatal Care
FEFO	FeroFolic tablets
HIV	Human Immunodeficiency Virus
HCW	Health care workers
HSSPIII	Health Sector Strategic Plan III
IBP	individualized birth plans
IPT	Intermittent Presumptive Treatment
IPTp	intermittent preventive treatment for malaria during pregnancy
ITNs	Insecticide Treated Nets
MDGs	Millennium development goals
MNCH	Maternal New and Child Health
MoHSW	Ministry of Health and Social welfare
MTUHA	Mfumo wa Taarifa za Huduma za Afya
NSGRP	National Strategy For Growth And Reduction Of Poverty
PHSDP	Primary Health Services Development Program
RCH	Reproductive and Child Health
RHMT	Regional Health Management Team
STIs	Sexual Transmission infections
TDHS	Tanzania Demographic Health survey
WHO	World health organization
SP	Sulfamethoxazole Pyrimethamine
HMIS	Health Management Information System
VDRL	venereal disease research laboratory
HIV	Human Immunodeficiency Syndrome
MRDT	Malaria Rapid Diagnostic Test

ABSTRACT

Globally, Maternal mortality ratio (MMR) reported to be declined, although is still high in sub-Saharan Africa. Antenatal care services (ANC) acknowledged to prevent detrimental outcomes for pregnant women and their babies through early identification of disorders like hypertensive, anaemia and malaria thus reducing mortality and morbidity. Maternal morbidity and mortality in Tanzania exist at unacceptably high levels. Maternal deaths, out of health facility and unskilled assisted deliveries exist in the study area despite of long term FANC model guideline implementation, which is also geared to influence facility based deliveries, completion four ANC visits hence reducing maternal related complications and mortalities. The level of health workers knowledge, adherence and practice regarding FANC model guideline was not fully known in the study area. The objectives study was to determine FANC model guideline knowledge; identify challenges; examine/explore the adherence level and determine healthcare workers' perception.

Study design was a cross sectional descriptive study adopted both qualitative and quantitative methods. Forty eight RCH department health care workers selected randomly, whereby 10 were interviewed, recorded and transcription imported into Atlas.ti for coding, content analysis and themes were established. Thirty eight workers were observed by using a checklist. An Exploratory Data Analysis (EDA) for quantitative data provided insights based on proportions regarding FANC model guideline parameters and participant's demographic characteristics. Secondary data were analyzed by using Microsoft Excel.

Findings indicate that the knowledge level in regards to FANC model guideline is high and majority of health care workers perceived it positively. Variation in adherence levels based on five FANC model guideline categories exist among health care workers observed of which majority (60%) were nurses(EN,RN).It is recommended that regular and intensive Reproductive and Child health focused supportive supervision at health facility levels is conducted to facilitate health care workers compliance of FANC model guideline.

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CHAPTER ONE

INTRODUCTION

1.1 Background information

Parturition is a moment characterized by joy and pride for woman, families and society in a global and in African culture in particular. The majority of pregnancies, the healthy newborn and the mother are expected to remain safe throughout delivery and the period after delivery; however the death of a woman due to pregnant associated causes is not declining sufficiently in sub-Saharan Africa (Awuah et al, 2014). Maternal mortality ratio (MMR) reported to be declined globally, although in sub-Saharan Africa and among developing regions including Tanzania is still high (Conrad et al, 2012). Majority of Maternal deaths in Sub-Saharan Africa is due to various reasons, among them are haemorrhage, puerperal sepsis and hypertensive disorders. Early identification of disorders like hypertension, anaemia and malaria is crucial because worsen during pregnancy and are associated with a greater risk of maternal deaths (Conrad et al, 2012).

World Health Organization (WHO) recommends focused ANC implementation that insists on four ANC visits and a well-defined set of activities proven to be beneficial for maternal and neonatal health (WHO 2001). Antenatal care services (ANC) is acknowledged as an effective method of preventing adverse outcomes for pregnant women and their babies hence reducing mortality and morbidity.. Moreover, ANC provides the opportunity to detect and treat anomalies of pregnancy and to provide preventive health services such as immunization against tetanus, prophylactic treatment of malaria and worms, HIV testing and counseling. To fully benefit from these interventions and quality ANC care delivery by health care workers, it is important that pregnant women start ANC early in their pregnancy (Villar J et al, 2001). However, the study done by Chiwaula (2011), on factors associated with late initiation of ANC among pregnant women indicates that high proportions of women in Africa initiate ANC late and are at risk of poor pregnancy outcomes.

In 2002, Ministry of health, Community Development, Elderly and Children in Tanzania, started implementing focused antenatal care (FANC) model guideline which was adapted from World Health Organization (WHO) in providing Antenatal care services to pregnant women. Focused Antenatal Natal Care integrates care through health promotion, prevention, detection and treatment of existing diseases and birth preparedness for pregnant women attending antenatal clinics (Kearns A. et al, 2014).

The WHO Focused Antenatal Care (FANC) model which is adapted in Tanzanian context recommend at least four ANC visits for uncomplicated pregnancies with the first visit starting before 12 weeks of gestation (MoH, 2004). The recommended FANC package in Tanzania based on four visits with initial visit before 12 weeks of pregnancy, a second visit between 20 and 24 weeks, a third visit between 28 and 32 weeks and a fourth visit at 36 weeks whereby specific checklist is used by providers to ensure appropriate delivery of counseling, testing, treatments and examinations for pregnant women (Karin et al, 2012). Therefore, quality services and education provided to pregnant women deserves a comprehensive package based on adherence to guidelines, knowledge, skills, capacity and capability of health care workers which is invested through different pre-service, in-service training and capacity building programmes. In the study conducted by Mpembeni et al (2007), on the use of maternal health services indicate that women who knew about risk factors are more likely to utilize effectively reproductive and child health services include attending at health facilities for delivery than those without knowledge. Therefore ANC services is an importance source of knowledge and positive behavior development among pregnant women attending clinics hence influencing better pregnancy outcome by adhering to recommended advises given.

According to Ministry of Health and Social welfare (2010), complications such as preeclampsia, anemia, perinatal death, premature births, intra uterine growth retardation, low birth weight, chorio amnionitis, maternal deaths, cerebral malaria are contributed by poor ANC services. This is because, if early detection and proper management of conditions associated with pregnancy is not done in time resulting in

adverse maternal and neonatal outcomes (Chiwaula, 2011). Thus, poor ANC service provision partly contributes to high Maternal Mortality Rate.

Antenatal care is a sub component of maternal health care which is one of the key components of the National Package of Essential Reproductive and Child Health Interventions (NPERCHI) focusing on improving the quality of life for women, adolescents and children (Raatikainen et al, 2007). Early and regular antenatal care attendance during pregnancy is important to identify and mitigate risk factors in pregnancy and to encourage women to have a skilled attendant at childbirth. However, many pregnant women in sub-Saharan Africa start antenatal care attendance late, hence benefit from promotive, preventive and curative services are not realized (Karin et al,2012).

In Tanzania about 87.8% of pregnant women make at least one antenatal care (ANC) visit, despite high ANC attendance, only 20% of pregnant women start ANC during the first trimester as per the national guidelines(Karin et al,2012). However, one third of women do not seek ANC until their sixth month or later (TDH, 2005, TDH 2010). According to Karin et al (2012), despite the fact that more than 85% of pregnant mothers attend ANC at least once and 42.8% attends four times or more, its believed that decreased attendance after the first initial visit is associated with lack of partner support, financial or logistical complaints and perceived poor quality care provided by health care workers by not adhering to FANC guideline. However, according to MoHSW (2010), only 50% of pregnant women deliver in safe hands at health facilities as opposed to the target of 80% hence escalating Maternal Mortality Ratio which is current 454/100,000(HSSP IV).

Quality ANC links the woman and her family with the formal health system, increases the chance of using a skilled attendants during delivery ultimately contribute to good health through the life cycle. Indeed inadequate care during this time breaks a critical link in the continuum of care, and affects both women and babies (TDHS, 2010). Quality care during pregnancy is important for the health of the pregnant women and

the development of the unborn baby. However, it's important moment to promote healthy behaviors and parenting skills.

1.2 Statement of the Problem

Maternal morbidity and mortality in Tanzania still exist and remain at unacceptably high levels (MoHSW,2010). According to HSSP IV (2015), health facility based delivery is 77% and the currently Maternal Mortality Ratio in Tanzania is 432/100,000 live births which influenced by different determinants. However, different interventions addressing the determinants are implemented currently focusing on the reduction of Maternal mortality and morbidity countrywide including quality focused antenatal care services provision hence influencing health facility and skilled assisted deliveries (Mboera et al,2011).

According to Mwanza Regional reproductive and Child Health (RCH) annual report (2014), Maternal Mortalities and Morbidities, out of health facility and unskilled assisted deliveries continues to prevail despite the fact that health facility based deliveries is being advocated through FANC model implementation which is geared to facilitate facility based deliveries, completion four ANC visits hence reducing maternal related complications and mortalities. Observation made through Magu district annual Reproductive and Child health reports for previous years shows that the number of maternal deaths and proportion of health facility based delivery in particular remained steady as indicated in Table 1:1. Moreover, reports indicate that among pregnant women attending antenatal clinics in the district 30% completes four required visits. Furthermore, 57% of pregnant women deliver outside health facilities whereas only 43% delivered at health facilities as opposed to recommended target of 80%(HSSP III,2008;HSSPIV,2015).

Table 1.1: Health facility based Deliveries and Maternal deaths -Magu DC

Condition	Years				
	2010	2011	2013	2014	2015
Number of Maternal Deaths	21	24	17	21	17
%Health facility delivery	49%	51%	51%	43%	63%

Source: Magu district Annual RCH reports

Tanzania adopted Focused Antenatal Care guideline for implementation in 2002(Karin et al,2012). The guideline is geared to reduce Maternal Mortality and improving pregnant women and unborn baby's health through providing timely, appropriate care and education on dangers signs, birth preparedness as well as how to prevent possible complications. Focus antenatal care provides promotive interventions emphasizing on health facility based delivery, compliance to completion of recommended number of antenatal visits (four visits) and birth preparedness and plan.

Focused Antenatal Care implementation demands health care workers capacity building at Regional and District levels on FANC guidelines and integrated approach to care pregnant women (Kearns A et al, 2014). The basic Focused Antenatal Care model recommends four antenatal visits that include individual counseling, targeted assessment and provision of safe, cost-effective and evidence based intervention according to the FANC checklist. Despite the fact that FANC model implementation is an ongoing process which has been conducted for about a decade now in all part of the country there is unacceptably low number of pregnant women who complete recommended four visits.

Focused Antenatal Care service provision evaluation studies have been conducted focusing on assessing the requirements of its delivery and training opportunities for health workers. Evaluation conducted previously in other location considered on assessing FANC resource availability among health facilities providing ANC services that influence quality delivery and adherence to the guideline (Kearns A. et al, 2014).

The level of health workers knowledge in regards to FANC guideline, adherence and practice to the target group (pregnant women) is also not fully known in the study area. Therefore this study aimed at assessing health workers' knowledge, adherence and practice in regards to the existing focused ANC guidelines. In view of the above presented information, focused antenatal care model guideline implementation process evaluation in regards to knowledge and practice of health care workers in Magu district is crucial in examining the extent to which FANC guideline implementation is adhered by health care workers, since it is not covered fully in respect to FANC at a district level.

1.3: Purposes of the evaluation project

The main purpose of the project is to conduct process evaluation on how focus antenatal care model guideline (FANC) is implemented by health care workers in regards to service delivery to pregnant women attending ANC clinics at health facility levels. Process evaluation intends to assess the extent to which health care workers adhere to protocols and standard operative procedures highlighted in the guideline to ensure quality service to all pregnant women attending ANC so as to facilitate health facility and skilled deliveries hence reducing maternal mortalities.

1.4: Evaluation questions

1.4.1: General evaluation question

The general evaluation question that guided the study was:

How is Focused Antenatal Care model guideline understood, adhered and practiced by health care workers in the course of providing services to pregnant women attending Antenatal Clinics in Magu district?

1.4.2: Specific evaluation questions

This evaluation study focused to answer important questions during evaluation. These were the guiding questions to ensure relevant information is captured. The following were the evaluation questions answered:

- i. What is the level of FANC model guideline knowledge among health care workers
- ii. How do health care workers perceive FANC guideline implementation in their day to day activities?
- iii. How do health workers adhere to the FANC model guideline during service delivery?

1.5: Main objective of the Evaluation

The Main Objective of this evaluation study was to assess the extent health care workers adhere to focused antenatal care model guidelines during service delivery in Magu district council.

1.5.1: Evaluation specific objectives:

- i. To determine the level of FANC model guideline knowledge among health care workers providing Antenatal care services in Magu district council
- ii. To determine healthcare workers perception to FANC model guideline implementation
- iii. To examine the extent to which health care workers adhere to the existing FANC model guideline /checklist

1.6: Significance of the Project evaluation

The evaluation study will provide information on whether health care workers at health facilities implement FANC model guideline accordingly. All these information together with recommendations will help managers, implementers and other stakeholders to improve the implementation process for better outcome and enhance reduction of morbidity and mortality among pregnant women.

Health workers, academicians, educators and researchers will use the findings to develop appropriate approach and interventions that will target and address factors that affect FANC adherence and uptake by health care worker. The evaluation facilitates the evaluator to attain an essential requirement as partial fulfillment for Master of Science in Health Monitoring and Evaluation of Mzumbe University.

1.7: Description of the Focused Antenatal Care guideline to be evaluated

World Health Organization (WHO) recommends the implementation of a Focused Antenatal Care(FANC) platform that consists of four ANC visits and a well-defined set of activities proven to be beneficial for maternal and neonatal health (WHO 2001). The focused ante-natal care services have guidelines to help providers identify pregnant women who have conditions requiring treatment and close monitoring. The guidelines explain steps to be taken whilst attending to a pregnant woman. This guideline has been designed as a job aid for ante-natal health care providers to facilitate pregnant women to know about simple preparation of a clean, inexpensive birth kit; inform pregnant women about danger signs which require professional care, where to get expert care and a transport plan; plan on using skilled personnel during birth; identify a person to accompany them to a health facility for delivery and person who will look after the rest of the family (Gerein, Mayhew & Lubben 2003). Implementation of the FANC involves health policies, guidelines as suggested by the WHO (2008a) and protocols from the Ministry of Health. Improving ante-natal care services provision process is one strategy of achieving early identification of disorders during pregnancy based on WHO recommended focused ante-natal care (FANC) which emphasizes actions known to be effective in improving maternal and neonatal health, excludes other interventions that have not proved to be beneficial while improves the information component, especially alerting potential health problems to pregnant women and instructing them on appropriate responses. Tanzania accepted the implementation of FANC from 2002 (Yengo M., 2009).

Maternal death is among the leading causes of death among women of reproductive age. The maternal mortality ratio (MMR) and proportion of births attended by skilled personnel are important indicators of quality maternal health (Kiplagat M., 2009). Majority of Maternal deaths in Sub-Saharan Africa is due to various reasons including hemorrhage, puerperal sepsis and hypertensive disorders. Early identification of hypertensive disorder, anaemia and malaria is crucial because worsen during pregnancy and are associated with a greater risk of maternal deaths (Conrad et al, 2012). This evaluation study will focus on the extent to which health care provider adhere to the specified FANC model guideline.

1.7.1: Focused Antenatal Care Stakeholder analysis

Stakeholders are individuals, group of people, institutions or organizations that have interest in the implementation of the FANC guideline geared to improve quality of life among pregnant women. Stakeholders range from primary, secondary to tertiary levels depending on their power to influence the implementation FANC guideline among health care workers.

Different stakeholders are important in the implementation of the FANC guideline which include Ministry of Health Community development, Elderly and Children, Regional health management team, Council health management team, Health care workers (public and private) and the community. It also involves none governmental organizations. Each stakeholder has the role to play. The evaluation study will involve different stakeholders to ensure effective evaluation as well as usefulness of the findings. A summary of stakeholders who will be involved in the evaluation, their roles, the perspective in which each will use the evaluation findings as well as the ways of communication are shown in table 2.1.

1.7.2: Stakeholder Assessment and Engagement

Health care workers, pregnant women, CHMT, RHMT members and donors are the main stakeholders in this evaluative study. These stakeholders will be involved in the evaluation for the purpose of gathering information about guideline implementation and

support during the evaluation. Stakeholders involvement and participation will ensure acceptance and utilization of the evaluation findings for improving the FANC guideline implementation. The matrix below analyses the key stakeholders who will be involved, their interest in evaluation, level of importance as well as the means to communicate to them.

1.7.3: Stakeholder analysis matrix

Focused antenatal care (FANC) guideline implementation requires coordinated and collaborative efforts of stakeholders available within or outside the region including CHMTs and RHMTs, health care workers, and other Implementing Partners (IP). Each has an important role that might contribute into execution of the guidelines appropriately. Different stakeholder's roles, interest, means of communication and levels of importance in regards to evaluation of health workers adherence to FANC guideline has been highlighted, (see table 1.2 below).

Table 1.2: Stakeholder analysis matrix

Stake holder	Role in the Program	Interest or perspective in evaluation	Role in evaluation	Means of communication	importance H, M or L
1.Community (particularly pregnant women)	Beneficiaries/ user of the service	Reduced pregnant morbidity and mortality	-Provide information on how FANC implementation is provided	Exit interview	L
2.Regional / Council Health Management Team (CHMT)	-Implementers -Health education on importance of the program -Supervision -Coaching -Mentoring	Reduced pregnant morbidity and mortality	-provide support for data and information gathering -Mobilize resources for FANC guideline evaluation -use evaluation findings to improve ANC services	- Mobile /Telephone - Visit and discussion	M
3.Health care workers at facilities	Execution of FANC model guideline to provide services to pregnant women attending ANC clinicsS Health education and Proper record keeping,	Reduced pregnant morbidity and mortality	-provide data and information - use evaluation findings to improve services	- Physical/verbal - Letters - Telephone/mobile phone - Electronic mail - Fax	M
4. Health partners	Provide material and non material(technical) support influencing effective FANC implementation	Reduced pregnant morbidity and mortality	-provide support for data and information gathering -Mobilize resources for FANC model guideline evaluation -use evaluation findings to improve ANC services	- Letters - Telephone/mobile phone - Electronic mail - Fax - Reports	H
Ministry of Health Community development, Elderly and Children	Provide FANC training guideline, ANC policies, conducting supervision	Health workers are conversant with FANC guideline implementation. Workers are able to practice , record and use data accordingly	- use evaluation findings to improve guideline and ANC/FANC related services	- Letters - Telephone/mobile phone - Electronic mail - Fax - Reports	H

Source: Research own constructs 2017

Adherence of health care workers to the existing FANC guideline during service delivery, positively influences the targeted group (pregnant women) attending antenatal clinics (ANC) to complete four recommended antenatal visits, increased health facility based deliveries, develop individualized birth plans (IBP), prevention and early management of identified diseases hence pregnancy related morbidity and mortality reduced ultimately improved maternal health. Ministry of health, Regional and Council management teams being stakeholders with the roles of coaching, mentoring supervising and ensure that health care workers are aware and implement the existing FANC model guideline consistently. Locally and international partners provide material and non material support to facilitate effective and appropriate implementation of FANC model guidelines.

1.7.4: Main objective of the Focused Antenatal Care (FANC) guideline:

The main objective of the FANC guideline is to facilitate promotion of health and prevention of diseases to maintain wellbeing of the pregnant woman and unborn baby by providing health related messages on important topics like birth plans, danger signs nutrition, rest, sleep and personal hygiene (Annie K. et al, 2014). Furthermore Equipping health service providers with enough FANC skills and competence, prevention of pregnancy and delivery associated complications as well improved maternal health are some of FANC effects
the effect of FANC

1.7.5: Specific objectives of the FANC model guideline

- i. **Health promotion and counseling:** Involves dialogue between health care workers and pregnant women on matters affecting women's health, dietary and nutrition education. Furthermore, the woman is given information concerning effect of smoking, risk of using herbs, hygiene, rest and medication. Information regarding family planning, exclusive breast feeding, immunization and care of the newborn is part of the counseling dialogue.

- ii. **Early detection and management of complications:** Entails on assessing and examining a pregnant woman for chronic condition and infectious diseases that may threaten the life of the mother and baby when not addressed particularly HIV/AIDS, Syphilis, other sexually transmitted infections, malnutrition, tuberculosis and Malaria. Moreover, conditions like anaemia (Hb<7G/DL), vaginal bleeding, eclamsia, fetal distress, fetal mal-presentation after 36weeks, and chronic ill health conditions like kidney failure, diabetes and cardiac problems are important to be addressed for the best interest of the mother and unborn baby (JHPIEGO, 2007).
- iii. **Support in the preparation of birth preparedness and complication readiness plans:** covers provision of a plan to pregnant woman about a place of delivery, transportation, companionship, blood donor, items for clean and safe delivery as well as provision of knowledge about danger signs and action to when arises.
- iv. **Prevention of complication:** Health care workers ensures use of prophylaxis by providing iron and folic acid to prevent anemia, Tetanus vaccination, intermittent preventive treatment and insecticide treated nets for prevention of Malaria and environmental hygiene to prevent diarrhea and intestinal worms (JHPIEGO,2007)

1.7.6: FANC guideline strategies

Strategies are selected course of actions chosen to achieve a specified set of objectives. According to Sani and Abubakar (2015), Antenatal care service provides pregnant women and community around with appropriate antenatal related information and advice intend to achieve a healthy pregnancy, safe childbirth and postnatal recovery. Moreover, FANC guideline strategies involves infrastructure, resource mobilization as well as a continuous training, mentorship, supervision to develop health care providers' competence to be able to ensure , a healthy and well being of the targeted pregnant women through: Early detection and management of disease/abnormality and

prevention; Counseling on health promotion ,antenatal visit completion and health facility based deliveries; Awareness and readiness creation to pregnant women on taking care of possible complications and the development of an individual birth plan and Provision of health education to targeted pregnant women.

1.7.7: Major activities of the FANC guideline

WHO recommends that pregnant women should have a minimum of four ANC visits scheduled as follows: First visit: On confirmation of pregnancy, Second visit: 20-28 weeks, Third visit: 34-36 weeks, Fourth visit: before expected date of delivery or when the pregnant woman feels she needs to consult health worker.

Under the FANC guideline there is a strict checklist of assessment and interventions that should be executed in each of the four recommended visits to ensure comprehensive care and timely identification of complication. Focused antenatal care model activities covers:

- i. Measurement of weight/body mass index (BMI) and assessment of nutritional status
- ii. Detection of pre-existing conditions which may complicate pregnancy
- iii. Monitoring blood pressure and signs and symptoms of pre-eclampsia/eclampsia
- iv. Tetanus toxoid
- v. Immunization
- vi. Prevention and treatment of anemia through Iron/folate supplementation for at least 6 months of pregnancy and 2 months postpartum.
- vii. De-worming medication in areas where parasites are common
- viii. Promotion of active management of the third stage of labor for the prevention of postpartum hemorrhage
- ix. Prevention of malaria in pregnancy – Intermittent preventive treatment (IPT) for malaria Insecticide treated bed nets (ITNs).

Recognition and treatment of sexually transmitted infections (STIs), “Opt out” counseling and testing for HIV and education and clinical services for the prevention of maternal to child transmission (PMTCT) including use of condoms during pregnancy in discordant couples. Confirmation of fetal position by 36 weeks of pregnancy, urine investigation for identifying protein in third trimester availability of signs of pre-eclampsia, birth Preparedness and Complication Readiness (Birungi & Ouma, 2006).

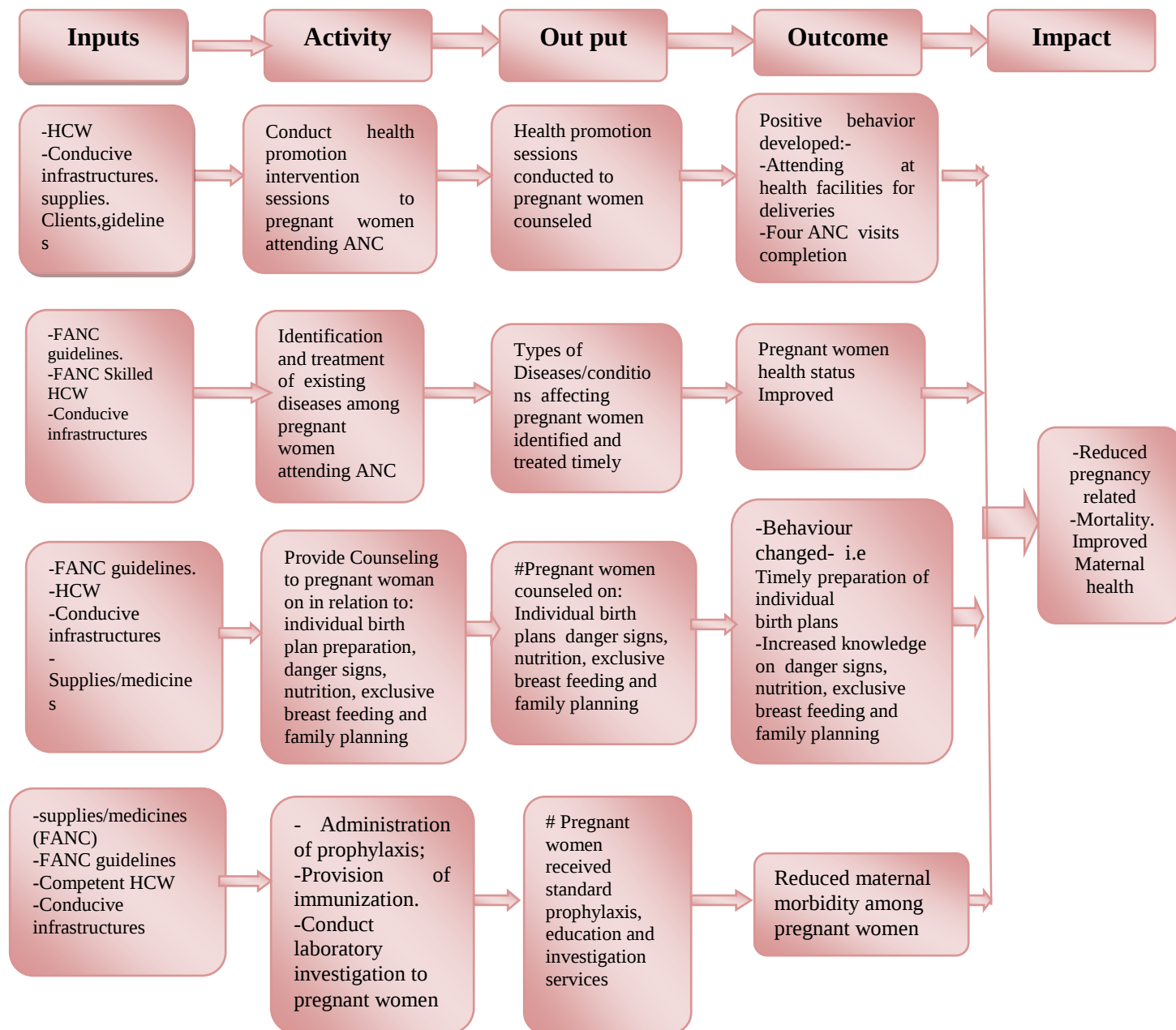
1.7.8: Purpose of focused antenatal care

The main purpose is: To provide evidence based interventions and care which can prevent and treat complications of pregnancy, to encourage skilled attendance at delivery, to discuss plans for emergency transport and funds in the case of an emergency and to identify the nearest site of Emergency Obstetric Care as well as to provide a link between women and the health care system.

1.7.9: FANC logic model

The FANC model implementation framework reflects on a detailed input, activity, output outcome and impact featured in fig 2.1. The problem that FANC Model guideline address include; Increased out of health facilities deliveries, low antenatal care visits completion, lack of birth plans, existence of maternal deaths and Insufficient FANC model guidelines implementation among health service providers. Moreover, among others, Reduction of pregnancy related mortalities is the foremost strategic goal that aimed to be realized.

Figure 1.1: Focused Antenatal Care Logic Model



Source: Researcher own constructs 2017

The above logic model considers that Focused Antenatal Care guideline is a tool to guide health worker to provide quality antenatal care services to pregnant women attending ANC clinics. Skilled and knowledgeable(competent) health care workers are expected to utilize available resources(supplies, infrastructure, guidelines) to provide comprehensive and quality services by adhering to the existing guideline. Appropriate

services given to the target group expected to produce intended results among pregnant women attending ANC by influencing health facility based deliveries, completion of recommended four antenatal visits and ensuring a detailed birth plans of which all together positively contribute to maternal mortality reduction hence improve maternal health. Health workers knowledge and skills pertaining to FANC guideline is provided through formal arrangement in professional training curriculums or informally through day to day seminars, workshop, mentoring and coaching. Based to fact that since 2002 FANC model guideline is being used as a tool that facilitate quality service delivery. The above model facilitate the understanding the level of FANC guideline knowledge and the extent to which health workers adheres to the guideline in the course of providing services to the target group for the purpose of attaining improved maternal health, reduced maternal deaths through insisting of health based deliveries, completion of recommended ANC visits and identification birth plans .

CHAPTER TWO

2.0: LITERATURE REVIEW

Covers the review of literature on focused antenatal care in general, It gives both theoretical and empirical literature of the study.

2.1: Theoretical Literature Reviews

2.1.1: Focused antenatal care Meaning and goal

Focused Antenatal care is provision of client centered ,goal oriented care provided that is timely, friendly, simple, beneficial and safe to the pregnant women normally provided by a skilled provider to a pregnant women emphasizing on women's health, her preparation for child birth, readiness for complications that may occur in pregnancy, labour, delivery or after delivery. The FANC goals include early detection of existing diseases and treatment or referral, health promotion and physically, mentally as well as socially wellbeing maintenance of mother and baby, development of individualized birth plan and complication readiness plan, prevention of diseases, early detection and management of pregnant related complications (MoHCGEC, 2016). Previously before 2001 ANC services applied traditional approach whereby pregnant women were classified based on the risk categories in determining their vulnerability to complications and more emphasize was on the visit frequencies. However, ANC evaluation revealed that frequent visits done by pregnant women did not improve pregnancy outcomes (Kiplagat,2009)

2.1.2: Focused Antenatal Care in Tanzania

In Tanzania Focus Antenatal Care implementation started officially 2002 adapted from the World Health Organisation's focused antenatal care (FANC) model insisting on four visits throughout pregnancy but with first visit within 16 weeks by then (currently 12 weeks), FANC integrates care through health promotion, prevention, detection and treatment of existing diseases, and birth preparedness. Provision of quality and goal oriented ANC is the first priority moreover , FANC model recognizes that antenatal period is a key entry point for many women into the health system, and so the model

integrates ANC with care and counseling related to several other conditions affecting pregnancy outcome (Annie K, et al, 2014). Provision of Antenatal Care services under the traditional model was time- and resource-consuming and compromised quality of care in many settings. The basic FANC model involves four antenatal visits that include individual counseling, targeted assessments, and the provision of safe, cost-effective, and evidence-based interventions. The core principle of FANC is the integration of care through health promotion, disease prevention, detection and treatment of existing diseases, and birth preparedness. Pregnant women are counseled on topics such as birth preparedness, danger signs, nutrition, exclusive breastfeeding, and family planning (Annie K, et al, 2014).

According to WHO (2002), the FANC concept reflects the understanding of the role of ANC based on reduced number of visits for pregnant women identified not to be at high, a well defined set of activities in each visits related to three equally important areas, namely: screening for conditions likely to affect pregnancy outcomes, providing therapeutic interventions known to be beneficial, and educating pregnant women about planning for a safe birth, deal with emergencies during pregnancy. However, it has been insisted that since the number of visits is reduced to four in the basic component it is expected that sufficient time should be used during each visit for discussion of the pregnancy and related issues with the client.

2.1.3: Pregnancy duration at entry to antenatal care

Early entry to antenatal care (ANC) is important for early detection and treatment of adverse pregnancy related outcomes. The World Health Organization (WHO) recommends that pregnant women in developing countries should start ANC services within the first four months of pregnancy (Villar J., Bergsjö P., 2002). Over two-thirds of pregnant women (69 percent) attend ANC at least once, However, to achieve the full life-saving potential that ANC promises for women and babies, four visits provide an essential evidence based interventions including identification and management of obstetric complications such as preeclampsia, Tetanus Toxoid immunization, intermittent preventive treatment for malaria during pregnancy (IPTp), and

identification and management of infections including HIV, syphilis and other sexually transmitted infections (STIs); promotion of skilled attendance at birth and healthy behaviors such as exclusive breastfeeding, early postnatal care, and planning for optimal pregnancy spacing is insisted (Ornella et al, 2012). Focused antenatal care insist on only four visit associated with quality ANC provision, facility based delivery, birth preparedness and awareness on possible pregnant related danger signs (Annie K, et al, 2014).

2.2 Empirical literature review

2.2.1: Importance of Focused Antenatal Care

Antenatal care (ANC) visits provide an opportunity to reach pregnant women with important preventive and treatment interventions as well as counseling on a variety of topics such as birth and complication readiness and the importance of skilled delivery. Majority of pregnant women in Sub-Saharan African countries including Tanzania do not receive key recommended interventions during routine antenatal care (ANC) including information on pregnancy related complications and importance of skilled delivery attendance. The scope of health education, counseling and its coverage on pregnancy and related complications provided to women during ANC visits by health care workers is often inadequate or nonexistent. Hence may contribute to the discrepant pattern of high ANC attendance but low skilled or health facility based birth attendance (Magoma et al, 2011).

According to Pembe A. et al (2010), pregnant women are supposed to be educated and counseled regarding pregnancy-related danger signs during ANC visits, and that a delivery plan will be created so that readiness for emergency can be better assured. Counseling on pregnancy danger signs is to be conducted according to focused antenatal care (FANC) guidelines, which include signs such as vaginal bleeding, severe headache or blurred vision, severe abdominal pain, swollen hands and face, fever, baby stopped or reduced movement, and excessive tiredness/breathlessness. However, studies conducted in Tanzania show low awareness on danger signs among women with delivery experience. Therefore, standardized provision of health education and

counseling to pregnant women is mandatory to be adhered to by health care workers as per FANC guideline to increase knowledge base, awareness and compliance of pregnant women to advice given to them.

2.2.2: Quality of Focused Antenatal Care Services

In the study done in Uganda, Burkina Faso and Tanzania regarding health care workers' compliance with the procedures set in the focused antenatal care indicate that health workers in all HF performed most of the procedures but also omitted certain practices stipulated in the focused ANC guidelines. There was a substantial variation in provision of ANC services among health facilities including the duration used to provide service for first visitors which was less than 15 minutes and health workers managed to spend even less time in following visits. Furthermore, reagents for laboratory tests and drugs outlined in the focus ANC guidelines were often out of stock in most facilities. The study concluded that health workers failed to perform all procedures stipulated in the focused ANC guideline (Conrad et al, 2012). However, despite of poor FANC performance identified in study done in Uganda, Bukina and Tanzania, in the study conducted by Awuah et al(2014), on the perception of midwives on FANC implementation in Ghana, concluded that there is positive perception among midwives in regards to FANC implementation that contributes to the quality of ANC and subsequent improvement in the health status of the pregnant women in Ghana.

2.2.3: Focused Antenatal care promotion in Tanzania

Antenatal Care is expected to be provided by experienced health workers with 2 to 4 years of professional training. However quality assessments showed that less than half of all women get information about pregnancy complications, receive iron tablets, and have access to anti-malarial medicine. About 44 % of all women in Tanzania deliver at a health facility. These data suggests that the potential benefits of ANC are not yet exploited. United Republic of Tanzania adapted of the new WHO FANC concept comprising of early detection and management of disease/abnormality, counseling on health promotion, counseling on birth preparedness, complication readiness and the development of an individual birth plan (Kearn A et al, 2014). Counselling and health

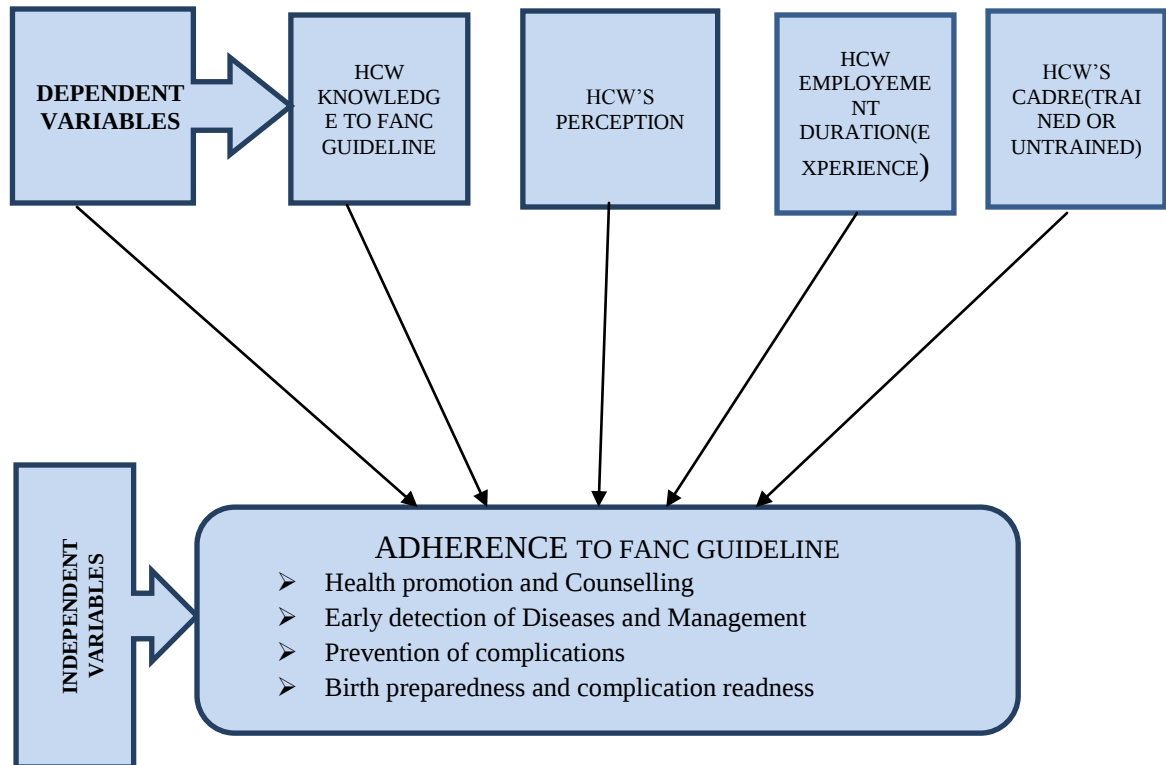
education have therefore become a major strategy to improve maternal health and in particular increasing the proportion of skilled delivery (Claudia et al, 2006).

2.2.4: Challenges in FANC implementation

Studies conducted in Tanzania to examine routine ANC antenatal care provision reported poor quality in terms of technical aspects such as clinical and laboratory examinations as well as drug administration (Gross et al 2011). In the study done by Boller et al (2003) on assessing quality of care in public and private ANC clinics in Dar es Salaam, concluded that FANC model guidelines were not frequently adhered to including diagnostic examinations were not carried out by health workers. It was also concluded in the study on Antenatal care practices among health workers in Kilombero done by Gross et al (2011), that shortage of supplies and trained staff, difficult working conditions and use of tools that are not in consistence with FANC guidelines caused some of the services that are recommended by the Focused Antenatal care model guideline to be given to all women while other services were not delivered at all.

2.2.5: Adherence of FANC model guideline involve dependent and independent variables. Individual health care worker knowledge, positive perception and category of health cadre (trained or untrained), age, duration of employment are independent variables responsible for influencing adherence to the guideline at this juncture is a dependent variable as refer, figure 2.1

Figure 2.1: Conceptual framework:



2.2.6: Existing gap

Different evaluation studies done previously focused on evaluation availability of FANC resources (supplies), infrastructure and time utilization. However, based on the above literature reviewed much is known about the requirements of pregnant women before undergoing delivery but also on the FANC requirements, when it comes to knowledge, practice and adherence among health care workers is not covered fully particularly taking account in Magu with different social-economic status. Hence it is pertinent to consider conducting an evaluative study on how health care workers adhere to the existing FANC guideline in the course of providing ANC services to pregnant women attending at respective health facilities in Magu district council. Currently there is no study which have been conducted in assessing the level of adherence that provide answers to reflect the existing status of health facility based deliveries, antenatal fourth visits completion and maternal deaths .

CHAPTER THREE

EVALUATION METHODOLOGY

3.1: Study Area

The study was conducted in Magu district which is among eight councils in Mwanza Region. The area was selected on the ground that it's a working area and proximal to the researcher with an optimal human resources for health (HRH) as well as acceptable network of health facilities with the capacity of providing Antenatal care services hence it was potential for process evaluation as regards to health care workers adherence to focused antenatal care guideline to be conducted. The District has a total of 2,671 square kilometers coverage, 18 wards, 67 villages and 14 streets respectively. The District has a total population of 317,397 (female-153,803 and 150,677 males) with 38 health facilities at which FANC services are provided in reproductive and child health departments respectively. Health facilities are located in different areas within the district equipped with basic facilities and different health staff cadre with basic Focused antenatal care knowledge and skills for execution of quality antenatal care services to target population.

3.2: Evaluation period

Evaluation of health care workers knowledge, adherence and perception in regards to focused antenatal care model guideline was conducted from 25th of January 2017 to 25th March. However, in this period pretesting for assessing reliability of data collection tools was conducted by involving health facilities located in Ilemela Municipal Council.

3.3: Evaluation approach

Process evaluation approach was used to evaluate knowledge, practice and adherence of health workers to FANC model guideline as an intervention or policy that guides health care workers on quality antenatal care service delivery to target group on day to day assignments. This approach facilitate evaluation of knowledge, perception, practice of

health care workers and how services are delivered by adhering to the existing guideline, for the purpose of improving performances and improve health outcome of pregnant women attending ANC clinics hence reduced morbidity and mortality. Relevant information for the evaluation was collected through Interview, observation and document review.

3.4: Evaluation study Design

This evaluation study design was a cross sectional descriptive study adopted both qualitative and quantitative methods in obtaining information from health workers providing antenatal care services at different health facilities purposively selected in the District in regards adherence to the existing Focused Antenatal Care model guideline.

3.5: Focus of evaluation and dimensions

The focus of this study was to evaluate health care workers' adherence to the existing guideline governing implementation of focused antenatal care to ensure reduction of maternal and neonatal morbidity and mortalities. The evaluation essentially focused on the following areas regards to focused antenatal care:

- Knowledge among health care workers providing Antenatal care services in Magu district council in regards to focused antenatal care (FANC)
- The extent by which health care workers adhere to the existing FANC guideline /checklist while providing antenatal care services to target population

3.6: Evaluation study variables

This study involved dependent and independent variables in realizing the evaluation objectives. Health care workers adherence to existing FANC model guideline is influenced and predicted by multiple factors that are believed to contribute into required status of FANC model guideline adherence among health workers in the course of providing services to pregnant women. Individual health care worker knowledge(Understanding on FANC guideline used on providing services to pregnant

women) ,positive perception (The way of feeling, putting value and thinking about a phenomenon) ,experience(duration of employment) and category of health cadre responsible for service provision (Professionally trained or untrained category of health care worker) are expected to have a remarkable influence on the level of adherence to the guideline as categorized in table 5:1 below:

Table 3:1 Definition and measurements of variables

Variable types	Variables	Definition of variable	Measurements
Dependent	Adherence to Focused Antenatal Care(FANC)	The act of doing what is required by a rule, policy, guideline or belief.	Number of pre determined FANC guideline procedures performed accordingly per client served
Independent	Knowledge on FANC guideline focus	Individual Understanding on FANC guideline used on providing services to pregnant women	knowledge will be measured and categorized as' 'high' when the participant is competently knowledgeable on FANC guideline; moderate- when little is known; 'low'-when nothing is known
	Perception	The way of feeling, putting value and thinking about a phenomenon or matter under debate.	Perceptions in regards to FANC guideline will be categorically measured as positive-when explanation are in line with FANC objectives; negative when explanation are not in line with FANC objectives
	Health care workers experience	Time elapsed in terms of years since official employment	Number of years providing ANC Service
	Source of FANC knowledge	Ways in which FANC knowledge acquired	Formal training; On job training
	Health care worker's cadre	Professionally trained or untrained category of health care worker	Trained(clinician, Registered nurse; Enrolled Nurse; Medical attendant

Source: Researcher own construct, 2016

3.7: Population and Sampling

3.7:1: Target population

Health care workers providing Reproductive and Child Health services at different health facilities within Magu district council was focused as a target population of the

evaluation study. Both qualitative and quantitative methods were used to obtain information from respondents among health care providers in the district.

3.7.2: Source population

The study participants were among health care workers located at all health facilities in the RCH department providing antenatal care services in the Magu district.

3.7.3: Study population

Study population comprised of clinicians, registered nurses, enrolled nurses and medical attendants providing services at Reproductive and child health departments in different purposively selected health facilities in the district.

3.7.4: Study units and sampling units

The study units comprised of individual health care workers of different cadre and experience working at reproductive and child health department particularly antenatal care section found at different health facilities in the district. The study sample size comprised of 48 participants obtained by using Epi Tool single proportional sample size calculator using the following formula: $n = (Z^2 \times P(1 - P))/e^2$ where n- Sample size; Z= (95% CI); P=55; e=0.05% (Desired precision).

3.7.5: Sampling procedure

The study employed different sampling approaches to obtain individual health care workers who participated in the evaluation study.

3.7.5.1: Purposive sampling method:

Purposive sampling (non probability) method employed to select thirty eight Government owned health facilities (dispensary, health centre and Hospital) out of 48 health facilities available in the District. Government facilities were selected because are the only facilities with different categories of health care workers which provide

antenatal care services in the district from which health care workers participated in the study were obtained.

3.7.5. 2:Convenience sampling method

A total of forty eight (48) health care workers (subjects) were selected conveniently among existing staff from selected health facility's reproductive and child health departments refer table 3.2. A total of 10 health care workers participated in an interview aimed at obtaining qualitative information to determine the FANC guideline knowledge and perception. Thirty eight health care workers among those providing antenatal care services at each health facility were conveniently recruited and observed using a checklist while providing services to pregnant women attending at the clinic for the first time (first visit clients) to examine the extent of FANC model guideline adherence, refer table 4.1.

Table: 3.2: Demographic characteristics of the entire sample(N 48)

Gender		Education		Cadre		Years of experience			Age		
Male	Female	Primary	Secondary	Trained	Un trained	≤5yrs	6-10yrs	>11yrs	<30yrs	30-40yrs	>40yrs
7 (14%)	41 (85%)	8 (17%)	40 (83%)	33 (69%)	15 (31%)	31 (65%)	10 (21%)	7 (14%)	22 (46%)	20 (42%)	6 (13%)

Source: Field data 2017

3.7.6: Inclusion and exclusion criteria

The inclusion criteria include a health worker who provides service at antenatal care clinics at selected health facilities. This criterion used to obtain study participants who are working at Antenatal clinics, aware and experienced on the existing FANC model guideline. Exclusion criterion is for a health worker not currently allocated in the Reproductive and Child Health department.

3.8. Data Collection

3.8.1: Data Collection Tool and Methods

In this study primary and secondary source of data were used to obtain relevant information from selected study participants. Data collection tools were tailored based on the research questions and study objectives.

3.8.2 Primary data

These are data collected by the researcher from the field. In this study, interview and observation methods were used to collect primary data from study participants. Qualitative as well as quantitative data collection was purely a concurrent process whereby an interview was followed by an observation.

3.8.2.1: Interview

An interview was conducted to about ten selected health care workers by using structured interview guide questions to collect information related to Focused Antenatal care model guideline awareness and understanding among selected health care workers, refer appendix I. Interview sessions were conducted within the working compound which believed to be conducive and quite enough to facilitate uninterrupted interview process. Interview was recorded using Smartphone and documentation was done simultaneously using a pen and notebook. Simultaneous recording facilitated comparison of data obtained from interviews to ensure information collected is complete, comprehensive and reflect exactly what participant responded. However, interview processes were preceded by participants' consent after a prior detailed information concerning the evaluation purpose and objectives. The information collected (recorded) was transcribed, translated thereafter entered in the Atlas .ti software for content and emerging themes analysis from collected data to respond to the research objectives or questions.

3.8.2.2: Observation

An observation checklist was used to observe a total of thirty eight health workers while providing services to client(s) refer appendix II. To address an observer effect, observation started right from the third client for the purpose of making a health care worker acclimatize with the researcher presence. Observation was conducted after an interview has been completed. Observation was done by the researcher following a brief explanation of the purpose of the study and asking for the consent from respective health care workers providing services who was also asking for the consent from the client to allow the researcher to stay in the room while she is being given services. Observation focused on how health worker provides services to a first visit pregnant woman based on gestation age who attended ANC by focusing on history taking; physical examination; provision of prophylactic services (medication, immunization), laboratory investigations as well as Counseling and health education.

Observation checklist was geared to assess the extent by which health workers adhere to indicators associated with grouped variables from the FANC model guideline, the label high (100%) was considered if all indicators are adhered while (50%) for low. Registration and history taking, drug distribution and vaccination will be measured by four indicators respectively if health workers comprehensively and appropriately takes histories, provide drugs(prophylaxis) and vaccination. Clinical examinations and Laboratory investigations are measured by six indicators; Client education and counseling measured by eight indicators. A detailed quantitative data presented based on observed indicators performed by health workers and attaining a conclusion on the observed behavior for descriptive analysis geared to identify the proportion of indicators adhered by the health workers .

3.8.3 Secondary data

Involve obtaining information from available data that were collected by other people (health workers) within the existing health facility network using the available HMIS framework (MTUHA book six) which were collected for different purposes other than evaluation study.

3.8.3.1: Document review

In obtaining secondary data pertaining to the study, reproductive and child health, HMIS book number six (Antenatal care services) was reviewed for obtaining information documented in December 2016. The data for December were preferred because of its recentness prior to data collection exercise and authentically reflecting the actual day to day practices done by health workers during service delivery at antenatal care clinics. Important categories of data reviewed include: number of clients served; Tetanus Toxoid Injections; Complicated personal information; Hemoglobin (HB) testing; Blood pressure measurement; Testing Urine for Glucose; Testing Urine for Albumin; Syphilis Testing; PMTCT; Atimalaria provision; Ferofolic tabs provision and Anti worms tabs

3.8.4: Pre-Test

In order to ensure reliability of data collection tool, interview guiding questions and observation checklist pretesting was conducted to eight selected health care workers in four health facilities located in Ilemela Municipal Council which is not a study area but the area has closely related social-cultural characteristics. The pre-test aimed at assessing data collection tools based on its feasibility, acceptability as well as if it could be understood consistently. Correction of repetitive statement in the observation checklist was done thereafter to ensure that the tool collects the required information from the study participants.

3.8.5: Data collection field work

The researcher was physically visiting each health facility purposively selected and involved in the study within the entire district. Health care workers who are working at antenatal care clinics were conveniently selected by taking into account the identified inclusion criterion.

Interview guiding questions and observation checklist were utilized to obtain information from selected study participants. Each health facility visited based on the available schedule of Antenatal Services, on average two health facilities managed to be visited per day due to the fact that the facilities are widely dispersed in different geographical areas, refer figure appendix IV, furthermore, different days have been assigned by each health facility to provide antenatal care service to pregnant women who are attending at the clinic for the first time.

3.9: Data management and analysis

Primary data collected from an in-depth interview and observation were critically reviewed (cleaning) on daily bases to ensure that no missing data and that all intended information from interviewee and health workers observed has been captured. The recorded interview information was verbatim transcribed and translated in English hence facilitated further analytical process. The transcribed word documents were imported into Atlas. ti for coding and content analysis and establishment of themes that reflect and answer the study questions and objectives. Exploratory Data Analysis (EDA) was carried out to provide an insight based on the quantitative data obtained from observation checklists. The proportions of FANC model guideline parameters and the demographic characteristics of health care workers were explored. Secondary data obtained by reviewing HMIS book six (Antenatal care services) were analyzed by using Excel obtained proportions of basic services documented in December 2016 reflecting the situation as regards to FANC model guideline adherence by health care workers who provide services to pregnant women.

3.10: Ethical Issues

A written consent was asked and obtained from District Executive Director Magu for a permission to conduct a study on evaluation of health care workers Knowledge adherence and perception in regards to focused antenatal care guideline in Magu district. Prior to starting an interview or observation the purposes of the study were explained clearly and in advance to participants for the aim of obtaining verbal consent, however District Medical Officer and in charges of the selected health facilities were asked for the verbal consent preceded by presentation of the permission letter from District Executive Director, refer appendix VI. Moreover, Mzumbe University ethical clearance committee provided a letter for approval for conducting an evaluation study, see appendix VII.

3.11: Evaluation dissemination plan

Evaluation study results will be timely shared to different stakeholders respectively. The intended stakeholders that will be involved include; major supervisor and the Mzumbe University academician community, Magu district council management, Regional and Council health management teams. This dissemination plan is believed to facilitate the evaluation results dissemination hence creating awareness to stakeholders on how health care workers do adhere currently to the guidelines especially FANC model guideline eventually attaining sound decisions for improving service delivery to targeted group of pregnant women and ultimately maternal health status improved. The mechanisms for sharing will involve report sharing, presentation in meeting and email.

3.12: Limitation of the Evaluation

In the course of conducting this evaluation research, partial experienced limitation include few pregnant women attending for the first time in some of the rurally based health facilities, this necessitate frequent re-visits to specific health facilities. Weather changes that lead into rainy situation affected to the great extent the accessibility to

health facilities due to the fact that the mode of transport used by the researcher was motorbike.

CHAPTER FOUR

PRESENTATION OF EVALUATION FINDINGS AND DISCUSSION

4:0: Introduction

The presentation of the finding solely reveal the intended evaluation study objectives in regards to Focus Antenatal Care (FANC) model guideline knowledge, adherence and perception among health care workers providing services to pregnant women attending clinics in Magu District Council. The study used interview, observation as primary data collection methods and document review for secondary data. The results are presented in two parts. The first part covers the qualitative aspect of the study based on health workers knowledge and perception in regards to FANC model guideline. The second part reflects on the quantitative (primary and secondary) data aspect of the study in regards to the extent to which FANC model guideline is adhered by health care workers in the course of executing their day to day activities.

4:1: Level of FANC model guideline knowledge among health care workers

4:1:1: Health care workers experience

The study result indicates that all (100%) health workers interviewed managed to attend formal professional training in different training colleges. However, finding further indicates that(50%) health care workers interviewed in the study had different working duration based on years spent in employment hence acquired enough experience that contributes positively when it comes on the issue of practicability and adherence to FANC model guideline among health care workers, yet some of health care workers interviewed were employed before either at the private or government health facility in other areas outside the study location before employed in Magu district as narrated by interviewed nurse incharge.

“I am a nurse studied a normal secondary education and completed form four, and had an opportunity to join with Shirati nursing college in the year 2005 eventually completed in 2008 letter employed by the Tarime district council in 2009 ,Mara Region but before employment I worked on a private

dispensary . I worked for nearly one year then got married, the husband needed us to live together whereby I asked for the transfer to Bukombe District In Shinyaga Region and worked for one, in 2011, I joined Bugando nursing school for one year upgrading course. I returned back in Bukombe in 2012 as Assistant Nursing officer worked as a CTC in charge for one year, the following year I was allocated as RCH in charge and worked for four years, unfortunately my husband received a transfer to Magu ,I asked for the transfer once again in 2016 to Magu where I was allocated at RCH-antenatal care clinic for the past ten months up to the moment am dealing with pregnant women quite ok and trying to serve them according to guidelines”.

Therefore, above findings provide an implication that health care workers located at RCH and Antenatal clinics in particular within the district had satisfactory experience and exposure as far as Focused Antenatal care model guideline and its implementation is concerned.

4:1:2: Health care workers Knowledge

Knowledge on FANC model guideline:

Study findings indicates that all health care workers(100%) interviewed have heard and are aware of the available FANC model guideline which is used currently to which every health care worker who delivers antenatal care services to pregnant woman who either attending for the first time or follow-up visit is supposed to abide to. Moreover, respondents knew and were aware of different important FANC model guideline elements that must be executed by health care workers in their day to day provision of service to pregnant women. Some of the elements which were clearly mentioned by the majority of respondents include client registration and proper history taking, clinical examination, laboratory investigations as well as preventive services which associate with prophylaxis against Malaria, intestinal worms, blood boosting medicines as well as immunization against tetanus. The respondents’ level of knowledge in regards to FANC model guideline is high and is positively reflected during provision of quality care to all pregnant women attending at different antenatal clinics as said by interviewed nurses.

“This term, I think it refers to all issues related to safe motherhood

whereby a pregnant woman from the time she conceives and by the time she cares for her pregnancy she must understand, what to do and not to do, receiving professional services and care till the time she delivers safely. Further FANC involves different important elements, though am not going to mention them sequentially, but what I do remember is as follows; guideline there is PMTCT, Health education, different laboratory investigation, general body assessment of the pregnant woman, therefore all these issues if they are done precisely to pregnant woman will help them and all those are concerned with FANC".Nurse one

"That is the service that is directed to the woman during pregnancy by receiving services that are available. Services available include investigations like HIV testing, Syphilis testing blood pressure, hemoglobin. To assess the size and age of the particular pregnancy, how the baby is positioned inside the uterus these are the other services given". Nurse two

Knowledge on FANC model guideline practice and implementation:

The findings from the study indicates that great proportion (90%) of respondents managed to explain steps ,sequences and categories of services which are vividly stipulated by the guideline to be provided to client(s) attending at antenatal care clinics for the first time and by considering the gestation age of the pregnancy as there are prophylaxis services based on the pregnancy age in weeks, never the less the study identified that respondents were able to recognize different approaches of providing health education to pregnant women attended such as group as well as individualized education which is based on the existing health problem diagnosed, but also early referral conscious mind . The level of FANC model guideline knowledge recognized among health care workers interviewed possibly is either contributed by an intensive training during formal training at health professional training institutions, exposure gained based on employment experience or placement at reproductive and child health departments at health facility levels, however, seminars and on job training was also declared by some of the respondents as amongst other sources of basic FANC model guideline knowledge as clinician and nurse highlighted .

"If pregnant woman attend at the clinic and probably the first visit, I will start by giving health education on the importance of attending clinic together with her partner then you tell each and every procedure that

follows including investigations and preventive drugs then inside the examination room now you continue by providing individual counseling for HIV testing, syphilis ,furthermore we have HB assessment test ,assessment of swelling ,anemia, the we give SP, ferrous. If at all I identify any problem which is beyond my capability normally we send the woman to the clinician for further assistance” clinical officer

“Ok, when I receive the client for the first time I normally ensure that they are together with a partner if she not accompanied we make sure that we know why ,then I open up the card and you start providing services like investigation and specifically PMTCT to check her status together with her husband and, also other investigations like blood grouping, Malaria testing using MRDT, other investigations service like RPR which detects syphilis also even blood albumin and glucose, however, if test are not available we request them to go outside the facility for testing. All these investigations will help the woman once she has an emergency. After finishing investigation then the woman gets in the abdominal examination to check the development of the baby inside the uterus. We normally assess the gestation age fundal height, presentation how the baby is positioned inside ,the baby’s heart beats and general physical examination, palms, varicose vein on the legs and it takes time but in reality it seem like a disturbance to client but it’s of much important to conduct a thorough examination. So, those are some of things needed to be given, other thing is nutrition counseling, hygien and birth plans but also family planning issues that she must remember after she has delivered because it is good to introduce this issue early in advance to prepare her to see the importance of the family planning. All these issue are supposed to be highlighted during the first visit”. enrolled nurse

Health care workers knowledge on technical support availability

The study indicates that respondents were well-informed on the value of technical support from higher levels particularly on FANC arena, however few interviewee (20%) declared lack of technical support from higher authorities, although few supportive supervisions have been provided by district, Regional, some NGOs and sometimes Ministry level which in deed seem to be inadequate in bridging the existing FANC model guideline knowledge gap. Lack of technical assistance might increase the knowledge gap among health care workers in regards to FANC model guideline to the extent that jeopardizing the quality of antenatal care service provided to the community,

like an enrolled nurse desperately said

“Mmmh, honestly I have not seen any technical support from the region or district leaving aside some NGO like WCCP which is Women centred Care Project, which based on helping pregnant women. We were given computers(tablate) by the program, which has the questionnaire installed in it for documenting identified facts obtained from pregnant women and if there are danger signs then it automatically gives out the option that are supposed to be taken to serve the client. So through such programmes our capacities and techniques are built, but in actual fact I have not seen any FANC technical support visit from the district.

Knowledge on source of FANC model guideline information:

Despite the fact that the level of FANC model guideline knowledge is high among interviewed respondents, the study also explored that respondents were quite aware of the sources of FANC model guideline information, majority(80%) acknowledged that training colleges were the source of their FANC knowledge base, this incredibly proves that proper development of suitable demand oriented curriculum and execution at training institution levels have a positive impact in relation to knowledge development and capacity building among health workers trained and eventually producing health professionals with enough and comprehensive knowledge suitable for serving the community appropriately. Never the less on job training and seminars have been also acknowledged by some of respondents(20%) as an additional source of FANC model guideline knowledge which cannot be undermined although it needs a deliberate resource mobilization and commitment for it to produce an intended results. As interviewed nurse said

“I heard of FANC guideline in 2011, when I was right here employed at the dispensary and in fact it was in a certain training which, I myself attended and was conducted at Bugando Medical centre for five consecutive days”

Therefore, technical support through supportive supervisions is helpful in increasing knowledge, but on job training and seminars are equally important and helpful in minimizing FANC model knowledge gap among health care workers

4:1:3: Knowledge of FANC model guideline importance

Focused antenatal care guideline seems to be a very important tool that facilitates health care workers in the provision of quality and focused services to pregnant women attending antenatal clinics in particular. Findings show that health care workers' knowledge regarding FANC model guideline importance is acknowledged and highly valued by the majority (90%) of respondents. The guideline believed to keep health care workers on track while attending pregnant women at antenatal clinics (ANC), also the guideline reminds health care workers on what procedures are supposed to be offered to client(s), however, the study further identified that some of the respondents believes that without conforming to the existing FANC model guideline there is a great possibility of causing problems including delayed and mal-diagnosis to the targeted group of pregnant women attending at antenatal clinics which eventually might cost pregnant women's lives, the babies or both in future circumstances as interview registered nurse highlights.

“Mmh ,myself I see FANC model as important as it is of much help because it assist as a guidance in helping us as health care workers to serve pregnant women accordingly as without following and adhering to the guideline it is possible to cause problem but if service provider abide exactly to the guideline then it facilitate to avoid problems that may affect women during pregnancy period, for instance problem like anemia, eclampsia, mis-carriages” .

Focus antenatal care model guideline is further acknowledged beyond doubt by some of the health care workers that it is an important tool, furthermore, it is believed that it is very awful and unacceptable to see a pregnant woman dies simply of the reason(s) that are preventable for a service provider only conforming to what has been shown and stipulated in the guideline hence it's a great loss, as nurse says

“It's important as by implementing FANC it give us an opportunity of not losing the mother as well as the child as if the client is not educated enough on important issues it will be dangerous, for instance different danger signs especially for primigravidae who are not aware of danger signs like leakage from the vagina or loss of faetal movement in the abdomen eventually they can just stay without taking immediate action to seek for

medical attention, therefore FANC is crucial to be sustainably provided so as to prevent loss of the babies and mothers”

4:2: FANC model guideline implementation challenges

4:2:1: Challenges associated with FANC model guideline Implementation

Execution of any guideline into real practices might not be as smoothly conducted as expected; challenges do arise unexpectedly in the course of its implementation. The study result indicate that, despite the fact that the knowledge and awareness level as regards to FANC model guideline that has been shown among interviewed respondents is satisfactorily high, there are several challenges spotted out as being commonly affecting the ongoing implementation process of the model guideline during service provision. Commonly mentioned challenges include shortage of important testing reagents that are necessary for performing different mandatory investigations to pregnant women such as Haemoglobin in assessment test kits, Urine for albumin and Glucose test kits, furthermore equipments such as weighing scales and blood pressure machines are not consistently and reliably available at health facilities to ensure quality service delivery and adherence as RCH department in charge said

“Among the challenges that we do face as a health facility is shortage of some of the important FANC related supplies like drugs like SP, Mebendazole, other challenge is lack of Syphilis test reagents, you find that women get miscarriages perhaps could be due to syphilis because it was not tested and diagnosed when she came for the first visit at antenatal clinic. Also I have said that, early detection of diseases as indicated in the FANC guideline is very important but we don't have Blood Pressure machine at antenatal clinic to make us suspect early signs of eclampsia like change in blood pressure may be from 140/90mmHG you start suspecting Pregnancy Induced Hypertension, but to be honest, only god's blessings assist us from having these problems. Also we don't conduct Random Blood Glucose testing at this facility for the reason that we don't have the machine”.

The voice aired out by interviewed health care workers concerning shortage of important FANC model based supplies and equipments has a direct effect and implications towards individual health care worker's performance in regards to FANC compliance and adherence, to some extent God's blessings were very much wished and depended by some of health care workers. Therefore, shortages and discrepancies of mandatory FANC related resources to the great extent affect the implementation and quality of care delivered to the targeted population. In the study on compliance with focused antenatal care services done in Uganda, Burkina Faso and Tanzania by Conrad et al,(2012) concluded that health care workers failed to perform all procedures as directed in the FANC model guideline due to out of stocks experienced in regards to some of laboratory reagents/tests and drugs outlined by the guideline.

4:2:2: Addressing FANC model guideline Implementation Challenges

The study identified that despite the fact that challenges are available and to some extent interferes with conformity and adherence to FANC model guideline, health care workers interviewed make use of different initiatives to address different challenges that believed to encroach execution and adherence to FANC model guideline. Of the initiatives that are commonly applied to address the existing challenges as far as FANC model guideline adherence is concerned include:

- i. Official communication with District headquarters, health facility committee leaders and locally available stakeholders were among the mechanisms utilized to address challenges.
- ii. Clients are advised either to conduct laboratory investigations and returning back the tests results or purchase drugs outside the health facilities as a temporary measure to address tests and drug shortages, as stipulated by interviewed nurse

“The challenges exist, this include lack or shortage of supplies like SP or Ferrous drugs, therefore the woman comes ,you provide services but they go home without getting ferrous or you advice the woman to go and buy at drug shops ,some of the women they turn up with drugs which they have

bought for confirmation and swallowing immediately. Other challenge is low awareness among women who refuses to swallow the drugs due to different reasons including that drugs are not smelling good”.

4:3: Health care workers perception regarding FANC guideline implementation

The way health care workers are feeling, valuing and thinking about FANC model guideline positively influences its implementation. The finding from the study indicates that majority (90%) of respondents perceived FANC model guideline implementation positively in their daily practice based on the fact that were aware and the knowledge is translated into practice. It is further believed and recognized that FANC guideline is a tool that facilitate them to abide and ensure that they provide quality services to pregnant women attending antenatal clinics in the right and recommended approach,. Furthermore, the guideline also seem to be the reminding tool for basic and important services as well as advice, education or counseling that must be provided to pregnant women attending at antenatal clinics. By adhering and conforming to the guideline accurately in due course pregnant related complications and deaths are eventually avoided and finally contribute into reduction of Maternal and neonatal deaths at the facility levels as insisted by interviewed nurses.

“Mmmmh ,on my side I see that FANC guideline is quite good concept and it help us a lot ,but we ask that they should base more on mother and child and they must give FANC implementation more priority for the purpose of serving pregnant women’s lives and their children too”. nurse one

“Generally pregnant women tries for their level best to abide to directives and advise given to them by health care workers, for instance, most of the appointments and re-visit schedule given normally pregnant women agree and always they turn up accordingly including submitting lab investigations, therefore it’s a good approach for serving pregnant women and their babies ,should be progressively provided”. nurse two

Perception has a direct relation to a successful implementation of an event. Positive perception was also ascertained in the study on the perception of Midwives on FANC implementation done in Ghana by Awuah et al ,(2014) which concluded that there is a positive perception among health care workers(Midwives) regarding FANC guideline

implementation which believed to contribute into quality ANC service delivery and subsequent pregnant women's health status improvement in Ghana.

Based on the information obtained from interview, it is realized and concluded that health care workers located in ANC clinics had satisfactory experience, exposure and awareness on FANC model guideline implementation. Moreover, even though Health care workers' exposure, experience and awareness is satisfactory also interviewed health care workers had enough knowledge in relation to steps and sequence in the course of executing and putting FANC model guideline into practice.

FANC model guideline knowledge level, experience and exposure possessed by health care workers positively influence the way health care workers value technical support potentials and opportunities from superiors; however it has been acknowledged to be very limited and minimal. Miraculously, FANC model guideline has been highly acknowledged among interviewed health care workers as a knowledge base and supporting tool for facilitating quality and individual oriented FANC services to the target population. Similarly, FANC model guideline importance among health care workers as it reminds them on different matters related to pregnant women's quality service delivery.

Challenges associated with implementation have been notified, these include shortage of important supplies like drugs, HIV, VDRL test kits and equipments like Blood pressure machine and weighing machine. Based on the level of acknowledgement regarding FANC model guideline as a tool, health care workers positively perceives the guideline as a Tool that guides them to ensure that proper service is given to pregnant women according to standard.

4:4:The extent to which health care workers adhere to the existing FANC model guideline /checklist

This objective explored by using data obtained from observation checklist. Data exploration and statistical scrutiny employed as part of analysis.

4:4:1: Description of the quantitative data analysis outcomes

For the purpose of analysis, the number of predetermined Focused Antenatal Care (FANC) model guideline elements performed accordingly per health care worker was being divided into five categories; History taking and registration (consist of personal history taking, present complain history taking, past medical history taking and family history taking), Clinical examination (consist of body weight measurement, blood pressure measurement, anaemia assessment, assessment of oedema on the lower extremities, fundal height measurement and feotal heart beat measurement), Laboratory investigation (consist of haemoglob in measurement, urine albumin assessment, urine glucose assessment, syphilis testing, HIV testing and malaria testing), Prophylaxis (consist of folate provision, provision of Ant malarial (SP), provision of Mebendazole and Tetanus Toxoid provision) and Health education & counselling (consist of provision of education on potential pregnancy complication, provision of education on proper diet & nutrition taking, provision of education on personal hygiene, education on STI/HIV effects on pregnancy and education on birth plans). These categories were then summarized based on the general classification of FANC model guidelines, in which, if an health care worker performs in all of the predetermined guideline elements, indicate adhere with the FANC guideline.

4:4:2: Exploratory data analysis

Exploratory Data Analysis (EDA) was carried out to provide an insight into the data. The percentages of FANC model guideline parameters and the demographic characteristics of health care workers were explored.

4:4:3: Statistical analysis

Having mentioned above information of the five summarized responses of interest (in which all are binary) and due to our small sample size, Fisher's exact test was used. Fisher's exact test for binary outcomes have gained special attention in building statistical association when the sample size is small. Fisher (1935) criticized large sample methods: one can perform inference using exact distributions rather than large-sample approximations.

4:4:4: Fisher's exact test for FANC model parameters

Fisher's exact test conducted using FANC model categories as outcomes and demographic characteristics as explanatory variables. Fisher's exact test was conducted to test the following hypotheses;

Null hypothesis(H_0) states that FANC model guideline categories adherence is independent of demographic characteristics

Alternative hypothesis (H_1) reflects for an association between FANC model categories and demographic characteristics.

4:4:5: Demographic characteristics of observed health care workers

A total of 38 health care workers were observed by using a specific checklist while providing services to pregnant women giving a completion rate of 100%; of which 35(92%) were female and only 3 (8%) were male, 30(79%) their education level was secondary and the remaining 21% were in primary school, approximately 24(67%) had five or less years of experience. As well about 61% were trained health cadre as being clinician, enrolled or trained nurse, while 39% were non trained health care (medical attendant). However, majority (47%) aged less than thirty years, (37%) aged between thirty and forty years while (16%) had more than forty years old refer, Table 6:1.

According to the current employment criteria, the Government and especially Local Government Authorities require an employee to have completed at least secondary education level(form four) also having undergone formal professional training as well before employment . The study findings therefore indicate that majority (79%) of observed health care workers completed form four level, most of all(69%) were trained personnel by either being clinician, Enrolled or Registered nurse this give an impression that mandatory employment criteria set are progressively met. However majority (47%) of workers observed were below thirty years old, this has appositve implication as far as working duration is concerned only if FANC related capacity building investments is done efficiently eventually long standing output and maternal health impact.

Table4.1: Demographic characteristics of observed health care workers

Category	N (%)
Gender	
Male	3(8.0)
Female	35(92)
Education	
Primary	8(21)
Secondary	30(79)
Cadre	
Trained	23(60.5)
Untrained	15(39.5)
Years of experience	
less or equal to 5 years	24(66.7)
6 to 10 years	5(13.9)
Above 11 years	7(19.4)
Age	
< 30 years	18(47)
30—40 years	14(37)
>=40 years	6(16)

Source: Field data 2017

Table 4:1 indicate that 47% of the observed health care workers were aged less than 30years old; nearly 68% had an experience of not more than five years;61% were trained health care workers;79% completed secondary education level and 92% were females.

However the study went further to study the association between demographic characteristics and FANC model guideline categories adherence. Findings indicate that, there were no association between demographic characteristics of the observed health care workers and FANC model categories adherence namely; Prophylaxis, history taking, clinical examination, health education and counseling and laboratory investigation (results not shown).

4:4:5: Observed FANC model guideline elements

Health care workers observation primarily focused on FANC model guideline elements provided by health care workers to a pregnant woman attending ANC clinic. Elements were categorized into groups(Appendix II) of service which consisted of history taking and registration; physical examination or clinical examination; provision of prophylactic(prophylaxis) services, laboratory investigations as well as Counseling and health education which were directly observed.

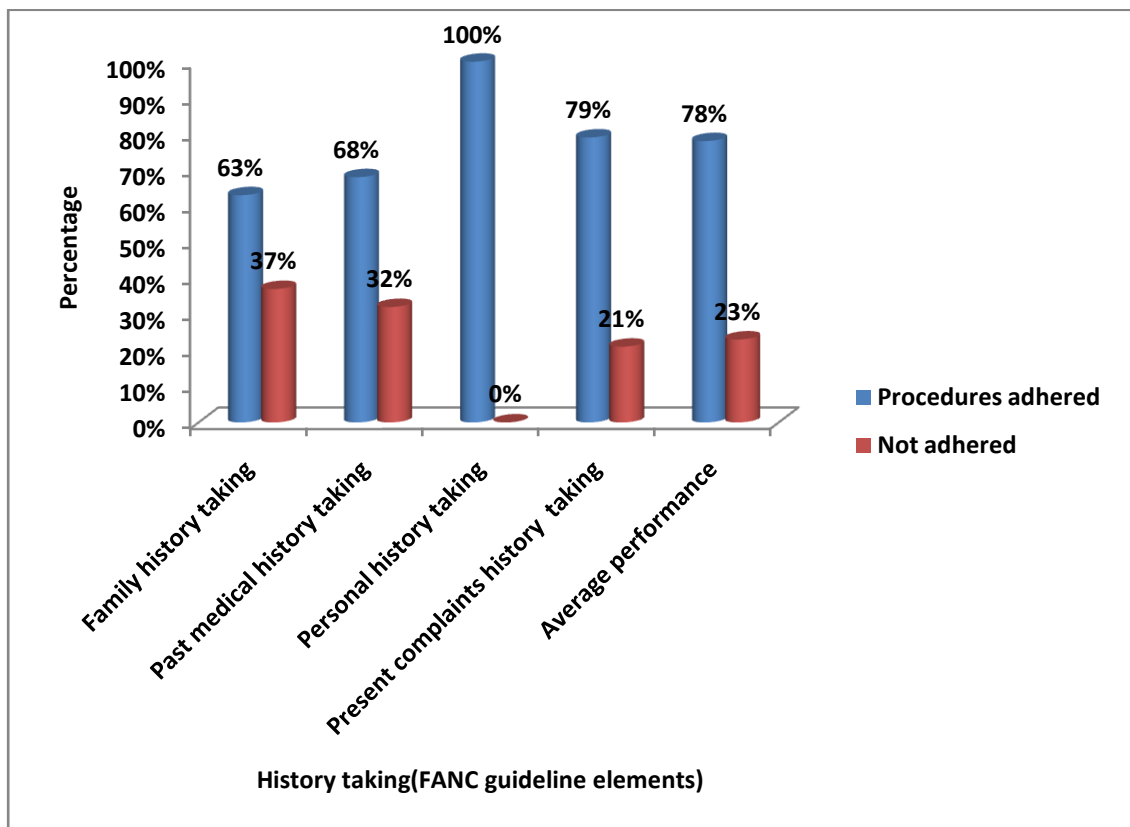
Registration and history taking, prophylactic services were measured by four indicators or elements respectively. Clinical examinations and Laboratory investigations were measured by six indicators or elements; Client education and counseling were measured by eight indicators or elements.

Observed history taking practice among health care workers

Taking into account all the elements from each category as far as history taking is concerned it has been observed that, health care workers tend to stick mostly on personal history taking, as among 38 health care workers, all (100%)health care workers

observed managed comprehensively to enquire personal histories from clients (with all health care workers tend to record personal history), however, family history given less attention as only 63% of health care workers requested family histories as opposed to the FANC model guideline requirement. Gathering of family history is important in facilitating client's diagnosis and better management hence attaining safe motherhood and eventually reduced maternal morbidity and mortalities. Proper and comprehensive history taking is crucial to ensure that a detailed personal particular, present complaint, past medical and family histories are obtained to have basic information that will later facilitate the entire client management process. Therefore, on average health care workers' adherence level based on this category (registration and history taking) is 78%, figure 6:1 below explains.

Figure:4:1: Observed history taking practice among health care workers



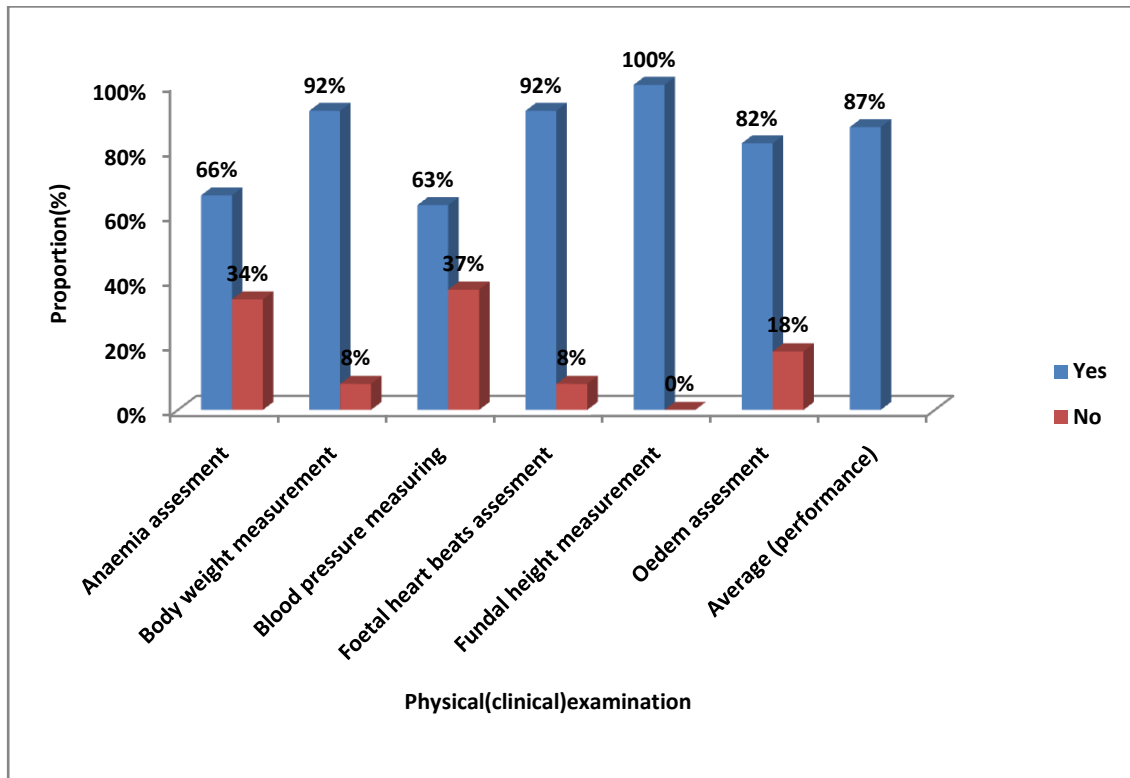
Source: Field data 2017

Figure 4:1 , above indicates that all (100%)health care workers took personal histories from clients(pregnant women attending ANC clinics) at the same time ranging from 21%(twenty one percent) to 37%(thirty seven percent) of the observed health care workers neither requested family histories, present complaints nor past medical histories from clients(pregnant women attending ANC clinics).

Observed clinical (physical) examinations performed

Clinical (physical) examination is equally crucial and supportive in identifying different ill health conditions that might affects pregnant women and the entire process. Clinical examination category is constituted of the elements namely; Conjunctiva or palms Anemia assessment, Blood pressure measurement, Body weight measurement, Fundal Height measurement, Foetal heart beats assessment and oedema or swelling of the lower limbs. The performances of health care workers in relation to assessed Clinical examination elements ranges from 66% to 100%. Amongst health workers observed all (100%) assessed the fundal height by using tape measure which gives the exact age of a pregnancy in months or weeks. Nevertheless (92%) assessed foetal heart beats using featoscope and body weight respectively, (82%) assessed lower extremities swelling (oedema), 66% managed to assess conjunctiva or palm for Anaemia, and only 63% remembered to measure pregnant women's blood pressures. This indicates that over 90% of health workers monitors foetal heart beats at the same time a good number of them (37%) did not manage to assess women's blood pressures due to different reasons despite the fact that blood pressure is one of the significant element to be assessed as far as FANC services and safe motherhood is concerned. On average (87%) of health care workers identified satisfactorily conform to clinical examination elements. However, Anaemia assessment identified to be among the most forgotten and least adhered element among all clinical examination elements supposed to be examined by health care workers, figure 6:2 highlights.

Figure 4:2: Observed clinical (physical) examinations performed



Source: Field data 2017

Figure 4:2 above demonstrate that Fundal height is highly adhered by the majority of health care workers in the course of providing services , foetal heartbeats and weight measurement are equally adhered as (92%) of health workers managed to assess or measure. Blood pressure measuring is among the least adhered FANC based clinical examination element as only (63%) of health care workers managed to measure as compared to other elements categorized.

4:4:5:3: Observed prophylaxis exercise performed by health care workers

Prophylactic category is made up of four preventive elements concerning provision of Antiworms drug (Mebendazole or Albendazole tabs),Ati-Malaria(Tabs SP),Iron drugs(Folate tabs). Health care workers' adherence performances ranged from (71% to 95%). Seventy one percent of the observed health care workers managed to advice or

provide Anti worms drugs (Mebendazole) to clients, (87%) advised or provided Anti malaria (SP), almost (95%) and (92%) of the health workers tend to request or provide Tetanus Toxoid and Folate, respectively. On average (86%) of observed health care workers well thought-out prophylaxis and preventive parameters as far as FANC model guideline requires, refer figure 4:3.

Figure 4:3: Performances in regards prophylaxis provision

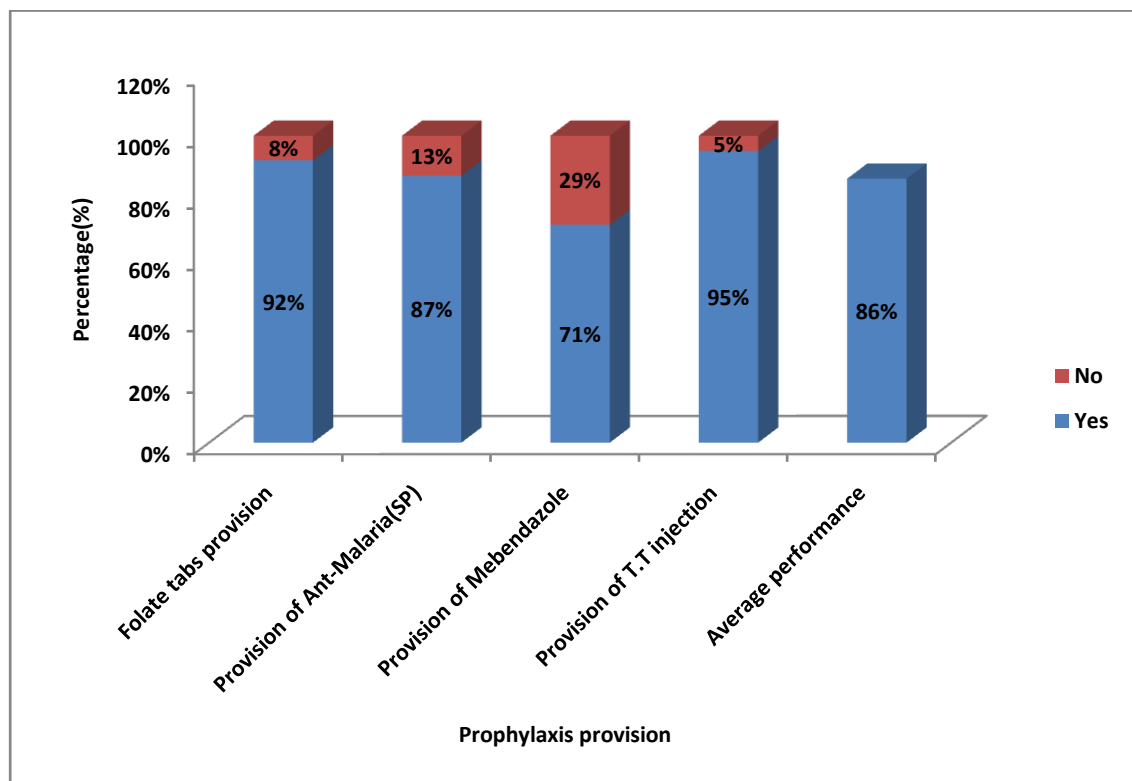


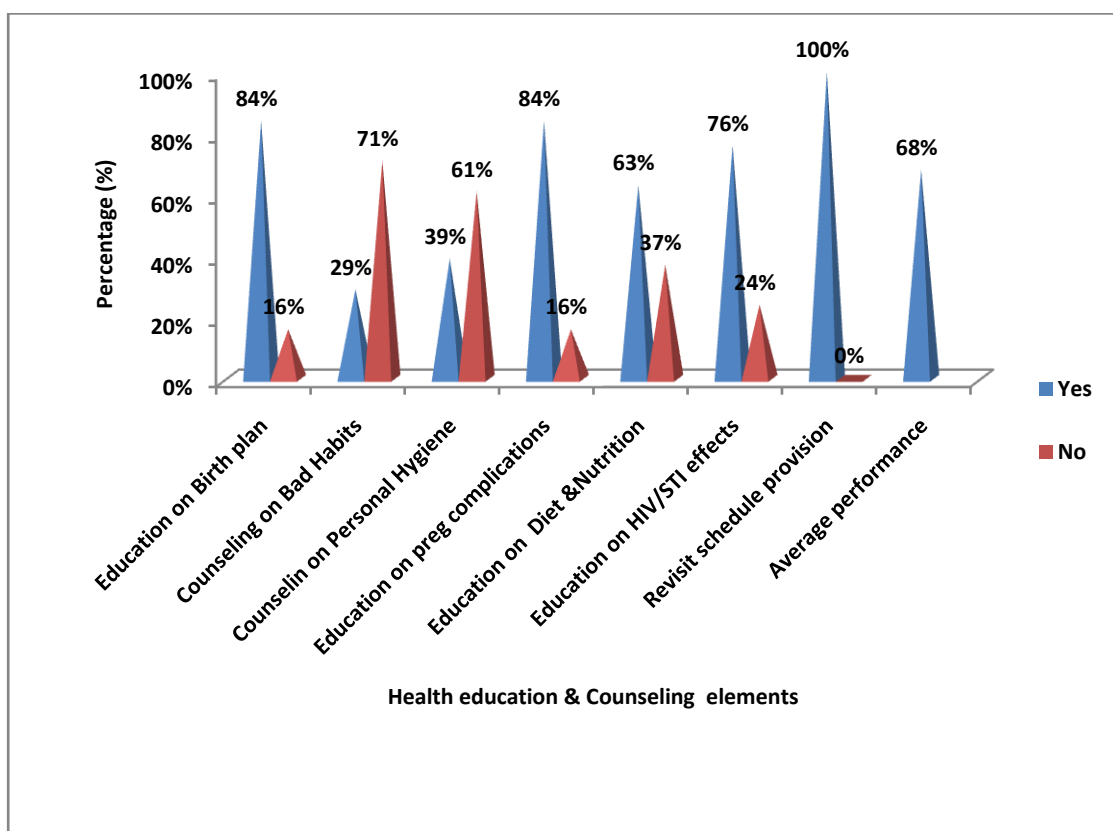
Figure 4:3, point out that nearly all preventive (prophylactic) interventions indicated by the FANC model guideline have been provided by health care workers to pregnant women attended ranging from (71% to 95%). Tetanus Toxoid injection being the highest (95%) followed by Folate and then SP (antimalaria) tablets.

Health education and counseling

Focused Antenatal Care oriented awareness creation to pregnant women is an important aspect in facilitating safe motherhood achievement as well as realizing Maternal deaths reduction potential. Categorically seven FANC service based elements were assessed, this include Individual Birth plan, Counseling on bad habits, Education on personal hygiene, Education on potential pregnant complications and ways to take actions, effect of HIV & STI on pregnancy and provision of re-visit schedule. Almost every health worker tends to provide a revisit schedule to pregnant women.

However, (71%) of health care workers did not provide education concerning bad habit in relation to pregnancy growth and process, such bad habit include cigarette smoking, alcohol consumption which are known to interfere badly with the pregnancy progress. Furthermore, nearly (61%) of health care workers failed to provide education concerning personal hygiene which is one of the important aspects in regards to infection control as far as maternal health is concerned, even so more than (60%) of health care workers provided education and counseling on proper Diet and Nutrition taking. Counseling on Birth plans and education on potential Pregnancy associated complications and actions to be taken conducted by (84%) of health care workers respectively. Therefore, it is concluded that counseling on birth plans and education on potential pregnancy related complications specifically is highly adhered than other elements like education on bad habit, personal hygiene and proper Diet and nutrition taking. This gives an implication that overall health education and counseling is not adequately provided to pregnant women as required by FANC model guideline as majority of important elements are given less attention in regards to education and counseling. Similar scenario observed in the study done by Magoma et al,(2010) which concluded that the scope of health education, counseling and its coverage on pregnancy and related complications provided to women attending ANC by health care workers is not adequately provided.

Figure 4:4: Performances regarding Health education and Counseling



Source: Field data 2017

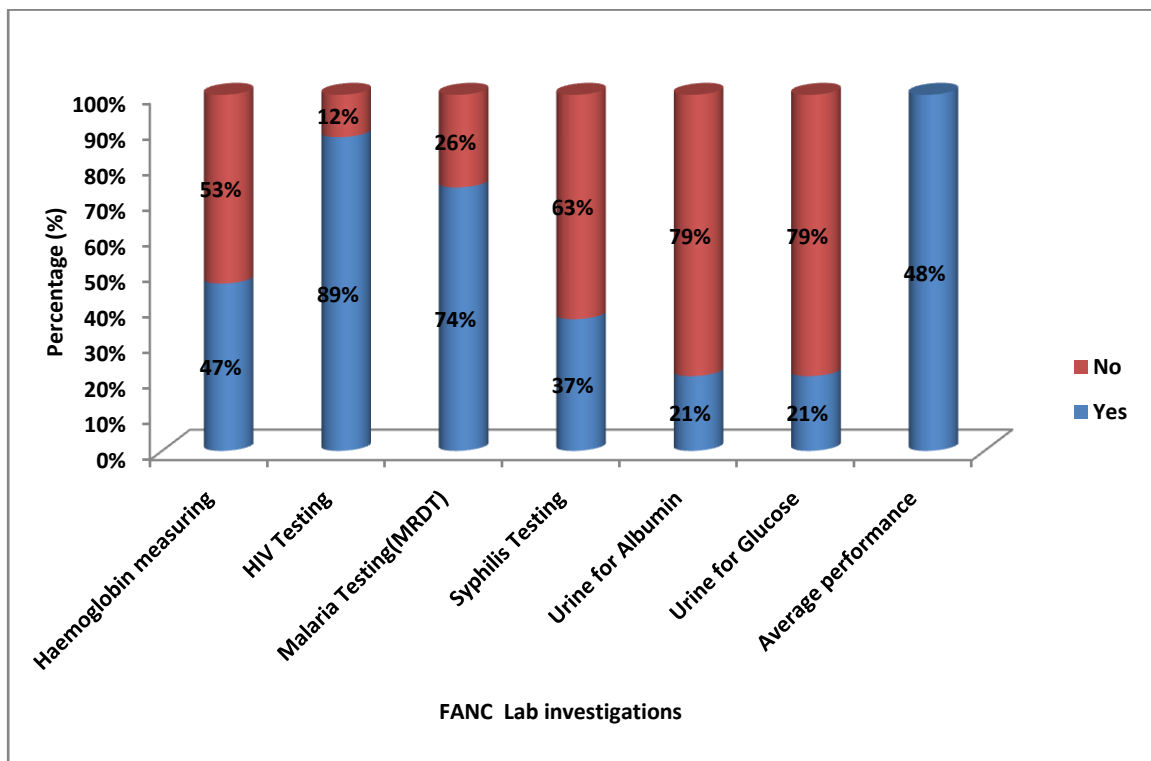
Figure 4:4 signifies important topics in relation to the extent by which health care workers either provide education or counseling to pregnant women. Seventy one percent (71%) of observed health care workers did not provide counseling on bad habits in relation to pregnancy, moreover, Sixty one percent (61%) of health care workers failed to provide personal hygiene education to targeted clients. Birth plan and potential pregnancy associated complications education including proper measures were provided by (84%) of health care workers respectively.

Laboratory based investigation requested by observed health care workers

Laboratory based investigations category is made up of six elements namely Haemoglob in measuring, HIV testing, Malaaria Testing(MRDT),Syphilis testing, Urine

for Albumin and Glucose. Laboratory investigations are important in supporting and confirming diagnoses of different conditions like pre-eclampsia that might affects pregnancy progress and eventually cost women's and unborn babies lives. Of the 38 observed health care workers, majority (89%) conducted HIV test to clients aiming at identifying client's Sero status. Malaria Testing by using MRDT was observed to be done by (74%) of health care workers. Moreover, due to different reasons few (21%) among observed health care workers managed to conduct or request Urine for Albumin or Glucose testing. Generally, on average (48%) of health care workers adhered to elements by either conducting or request for the test to be done as far as FANC model guideline based Laboratory investigations is concerned.

Figure 4:5: FANC Laboratory based investigations requested



Source: Field data 2017

Figure 4:5 indicate that majority (89%) of the observed health care workers tested clients (pregnant women) for HIV status. Urine for Glucose or Albumin were tested or requested by only (21%) of the 38 observed health care workers.

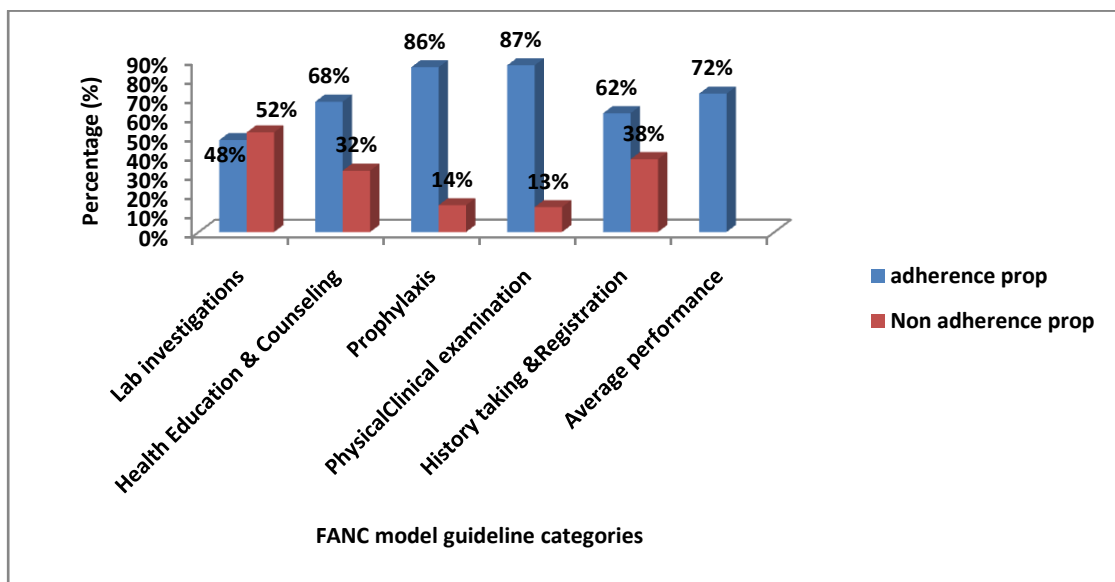
4:4:6: Proportion of health care workers adhered to FANC guideline based on five categories

The proportions of adhering to FANC model guidelines among health care workers based on identified five categories varies greatly. Eighty six percent (86%) of health care workers observed were able to either provide or advise on prophylaxis as preventive strategy to the target population (pregnant women), eighty seven (87%) managed to conduct proper physical or clinical examination according to the FANC model guideline, furthermore, sixty two percent (62%) of observed health care workers collected proper history from pregnant women by adhering to all required elements under history taking category. All over again, (68%) health care workers provided health education and counseling to pregnant women, whereas only 48% of health care workers either tested or requested laboratory investigations based on the existing FANC model guideline.

In Comparison, the proportion among health care workers adhering to physical or clinical examination (87%) and prophylaxis (86%), categories among all five FANC model guideline was high as compared to other four categories namely; Laboratory based investigation (48%), health education and counseling provision (68%) as well as comprehensive history taking (62%) . On average (72%) of observed health care workers satisfactorily adhered to the recommended FANC model guideline categories while providing services to first visit pregnant women attending at ANC clinics in the district. However, it seems to be different with the findings obtained in the qualitative study done by Gross et al (2011) on ANC service routine provision, it was reported the quality of services provided in terms of clinical and laboratory as well as drug administration was poor including shortage of supplies and trained staff. Furthermore,

in the study done in Dar es Salaam by Boller et al(2003) on assessment of quality of care in private and public ANC concluded that FANC model guideline elements were not frequently adhered including clinical examination and diagnostic aspects were not carried out by health care workers.

Figure: 4:6: Proportion of health care workers adhered to FANC guideline based on five categories



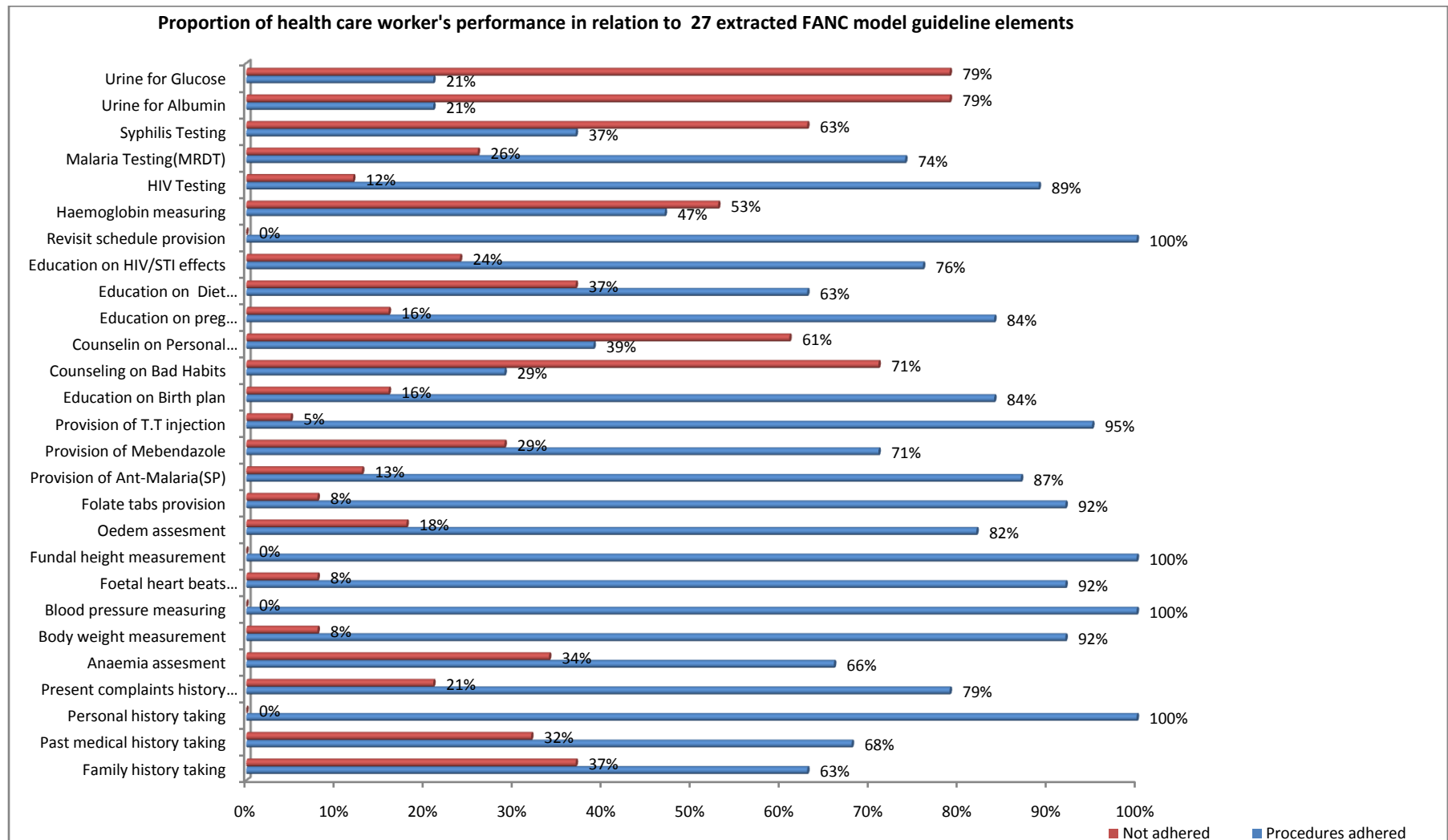
Source: Field data 2017

Figure 4:6 show all five categorized major procedures to which each health care worker must fulfill in the course of providing service to pregnant woman. The least adhered category is lab investigations whereby (48%) of health care workers observed adhered whereas majority (87%) of health care workers performed clinical or physical examination to clients.

4:4:7: Proportion of health care workers' adherence in relation to 27 FANC model guideline elements/activities

This evaluation study utilized twenty seven (27) FANC model guideline elements(activities) which were customized based on most common activities done to a pregnant women attending ANC clinic, refer figure 6:7. These elements were measured during observation done to health care workers using a checklist and categorized into five main groups namely; Laboratory based investigations, Health education and counseling, prophylaxis, physical /clinical examination and history taking and registration, refer figure: 6:6 and appendix II. Conclusively, findings indicate that there is a huge variation based on adherence to specific FANC model guideline elements or activities observed during service provision. Variations anchored in individual health care worker adherence to the required procedure ranges from (21% to 100%) as figure 4:7 point out.

Figure: 4:7: Proportion of health care workers' performance in relation to 27 extracted FANC model guideline elements



Source: Field data 2017

Figure 4:7 indicate the overall adherence performances among health care workers who were observed during the study ranges from 21% to 100%. Adherence varies greatly among workers themselves as well as individual elements that constitute FANC model guideline.

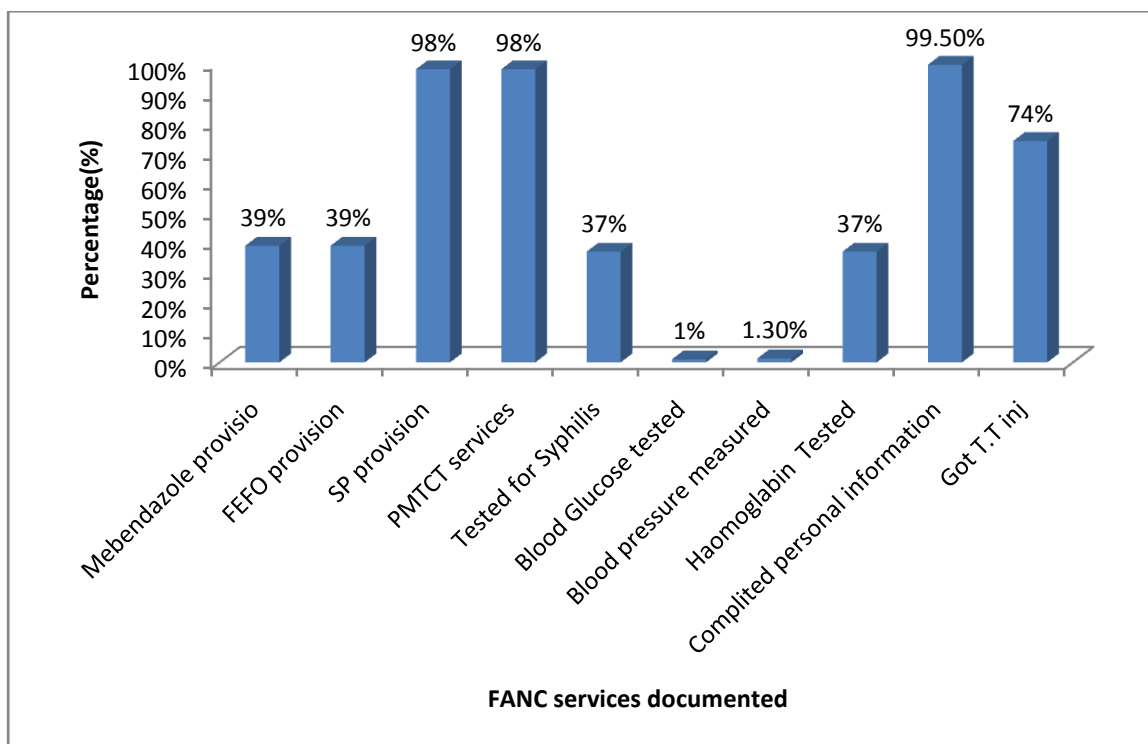
4:4:8: Health Management Information System (HMIS) book six document review Analysis

Execution of Focused Antenatal Care model guideline is sustainably proved to be conducted in all visited health facilities in the district. The capacity building process to health care workers in regards to FANC model guideline is taking place at professional training colleges levels as well as on job training. HMIS book six (Antenatal care service) is used for documentation of each services done to pregnant woman as part of monitoring framework mechanism available.

A total of ten FANC services (elements) documented in the Antenatal Care service books were selected for assessing the extent to which health care workers abide and document services provided to targeted clients as a reflection to what the FANC model guideline requires. The information obtained from document review related to Tetanus Toxoid Injections; Completed personal information; Hemoglobin (HB) testing; Blood pressure measurement; Testing Urine for Glucose; Testing Urine for Albumin; Syphilis Testing; PMTCT; Atimalaria provision; Ferofoolic tabs provision and Anti worms tabs . A total of 38 health facilities were visited. About 1,148 pregnant women attended at ANC clinics for December 2016. Of the 1,148 found attended more than (90%) had their personal information completely documented, HIV tested through PMTCT approach and provided Anti malaria prophylaxis (SP). However, Mebendazole and Iron tabs supplement (Ferofoolic) respectively were provided to (39%) of pregnant women attended. Laboratory investigative services provided varied, Syphilis (VDRL) test(37%); Blood pressure measurement(1.3%);Blood glucose assessment(1%); Haemoglobin (HB) tested was (34%). Never the less, immunization (Tetanus Toxoid) provided to the targeted group was (74%). The above findings indicate that the existing FANC model guideline is inadequately adhered as nearly seventy percent of key

selected services assessed were provided to less than fifty percent of pregnant women who managed to attend at ANC clinics in the district for December 2016, refer figure 4:8.

Figure 4:8: FANC services documented in HMIS book six(Antenatal care service) December 2016



Source: Field data 2017

Figure 4:8 indicate the proportion of selected key services provided to pregnant women attended ANC, one percent (1%) documented as tested for blood glucose; thirty seven percent(37%) tested for syphilis and HB; Mebendazole and Iron supplement provided to (39%) of the attendee; seventy four percent(74%) received inj T.T; extraordinarily personal information, Antimalaria (SP) and PMTCT provided to more than 905 of pregnant women attended

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5:1: Summary of Findings

Qualitative information obtained by conducting interview to ten health care workers providing services to pregnant women (ANC clinic) who were conveniently selected to participate in the study. Qualitative information aimed at determining the level of FANC model guideline knowledge and perception among health care workers providing Antenatal care services; identifying challenges faced by healthcare workers during FANC guideline implementation. On the other hand quantitative information obtained from 38 observed health care providers each health facilities aiming at examining/exploring the extent to which health care workers adhere to the existing FANC guideline /checklist.

Findings clearly demonstrated that the FANC model guideline knowledge is high among health care workers, based on the reality that have heard while attending formal training in colleges or seminars and are aware of different elements and categories constituting the FANC model guideline namely: client registration and proper history taking, clinical examination, laboratory investigations as well as preventive services which associate with prophylaxis against Malaria, intestinal worms, blood boosting medicines as well as immunization against tetanus.

Majority of health care workers, confidently and comprehensively explained the concept and practical theories of FANC model guideline. Irrespective of high level of knowledge shown by health care workers during carrying out duties, several challenges identified to impede implementation process of the FANC model guideline, these are shortage of important testing reagents and supplies that are necessary for performing different mandatory investigations ,equipments such as weighing scales and blood pressure machines, are not consistently and reliably available

However, study indicates that majority of respondents perceived FANC model guideline implementation positively and is recognized as a tool that facilitate them to abide and ensure that they provide quality services to targeted population.

Of the 38 observed health care workers, about 61% were trained health cadre as being either clinician, enrolled or trained nurse, while 39% were non trained health cadre (medical attendant). However, majority (47%) were aged less than thirty years, (37%) aged between thirty and forty years while (16%) had more than forty years old refer Table 6:1. During execution, all (100%)health care workers enquired personal histories from clients (with all health care workers tend to record personal history), however, family history enquire was given less attention as only (63%) of health care workers requested family histories as opposed to the FANC model guideline requirements. Amongst health workers observed all (100%) assessed fundal height by using tape measure which gives the exact age of a pregnancy in months or weeks. Nevertheless (92%) assessed foetal heart beats using faetoscope and body weight respectively, (82%) assessed lower extremities swelling (oedema),66% managed to assess conjunctiva or palm for Anaemia, and only 63% remembered to measure pregnant women's blood pressures see figure 6:2. Seventy one percent(71%) of the observed health care workers managed to advice or provide Anti worms drugs (Mebendazole) to clients, (87%) advised or provided Anti malaria (SP), almost (95%) and (92%) of the health workers tend to request or provide Tetanus Toxoid and Folate, respectively, see figure 4:3. Seventy one percent (71%) of health care workers did not provide education concerning bad habit in relation to pregnancy growth and process, nearly (61%) of health care workers failed to provide education concerning personal hygiene, see figure 4:4.

Counseling on Birth plans and education on potential Pregnancy associated complications and actions to be taken adhered by (84%) of health care workers respectively, figure 4:4clarifies. Majority (89%) conducted HIV test to clients aiming at identifying client's Sero-status. Malaria Testing by using MRDT rapid test was observed to be done by (74%) of health care workers, refer figure 4:5. Therefore, the proportions of adhering to FANC model guidelines among health care workers signify

that eighty six percent (86%) of health care workers observed were able to either provide or advise on prophylaxis as preventive strategy, eighty seven (87%) managed to conduct proper physical or clinical examination accordingly, sixty two percent (62%) of observed health care workers collected proper history from pregnant women by adhering to all required elements under history taking category and (68%) health care workers provided health education and counseling to pregnant women, whereas only 48% of health care workers either tested or requested laboratory investigations as figure 4:6.

In document review aspect, a total of ten FANC services (elements) documented in the Antenatal Care service books were selected for assessing the extent to which health care workers abide and document services provided to targeted clients as a reflection to what the FANC model guideline requires. Of the 1,148 pregnant women attended, more than (90%) had their personal information completely documented, HIV tested through PMTCT approach and provided Anti malaria prophylaxis (SP). However, Mebendazole and Iron tabs supplement (Ferofoolic) respectively were provided to (39%) of pregnant women attended. Laboratory investigative services provided varied, Syphilis (VDRL) test(37%); Blood pressure measurement(1.3%);Blood glucose assessment(1%); Haemoglobin (HB) tested was (34%). Never the less, immunization (Tetenus Toxoid) provided to the targeted group was (74%), refer figure 4:8. This gives an implication as far as adherence is concerned that health care workers are not fully adhering to the guideline as some of the important FANC model elements are not assessed except for personal information, HIV testing and anti malaria tabs provision.

5:2: Conclusion

This mixed method study gives synoptic status of FANC model guideline process implementation among health care workers. Moreover, the extent in which the existing guideline is known implemented and adhered in the course of implementation in Magu District is enlightened.

It is therefore concluded that; basic theoretical knowledge in regards to FANC model guideline concept and practical aspects among health care workers located in the RCH department and in ANC clinics in particular is above (50%) which is satisfactory. However ,by considering satisfactoriness of FANC guideline knowledge health care workers have, it was identified that not all required FANC model guideline elements were fully adhered by Health care workers during service delivery hence adherence is less than 100%, this give an implication that the guideline is not practiced(adhered) at its full potential therefore, disease identification, prophylaxis provision , counseling and education on nutrition, personal hygiene, effects of STIs on pregnancy are not fulfilled, this status increases threat to pregnant womens' lives regardless of being able to attend at ANC clinics consistently.

Moreover, positive perception among key implementers (health care workers) exists as it is believed that the guideline itself is being considered as a tool for facilitating quality provision of required services to intended target group. Different sources of FANC model guideline knowledge identified to be professional training colleges, though on-job training through seminars was also acknowledged to be among the supplementary source of knowledge and skill development.

Despite the fact that knowledge and positive perception among health care workers regarding FANC model guideline exist, challenges emerge in the course of implementation at local facility levels, shortage of important test kits(HIV,MRDT, Syphilis),equipments(weighing scales, BP machines) and unfavorable infrastructures hinders smooth implementation of the guideline.

Majority more than (60%) health care workers found at health facilities were trained personnel, nearly (50%) were aged less than 30years hence more working years to deliver service to the community.

5:3: Recommendations

Based on the evaluation study objectives as well as obtained findings, it therefore recommended that:

- Magu District Council Health Management team should ensure that regular and intensive Reproductive and Child health focused supportive supervision at health facility levels is conducted to facilitate health care workers compliance of FANC model guideline by inculcating behavior and culture of completely adhering to the existing guidelines
- Important and necessary FANC based resources should be made readily and sustainably available at all health facilities providing Antenatal Care Services by CHMT to support delivery of quality ANC services.
- Regular coaching and mentoring(on job training) should be done to inadequately and poorly FANC performing health care providers or health facilities to improve the quality of ANC services hence reduce maternal deaths, increase health facility deliveries and completion of recommended ANC visits among pregnant women attending clinics

CHAPTER SIX

WORK PLAN AND BUDGET

6.1: Work plan

Evaluation study on health care worker's knowledge adherence and perception in regards to focused antenatal care guideline in magu district implemented based to the existing work plan(refer table 8.1)According to the work plan, data collection exercise officially take took place in semester four(January 2017) after proposal approval followed by report writing, dissemination of the results as well as oral presentation. Work plan detail is reflected in the table.

Table 6.1 Work plan for the project

Activity	Time schedule				partnership	Responsible person
	Semester One	Semester Two	Semester Three	Semester Four		
Identification of the Institution for field project. Review of documents/reports for gap identification and goal/objective setting					DED and CHMT(Magu)	Evaluator
Writing programme project background Literature Review and Development of work plan.					Evaluator MU field supervisor	Evaluator
Methodology development					Evaluator MU field supervisor	Evaluator
Pilot study(Testing data collection instruments)					Evaluator	Evaluator
Data collection and analysis					CHMT(Magu)	Evaluator
Report Dissemination Oral presentation and submission to Mzumbe University					Lecturers (department of HSM)	Evaluator

Source: Researcher own construct 2016

6.2 Budget

This evaluation study was conducted in Magu district. Among other resources, a total of Tsh 8,615,420/= was utilized up to its final report. However, expenditure covered allowances for researcher, fuel costs, procurement of data recording tools, refer table 6.2.

Table 6.2 Evaluation study budget matrix

Item	Activity budget	Total
Fare (Transport)	Traveling Morogoro- Magu Magu-Morogoro 45,000 x 6 =90,000/=	
	Sub total:	270,000/=
Allowance(Perdiem)	Principal researcher: 60 days x 45,000/= 2,700,000/= Driver:1 x60days x25,000/=1,500,000/= Fuel-20lts x 2500 x 60 dys= 3,000,000/=	
	Sub total:	7,200,000/=
Stationary and secretarial service	Procurement of papers;3 x 12,000/= 36,000/= 6 ball pen x200/=1200. Correction fluid:4 x1000/=4000	
	Sub total:	41,200/=
Procurement of data collection devices	Tape recorder	300,000/=
	Report typing:1000 x 150pgs =150,000/= Binding 4copies x 15,000/=60,000/=	
	Subtotal:	210000/=
Miscellenius 10%		783220/=
	GRAND TOTAL	8,615,420/=

Source: Researcher own construct 2017

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APPENDICES

Appendix 1: Interview guiding questions

Evaluation of health care workers knowledge, perception and adherence to focused antenatal care guideline in Magu district

Thank you for devoting your valuable time to discuss few issues concerning focused antenatal care guideline. My name is Samuel Isaac Kalongoji, am conducting a study on Evaluation of health care workers knowledge, perception and adherence to focused antenatal care guideline. I am interested in hearing about your experiences and knowledge in relation to FANC guideline in general. The information obtained out of this interview will be tape recorded, confidentially treated and used for the study purpose. Is there any question before we begin? Can we proceed?

Employment duration..... cadre.....

Age.....sex.....

***Objective one-**Level of FANC knowledge among health care workers providing Antenatal care services in Magu district council*

Q1. Briefly can you explain to me the employment, professional history and your work experience in general?

More probe

- For how long have you been working at RCH department

Q2. According to your experience in providing services what do you understand by the word FANC?

More probe

- When did you encounter the term FANC for the first time in your career life time
- In what ways did you managed to acquire FANC knowledge?
- Based in your experience, how do you carry out FANC in the course of providing services to the target group
- In what ways the existing FANC guideline has been useful to your day to day service delivery
- In what modalities do FANC technical support reaches at your place of work

Q3. Briefly can you explain on the contents of FANC guideline used at ANC service provision?

Q4. FANC services are continued to be provided to target group by health workers, do you think is there importance of you continuing adhering to the existing FANC guideline and why ?

More probe

- What are your views in regards to the existing implementation in health settings
- How do you find FANC guideline is it useful (why?)
- Are there any challenges associated with the existing FANC guideline in providing services to clients(mention)

Objective two-The extent to which health care workers adhere to the existing FANC guideline /checklist

Q5. In the course of providing service on daily bases, how do you use Focused Antenatal care checklist during service delivery to pregnant women attending ANC clinic?

More probe

Is there a written wall poster FANC procedure to be followed?

Q6. Briefly describe how FANC checklist facilitate you in providing services on daily basis

Q7. What are the challenges normally faced in the course of using FANC checklist/guideline

Objective three-Healthcare workers perception in regards to FANC guideline implementation

Q8. FANC guideline is a useful tool facilitating provision of quality ANC services to pregnant women hence improving health status of the target group. What is your opinion or views in regards to the statement?

Once again thanks for devoting your time

**Appendix II: Observation checklist for health care workers providing ANC
services-Magu DC**

Observation checklist for health care workers providing ANC services-Magu DC

Age: [] **Education level:** [] **Employ duration:**

Sex: [] **Duration at ANC:** []

No	Categorized Activities per Guideline	ANC services		Observed indicators per visit	
		Variables	Indicators/Elements	1 st visit	Follow up visits
1	History taking	Registration & history taking	Personal history		
			History of complaints in current pregnancy		
			Past medical history		
			Family History & social history		
2	Disease/abnormality detection	Clinical examination	Body Weight weighing		
			Blood pressure measurement taking		
			Anaemia(Palmer pallor/conjunctiva assessment)		
			Assesment of Oedema on the lower extrimities		
			Uterine (fundal) height measuring by tape		
			Foetal heart sounds assesment using Foetoscope		
		Lab investigation	Haemoglobin assessment request		
			Urine for albumin assessment request		
			Urine for glucose assessment request		
			Syphilis investigation request		
			HIV testing		
			Malaria investigation request		
3	Prophylaxis/Immunization	Drug distribution & Vaccinatio	Iron/Folate tabs provision		
			Malaria prophylaxis(SP) given		
			Anti worms tab given		
			Inj T.T ordered		

		n			
4	Health education &Counselling	Client education and counseling	Education provided on pregnancy process, danger signs and potential complications &		
			Education & counseling on Diet and nutrition provided		
			Education provided on Personal hygiene ,Rest and exercise		
			Education provided on Effects of STI/HIV		
			Voluntary counseling &Testing		
			Plans of delivery(Emergency preparedness, place of delivery, transportation, financial arrangement)		
			Harmful habits (smoking, drug abuse, alcoholism)		
			Schedule of return visit		

Appendix III Application for Conducting a Research

SAMUEL ISAAC KALONGOJI

P.O BOX 132.

MWANZA

03/FEB/2017

Regional Administrative Secretary

P.O BOX 119

MWANZA

RE: APPLICATION FOR CONDUCTING A RESEARCH

Sir,

Refer the above captioned statement

I am the student from Mzumbe University pursuing Master of Science in Health Monitoring and Evaluation. As part of the requirement am supposed to conduct an evaluative research in any aspect, the title of the research am asking to conduct is **“Evaluation Of Health Care Worker’s Knowledge Adherence And Perception In Regards To Focused Antenatal Care Guideline In Magu District.** Magu District was selected for the reason that it was the place where I was employed before being transferred to RAS –MWANZA.

This research will involve collection of data from health care workers through interview and observation at their respective Antenatal Clinics.

Hopefully my application will be positively considered

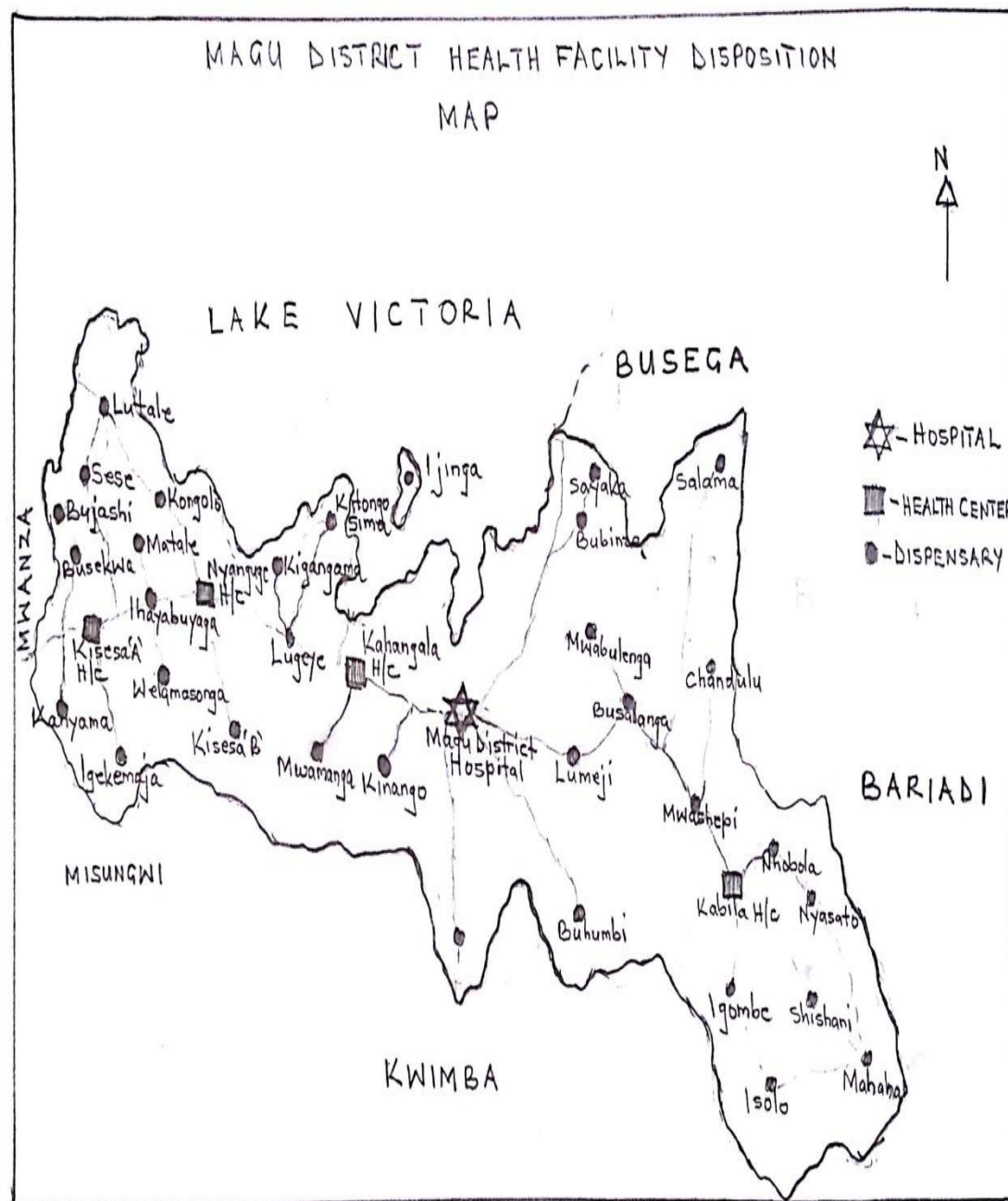
Kind regards

NB: Attached is a copy of the permission from the University

Samuel Isaac Kalongoji

Principal Assistant Dental Officer II

Appendix IV Magu district Health facilities distribution Map



Source: Health report Magu, 2017

Appendix: V: Comprehensive study sample demographic characteristics

Category	Interviewed(10)	Observed(38)	Total subjects(48)
Gender			
Male	4(40%)	3(8%)	7(14%)
Female	6(60%)	35(92%)	41(85%)
Education			
Primary	0(0%)	8(21%)	8(17%)
Secondary	10(100%)	30(79%)	40(83%)
Cadre			
Trained	10(100%)	23(60%)	33(69%)
Untrained	0(0%)	15(39%)	15(31%)
Years of experience			
less or equal to 5 years	5(50%)	24(67%)	31(65%)
6 to 10 years	5(50%)	5(14%)	10(21%)
Above 11 years	0(0%)	7(19%)	7(14%)
Age			
< 30 years	4(40%)	18(47%)	22(46%)
30—40 years	6(10%)	14(37%)	20(42%)
>=40 years	0(0%)	6(16%)	6(13%)

Source: Field data 2017

Appendix VI: Permission letter from DED Magu

MAGU DISTRICT COUNCIL

(All correspondences should be directed to District Executive Director)

MWANZA REGION

Tel.No:- 028 – 2530002

Fax.No:-028 – 2530199



District Executive Director's Office

P.O.Box. 200,,

MAGU.

Ref .No. MDC/S.10/21/VOL XIV/118

8TH 02.2017

District Medical Officer,
Magu District Hospital,
P.O.Box 30,
MAGU.

RE: RESEARCH PERMIT TO MR.SAMWEL ISACK KALONGOJI

The above mentioned person is bonafide student of Mzumbe University who is pursuing (MSC HME) Degree programme who at the moment conducting research as a part of requirement for completion of his studies.

The title of his Research is "**Evaluation of Health care workers Adherence to focused Antenatal care Guideline**" A case study in Magu District

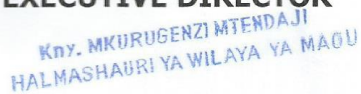
Kindly we ask you to provide assistance and introduce him. Also he will work under ethical, rules and regulations all the time when he will be here for data collection.

Sincerely


Francis Z. Mathias

FOR: DISTRICT EXECUTIVE DIRECTOR

C.C: ✓ Vice Chancellor,
University of Mzumbe,
P.O.Box 63,
MZUMBE - MOROGORO.


Kny. MKURUGENZI MTENDAJI
HALMASHAURI YA WILAYA YA MAGU

C.C: Samwel Isack Kalongoji,
Student.

Appendix VII: Clearance letter from Mzumbe University



MZUMBE UNIVERSITY

OFFICE OF THE VICE CHANCELLOR

Tel: +255 (0) 23 293120/1/2
Fax: +255 (0) 23 2604382
Cell: +255 (0) 789 722 733
E-mail: drps@mzumbe.ac.tz
Website: www.mzumbe.ac.tz and www.drps.mzumbe.ac.tz

P.O. BOX 63
MZUMBE
MOROGORO, TANZANIA

Ref. No.: MSC./HME/MZC/029/T.15/

Date: 3rd November, 2016

TO WHOM IT MAY CONCERN

RE: INTRODUCTION OF MR. KALONGOJI SAMUEL ISAAC

The bearer of this letter is a postgraduate student at our university (Mzumbe University) pursuing **Master of Health Monitoring and Evaluation (MSc. HME)**. As a part of requirements for completion of his studies, he is collecting information on ***"Evaluation of Health Care Workers Adherence to Focused Antenatal Care Guideline in Magu District."***

This letter serves to achieve three purposes. Firstly, to introduce him to you, secondly, to request you to grant him permission to undertake the mentioned research at your Institute, and thirdly to request you to facilitate any form of assistance he might need in order to successfully pursue this noble exercise at your organisation/institute. We can assure you that this activity is entirely for academic and will never be used for any other purposes.

We trust that you will accord our student with necessary assistance.

Sincerely yours,

Dr. Fred Alfred (PhD)
FOR: VICE CHANCELLOR