



**ASSESSING THE UPTAKE OF FACILITY BASED POSTNATAL CARE SERVICES BY
MOTHERS IN COMMUNITIES OF NAMABYA SUB-COUNTY MANAFWA
DISTRICT.**

By

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Declaration

I **MIRIAM MUTENYO** do here by declare that the work presented in this dissertation is my own original work unless otherwise acknowledged.

This piece of work has never been submitted in part or in full for publication or award of a degree in any other university.

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Dedication

This work is dedicated to my dear parents Mr and Mrs Watuwa who gave me the firm foundation for my education background and whose inspirations and teachings have made me what I am today.

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List of Acronyms

ANC	Antenatal care
CHW	community health workers
HF	Health facility
HIV	Human Immunodeficiency Virus
HW	Health worker
HSSP	Health Sector Strategic Plan
IMR	Infant mortality Rate
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
NGO	Non-Governmental Organization
PHC	Primary Health Care
PNC	Postnatal Care
TBA	Traditional Birth Attendants
UDHS	Uganda Demographic and Health Survey
USAID	United States agency for International Development
WHO	World Health Organization

Operational Definitions.

Maternal health refers to the health of women during pregnancy, child birth and postpartum period.

Maternal mortality rate refers to death occurring to women during pregnancy, delivery or within two months of delivery per 100,000 live births.

Neonatal mortality is the probability of dying within the first month of life.

Postpartum period is defined as the period between delivery of the placenta and six weeks following that period.

Postnatal services refers to the services offered to women with in the six weeks after delivery and range from physical examinations, immunizations, family planning, health education for the mother on how to look after herself and the baby, counseling services and treatment.

Antenatal care as defined by WHO constitutes screening for health and social economic conditions likely to increase the possibility of specific adverse pregnancy outcomes, providing therapeutic interventions known to be effective and educating pregnant women about planning for safe birth, emergencies during pregnancy and how to deal with them.

Abstract

Background

Maternal health in Uganda remains a critical area of public health concern and a high MMR of 438 deaths per 100,000 live births, the MDG 5 seems far from being achieved. PNC which is one of the maternal health services offered from the first day of delivery up to six weeks is meant to benefit the health of both the mother and her baby and if well utilized, a lot of maternal and neonatal deaths could be prevented. The study was aimed at assessing the uptake of facility based PNC services by mothers in communities of Namabya sub County Manafwa district in order to devise ways of improving maternal and infant health.

Methodology

A descriptive cross sectional study which incorporated both qualitative and quantitative methodologies was done. Interviews, focus group discussions and key informant interviews were used. A sample size of 288 mothers with children below 24 months was used. Multi stage sampling technique was used where by villages were used as the primary sampling units and house hold were the secondary sampling units. Probability proportion to size sampling was used to determine the number of villages per parish. Proportions and cross tabulations were used in the analysis.

Results

The median age of participants was 29 (range= 15-49) years. Utilization of PNC and ANC was at 58.3% and 83.7% respectively. Sixty one percent (61%) were aware of PNC services with their biggest source of information coming from health workers. This was also confirmed by the key informants. Factors that were significantly associated with PNC utilization were education above primary level, occupation status of mothers, parity of 5 and above, ANC attendance, place of delivery, assistant at delivery and awareness about PNC.

Conclusion:

Maternal mortality in Uganda has continued to be an area of public health concern and the progress in reducing maternal mortality and morbidity seems not to be progressing well and may be difficult to achieve the global goals. In the study, PNC which is one of the critical maternal

health services was low compared to the awareness levels that were slightly high with mothers reporting their main source of information being health workers and thus besides their professional knowledge, health workers especially in rural facilities need to be trained to equip themselves with skills in communication and counselling.

ANC uptake was high at 83.7% though important to note was that though many deliveries occurred in a health facility, there were equally several deliveries that occurred outside a health facility and this greatly impacted on PNC uptake despite other barriers. There is an urgent need therefor for interventions from the HF perspective but also to increase awareness with an objective to increase facility births which eventually will impact on PNC uptake.

In Namabya the busiest facilities that offered maternal health services were faith based and supported by government though it was inadequate. There is need therefore to revamp the few existing government facilities in terms of infrastructure and stock ups to ensure increased access. Government also needs to review and establish PNC guidelines specific to rural HFs since they contain the biggest population of vulnerable women with high population growth rates in addition to advocacy for behaviour change among women in the these communities.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The study aimed at finding out factors associated with uptake of facility based postnatal care services by mothers and was carried out in communities of Namabya Sub-county in Manafwa district during the period of January 2013.

Manafwa district was formerly part of Mbale district and was created in September 2005. It is comprised of two health sub-districts namely Bubulo East and Bubulo West. Bubulo East has 15 sub counties which are Magale, Bubutu, Bumwoni, Bumbo, Bukokho, Buwabwala, Bupoto, Buhawekha, Mukoto, Tsekululu, Buhabusi, Bukiabi, Namboko, Lwakhaka Town council and Namabya which was the study area. Namabya sub county has a total of three parishes which are Masaka, Bumusomi, Namunyali and each of these parishes has a number of villages which add up to a total of 34 altogether.

In this study, postnatal care services were the dependent variable while factors that influenced uptake of the services were the independent variables and were categorized as individual related factors, health service factors and knowledge levels.

This Dissertation is comprised of six chapters and subtitles under each. Chapter one presents the introduction and background of the study, statement of the problem, objectives of the study, significance of the study and conceptual frame work. Chapter two presents the literature review, chapter 3 comprises the methodology that was used, chapter 4 presents results from the study, chapter 5 comprises the discussions from the results and finally chapter 6 outlays conclusions and recommendations.

1.1 Back ground of the Study

Maternal health is one of the key areas of the Millennium development goals (MDGs) and specifically has an impact on goal 5 whose target is to reduce by three quarters the maternal mortality ratio between 1990 - 2015 as well as having universal access to reproductive health services. It also has an impact on goal 4 whose target is to reduce by two thirds the under-five mortality rate between 1990 - 2015. Post natal care services are a component of maternal health whose aim is to ensure good health of the mother and baby after delivery.

Globally there was an estimated 287,000 maternal deaths in 2010, yielding a MMR of 210 per 100,000 live births among 180 countries that were studied (WHO, 2012). The study further indicates that developing countries account for 99% (284,000) of the global maternal deaths, majority of which are in sub-Saharan Africa (162,000) and south Asia (83,000). In addition to that, sub-Saharan Africa had the highest MMR at 500 maternal deaths per 100,000 live births and the adult time risk of maternal mortality (that is the probability that a 15 year old woman will die eventually from a maternal cause) in sub-Saharan Africa is 1 in 39 compared to 1 in 3800 among women in developed countries (WHO, 2012).

According to WHO, poor maternal, newborn and child health remain a significant problem in developing countries with majority of maternal deaths occurring during or immediately after child birth. Common medical causes of maternal deaths include bleeding, high blood pressure, prolonged and obstructed labour, infections and unsafe abortions. The same report mentions that the main causes of neonatal deaths are preterm births, severe infections and Asphyxia (WHO, 2011).

In Uganda maternal mortality stands at 438 deaths per 100,000 births in 2011 (Uganda Demographic and Health Survey, 2011) and has shown a very slight increase compared to 2006 which was 435 deaths per 100,000 (UDHS, 2006) This remains significantly high and far from achieving the millennium development goal 5 which aims at bringing maternal mortality to 131 per 100,000 by 2015.

Apart from dying during pregnancy and child birth, women also often suffer from short and long term disabilities and illnesses which range from fever, depression, to severe complications like obstetric fistula, and uterine prolapse. In addition, 30-40% of neonatal and infant deaths result from poor maternal health and inadequate care during pregnancy, delivery and critical immediate postpartum period (Family care International, 2007).

More than two thirds of new born deaths do occur by the end of the first week after delivery and on the other hand it is approximated that two-thirds of all maternal deaths occur in the postnatal period (Population reference Bureau, 2007). In developing countries, an estimated 70% of women do not receive postpartum care and some 60-80% of maternal deaths occur during this period (WHO, 2008)

Coverage of postpartum care remains low at 26% (UDHS, 2011) compared to 90% uptake of PNC in developed countries (Dhakal *et al*, 2007). The same author reported that 64% of women didn't receive postnatal care and yet antenatal care attendance from a skilled provider was high at 95%. Overall the percentage of births that occurred in the health facilities in Uganda was 57% according to the UDHS 2011.

Bubulo East Sub-district where Namabya lies has a population of 173,024 of which 89,002 are female and 84,002 are male. The highest health facility in Bubulo East health Sub district is

health centre IV located at Magale and is a faith based facility (not for profit) but also supported by Government. The entire sub district has a total of 9 government health facilities and 4 NGO/Faith based facilities. With only 21% of deliveries occurring in health facilities compared to the national 57% and neonatal mortality of 31 / 1000 compared to the national 27/1000 (United States Agency for international Development/DELIVER PROJECT, 2008) shows severe challenges regarding maternal health services in Manafwa district.

From the statistics above which show the percentage of health facility deliveries standing at 21%, this implies that several mothers who give birth outside health facilities are likely to miss out on the early postnatal services which include immunization for the baby against Polio and Tetanus usually given before the mother and baby are discharged from the health facility, early detection of abnormalities, weight taking which would aid in growth monitoring, enhancement of breastfeeding, umbilical cord hygiene, and general care among others for the baby. For mothers, they are usually checked for excessive bleeding, monitoring pressure and condition of the uterus, given advice on family planning, general hygiene among others.

It is important that women attend ANC as this would have a direct impact on the uptake of postnatal care health care services. With adequate counselling during antenatal visits, mothers are likely to become more aware of possible postpartum complications and sources of quality health services for treatment of those complications. Behaviour change communications also occur during antenatal care visits and this can prepare and instil in mothers good practices of neonatal care alongside postnatal care.

Rahman M et al 2011 suggests that one of the best things that antenatal care could accomplish would be to influence women to select a trained attendant during pregnancy and after delivery.

Therefore since most maternal and neonatal deaths occur during the early postnatal period yet some of these would be avoided if mothers attended PNC, its worthy that PNC services are stepped up in order to improve the maternal and reproductive health of mothers.

1.2 Statement of the Problem

Antenatal care attendance by mothers usually has a potential to influence the likelihood of the mothers attending post natal care. Much as the national antenatal care attendance (ANC) from skilled providers stands at 95% with 47% of these births occurring in health facilities with assistance from a healthcare professional, only 36% accessed PNC which is a critical time in the life of the mother and the baby (UDHS, 2011).

According to the Health Sector Strategic Plan III (2010/11- 2014/15), Sepsis is the second leading cause of maternal mortality accounting for 22% after Hemorrhage which is 26% and yet this can be prevented during delivery and postnatal care attendance. The same report mentions that Neonatal deaths contribute 38% of all infant deaths and are mostly caused by Pneumonia 31%, Asphyxia 26%, Prematurity 25%, Congenital abnormalities 7%, Tetanus 2%, Diarrhoea 2% and other conditions 7%. All these are preventable if addressed during the PNC period. Infant mortality as per UDHS 2011 was 54 per 1000 live births.

Lack of PNC attendance contributes to maternal mortality and infant deaths. Maternal mortality ratio in Uganda is still high at 438 deaths per 100,000 live births. There are no well documented statistics about PNC for Manafwa district though its MMR is high at 189/100,000 live births and neonatal mortality stands at 31/1000 live births. This study sought to assess factors influencing mothers' uptake of facility based postnatal care in communities of Namabya sub County.

1.3 Objectives of the Study

To establish factors associated with uptake of facility based postnatal care services by women in communities of Namabya sub-county, Manafwa district during January 2013.

1.4 Specific Objectives

The study was set out to achieve the following specific objectives;

- (i) To assess the level of knowledge about PNC among mothers in communities of Namabya sub-county from 01-31 January 13.
- (ii) To determine the level of PNC attendance among mothers in Namabya sub county from 01-31 January 13.
- (iii) To identify individual factors associated with use of PNC services by mothers in communities of Namabya Sub County from 01-31 January 13.
- (iv) To find out the health service factors associated with use of PNC services in communities of Namabya Sub County from 01-31 January 13.
- (v)

1.5 Research Questions

- i. What are the knowledge levels of mothers about PNC in communities of Namabya sub-county?
- ii. What is the level of PNC attendance among mothers in Namabya Sub County?
- iii. What individual related factors are associated with use of PNC services by mothers in communities of Namabya Sub County?
- iv. What health service factors are associated with use of PNC services in in communities of Namabya Sub County?

1.6 *Justification / Significance of the study*

Complications that mothers develop after birth can be prevented if they attended postnatal care. With the district's maternal mortality rate of 186 per 100,000 live births, this is quite high and coupled with the low uptake of postnatal care services which ideally improves the health of the mothers and that of their children justifies the study. Several factors may affect mothers' uptake of postnatal care services and that is what the study seeks to find out.

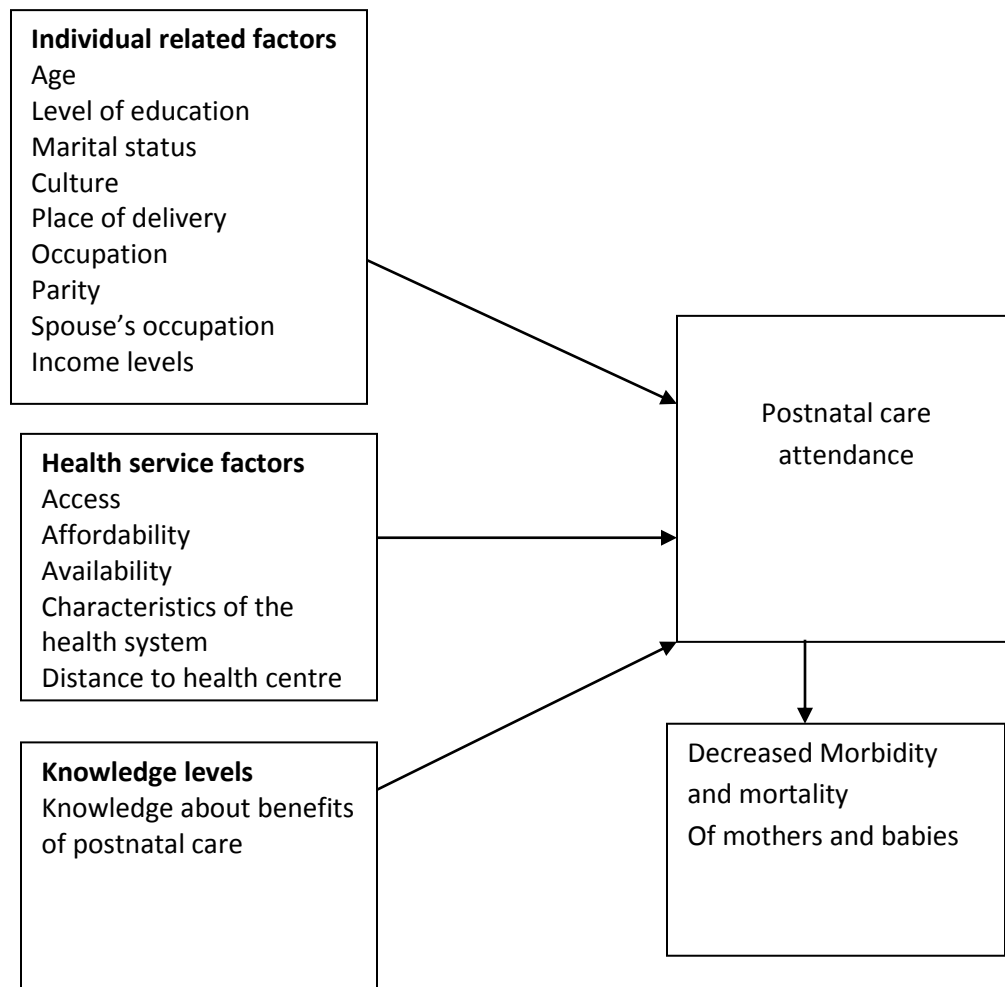
The study findings will be use full to health facilities that provide such maternal health services and postnatal care being one of them; it will provide an insight on how these services can be provided and put more light on better efficient interventions. .

It will also be useful to district health officers of Manafwa district and how best they can improve on the service delivery.

It will also be of benefit to the academicians especially those in the field of public health who wish to carry out further investigations in maternal and reproductive health issues of women.

1.7 Conceptual Frame Work

In this study, attention was given to the factors associated with uptake of postnatal care services by women in Namabya sub-county Manafwa district. Factors associated with use of PNC formed the independent variables while postnatal care services formed the dependent variable.



From the diagram above, use of postnatal care services is associated with several factors. These have been categorized as individual related factors, health service factors and other factors which

include knowledge and expected benefits from PNC services. Individual related factors which also incorporate social demographic factors have an effect on use of PNC services and these include age, level of education, occupation, place of delivery, parity, mother's occupation and that of spouse among others. Health service factors that affect the use of PNC services include aspects like accessibility to the health facilities, affordability, availability of the services at the health centres including that of supplies e. g drugs, characteristics of the health system which looks at factors like waiting time, attitudes of the health workers, human resource availability, quality of services among others which influence PNC use. Other factors that affect PNC use include knowledge about postnatal care and expected benefits from attendance. If a woman anticipates good health for themselves and their babies as a result of PNC and are knowledgeable, they will likely attend postnatal care.

The dependent variable which is PNC attendance has an effect on mortality and morbidity of both mothers and babies in that if the uptake is good, mortality and morbidity of mothers and babies will be decreased.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides an overview of literature on the topic of study which is factors associated with uptake of facility based postnatal care services.

Postnatal care is meant to maintain and promote the health of both the mother and her new born baby as well as foster an environment that offers help and support to the extended family and continuity for a wide range of related health and social needs which involve physical and mental health as well as social and cultural issues that can affect health and wellbeing (WHO, 2008). The same report notes that among women who gave birth outside facilities, averagely 70% did not receive postpartum care and among those that did receive postnatal care, health care professionals provided 57% of postnatal care while 36% received postnatal care from TBAs and 7% classified as others.

In Uganda, 64% don't receive postnatal check-ups and those who receive, 33% of them are within the critical first two days following delivery and 21% within four hours of delivery (UDHS, 2011).

Warren c et al, 2006 asserts that postnatal care programmes are among the weakest of all reproductive and child health programmes in the African region and wonders what can be done to increase coverage of integrated maternal and new born care in the postnatal period. Every year in Africa at least 125,000 women and 870,000 new borns die in the first week after birth compared to 2200 in developed regions and yet this is when coverage and programmes are at their lowest along the continuum of care.

Warren et al cited in opportunities for Africa's newborns mentions that the leading cause of maternal mortality in Africa accounting for 34% of deaths is haemorrhage which occurs mainly in the early postnatal period, sepsis and infection account for 10% and goes ahead to mention that HIV positive mothers are at greater risk of postnatal maternal death than those that are HIV negative.

2.1 Antenatal and Postnatal care:

Antenatal and postnatal care services are amongst the major interventions aimed at reducing maternal and new born deaths worldwide. Through antenatal visits, women benefit from various interventions including counselling about healthy lifestyles, the provision of iron / folic acid supplements and tetanus toxoid vaccinations reported to protect new borns against neonatal deaths (Titaley et al, 2010).

Antenatal care as a maternal health service bridges the mother and her family to the health system during her time of pregnancy. It also provides a platform to counsel mothers and offer advice on nutrition and preparation for birth, prevention and treatment of abnormal medical conditions, early initiation of PMTCT services for those that are found to be positive and also increases the likelihood of giving birth in a health facility with assistance from skilled personnel. During ANC effective preventive and curative interventions are offered to a large number of women and communities. Many of these services are incorporated in various policies, guidelines and strategic frameworks for example the reproductive health policy, the national adolescent health policy, the health sector strategic plan III and the road map to ensuring reduction of maternal and neonatal mortality is achieved. (MOH, 2008).

Household and community practices during pregnancy involve demand for antenatal care services and planning for a healthy birth, including emergency preparedness, prevention of

malaria, HIV testing and nutrition. The support and involvement of a spouse and the community is also important during this time (Ministry of Health Ug, 2008).

In Uganda at least four antenatal visits are recommended in normal uncomplicated pregnancies and the goals of ANC vary depending on the timing of the visit /duration of the pregnancy. The MOH has however adopted a goal-oriented focused approach for implementation of ANV services (Uganda clinical guidelines 2010).

According to the UDHS 2011, only 48 percent of pregnant women attended ANC four or more antenatal visits during their entire pregnancy; only 21% of women made their first antenatal care visit before the fourth month of pregnancy.

The minimum health care package of Uganda that was adopted from WHO highlights the following core interventions for maternal and new born health which clearly highlights ANC as one of them; Provision of care during pregnancy such as TT immunisation, proper nutrition, including iron and folate supplementation, and the prevention and treatment of maternal infections such as malaria and STIs, PMTCT, Infection control during and after delivery, newborn resuscitation, Provision of postnatal care, including thermal care, exclusive breastfeeding and Vitamin A supplementation, Counselling and education on newborn care practices, especially careful management of low birth weight babies during the postnatal period, Sensitisation and education on danger signs for the mother and newborn (Ministry of Health, 2008)

In developed countries, 97% of women make at least one antenatal visit with 99% delivering with a skilled attendant and 90% make at least one postnatal visit (Mrisho. M et al, 2008). The same authors assert that although the current rate of ANC uptake is encouraging in some

developing countries compared to PNC, detailed information about the actual quality and effectiveness of ANC in practice is scant and this is mainly attributed to the packages that vary so much from place to place in terms of components, timing, frequency of visits and the provider. In the same way, little evidence is available for the packaging of interventions for routine PNC for mother and the new born.

PNC is highlighted as one of the components of the Minimum Health Package of Uganda and relates to other guide lines including the National reproductive health standards and policy guidelines, Essential Maternal and Neonatal Care Clinical Guidelines for health workers, national guidelines on Infant and Young Child Feeding and guidelines for the Integrated Management of Childhood Illnesses (IMCI). Important to note however is that the critical first postnatal period that highlights care during the first few days of life was found to be a significant gap in most of the guidelines besides implementation (MOH Ug, 2008)

The UDHS 2011 shows that only 33% of women received PNC for their last birth with in the critical first two days following delivery, 8 percent received care within 4-23 hours, and 4percent were seen one to two days following delivery. Important to note is that the percentage of mothers who did not receive any postpartum check-up declined from 74 percent in 2006 to 64 percent in 2011. The skill level of the provider who performs the first postnatal check-up has important implications for maternal and neonatal health. Results from the UDHS 2011, showed that only 30% of women received PNC from a skilled health worker (Doctor, Nurse, or midwife) and only 2% received PNC from a TBA.

2.2 Postnatal care and PMTCT integration;

Prevention of mother to child transmission of HIV (PMTCT) is a program for preventing the transmission of HIV from an infected mother to her child. It is argued that much as HIV/ AIDS may not directly lead to neonatal deaths, HIV status of mothers has an effect on the survival of newborns through increased risks of uncertain still births and can also lead to severe neonatal outcomes which may include preterm and low birth weights and Apgar scores that may be low (WHO, 2008). It has been established that antiretroviral drugs can reduce HIV transmission from the mother to the child by 5% and this therefore justifies early HIV testing during pregnancy (WHO, 2010).

The same WHO 2010, asserts that PMTCT program comprises four pongs which are;

1. Primary prevention of HIV infection among women of reproductive age
2. Prevention of unwanted pregnancies among women living with HIV
3. Prevention of HIV transmission from pregnant women living with HIV to their infants
4. Providing appropriate treatment, care, and support to mothers living with HIV and - their children and families.

In Uganda PMTCT program was started in 2000 and despite the success with increasing geographical access, many HIV positive mothers and their babies are lost at some point in the PMTCT early infant diagnosis process (MOH 2009/2010). The Uganda national PMTCT scale up plan 2010/15 recommends integration of PMTCT with the already existing postnatal care services. With integration, PMTCT services are part of the PNC package offered on the same day under the same roof. Added to that, an infant born to an HIV positive mother brought for immunization is offered early infant diagnosis (Kwikiriza M, 2012).

Integration of PMTCT and postnatal care however is dependent on improved systems at the health facility which among others includes adequate and trained human resources, logistics, sound health management and information systems for monitoring and evaluation, working referral and linkage system both within and outside the facility (Kwikiriza M, 2012).

A 2008 situation analysis report of new born health in Uganda highlighted about Uganda having good policies that are meant to protect mothers and their new borns and ensure provision of integrated care but there is need to emphasis care during the early postnatal period and effectively disseminate and implement such maternal health policies (Save the children, 2008).

2.3 Health service decentralization in Uganda:

Health service delivery in Uganda was decentralised to the district and sub district level with an objective of getting services closer to the people as well as ensuring efficiency and effectiveness. The system also provides an opportunity for decision making and partaking investments meant to improve neonatal health (MOH Uganda, 2008).

Through the decentralization system, districts are empowered to manage health services, develop health priorities, mobilise, budget and allocate resources based on the disease burden, which is an opportunity for inclusion of newborn health issues. The system if well implemented and supervised can have several benefits though it continues to face challenges ranging from lack of resources to retain and attract health workers especially in the hard to reach areas and the grossly underfunded health sector hence funds meant to run the health system in the districts are inadequate (MOH Uganda, 2008).

2.4 Factors influencing postnatal care services

2.4.1 Knowledge about post natal care services

At an individual level, variables related to awareness and perceptions are found to be much more relevant for skilled maternal service utilization. Women may get knowledge on the importance of skilled maternal care in different ways such as previous exposure to skilled maternal services, community based health educations, through community media or due to their better educational status. Having awareness about health facilities to get skilled professionals is found to be a significant predictor of both skilled antenatal and delivery care (Gebeyehu A et al 2013).

According to Gebeyehu A et al 2013 in a study done on factors affecting utilization of skilled maternal care in Northwest Ethiopia based on a multilevel analysis, the effect of awareness was observed in community-based interventions focusing on awareness creation. The expected effects of knowledge about an issue can cause change on individual attitudes. Women who have confidence on skilled providers and their care tend to use maternal health services diligently.

Knowledge about PNC services and its significance is vital in determining utilization of PNC. Nankwanga A, 2004 argues that because women and their families lack understanding of the danger signs or gravity of the condition or because they don't know where to go to seek help affects women's capabilities to make their own decisions about seeking health care and ability to exercise their reproductive rights. Several authors like Achrya L et al 2000, Rahman m et al 2011, Dhakal S 2007 and many others also acknowledge that the main reason for the non-use of postnatal health services is the lack of awareness or not perceiving the need for it.

According to Mrisho M, 2011 in one of the studies carried out, it was revealed that some women were not able to differentiate between the care in the first 6 weeks and the expanded program on immunization which continues for the year and more of the child life. The author concluded that

by sharing of knowledge with women and mothers in health education sessions during ANC and PNC visits, health care providers could influence health seeking behaviour of pregnant women in the rural areas.

2.4.2 Individual related factors

Wealth. According to UDHS 2011, women in the highest wealth quintile were more likely to get postpartum care compared to other women. Rahman M et al (2010) also acknowledges that mothers from wealthy families are expected to seek modern / medical health services when they are sick with maternal complications. The author's results also supported the hypothesis that women with a higher economic status were more likely to receive postpartum care than their poor counterparts. The Uganda survey 2011 goes ahead to show regional differences in the utilization of PNC and indicates that higher proportions of women in Kampala, eastern and central 1 region received postpartum checks compared to women in other regions.

Education. The strong influence of mothers' education on use of postpartum services is consistent with findings from several studies done. Authors like Kabakian et al (2005), Reggasa N 2011, among many other studies done argue that education is thought to empower women to overcome barriers to information. Lack of awareness which was related to the literacy levels was also mentioned as the main reason for no-use of postnatal care health services. Reggasa N, (2011) also affirms that education is likely to enhance female autonomy and help women develop greater confidence and capability to make decisions about their own health and adds that literate women are likely to seek out higher quality services and have greater ability to use health care inputs that offer better care.

Level of income. Women's health seeking behaviour is influenced by the cost of maternity services and their capacity to cover the expected expenses (Gebeyehu A, 2013). Hutchison P., et al 1999, mentions that women who have earnings have a high likelihood to use services but the more a household relies on those earnings, the less likely that woman will be able to use services. Nankwanga A, 2004 explains a significant association between husbands / spouses occupation and utilization of PNC services. Women whose husbands were self-employed or worked in government utilized PNC services most. So the husband's occupation was considered a major predisposing factor to utilization of PNC. Important to note is that the UDHS (2011) survey mentions that almost half of the women said that getting money for treatment was a problem in accessing health care.

Culture. In Africa and several developing countries, culture has a significant contribution in terms of attitudes towards PNC. Warren C et al, (2006) acknowledges that the period following birth in Africa is often marked by cultural practices and therefore understanding these beliefs and practices is very important in ensuring effective and timely care.

Several communities in Africa observe practices that keep mothers and babies indoors for the first month after birth, a period referred to as seclusion and if mothers or babies became ill during this period, seeking formal health care is often delayed (Warren C et al, 2006). The same author mentions that some cultural practices affect survival and health of the newborn for example bathing new babies in cold water, Shea nut butter used for smearing babies, cow dung used for drying up the umbilical cord stump, giving other foods other than breast feeding among others.

The role of traditional and religious beliefs as well as the perception of women with regards to comparative efficacy of the medical versus traditional birth attendants may also be contributory to failure to have skilled attendants at birth. It was also pointed out by the same author that modern (medical) and indigenous maternal health care services coexist in most African communities, particularly in rural areas, and women may have to choose between the two options. Some previous studies had reported that many Nigerian women, particularly those in rural areas, rate the services of the traditional birth attendants (TBAs) as being of higher quality than that of medical healthcare practitioners, particularly with regards to interpersonal communications and relationships (Babalola S et al, 2009)

Parity. Several studies have shown that women who had fewer children and had received antenatal care were more likely to use PNC. Lower parity was associated with uptake of postpartum visit because usually first time mothers are more anxious to get health care or because they had fewer time demands from older children (Kabakian et al, 2005). According to Gebeyehu A, 2013, the predictor birth order indicates that women tend to use skilled maternal care if their birth is the first, and its significant effect is observed in antenatal and delivery care. The variations observed in the odds ratios can be related with the risk perception of women that varies overtime. According to Gebeyehu A, 2013 findings, many women (48.3%) believe the first pregnancy is risky compared with the next consecutive pregnancies. Other authors like Rahman M et al 2011 argue that having more children may cause resource constraints which has a negative effect on health care utilization.

Antenatal care attendance. Antenatal care visits have a positive impact on the utilization of postpartum health care services for the young mothers. During these antenatal visits, mothers receive adequate counselling and may become aware of possible postpartum complications and

sources of quality health services for treatment of these complications (Mosiur et al, 2010). Gebeyehu A 2013 in his study mentions that antenatal care by a skilled provider increases steadily with education so that women with secondary and above education were 68% more likely to use the services as their counterparts with no education. Women who have had at least one antenatal care in previous pregnancies were about three times more likely to use skilled antenatal care for their recent pregnancy. Similarly, women who preferred health professionals for their maternity care and have awareness about health facilities to get skilled professionals significantly use skilled antenatal care compared with their counterparts.

2.4.3 Health service factors

Geographic proximity to modern healthcare providers is found as in many similar efforts to be an important determinant in the use of health services. Physical distance to health care provider is an important factor in accessibility (World Bank, 1999). According to the UDHS 2011, many women 41% reported that distance to a facility was a problem and affected their access to health services. With regard to the health service utilization in Uganda, there exist gaps right from distribution of facilities between regions, notable imbalances between rural and urban centres for hospitals and higher health centres which are mandated to provide new born services (MOH, 2008)

In Uganda according to the established health system, lower grade facilities are mandated to give limited care services despite being closer to rural communities which are most at risk of maternal and new born mortality however the availability, access and quality of services are affected by insufficient numbers of trained staff and uneven distribution of available skilled personnel (Save the children, 2008).

Several studies done for example Titaley. C et al, 2010; Dhakal .S et al, 2007; Regassa .N, 2011 also acknowledge that physical distance to the health facility does affect women and newborns from receiving maternal health services.

The place of birth also determined chances of women having postpartum checks. According to UDHS 2011, women who gave birth in a health facility (42%) were more likely to receive PNC from skilled professionals. Gebeyehu A et al 2013 asserts that at the health facility level the availability, readiness, and quality of services as well as the type, competence and caring behaviour of providers are very important for maternal services. However, in many developing countries health facilities are not performing the expected functions according to their level and furthermore, there is a huge gap in the competence of health workers categorized as skilled providers. Gebeyehu A et al, 2013 argues that to ensure provision of skilled maternal health services, an enabling environment which include; functional health facilities and a reliable referral system to link the different levels, awareness and readiness of the community for utilizing skilled care as well as supporting the policy and political commitment is needed.

Mrisho M, 2009 in some of his study findings revealed that majority of women who gave birth at home did seek PNC services but reported three to seven days after child birth and some women reported going for the service after two or three weeks. The women' main reasons for the delay was that they wanted the baby's cord stump to first fall off and also to allow the mother and baby regain energy lost during child birth.

Quality of services. World Bank 1999 publications reveal several scholars acknowledging that quality of services in general significantly affects the demand for medical care. It further identifies some common measures of quality which include availability of essential drugs,

electricity, running water, basic adult and child services, presence of key personnel and basic equipment. This has seen several people leaving lower cost, lower quality facilities especially government facilities for expensive higher quality care. In Uganda like several other developing countries, provision of quality maternal health services that includes the early postpartum period is faced by severe constraints including lack of basic equipment and essential drugs, resuscitation kits, special care support for new borns with complications especially in lower grade facilities that are closest to the communities but is not also uncommon in higher grade facilities (MOH, 2008).

2.5 *Studies reviewed about postnatal care*

Rahman et al, 2011 carried out a study on factors affecting utilization of postpartum care among young mothers in Bangladesh and established a stronger influence of the mothers' education and antenatal care on the utilization of postpartum care. This is in agreement with Yawar A et al, 2004 who also did a study on factors affecting utilization of antenatal care among women in urban slum areas of Islambad and concluded that utilization of antenatal care facilities is associated with the educational status of women and their husbands. Rahman *et al* 2011 also made an analysis that concern of the husband or family about pregnancy complications showed a significant and positive impact on the utilization of postnatal care. Multivariate analysis showed that mothers age at delivery, residence, education, antenatal care, place of delivery, wealth, husband's occupation and mother's permission to go to the health centre alone were likely to affect utilization of postpartum care services. Authors recommended urgent need in Bangladesh for an awareness-raising program highlighting the importance and availability of postpartum care, strategies to improve the availability and accessibility of antenatal care services and skilled

birth attendance including focused financial support, high priority to women's education and enable women to exercise their rights to control their freedom of movement, own healthcare and access to economic resources.

Simkhada *et al*, (2008) did a study on factors affecting the utilization of ANC in developing countries. The study identified factors affecting uptake of ANC such as maternal education, husbands' education, marital status, availability, cost, household income, women's employment, media exposure and having a history of obstetric complications. Some of the findings were that cultural beliefs and ideas about pregnancy did have an influence on ANC use. It was also mentioned that whereas women of higher parity tend to use ANC less, there is interaction with women's age and religion. The authors concluded that adequate utilization of ANC cannot be achieved merely by establishing health centres but women's overall status in terms of social, political and economic need to be considered.

Babalola S and Fatusi A (2009) carried out a study in Nigeria to examine the determinants of maternal services utilization with a focus on individual, household, community and state level factors. As per the results of the study, approximately 60.3% of mothers used ANC service at least once during their most recent pregnancy, 43.5% were attended by a skilled attendant during pregnancy and 41.2% received PNC. The study revealed that education is the only individual level variable that is consistently a significant predictor of service utilization, while social economic level is a significant predictor at house hold level. At the community level, urban residence and community media were strong predictors. Other inconsistent predictors at individual level included the woman's age at the birth of the last child, ethnicity, ideal family size, and approval of family planning. At community level, there is prevalence of the small

family norm and at the state level variable there is the ratio of PHC to the population. The authors concluded that effective interventions to promote maternal health service utilization should target individual, household, community and policy level factors.

Nankwanga A (2004) did a hospital based research about factors influencing PNC services in Mulago and Mengo hospitals, a government and private hospital respectively in Uganda. Some of the findings of the study were;

Awareness of PNC services significantly ($p < 0.001$) influenced the utilization of PNC. The chi square test indicated a statistically significant ($p = 0.002$) association between the distance from hospital and attendance of PNC services. An association between social demographic factors and PNC was also done and the chi-square test showed no relationship ($p = 0.297$) between the age of a mother and attendance of PNC. The chi-square test also showed statistically significant ($p = 0.001$) relationship between husbands employment and utilization of PNC services. As far as the education of the mother is concerned, the chi-square test showed a statistically significant relationship ($p = 0.003$) between education of a mother and utilization of PNC services.

A study on utilization of postnatal care for newborns and its association with neonatal mortality in India was done and conditional logit regression models were used to examine the association of PNC with neonatal mortality. The findings suggested no association between check-up of newborns within 24 hours of birth and neonatal mortality. The place where the newborns were examined however was significantly associated with neonatal mortality. It was also noted that children of mothers who were advised on the ' kangaroo care' after birth during their antenatal

sessions were significantly less likely to die during the neonatal period compared to those children whose mothers were not advised about the same time. The authors also concluded that findings were relevant because 'keeping baby warm' was one of the most cost-effective and easiest interventions to save babies from dying during the neonatal period especially for a country like India where the neonatal mortality rates are unacceptably high (Singh et al 2012).

Rayner A *et al* (2010) did a study on state wide review of postnatal care in private hospitals in Victoria, Australia using a mixture of design methods. Some of the findings established were that private hospital care providers reported that postnatal care was provided in very busy environments and that meeting the aims of postnatal care was difficult in the context of increased acuity of PNC, prioritizing of other areas over PNC, high midwife to women ratios as well as the number and frequency of visitors. Noted also was that Private hospitals are also more likely to employ staff other than midwives, have fewer core postnatal staff and have a greater dependence on casual and bank staff to provide postnatal care. The authors recommended that there is need to review and monitor the adequacy of staffing levels and to develop alternative approaches to postnatal care.

Sirtin S *et al*, (2013) did a study on reaching mothers and babies with early postnatal home visits: The implementation realities of achieving high coverage in larger scale programs using cross sectional surveys done in Bangladesh, Malawi and Nepal. Findings revealed that mothers and babies were more likely to receive a postnatal home visit within three days if the mother received at least one home visit during pregnancy, the birth occurred outside a health facility, and the mother reported a community health worker was notified of the birth. Some of the

recommendations of the authors was that in all settings, programs must evaluate what community delivery systems can handle and how best to utilize them to improve PNC access.

Mrisho M *et al*, (2009) carried out a study in Tanzania on the use of antenatal and postnatal care; perspectives and experiences of women and health care providers in the rural south and noted that postnatal services are perceived to be both important and routinely provided however unless there is serious issue related to maternal complications, these services targeted the child and little attention was paid to the mother. PNC was viewed by the mothers and health care providers as being important for the baby. The author also concludes that antenatal and postnatal care can offer important opportunities for linking the health system and community by encouraging women to deliver with a skilled attendant. This is also in line with several other authors like Rahman *et al*, 2010 who acknowledged that ANC visits would have a positive impact on the utilisation of postpartum health services for young mothers because with adequate counselling during these visits, mothers become more aware of possible postpartum complications and sources of quality health services for treatment of these complications.

A study carried out by Singh A *et al*, (2012) on social Economic inequalities in the use of postnatal care in India and some of the findings were that postnatal care for both mothers and new borns was substantially lower than care received during pregnancy and child birth. It also established that mothers who had home births were significantly less likely to have received PNC than those who had facility births with significant differences across the social –economic strata. This is in agreement with Mrisho M, 2009 whose study on use of antenatal and postnatal care-perspectives and experiences of women and health care providers in rural southern Tanzania

and concluded that attention must be paid to the social and economic conditions that keep women from exercising their right to utilize existing services. Singh A 2012 findings suggested the need for strengthening PNC services to keep pace with advances in coverage for care at birth and prenatal services through targeted policy interventions.

Bick D et al, (2011) did a study on improving inpatient postnatal services; midwives views and perspectives of engagement in a quality improvement initiative using a continuous quality improvement (CQI) approach which was adopted to support a systems care and process change to inpatient and care on transfer home in a large district general hospital with around 6000 births a year. Some of the conclusions of the study were that Midwives play a lead role in the planning and organisation of in-patient postnatal care and it was important to obtain their feedback on whether revisions were pragmatic and achieved anticipated improvements in care quality. The initial involvement of midwives also ensured priority areas for change were identified and implemented. Their subsequent feedback highlighted further important areas to address as part of CQI to ensure best quality care continues to be implemented.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the study design, sources of data, the study population, sample size calculation, sampling procedures, study variables, data collection techniques, data collection tools, plan for data analysis, quality control issues, plan for dissemination, ethical issues and limitations of the study.

3.1 Study design

This was a cross sectional survey that adopted both qualitative and quantitative methodologies. It involved studying a certain cross section of the population at one point in time and out comes would be generalized to the entire community.

3.2 Sources of data

Primary data was collected from mothers with children aged two years and below in communities of Namabya sub county. This mainly involved asking the interviewee a series of questions and recording the responses.

Secondary data was also a useful resource that was adopted.

3.3 Study population

The target population were mothers with children aged two years and below in the sampled population residing in Namabya sub-county at the time of the study.

A focus group discussion was carried out comprising of mothers of reproductive age (15-49 years) but who had delivered at least two years presiding the study. The key informants were

comprised of Health Personnel from health facilities and comprehensive nurses were interviewed.

3.3.1 Inclusion criteria

Mothers with children aged two years and below who resided in Namabya sub-county and gave informed consent to the study.

3.3.2 Exclusion criteria

Mothers who were sought to be eligible but were not mentally sound or were ill or for some other reasons were unwilling to participate were excluded.

3.4 Sample size calculation

The sample size was derived using the formula below (Bennett et al 1991).

$$C = \frac{P(1-P)D}{S^2b} \quad C = \frac{0.36(1-0.36) \times 2}{0.04^2 \times 16} \quad C = \frac{0.4608}{0.0256}$$

C = 18 villages

Where:

P = estimated prevalence of utilisation of postnatal care services in Uganda was 36% (UDHS, 2011).

1-P = 100-P = (64%)

D = design effect (2)

b = number of respondents per cluster is 16

C= Number of clusters/villages (18)

δ = maximum error the investigator was willing to allow (4%) = 0.04

Sample size = $18 \times 16 = 288$ mothers

3.5 *Sampling procedures*

Sampling technique: Multi-stage sampling technique was used whereby villages were used as the primary sampling units and households were used as the secondary sampling units. Purposive sampling of the sub county was used. All the three parishes in Namabya sub-county were considered. To determine the number of villages per parish, probability proportional to size sampling was used. The villages were randomly selected. The random walk method was used at the household level to select mothers with children less than two years.

3.6 *Study Variables*

In this study assessing the uptake of facility based postnatal care services by mothers in communities of Namabya Sub County formed the dependent variable. The independent variables included individual related factors like age, marital status, level of education, parity, place of delivery. Health service factors which were also an independent variable considered factors like accessibility, affordability, availability of essentials, infrastructure, and attitudes of health workers. Other independent variables included knowledge about PNC and expected benefits of attendance.

3.7 *Data collection techniques*

The study used face to face interviews, key informants (2 health officers) and focus group discussions (1 FDGS).

3.7.1 Training Research Assistants;

A total of seven research assistants were identified and trained on how to conduct the interviews. It was important that those who were selected could speak both English and Lugisu so that translation of questions from English to the local language was made easy. The questionnaire was reviewed together with the research team to ensure a common understanding of the questions and interpretation as well as clarification of any questions that were not clear.

3.7.2 Data collection tools

These included;

i) Administered questionnaires

Structured questionnaires that consisted a layout of questions that the interviewer would ask and responses documented were used. This was an appropriate method to use bearing in mind that some of the respondents were illiterate or semi illiterate and hence gave the researcher chance to explain questions that were misunderstood or unclear.

ii) Key informants' and focus group guides

These were composed of key areas of concern or topics and questions that were asked during the interactive sessions with the key informants and focus group members

3.8 Plan for data analysis

Questionnaires used in the survey were checked for completeness and errors. This was done on a daily basis during the course of data collection. Data entry was done using Epi data Version 3.1 which also acted as an electronic back up for the questionnaires and was later exported to statistical package for social sciences (SPSS Version 16) for a more detailed analysis. To answer the first and second objectives, proportions were used .To answer the third and fourth, the chi-

square test and crude odds ratios were used to determine the strengths of association. P-values were determined using Pearson chi-square test to gauge the statistical significance if less than 0.05.

3.10 Quality control

The data collection instruments were pre-tested by the researcher to ensure consistency, estimated time of administering the interview and making necessary changes to the questionnaire. All in all pretesting was to ensure validity and reliability of the data collected

3.11 Plan for dissemination

After completion of the study, copies of the report would be given to the academic institute which is International Health Services University (IHPM), and Manafwa District Health Office.

3.12 Ethical issues

An introduction letter from the academic institution was acquired which gave a brief introduction about the researcher and intent of the research as well as approval to go ahead with data collection. A letter from Manafwa District Local Government (Office of the Chief Administrative Officer) authorities authorizing the study was acquired which was presented to the local Council authorities of Namabya Sub County.

The respondents were assured of confidentiality and anonymity of their responses and were required to consent to the study by signing on the consent form.

CHAPTER FOUR

PRESENTATION OF RESULTS:

4.0 Introduction

This chapter presents results from the study. A total of 288 questionnaires were received from the research assistants making it a 100% response rate.

4.1 Socio-demographic characteristics of participants

The median age of the participants was 29 (range = 15-49) years. Most of the participants (26.7%) were aged 35 years and above followed by 25-29 age group at 25.3%. A large proportion of participants were married/cohabiting (76.7%), had attained primary education (54.5%), were Anglicans/Protestants (42.7%), were farmers (49%), did not earn a monthly income (91.7%) and most of their spouses engaged in farming for a living (39.8%) as shown in Table 1.

Table 1: Socio-demographic characteristics of study participants

Variable	Frequency (n=288)	Percentage
Age Median (range)	29 (15-49)	
15-19	25	8.7
20-24	61	21.2
25-29	73	25.3
30-34	52	18.1
≥ 35	77	26.7
Marital Status		
Single	24	8.3
Married/Cohabiting	221	76.7
Widowed	13	4.5
Divorced/Separated	30	10.4
Level of education		
Never attended	22	7.6
Primary	157	54.5
Secondary	93	32.3
Tertiary/University	16	5.6
Religious affiliation		
Catholic	80	27.8
Anglican/Protestant	123	42.7
Moslem	19	6.6
Pentecostal/Born Again	53	18.4
Seventh Day Adventist	13	4.5
Occupational status		
Unemployed	65	22.6
Employed	22	7.6
Self Employed	30	10.4
Causal Labour	17	5.9
Farming	141	49.0
Student	13	4.5
Earn a monthly income		
Yes	24	8.3
No	264	91.7
Occupation of the spouse (n=221)		
Nothing	6	2.7
Employed	31	14.0
Causal Labour	54	24.4
Farming	88	39.8
Student	2	0.9
Selling goods/business	36	16.3
Other (Carpenter, Bodaboda, Electrician)	4	1.8

4.2 Individual factors related to PNC attendance

Table 2 shows other factors that are likely to influence attendance and considered variables such as parity, attendance of ANC, reasons for choice of place of delivery, distance to the nearest health facility and the

type of personnel who assisted during delivery. The median of parity was 3 (range=1-3) children. Most of the respondents had between 3-4 children (38.9%). A high percentage of women 83.7% attended ANC. Regarding place of delivery of the youngest child at the time of the study, most mothers 27.4% delivered at an NGO facility while 20.1% and 20.8% delivered at a public health facility and at home respectively. The reasons advanced for choice of facility were mainly accessibility at 36.1%. Most mothers 77.8% reported the nearest distance to a health facility being less than 5km. During delivery most participants 51.4% were assisted by a midwife/Nurse.

Table 2: Individual factors related to PNC attendance

Variable	Frequency (n=288)	Percentage
Parity Median (range)	3 (1-11)	
1-2	90	31.2
3-4	112	38.9
5 and above	86	29.9
Attended ANC		
Yes	241	83.7
No	47	16.3
Place of delivery of youngest child		
Public Health Facility	58	20.1
Private clinic	55	19.1
Ngo clinic	79	27.4
TBA's Home	34	11.8
At Home	60	20.8
Other (On the way)	2	0.7
Reasons for choice of facility		
Affordable	101	35.1
Accessible	104	36.1
Medical staff availability	57	19.8
Costly	13	4.5
Personal wish	9	3.1
Others (No time, none)	2	0.7
Distance to the nearest facility		
Less than 5 km	224	77.8
5 km	16	5.6
More than 5km	48	16.7
Assistance at delivery		
Doctor	10	3.5
Midwife/Nurse	148	51.4
Clinical Officer	24	8.3
TBA	45	15.6
Other (Self, Relatives)	61	21.2

4.3 Awareness of PNC services among mothers

Most of the participants (60.8%) were aware of PNC services considering the outcome from the field questionnaires as shown in table 3. This was in agreement with the discussion from the key informant:

“Most of the mothers are aware of postnatal care services and we receive on average about 6 mothers on a day and referrals made for those with complications” (Registered comprehensive Nurse, Buwasunguyi Health centre).

There was however some responses that were given by some members during the FGD that showed that there was some level of ignorance regarding PNC for example during a focus group discussion with mothers from Bumandali parish one said:

“It is a time when one is not supposed to work” (FGD, Bumandali Parish)

Of those who said they were aware of PNC services (n=175) and were asked about nature of services provided, most 100% mentioned immunization followed by family planning at 92.6%, health education and counselling 73.7% and physical examination of the baby and mother at 66.3% and 58.3% respectively. Most of the mothers mentioned a health worker as their source of information about PNC (66.6%).

Those that utilized PNC services were 58.3% and for those who didn't utilize PNC services, 37.5% gave cost as a reason and 30% said they didn't have time as shown in Table 3. During the FGD with mothers, poverty, distance to referral facilities, lack of qualified staff, lack of drugs and poor facilities were also mentioned which concurs with some of the earlier findings from interviewer administered questionnaires.

One mother in the FGD said;

“We are going through a lot of poverty and don't have money, so many of us will only go back to the health facility if we develop problems. It is also frustrating that sometimes when you go to the facilities you are asked to buy everything and transport is also difficult in case of referral. Power supply is also a problem in some of these facilities and no experienced health personnel instead you find young interns” (FGD, Bumandali Parish)

One key informant outlined some of the challenges like not going to health facilities because of outreach services and some don't return because of some cultural perceptions which were also contributory factors to non-attendance of PNC.

“Community outreach programs are good but are also a challenge in that some mothers dodge coming to the health centres for PNC and instead wait for immunizations during these outreach programs. Others have a perception that the nurses are young. Culturally some mothers avoid giving birth in facilities because they are made to lie on the bed yet they believe they should squat” (Registered comprehensive Nurse, Buwasunguyi Health centre)

Another challenge faced was the work of TBAs who conduct deliveries out of health facilities. Therefore mothers who are assisted by TBAs don't go for postnatal care services as reported by one key informant who said;

“Many of the mothers stubbornly don't return back even after educating them during ANC and TBAs have continued to pose a challenge because when some of these mothers go to them, some never return back to the facilities” (Registered comprehensive Nurse, Buwasunguyi Health centre)

Table 3: Awareness of post natal care services

Variable	Frequency	Percentage
Aware of post natal care services (n=288)		
Yes	175	60.8
No	113	39.2
If yes, for what services (n = 175)*		
Immunisation	175	100.0
Family planning	162	92.6
Health education and counselling	129	73.7
Physical examination of baby	116	66.3
Physical examination of mother	102	58.3
Physiotherapy	42	24.0
Source of information (n = 175)*		
Health worker	116	66.3
Radio	54	30.9
Television	3	1.7
Print media	8	4.6
Relative/family member	25	14.3
Friend	18	10.3

**Multiples responses were allowed*

4.4 PNC services utilized by mothers

Table 4 shows a breakdown of services for those that utilized PNC (n=168). Participants that received immunization for their children were the majority at 99.4%, family planning 75.9%, health education and counseling 78.8%, physical examination of the baby and mother at 73.9% and 61.8% respectively. Information from the key informant at one of the health facilities reaffirms some of these findings:

“At 6 weeks we check the mothers abdomen, breast examination to look out for any engorged breasts, the perineum is also checked to ensure its intact, mothers are asked of any abnormal discharge, family planning is discussed and also HIV testing. For the babies we do immunizations, advise mothers on hygiene and nutrition, breastfeeding (exclusive) and finally we also enlighten mothers about outreach programs” (Registered comprehensive Nurse, Buwasunguyi Health centre)

Majority of the mothers (75.6%) said they benefited from PNC by gaining knowledge about Infant care followed by knowledge about Family planning (69.0%). This was in agreement with majority of the responses from the FGD who said;

“When we go back to the health facility, our children get immunized, they check us for any fevers and excessive bleeding, we are told about how to look after the babies, family planning and also our uterus is checked” (FGD, Bumandali Parish)

For those participants that attended PNC services, 96.4% said they were satisfied with them. The main problems reported after deliveries were chronic pain at 25.7% followed by excessive bleeding after delivery at 24.0%.

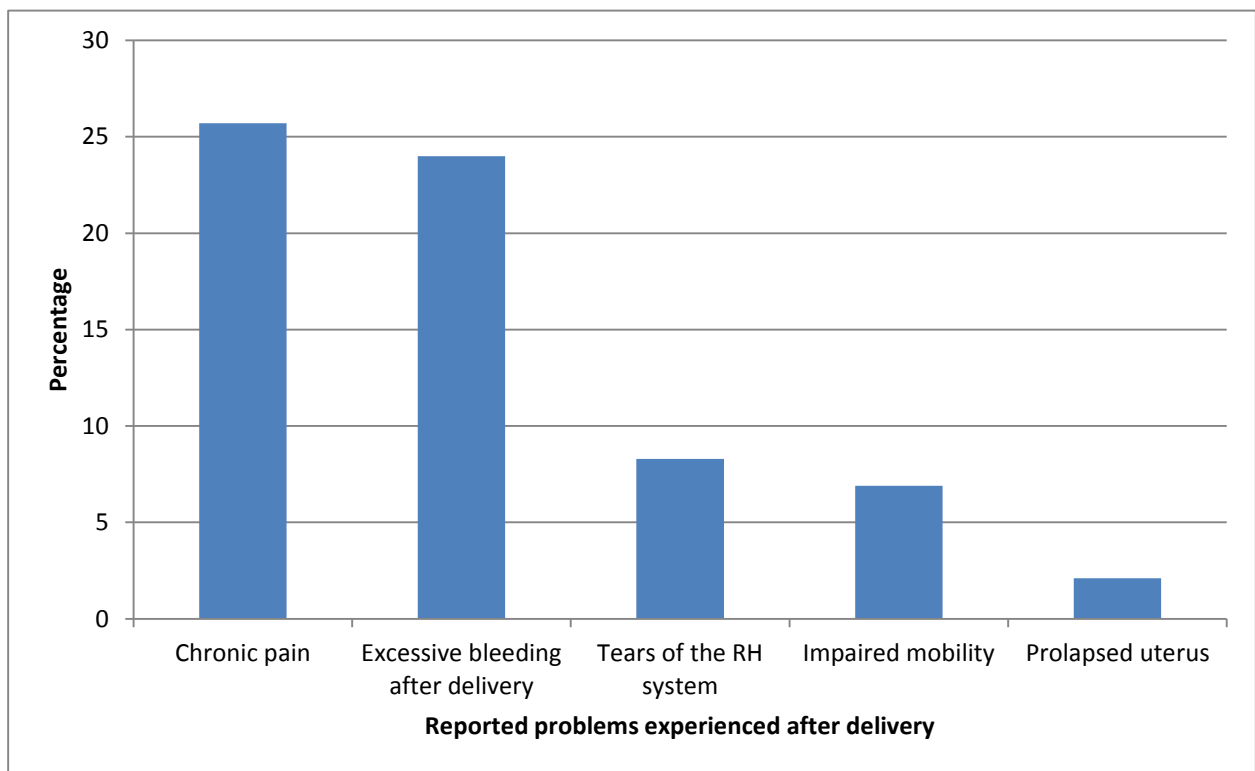
Table 4: Type of postnatal care services utilized by mothers

Variable	Frequency (N=168)	Percentage
Utilized postnatal care services (n=288)		
Yes	168	58.3
No	120	41.7
Reasons for non utilization (n=120)*		
Cost	45	37.5
No time	36	30.0
Distance is long	25	20.8
Attitude of health worker	25	20.8
Long waiting time	18	15.0
Husband refused	18	15.0
Lack of essential drugs	5	4.2
Poor facilities	4	3.3
If yes what services (n = 168)*		
Immunisation	165	99.4
Family planning	126	75.9
Health education and counselling	130	78.8
Physical examination of baby	122	73.9
Physical examination of mother	102	61.8
Benefits (n = 168)*		
Early detection of baby's illness	91	54.2
Detection of maternal illness	63	37.5
Knowledge of infant care	127	75.6
Knowledge of family planning	116	69.0
Were you satisfied with these services offered (n = 168)		
Yes	162	96.4
No	6	3.6
Were these services free(n = 168)*		
Yes	128	76.2
No	40	23.8

**Multiples responses were allowed*

The participants were asked about problems that they had experienced after delivery of their youngest child and these were summarized in figure 1. Chronic pain like in many births else where was the highest problem reported after delivery (25.7%) followed by excessive bleeding at 24.0%. It was important that mothers were asked of problems experienced during delivery as some studies like that done by Kabakian T et al 2005 acknowledged that having a problem increased the likelihood of having a postnatal visit probably because curative care is more likely to be accessed than preventive care.

Figure 1: Reported problems experienced by mothers after delivery.



4.5 Individual and Service factors associated with utilization of PNC services

Table 5 shows a summary of factors associated with utilization of PNC services. Respondents who had attended education above primary school were more likely to have utilised postnatal care services compared to those who had attained below primary school education (COR = 26.10, CI: 3.43-198.85). In addition, respondents who were employed/self-employed/causal labourers and those who were engaged in farming were more likely to utilize post natal care services compared to those who were unemployed (COR = 22.11, CI: 2.83-172.51); respondents who had given birth to more than 5 children were less likely to utilize post natal care services compared to those who had had 1-2 children (COR = 0.53, CI: 0.29-0.96). Respondents who attended ANC while pregnant were more likely to utilize post natal care services than those who did not attend ANC (COR = 9.63, CI: 4.30-21.57). Respondents who did not deliver at a health facility were less likely to utilize post natal care services than those who delivered at a health facility (COR = 0.19, CI: 0.11-0.33). Mothers who were assisted by a TBA/Self/Relative were less likely to utilize PNC services than mothers who were assisted by a doctor/midwife/nurse/clinical officer (COR = 0.19, CI: 0.11-0.33). Respondents who were aware of Post natal care services were more likely to utilize post natal care services than respondents who were not aware of post natal care services (COR = 25.49, CI: 13.53-48.04).

Table 5: Factors associated with utilization of PNC services

characteristics	-n-	% used PNC services	COR (95.0% C.I.)	P-value	
Age group	15-19 years	25	56.0	1.0	
	20-24 years	61	57.4	1.06 (0.41-2.70)	0.907
	25-29 years	73	64.4	1.42 (0.56-3.58)	0.457
	30-34 years	52	53.8	0.92 (0.35-2.39)	0.859
	> 35 years	77	57.1	1.05 (0.42-2.60)	0.920
Marital status	Single/Widowed/Separated/Divorced	67	56.7	1.0	
	Married/Cohabiting	221	58.8	1.09(0.63-1.89)	0.759
Education status	Never attended	22	4.5	1.0	
	Primary	157	55.4	26.10 (3.43-198.85)	0.002
	Secondary	93	69.9	48.75 (6.25-380.37)	0.001
	Tertiary/University	16	93.8	315.0 (18.22-5445.12)	0.001
Religious status	Catholic	80	61.2	1.0	
	Anglican/Protestant	123	61.0	0.99 (0.56-1.76)	0.969
	Moslems/SDA/Born Again	85	51.8	0.68 (0.37-1.26)	0.220
Occupational status	Nothing/Student	78	48.7	1.0	
	Employed	22	95.5	22.11 (2.83-172.51)	0.003
	Self Employed	30	53.3	1.20 (0.52-2.80)	0.668
	Causal Labour	17	52.9	1.18 (0.41-3.39)	0.752
	Farming	141	58.9	1.51 (0.86-2.63)	0.149
Parity	1-2	90	64.4	1.0	
	3-4	112	60.7	0.85(0.48-1.52)	0.587
	5 and above	86	48.8	0.53(0.29-0.96)	0.038
ANC attendance	No	47	17	1.0	
	Yes	241	66.4	9.63(4.30-21.57)	0.001
Distance to Health facility	<= 5km	240	59.2	1.0	
Place of deliver of last child	5 km	48	54.2	0.82(0.44-1.52)	0.522
	Health Facility	192	71.4	1.0	
	TB's home/At home/On the way	96	32.3	0.19(0.11-0.33)	0.001
Assistant at delivery	Doctor/Midwife/Nurse/Clinical officer	182	73.1	1.0	
	TBA/Self/Relatives	106	33.0	0.18(0.11-0.31)	0.001
Aware of PNC services	No	113	17.7	1.0	
	Yes	175	84.6	25.49(13.53-48.04)	0.001

CHAPTER FIVE

DISCUSSION:

5.0 Introduction

This chapter comprises the discussion from the findings of the study with reference to the overall objective which was to assess the uptake of facility based postnatal care services by women in communities of Namabya sub county, Manafwa district. A total of 288 mothers were interviewed which generated a 100% response rate. Different studies done about postnatal care show variations in terms of level of utilization. In this study the level of PNC utilization was at 58.3% which was higher compared to the national PNC prevalence at 36% (UDHS 2011) and much lower than that of developed countries that is high at 90% (Dhakal et al 2007)

5.1 Individual and Service factors associated with utilization of PNC services

Knowledge and awareness

Utilization of maternal health services is sought to be affected by the level of knowledge and awareness that the mothers have about existing health services. Knowledge empowers women with information about the importance of skilled maternal health services and as expected would have an effect on positive behaviour change and individual attitudes. The study indicates awareness levels about PNC at 60.8% with their biggest source of information coming from health workers and those that utilized the services were 58.3%. Awareness of PNC had a significant association with utilization of PNC which was in agreement with Dhakal et al, 2007 who mentioned lack of awareness as the main reason for non-use of PNC health services, Gebeyehu A 2013 also observed that awareness about health facilities to get skilled professionals was a significant predictor of both skilled antenatal and delivery care. When women perceive the

importance of PNC and have accessible health facilities, it will likely improve utilization. The government of Uganda through MOH and complimented by several NGOs like Uganda health marketing group (UHMG), UNAIDS, Marie stops Uganda among others are implementing a lot of maternal health campaigns with a vision of improving infant and maternal health but this should be extended to the rural areas.

The argument above about knowledge and awareness was more inclined on an individual angle of mothers or recipients of PNC however there is a need to also evaluate knowledge on the side of the service providers also. A situation analysis of new born health in Uganda done by the MOH 2008 acknowledges that not all staff have sufficient skills to provide the necessary services to save the lives of newborns and mothers and that there exists large knowledge gaps among health providers especially in the areas of resuscitation, provision of oral and parental antibiotic treatment for new borns and the management of low birth weight babies. These situations are worse in the rural health systems in Uganda and would perhaps call for intensified training of health professionals targeting those at rural facilities where majority of maternal and child deaths occur.

Antenatal care attendance

ANC uptake was high among mothers in communities of Namabya (83.7%) though the situation was different with the number of women who attended PNC (58.3%). Antenatal care attendance was found to have a significant association with utilization of PNC. This was in agreement with other studies for example (Rahman et al 2011; Kabakian & Campbell, 2005; Mosiur et al, 2010). The high ANC uptake is in agreement with results from the recent UDHS 2013 which puts it high at 95%. WHO recommends a minimum of four ANC visits, preferably starting before the

twelfth week of pregnancy, which incorporate appropriate evidence-based interventions. Antenatal care can have a positive impact on the utilization of PNC health services in that with adequate counselling during antenatal visits, mothers become more aware of possible postpartum complications and also influence mothers to identify with trained attendants during and after delivery.

Much as the uptake of ANC among mothers in Namabya Sub County was fairly high, the numbers of deliveries that occurred in health facilities were low. According to one of the key informants at one of the major facilities, TBAs contributed a lot to this trend.

It was interesting to note that statistics of those that gave birth in a Health facility, public or private and those that gave birth outside the health facility that is TBA/Home/on the way were almost the same statistically.

The results showed a significant association between place of delivery and utilization of PNC which was in agreement with other studies done which show a significant association between those that delivered in a health facility and utilization of PNC. From the focus group discussion, it was noted that several factors were responsible for this kind of trend ranging for limited health professionals at the facilities, transport issues, unavailability of essentials at the facilities including drugs, electricity among others. This was also confirmed by the key informant who was a comprehensive nurse at one of the facilities and admitted that they are understaffed and have a lot of workload and situations worsened when some of their members went on leave. This argument is also backed by MOH et al, 2008 whose analysis also found that poverty was the most frequent reason for mothers' failure to prepare and failure to give birth in a health facility

and that community leaders observed that despite advice from health workers, many mothers especially young mothers were poorly prepared for delivery and would likely go to the TBAs where they would not be scolded if they had no clean delivery kit.

According to Gebeyehu A 2013, at the health facility level the availability, readiness, and quality of services as well as the type, competence and caring behaviour of providers are very important for maternal services. However, in many developing countries health facilities are not performing the expected functions according to their levels. This was in agreement with the MOH 2008 report that also affirms that the provision of quality immediate and early postnatal care services was constrained by a lack of basic equipment, such as thermometers and weighing scales, as well as regular stock-outs of basic supplies and drugs. Inadequate integration of new born care into existing services, particularly in regard to drug supply protocols at lower level health facilities, contributed to the limited availability of new born care services, including pre-referral care at first-level facilities. During the focus group discussion, several participants were demotivated to go to the health facilities because they were requested to purchase almost all necessities and besides transport seemed to be a big issue in times of referral.

Education

Education status from primary and above was significantly associated with use of PNC services. Mothers who had attained above primary education were more likely to utilize PNC services than mothers who had not attained at least primary school level. This association is consistent with findings from other studies like Kabakian et al, 2005, Rahman et al 2011, Dhakal et al 2007, UDHS 2011. The argument advanced for this trend is that education empowers women to overcome barriers to use health services via better information. In addition women who have attained a basic educational level are in position to make sound judgments and informed

decisions about issues relating to their health and that of the baby. According to Regassa N 2011, education likely enhances female autonomy and helps women develop greater confidence and capability to make decisions about their own health. Women who are literate are more likely to seek out higher quality services and have greater ability to use health care inputs that offer better care. MOH, 2008 acknowledges that maternal education affects many aspects of new born life, including individual, social economic and health behaviour. It also provides girls with sexual and reproductive health and rights information, in addition to peer support programmes that develop life skills with long-term benefits for them and their new born.

Employment/ occupation

Findings from the study showed that employment had a significant association with utilization of PNC. This is explained by the fact that women who are employed or earn an income not only have the ability to use quality health services but also gain empowerment to take part in the decision making processes about health care in the family (Dhakal et al, 2007).

The above argument also looked at occupation of the husband as a significant factor in influencing the utilization of PNC. Authors like Rahman M, 2010 in one of his findings asserted that a husband having a professional job, technical or managerial job was significantly associated with the mother seeking a check-up within two days of delivery. Though the biggest proportion reported not earning a systematic monthly income, they did acknowledge getting earnings from their farming.

Parity

Findings show that women who had given birth to 5 or more children were less likely to utilize PNC services than women who had given birth to fewer children (1-2). This was in line with Nigatu R, 2011, UDHS 2006 which showed lower parity being associated with uptake of

postpartum services. First time mothers are usually more anxious to get health care and have less time demands from older children (Kabakian et al, 2005). It is also believed that women with several children have gone through different history of scenarios with pregnancies and such women will always perceive a need for PNC at a health facility when they think they have a complication. Other studies have also reported that having more children may cause resource constraints which has a negative effect on health care utilization. Kabakian also reaffirmed that having a health problems increased the likelihood of having a postpartum visit probably because curative care is more likely to be accessed than preventive care (Kabakian et al, 2005).

Assistant at delivery

Mothers who were assisted by health workers during delivery were more likely to utilize PNC services than those that delivered without assistance from a health worker. Like several other studies, Gebeyehu A 2013 asserts that Women having at least one antenatal care in previous pregnancies or skilled antenatal care in their recent pregnancy were about two times more likely to have birth attendance by a skilled provider. Similar to the antenatal care services, women who had awareness about health facilities and ability to get skilled professionals used significantly more delivery care by a skilled providers compared those that were not aware. Since the main source of information about PNC was from health workers, then mothers who were assisted by health workers received this information and were more likely to utilize PNC services. Findings from the study especially during the focus group discussions indicate a need to carry out awareness campaigns about the importance of delivery at health facilities but also a need to revamp the existing public facilities in Namabya so that mothers have the motivation to attend maternal services in these facilities. Important to also note is that mothers who are assisted by a

health professional usually get an appointment to return for PNC hence can easily influence the uptake.

Distance / access to facilities

The highest number of respondents reported that the distance to the nearest health facility was not more than 5km yet the proportion of those that attended PNC was only 58.3%. Results further showed no association between the distance of a health facility and utilization of PNC implying there are other underlying reasons for the low uptake despite the distance to the facility. Contrary to some studies done, these findings were in agreement with Dhakal et al, 2007 who did a study in Nepal and found an insignificant association between health facilities being far and PNC uptake. The same study however acknowledges that women living within a kilometre of a health facility were more likely to consult medically trained providers than those living further away.

5.2 Challenges affecting PNC uptake in Namabya

In this study, several barriers were identified as per the results of the study and these ranged from service factors to individual related factors.

Inadequate health facilities as well as limited supplies in the few health facilities that exist were a major problem of concern to the mothers. In Uganda, the delivery of health services was decentralized to the district and sub-district levels to bring services closer to the people with lower grade facilities being mandated to give limited care services despite being closer to the rural communities but most of them are not functioning efficiently. The HCIs according to MOH are mandated to provide out patient care, ANC, immunization and outreach services yet many of these facilities lack water and soap as well as essential medicines and supplies yet they

are the closest points of care to many Ugandans especially in rural areas. In Namabya, the only health centre II that exists is non-functional leaving mothers with other options of NGO/Faith based facilities and other health facilities in the neighbouring sub counties. Limited power supply was also mentioned as a major problem.

Transport was a concern especially in times of referral. Despite the fact the Namabya by virtue of having several hills and the road network not so well enhanced creates a transport challenge. Some mothers reported the issue of transport being worse during abrupt onset of labour especially at night.

Limited health personnel and negative attitude of some of the health workers. The Ministry of Health estimates indicates that there are only 12 midwives and 22 nurses per 10,000 patients in Uganda meaning that adequate coverage for essential maternal health services is difficult. According to one of the key informants who was a comprehensive nurse, heavy workload was also a constraint.

Illiteracy; According to the results the biggest proportion of mothers were at primary level of education and yet better educational status is believed to be an important factor for better awareness and positive attitude related to maternal health service utilization . The education system like it is in several rural areas is faced with several challenges bearing in mind the poverty level that prevail in several rural communities.

Cultural factors; One of the key informants who was a HW said some women avoided giving birth in HFs because they are made to lie on the bed as opposed to squatting. There are several other practices that take place during and after child birth many of which are linked to unskilled

care and poor hygienic practices at home and at TBA facilities and several of these puts the lives of new borns at risk.

The impact of community outreach programs; According to some HWs in Namabya, several mothers waited for immunizations during these programs rather than going back to HFs and yet that was an opportunity for integrated postpartum care for both the mothers and babies.

Poverty; This as mentioned by several mothers during the focus group is a characteristic of several other rural areas in Uganda. It is common that several households lack employment or income generating activities that can comfortably allow them to prioritize some funds for health emergencies. It's also known that the existing services are bound to experience pressure from the increasing population growth which is one of the highest rates in the world.

In conclusion, several factors affect service delivery in many of the health centres but the underfunding of the general health sector in Uganda especially at the district levels constrains the implementation of maternal, new born and child health services. Several remote and poor districts which constitute the most vulnerable populations cannot attract and retain skilled health workers.

5.3 *Limitations of the study findings*

The study was a descriptive cross sectional study that covered a small area. Out of 15 Sub counties in the entire county, only one was considered and hence the results may not necessarily be representative of the entire population of Manafwa district.

Responses were recorded as given by the mothers being interviewed and required them to recall their PNC period. Recall bias therefore can't be totally ruled out though it was minimized by selecting mothers with children aged 2 years and below.

5.4 *knowledge gap*

There exists knowledge gaps about factors associated with uptake of PNC services especially in rural areas of eastern Uganda like Manafwa district. The few studies that have been done in Uganda have looked at PNC at health facility levels and not much has been done in the rural community context. Manafwa where Namabya sub-county lies has a high MMR of 186 per 100,000 live births with regard to the National MMR which is 438 deaths per 100,000 live births and IMR of 95 per 1000 live births, the communities can therefore benefit from PNC services. District policy makers and other stakeholders may devise appropriate approaches to scale up PNC in such rural settings of Manafwa district.

CHAPTER SIX

Conclusion and Recommendation

6.0 Conclusions

Maternal mortality in Uganda has continued to be a subject of public health concern and the progress in reducing maternal mortality and morbidity seems not to be progressing well and may be difficult to achieve the global goals. This study narrowed down on PNC which is a critical maternal health care service although the uptake was low at 58.3% though awareness levels was 60.8%. The mothers' reported their main source of information about PNC to have come from health workers and hence it would be worthy that they are trained to equip themselves with skills in communication and counselling since they can be used as the lead tool in promoting awareness and knowledge about PNC.

The major benefits of attending PNC as mentioned by the respondents was immunization, health education and counselling, physical examination of the mother and baby and family planning though during the focus group discussion, several women had disturbing complaints about FP hence the need proper counselling prior to administration of family planning.

ANC uptake was high at 83.7% though important to note was that several deliveries also occurred outside the health facilities and the figures were not statistically different with those that delivered at health facilities. Interventions therefore need to be put in place to encourage health facility deliveries which eventually impact on PNC uptake. In Namabya which was the area of study the busiest facilities that offered maternal health services were the faith based facilities but supported by the government. But this is perhaps due to the limited funding of the

overall health sector and service delivery especially at district levels and therefore may not ably build more infrastructures.

Though the awareness levels of PNC in Namabya were fairly high, a smaller proportion utilized the services citing several barriers that hindered them from using the services and these ranged service factors and individual related factors. Services factors included inadequate facilities, unstable and limited power supply at many of the facilities, inadequate supplies in the facilities which was evidenced by the several stock outs and on many occasions' mothers reported they were asked to purchase most of the essentials, limited health personnel at the facilities with some of them reporting heavy work load hence this also impacted on waiting time, transport issues especially in times of referral, and challenges with outreach programs among others. Individual related factors included poverty, cultural factors, illiteracy levels and the perceived need of PNC among other factors.

Most respondents reported distance to the nearest health facility being with in 5km and yet PNC attendance was not as high and hence distance was not a significant factor associated with PNC uptake. Other factors that were significantly found to be associated with PNC uptake a included education status of the woman, occupation, ANC attendance, place of deliver, assistant at delivery, parity and awareness of PNC services.

6.1 Recommendations

- ❖ The district health team should carry out sensitization within the communities to raise more awareness about maternal health and service utilization. This should include messages encouraging women to attend ANC and deliver in health facilities.
- ❖ Advocacy would also help in promoting behaviour change among women and embrace the importance of PNC. Civil societies can be enhanced to provide technical guidance to government and also serve as strong voices for the mothers.
- ❖ One of the challenges reported was limited staff as well as turnover, therefore the government should implement a different incentive policy to attract and retain skilled health workers in rural areas.
- ❖ In addition to the above, alternative sources of funding should be sought mainly through donor and grant agencies to supplement the inefficient government facilitation to the health sector but also the fund should be utilized efficiently.
- ❖ To compliment on the gap created by the limited health personnel in some of these communities, perhaps village health teams (VHTs) could be incorporated and trained in order to increase access to care at the community levels. These could be used for stance in the promotion of healthy home behaviours before, during and after child birth.
- ❖ From the study findings, since several mothers equally give birth outside health facilities and yet the practices that exist during and soon after child birth may affect the health of the new borns, government should make efforts to increase distribution of clean delivery kits in order to increase facility births and improve hygiene of births outside facilities.

- ❖ Since transport was mentioned as a major problem especially in times of referral, the communities could be mobilized to organise transport schemes to assist women to reach maternity services.
- ❖ To reduce the poverty problem, poverty eradication programs should be should be redirected at the community and family levels and also encourage families to always give some priority to health expenditures. In addition, the district together with the central government should enhance agricultural growth and development in the rural areas being that it's the biggest economic activity and source of earning.
- ❖ Findings showed that the education level was low with the biggest percentage having attained primary level. Therefore strategies should be put in place to improve maternal education by improving enrolment and retention and also increasing vocational training opportunities for the women.
- ❖ Government through the Ministry of Health should consider delegating some of the restricted responsibilities of higher level facilities to the lower level facilities like the health centre IIs which are more easily accessible especially in the rural areas. .
- ❖ Outreach programs which were said to cause a challenge to PNC in the communities could be used as an avenue to educate mothers about maternal health which should also include the value of PNC since most women who are able to receive immunizations through outreach programs don't return to the facilities and such services at the health facilities would avail an opportunity for the mothers to also simultaneously undergo postnatal checks.
- ❖ Measures to scale up family planning in rural areas where the fertility rates are high and also impact on maternal health services should be sought. From the discussion during the

FGD, awareness about particular family planning methods is needed especially long term methods of family planning.

- ❖ Last but not least, Manafwa district in collaboration with the central government should give ample support to the NGOs/Faith based facilities in Namabya Sub County since findings showed that despite being the biggest providers of maternal health services in the sub-county and were overwhelmed, they reported inadequate support from the District / Government and yet they played a crucial complementary role to the few government facilities that existed.

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