KNOWLEDGE AND PRACTICES OF WOMEN REGARDING PMTCT IN MWIZI SUB-COUNTY

A MICRO-RESEARCH REPORT

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DEDICATION

This work is lovingly dedicated to all the children who, having not benefited from PMTCT, are living with HIV.

None of us will ever really understand the physical, emotional and psychological pain of growing up with HIV and of living on daily medication.

It’s for the hope of an HIV-free generation after them that all the efforts were put in this piece of work.
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LIST OF ACRONYMS AND ABBREVIATIONS

AIDS: Acquired Immunodeficiency Syndrome
ANC: Antenatal Care
ART: Anti-retroviral therapy
ARV: Anti-retroviral
FREC: Faculty Review and Ethic Committee
HC: Health Centre
HCU: Healthy Child Uganda
HEI: Healthy Education Information
HEI: Health Education and Information
HIV: Human Immunodeficiency Virus
IEC: Information Education Communication
IRC: Institutional Review Committee
LC: Local Council
MDGs: Millennium Development Goals
MOH: Ministry of health
MRRH: Mbarara Regional Referral Hospital
MTCT: Mother-to-Child Transmission
MUST: Mbarara University of Science and Technology
PMTCT: Prevention of Mother-to-Child Transmission
sdNVP: Single dose Nevirapine
STIs: Sexually Transmitted Infections
UBOS: Uganda Bureau of Statistics
UN: United Nations.
UNAIDS: Joint United Nations Programme on HIV/AIDS
UNESCO: United Nations Educational, Scientific and Cultural Organization
UNFPA: United Nations Population Fund
UNGASS: United Nations General Assembly Special Session
UNICEF: United Nations Children's Fund
VHT: Village Health Team
WHO: World Health Organization
ABSTRACT

Background—Worldwide, an estimated 3.4 million children below 15 years of age are HIV-infected, 90% of whom live in the Sub-Saharan Africa (SSA). About 150,000 of them live in Uganda. 95% of all paediatric HIV infections in SSA result from mother-to-child transmission (MTCT) which occurs during pregnancy, labour or breastfeeding. HIV mother-to-child prevention measures (PMTCT) can significantly reduce the risk of MTCT. For this to work women of child bearing age need to know about MTCT and PMTCT. Currently, in rural south west Uganda, information on MTCT and PMTCT is provided to women by local health workers that include volunteer village health teams with limited formal health training. This study sought to explore the knowledge and practices of women in rural south west Uganda regarding MTCT and PMTCT to determine if the current strategy to help women gain this knowledge is working.

Methods—This exploratory descriptive study was conducted among women of child-bearing age (15 to 49 years) from Mwizi, a rural sub-county in Mbarara district in south west Uganda in July and August 2011. A semi-structured oral questionnaire was administered by the MicroResearch Team of BRA, AR, JMS, DM, and DT to 100 women randomly sampled from the five parishes of the sub-county, ten women from each parish. The study received ethical approval from the Institutional Review Committee of Mbarara University of Science and Technology and was supported by a MicroResearch grant.

Results—Of the 100 women approached, all agreed to participate. 88% were between 15 and 25 years, 88% had attained primary education, 84% were peasant farmers, 88% were married, and 91% had been pregnant or were pregnant at the time of the study. 91% knew that MTCT could occur, while 72% were aware of PMTCT. However, only 7% had adequate knowledge of how HIV was transmitted from mother to child and what steps are needed to prevent it. While 82% knew that MTCT can occur during labour and delivery, only 54% knew about risk with breastfeeding, and only 23% knew that HIV could be transmitted to the fetus during pregnancy. 68% knew that delivery at a health facility could reduce the risk of MTCT because additional preventative measures would be taken 70% recalled hearing messages about MTCT and PMTCT from a health worker, their major source of PMTCT information. Several women had practiced PMTCT interventions themselves or advised their friends.

Conclusion—The majority of women of child bearing age in Mwizi sub-county of Uganda lacked adequate knowledge to prevent MTCT despite high awareness of MTCT and need for PMTCT. For PMTCT knowledge to trickle down to the women at the village level MTCT and PMTCT messaging from local health care workers needs to be reinforced since they are currently the major source of MTCT and PMTCT information locally. More training on how to better reinforce PMTCT messages by local health workers is needed. Other forms of messaging such as radio and cell phone messages, village meeting discussions and social gatherings might be considered to reinforce prevention awareness.
1.0 INTRODUCTION

1.1 Background

The Human Immunodeficiency Virus (HIV) infection which causes the Acquired Immune-Deficiency Syndrome (AIDS) continues to be a serious global problem. According to UNAIDS (2011), an estimated 34 million people worldwide are infected with HIV, 52% of who are women and more than two-thirds (68%) of the global HIV population live in the Sub-Saharan African (SSA). Of these, 3.4 million are children under 15 years of age, 90% of whom live in SSA (WHO/UNAIDS/UNICEF, 2011). Worldwide, there are about 7,400 new infections and 5,500 HIV-related deaths daily. Over one thousand children below 15 years of age get infected with HIV daily, 90% of who live in SSA, where HIV has its greatest toll (UNAIDS, 2011).

HIV is transmitted through sexual contact with an infected individual, through mother-to-child transmission (MTCT), and through sharing of sharp instruments with an infected person and transfusion of infected blood and blood-products. MTCT, which occurs when a mother passes on the virus to her child during pregnancy, labour and breastfeeding, is responsible for an estimated 20% of all HIV infections and more than 95% of paediatrics HIV transmissions (UNAIDS, 2010).

MTCT is of major public health concern especially in SSA countries, which have high total fertility rates and high prevalence of HIV infections among women of child-bearing age (UNAIDS, 2010). Advanced maternal HIV disease, high viral loads, maternal malnutrition and co-morbidity with sexually transmitted infections (STIs), all of which are prevalent among African women increase the risk of this MTCT (Grant et al., 2004). Without any preventive intervention, pregnant mothers in the developing world carry a 25 to 45% risk of transmitting HIV to their children (Decook et al., 2000; World Health Organization, 2006).

In Uganda, the prevalence of HIV infection is estimated at 6.8%, with 52% of HIV infected individuals being women. The highest prevalence of HIV is among women of child-bearing age of 19 to 25 years. About 78,000 Ugandan women living with HIV become pregnant annually, resulting into about 25,000 annual paediatric HIV infections (WHO, 2010). An estimated 150,000 children under 15 years of age are living with HIV, making a prevalence of about 0.7 percent (UNAIDS, 2011).
Prevention of mother-to-child transmission (PMTCT) aims at reducing the risk of a mother infecting her child with HIV and starts with primary prevention of the infection in women of child-bearing age who are the main vehicles of pediatric HIV transmission.

Modern PMTCT strategies include testing for HIV during pregnancy, modified obstetric practices, preventive anti-retroviral (ARV) drugs, and modified infant feeding practices. These strategies, which are still limited both in scope and reach in most of Sub-Saharan Africa, where ironically, the heaviest burden of maternal HIV infection and MTCT exist, have the potential of reducing the MTCT risk down to only 2 to 5 percent (WHO, 2010).

The World Health Organization (2010) recommends lifelong highly active antiretroviral therapy (HAART) for HIV-infected women in need of treatment for their own health, which is also safe and effective in reducing MTCT or ARV prophylaxis to prevent MTCT during pregnancy, delivery and breastfeeding for HIV-infected women not in need of treatment for themselves.

In Uganda, PMTCT services started following a study done in Mulago Hospital that demonstrated a 50% reduction in the risk of MTCT by administering a single dose of nevirapine to HIV positive mothers during labour (Guay, et al., 1999). Following this finding, PMTCT was piloted in 2000 in five hospitals. Currently, these services are offered in all public health hospitals and in most primary health care centres. However, only 33% of mothers who test HIV positive and 31% of HIV-exposed babies receive ARVs for PMTCT (Esiru, 2010).

In order to optimize the use of PMTCT services, the knowledge of women of child-bearing age is paramount, and potential mothers need to be aware of the risk of MTCT and the possibility of reducing it. They should also translate this knowledge into behavior change.

Previous studies have shown mixed levels of awareness regarding HIV and its transmission routes including MTCT, but low levels of awareness regarding PMTCT. (Addo, 2005; Bajunirwe and Muzoora, 2005; Katushabe, 2006; Petrovic, et al., 2009). Currently, in rural south west Uganda, information on MTCT and PMTCT is provided to women by local health workers that include volunteer village health teams with limited formal health training. This study sought to explore the knowledge and practices of women in rural south west Uganda regarding MTCT and PMTCT to determine if the current strategy to help women gain this knowledge is working.
1.2 Problem Statement
Maternal-to-Child transmission of HIV (MTCT) is responsible for about 20% of all HIV transmissions and more than 90% of worldwide paediatrics HIV infections, 95% of which are in the Sub-Saharan Africa (UNAIDS, 2011). Without any preventive interventions, nearly 50% of HIV positive mothers will transmit HIV to their children during pregnancy, labour and breastfeeding (Decook, et al., 2000; Petrie 2007; Van de Perre,1991; WHO, 2006;). HIV/AIDS-associated illnesses are responsible for up to 10% of childhood mortalities in Africa (WHO, 2006) failing countries from attaining the Millennium Development Goals of reducing two-thirds of under-five mortality and reversing the spread of HIV by 2015 (UN, 2000).

About 85% of the Ugandan population is rural based (UBOS, 2006) with limited access to information and health services, including PMTCT. Previous studies have shown mixed and low levels of knowledge regarding MTCT and PMTCT respectively, among women (Addo, 2005; Bajunirwe and Muzoora, 2005; Katushabe, 2006; Petrovic, et al., 2009) and no recent studies have been done in our area to find out the level of knowledge and practices regarding PMTCT. And yet to optimize the use of PMTCT services, women need to be aware of MTCT and PMTCT and be able to translate this knowledge into behavior change.

1.3 Significance of the Study
The findings of this study may inform health workers, educators and policy makers in designing appropriate and tailored health education and policies for rural women. This should increase the levels of knowledge and practises regarding PMTCT among these women, translating into better access and utilisation of PMTCT services in rural Uganda. This should consequently result into reduced MTCT and improved maternal and child health and support Uganda’s efforts to attain the relevant MDGs.
1.4 Study Objectives

1.4.1 Main Objective

The aim of the study is to explore the knowledge and practices of women of child-bearing age of Mwizi sub-county regarding PMTCT.

1.4.2 Specific Objectives

i. To estimate the proportion of women of child-bearing age in Mwizi sub-county who are aware that MTCT and PMTCT occur.

ii. To find out what women of child-bearing age in Mwizi sub-county know about MTCT and PMTCT.

iii. Explore the practices of women of child-bearing age of Mwizi sub-county, with regard to PMTCT

iv. Identify the sources from which women of child-bearing age of Mwizi sub-county receive information concerning MTCT and PMTCT.

1.5 Research Questions

1. What is the proportion of women of child-bearing age of Mwizi that are aware of MTCT and PMTCT?

2. What do women of child-bearing age of Mwizi sub-county know regarding MTCT and PMTCT?

3. What do women of child-bearing age of Mwizi sub-county practice in regard to PMTCT?

4. What are the sources from which women of child-bearing age in Mwizi receive information regarding MTCT and PMTCT?
2.0 CHAPTER 2 LITERATURE REVIEW

2.1 The Global Burden of HIV

The Human Immuno-defeciency Virus (HIV) which causes the Acquired Immuno-deficeincy Syndrome (AIDS) continues to be a serious global emergency. An estimated 33.4 million people are living with HIV worldwide, 15.7 million (52% of adults) of whom are women and 3.4 million children younger than 15 years of age (WHO, 2011). The majority (two-thirds) of this global HIV burden resides in Sub-Saharan Africa, where HIV/AIDS is among the leading causes of maternal and child morbidity and mortality. Without treatment, one-third of children living with HIV die in their infancy and over a half by the second year of life (WHO, 2006).

2.2 HIV Infection among Women

The HIV/AIDS epidemic has had a unique impact on women, which has been exacerbated by their role within society and their biological vulnerability to HIV infection.

Generally women are at a greater risk of heterosexual transmission of HIV. Biologically women are twice more likely to become infected with HIV through unprotected heterosexual intercourse than men. In many countries women are less likely to be able to negotiate condom use and are more likely to be subjected to non-consensual sex (UNAIDS, 2009).

Consequently, close to 52% of all people living with HIV are women, 76% of who live in the sub-Saharan African region (UNAIDS, 2010). More than a quarter of all new infections are among the most productive age group of women between 15 and 24 years. Globally, 60% of all young people (aged 15 to 24 years) living with HIV are women, but the figure jumps to 72% in Sub-Saharan Africa. (UNICEF, UNAIDS, UNESCO, UNFPA, ILO, WHO, and World Bank, 2011).

In Uganda, women are disproportionately affected, accounting for 57 percent of all adults living with HIV. Ugandan women tend to marry and become sexually active at a younger age than their male counterparts, and often have older and more sexually experienced partners. (Government of Uganda, 2010).
This therefore compounds Mother-to-child transmission of HIV since women of child-bearing age bear the greatest blunt of the epidemic. This is further worsened by fertility rates, many unwanted pregnancies and poor maternal and child health care (Guttermarcher Institute of Medicine, 2009; Population Reference Bureau, 2011).

### 2.3 Mother-to-child Transmission of HIV

Mother-to-child transmission is responsible for about 20% of all HIV infections, but is the route through which almost all paediatric infections occur. MTCT can occur during pregnancy, labour or breastfeeding. Advanced maternal disease, acute maternal infections during pregnancy and lactation, and co-morbidity with STDs increase the risk of transmission (UNAIDS, 2011).

During pregnancy, 5-10% of all exposed fetuses will be infected. This is possible through placental tears, chorioamninitis, cigarette smoking, and use of elicit drugs; which disrupt the placenta and cause micro-transfusions of maternal blood to the fetus (Newell, 1998).

During labour and delivery, 10-20% of all children will get infected. This is through direct contact with infectious maternal blood and genital secretions and absorption through fetal/neonatal digestive tract (Newell, 1998). Most (about 70%) of all the MTCT occurs during labour and delivery (Chouquet, et al., 1997; Mofenson, 1997).

During breastfeeding, a further 5-15% of infants will be infected. This may be through cell-free or HIV-infected cells in milk. The innaturity of the gastrointestinal tract and its damage by introduction of other foods may increase viral permeability (Newell, 1998).

### 2.4 Prevention of MTCT

Knowledge of the risk and timing of MTCT may inform creation of approaches to optimise its prevention. The World Health Organisation and UNAIDS (2006) have proposed a multi-pronged strategy to reduce the risk of MTCT, which include the following:

- Preventing HIV infection among prospective parents and especially among women of a child-bearing age.
- Avoiding unwanted pregnancies among HIV-positive women - providing appropriate counseling and support to women living with HIV to enable them to make informed
decisions about their reproductive lives and ensuring that contraception is available to women who want it.

- Preventing the transmission of HIV from HIV positive mothers to their infants during pregnancy, labour, delivery and breastfeeding, by provision of appropriate ART, modified obstetric care and safe infant feeding.
- Integration of HIV care, treatment and support for women found to be positive and their families.

These strategies have the potential of reducing the risk of transmission to two to five percent in non-breastfeeding and breastfeeding populations. However, many countries still do not have enough PMTCT services and existing services are not reaching many of the local women in need (WHO, 2006).

### 2.4.1 PMTCT in Uganda

Following a study that showed a 50% reduction in the risk of MTCT with the administration of a single dose of nevirapine to mothers in labour (Guay, *et al.*, 1999), the Ugandan Ministry of Health began offering a free PMTCT service in a few antenatal clinics in January 2000. Currently, these services are offered in all public hospitals and in almost all primary health care centres (Ministry of Health Uganda, 2007).

However, only 33% of HIV-positive mothers and 31% of HIV-exposed babies receive ARVs for PMTCT (Esiru, 2010). Consequently, 18 percent of new HIV infections in Uganda occur through mother-to-child-transmission (Government of Uganda, 2010).

### 2.5 Knowledge Regarding MTCT and PMTCT

For PMTCT to be successful, every individual woman, especially of child-bearing age, needs to be empowered with the knowledge regarding HIV infection, and the risks of transmission to her baby, and the services available to reduce the risk. A number of studies have been carried out to find out the levels of knowledge regarding PMTCT among women with mixed results.

Maputle and Jali (2008) found high levels of awareness of HIV/AIDS but a low level of knowledge about MTCT through breast feeding among women attending an urban teaching
hospital in Natal, South Africa. However, women attending a post-natal clinic in an urban university teaching hospital in Nigeria had very high levels of knowledge about transmission of HIV from mother to child, but very low levels of knowledge about the preventive measures (Moses 2009).

Similarly, Berhane and Tesfazio (2005) found that 75.5% of Eritrean women were aware that MTCT can occur, but only 26% of them knew that it can be prevented. Older, more educated and married women were found to have higher knowledge regarding both MTCT and PMTCT. In a related study, Harms, et al (2005), also found high prevalence of knowledge regarding MTCT among rural women in Uganda and Tanzania.

Furthermore, a 2007 study found low levels of awareness regarding PMTCT among health workers in four African countries of Botswana, Kenya, Malawi and Uganda and some National HIV managers were unsure about infant feeding policy in the context of HIV (Chopra and Rollins, 2007).

A 2008 study in rural and urban areas of Moshi district in the Kilimanjaro region of Tanzania found most mothers were aware of the possibility of MTCT during labour and delivery, but about 40% weren’t aware it could occur during pregnancy. Mothers thought that babies were fully protected from HIV and other infections while in the uterus. However, less mothers knew about PMTCT modalities, and the rural and younger mothers were more likely to be less knowledgeable (Falnes 2010).

Also high and low levels of awareness regarding MTCT and PMTCT respectively were found by Katushabe (2005) who reported that 80.8% and 51.6% of women attending antenatal care (ANC) in Mbale Regional Referral Hospital knew that MTCT occurs and can be prevented respectively. She also found that the level of knowledge increased with being married, education and age.

Finally, in Mbarara, South Western Uganda, more than 80% of mothers attending Ante-natal care (ANC) at an urban-based Regional Referral Hospital were aware that MTCT could be prevented and that the level of knowledge among both urban and rural women was similar (Bajunirwe and Muzoora 2005).
In aggregate, studies show generally high levels of awareness regarding MTCT but mixed levels of awareness regarding PMTCT. Most of these studies have however been done among pregnant mothers attending ANC, who could have taken special interest in such messages because they were pregnant.

2.6 Practises Regarding PMTCT

To achieve a reduction in MTCT women need to translate their knowledge regarding MTCT and PMTCT into practice. However, cultural factors and the stigma associated with HIV and AIDS might limit this. Studies suggest that there are generally low levels of knowledge regarding PMTCT among women of child-bearing age which is detrimental to efforts to reduce the risk of MTCT.

Varga (2008) found that rural South African adolescents were less likely than their urban counterparts to successfully implement most PMTCT-related practices. HIV stigma, family decision-making and cultural norms surrounding infant feeding hampered mothers' efforts to implement practices that would decrease the risk for childhood infection. However Becquet and Leroy (2005) found very high rates of mixed feeding among women of unknown HIV status in Abidjan, Cote d’Ivoire, which practice could increase MTCT rates.

Mbonye, et al (2010) found that there was low utilization and uptake of PMTCT services in Wakiso district in central Uganda and that most women were not empowered to make their own decisions concerning PMTCT.

In Uganda, Barigye, et al., (2010) found an unacceptably low level of uptake of PMTCT services in 53 rural villages in South Western Uganda between 2002 and 2007. Only 63% of mother-baby pairs delivered in a health facility and received single dose nevirapine (sdNVP) for HIV prophylaxis.

3.7 Channels of Information Regarding PMTCT

The uptake of prevention of mother-to-child transmission (PMTCT) interventions is likely to be dependent on the beliefs and educational needs of those requiring PMTCT services. PMTCT
requires behavioral change on part of women of child-bearing age, which starts with knowledge empowerment. It is important to find out where the mothers access the information on PMTCT so that more efforts could be placed into those channels to inform them of the availability and benefits of PMTCT services. Very little has been written about the sources of information for women about PMTCT.

Igumbor, et al (2006) found high rates of ANC attendances in the catchment areas of Tshilidzini Hospital in South Africa, but the frequency of ANC attendance had no correlation with the level of exposure to health education and information (HEI) regarding PMTCT. Two-thirds of the participants received PMTCT information most frequently from radios.

Katushabe (2005) in the Mbale study referred to above found out that hospital health education was the most frequently (53%) stated channel through which women got information regarding MTCT and PMTCT. Other channels included friends, radios, seminars and newspapers at 20, 13, 7.4 and 7.2 percent mention respectively.

In Masaka and Sembabule districts in Uganda, an evaluation of a community-based Information Education and Communication (IEC) HIV/AIDS program found that videos and dramas were the most preferred channels of information, followed by leaflets and community educators among rural respondents. (Mitchell et al., 2001).

In aggregate, mass media and health workers seem central to the provision of knowledge regarding MTCT and PMTCT to women.

4.8 Summary

In conclusion, HIV/AIDS continues to be a global emergency, especially in Sub-Saharan Africa. Mother-to-child transmission is responsible for about a fifth of all HIV infections, and more than 95% of all paediatric HIV disease. Studies have shown mixed and low levels of knowledge regarding MTCT and PMTCT respectively among women of child-bearing age. Increasing awareness of MTCT and PMTCT among women is the cornerstone of all efforts to reduce MTCT. Generally health workers and mass media are the most important sources of information regarding MTCT and PMTCT for women.
3.0 METHODS

3.3 Study Design

This was an exploratory, descriptive cross-sectional study to find out the knowledge and practices of women of child-bearing age regarding MTCT and PMTCT in Mwizi sub-county and to establish the channels through which they receive this information in August 2011. Since no similar studies are known to have been conducted in Mwizi, an exploratory design was used.

3.1 Study Area

The study was conducted in Mwizi sub-county which is one of the nine sub-counties in Rwampara county, Mbarara district, south-western Uganda. It is comprised of five (5) parishes, with a total of fifty five (55) villages. It has a hilly terrain with poor roads and a high population density. The population of females and males is 16100 and 14800 respectively (Uganda National Housing and Population Census, 2002). Mwizi is about 35 kilo meters from Mbarara town which is about 260 km south-west of Kampala.

Mwizi sub-county represents a typical Ugandan rural setting, with poor terrain and limited access to health care services and information. Therefore, findings from Mwizi can be applicable most other Ugandan and Sub-Saharan rural settings.

3.2 Study Population

The study enrolled women of child-bearing age from 15 to 49 years of age that were residents of Mwizi sub-county.

3.4 Inclusion criteria

- Women of child-bearing age of 15 to 49 years
- Women who were permanent residents of Mwizi sub-county
- Women who consented to participate in the study.
- Women who were not the first ones to interact with the study team in each household.
3.4 Sampling Procedure

Mwizi sub-county is comprised of five (5) parishes, which are in turn made up of several villages each. The whole sub-county was divided into five strata, with each parish making a stratum. From each parish, two villages were randomly selected using the lottery method as follows: the name of each village of every parish was written on a piece of identical paper. One blinded person then picked any two pieces of paper randomly. The two villages whose names appeared on the pieces of paper picked were included in the study. The process was then repeated for each parish until ten villages were randomly selected; two from each parish.

3.5 Sample Size

The study enrolled ten women from 10 randomly selected villages making a total of 100 women.

3.6. Study Procedure

3.6.1 Access to study participants

The research team visited the villages using the Local Council I chairperson as the entry point into the community, and his/her designated representative as a research guide, to introduce the team to the study participants.

The household closest (in terms of physical distance) to the research guide’s home was visited first, and the first female, aged from 15 to 49 years to meet the research team was enrolled into the study and interviewed. The study team would then proceed to the next household (the closest in terms of distance) and the process was repeated until 10 women were interviewed.

3.6.2 Consent

The interviewer first gave an explanation in the appropriate language (Runyankore) regarding the study purpose and procedure to the eligible participant. The participant was then asked to sign a written informed consent statement to participate in the study. A copy of the signed consent form was given to the participant and the other copy kept by the interviewer.

3.6.3 Data collection instruments

A pre-tested interviewer-administered questionnaire and semi-structured interview guide were administered to the participant. Care was taken to ensure that the interview was conducted far
away from where anyone else could listen into the conversation. Data was collected regarding participants variables including among others, the age, marital status, residence, parity, whether they had ever tested for HIV and whether they knew that MTCT occurs and whether they knew that it can be prevented. Questions were also asked as to how MTCT occurs and how it can be prevented. An open-ended question “what have you ever done to prevent a mother from transmitting HIV to her baby” was asked. Participants were allowed to give their responses which were written down by the interviewer.

After the interview, the participant was then given an opportunity to ask any question regarding the study and appropriate responses were given.

3.8 Data Management

Data from pre-coded and completed questionnaires was entered into Microsoft Excel 2007 spreadsheet. It was cleaned and checked for errors and corrected, and subsequently transferred to Stata 11.0 for analysis.

3.9 Statistical Methods

3.9.1 Categorization of variables

The variables “level of knowledge about MTCT” and “level of knowledge about PMTCT” were operationalized using the responses given by the participants pertaining to what they knew about MTCT or PMTCT. A total of three categories were generated for each of the variables, that’s, 0=“No knowledge”, 1=“Inadequate knowledge” and 2= “Adequate knowledge”. The participants categorized as “No knowledge” are those who either reported that knew nothing about MTCT or PMTCT, or those who gave a wrong response. The participants categorized as with “inadequate knowledge” had given at least 1 or 2 correct responses while categorized as with “adequate knowledge” had given at least 3 right responses.

3.9.2 Data analysis

- Quantitative data was transferred from excel into STATA soft-ware Version 11.0 for analysis.
- Univariate analysis done using one-way tables for proportions of various variables.
For qualitative data, thematic analysis was done, and quotations done were appropriate, especially when addressing the practices of women regarding PMTCT.

3.10 Quality Control

- The questionnaire and the interview guide were pre-tested on ten eligible women before the actual data collection and the necessary corrections were made.

- The filled questionnaire was cross-checked for inconsistencies and incompleteness before the interview was terminated and clarifications were sought while the study participant was still available.

- Data analysis was done in consultation with a qualified statistician.

3.11 Ethical Considerations

- The research proposal was submitted for ethical review to the Faculty Research and Ethics Committee (FREC) and Institutional Review Committee (IRC) of MUST.

- Written and informed consent was obtained from the participants before the interview was conducted.

- Care was taken to conduct the interviews away from other people could to ensure confidentiality.

- Participants not aware of MTCT and PMTCT were briefly educated about them by the researchers.

- No names were written on the questionnaires – only codes were used.

- After the interview, the researcher answered all questions asked by the participant.

- The completed questionnaires are kept under lock and key and only accessed by the researchers.
4.0 RESULTS

4.1 Description of the Study Participants

A total of 100 women of child-bearing age between 15 and 49 years were enrolled into the study. No woman refused consent to participate.

4.1.1 Socio-demographic characteristics of the participants

Of the total 100 women, 84 (84%) were peasants, 69 (69%) had been to primary school and 88 (88%) were married. Just over a half of them were of protestant religion, and a half of them were young people, aged between 15 and 25 years.

Table 1: Socio-demographic characteristics of study participants

(N=100)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Primary</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Tertiary</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roman Catholic</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Protestant</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Pentecostal</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peasant</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>Businesswoman</td>
<td>09</td>
<td>09</td>
</tr>
<tr>
<td>Salaried worker</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td>Student</td>
<td>04</td>
<td>04</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>08</td>
<td>08</td>
</tr>
<tr>
<td>Widowed</td>
<td>03</td>
<td>03</td>
</tr>
<tr>
<td>Separated</td>
<td>01</td>
<td>01</td>
</tr>
<tr>
<td>Married</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-25</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>26-35</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>36-49</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>
4.1.2 Parity of the participants

Of the 100 women, 91 had ever been pregnant and 20 were pregnant at the time of the study. More than a third (39%) had had more than five pregnancies, and a third had had 1 to 2 pregnancies. Fifty (58%) of the 85 women who had had a child had their youngest children in the age ranges of 13-59 months.

Table 2: Parity of Study Participants.

(N=100).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ever been pregnant?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>No</td>
<td>09</td>
<td>09</td>
</tr>
<tr>
<td><strong>Are you currently pregnant?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>No</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td><strong>Number of pregnancies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>09</td>
<td>09</td>
</tr>
<tr>
<td>1-2</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>3-4</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>≥5</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td><strong>Age of your youngest child (months)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤6</td>
<td>10</td>
<td>11.76</td>
</tr>
<tr>
<td>6-12</td>
<td>15</td>
<td>17.65</td>
</tr>
<tr>
<td>13-59</td>
<td>50</td>
<td>58.82</td>
</tr>
<tr>
<td>≥60</td>
<td>10</td>
<td>11.76</td>
</tr>
</tbody>
</table>

4.2 Knowledge Regarding MTCT

4.2.1 Percentage of women aware that MTCT can occur

Women were asked if they knew that MTCT can occur. Ninety one participants (91%) said that they knew that MTCT occurs.
4.2.2 Knowledge regarding the Timing of MTCT

The participants who were aware that MTCT occurs were then asked when it occurs in an attempt to assess their level of knowledge. Only 83 of the participants answered this question and the majority, 68 (82%) were aware that MTCT occurs during labour. The second most frequently mentioned timing was breastfeeding (54.2%). Three women (3.6%) reported that whereas as they knew that MTCT occurs, they did not know when it occurs. Interestingly, 14 (16.9%) of the respondents thought that sharing of sharp instruments was one of the ways in which MTCT occurs.

4.3 Knowledge Regarding PMTCT

4.3.1 Percentage of women aware of PMTCT

The participants were further asked if they were aware that MTCT can be prevented. Seventy-two (72%) out of all the participants said they knew that MTCT can be prevented.

The seventy-two participants who were aware that MTCT can be prevented were then asked to explain how its’ done. Delivering from a health facility was the most frequently mentioned strategy through which MTCT can be prevented (68.1%).

The second most mentioned strategy of MTCT prevention was modified infant feeding practices, by 34 (47.2%) of the respondents. One participant who knew that MTCT can be prevented did not know how it is possible.

Table 3: Proportion of Study Participants who knew that either MTCT or PMTCT occurs

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware that MTCT occurs (N=100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>91</td>
<td>91</td>
</tr>
<tr>
<td>No</td>
<td>09</td>
<td>09</td>
</tr>
<tr>
<td>Aware that PMTCT occurs (N=100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>No</td>
<td>28</td>
<td>28</td>
</tr>
</tbody>
</table>
Table 4: Knowledge of Women Regarding how MTCT and PMTCT occur

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Timing of MTCT (N=83)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
<td>68</td>
<td>81.92</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>45</td>
<td>54.21</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>19</td>
<td>22.90</td>
</tr>
<tr>
<td>Sharp instruments</td>
<td>14</td>
<td>16.87</td>
</tr>
<tr>
<td>Don’t know</td>
<td>03</td>
<td>03.61</td>
</tr>
<tr>
<td><strong>How MTCT can be prevented (n=72)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivering from health facility</td>
<td>49</td>
<td>68.06</td>
</tr>
<tr>
<td>Modified infant feeding</td>
<td>34</td>
<td>47.22</td>
</tr>
<tr>
<td>Preventive ARVs</td>
<td>25</td>
<td>34.72</td>
</tr>
<tr>
<td>HIV counseling and testing</td>
<td>06</td>
<td>08.33</td>
</tr>
<tr>
<td>Don’t share sharps</td>
<td>02</td>
<td>02.78</td>
</tr>
<tr>
<td>Don’t know</td>
<td>01</td>
<td>01.39</td>
</tr>
</tbody>
</table>

4.2.3 Adequacy of knowledge regarding MTCT and PMTCT

Participants were classified according to the adequacy of their knowledge regarding MTCT. Respondents who mentioned three correct responses regarding the timing of MTCT were classified as having “adequate knowledge”, those who gave one or two correct responses were regarded as having “inadequate knowledge”, while those who either mentioned no correct response or who acknowledged not knowing, were regarded as having “no knowledge” at all. Seventy-three women (88.0%) and seven women (8.43%) had inadequate and adequate knowledge regarding the timing of MTCT respectively.

Furthermore, the participants were classified according to the adequacy of their knowledge regarding PMTCT. Respondents who mentioned two or more correct responses were classified as having “adequate knowledge”, and those who mentioned one or no correct response were classified as having “inadequate knowledge” regarding PMTCT. Of the 72 participants, 7 (9.7%) and 65 (90.3%) had adequate and inadequate knowledge regarding PMTCT respectively.

Table 5: Adequacy of Knowledge among Study Participants Regarding how MTCT and PMTCT occur
Variable                                      Number (n)   Percentage (%)
Knowledge of how MTCT occurs (n=83)
  None       03    03.61
  Inadequate      73    87.95
  Adequate      07    08.43
Knowledge of how PMTCT occurs (n=72)
  Inadequate      65    90.14
  Adequate      07    09.86

4.4 Sources of Information Regarding MTCT and PMTCT

Participants were further asked to identify the sources from which they learnt about MTCT and PMTCT. Health workers were the most frequently mentioned source of information for women regarding MTCT and PMTCT. Of the 89 participants who answered this question, 62 (69.7%) mentioned health care workers as having told them about MTCT and PMTCT, followed by mass media (32.6%).

Table 6: Sources from which Women Learn about MTCT and PMTCT

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources of MTCT and PMTCT Information (N=89)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health workers</td>
<td>62</td>
<td>69.66</td>
</tr>
<tr>
<td>Mass media</td>
<td>29</td>
<td>32.58</td>
</tr>
<tr>
<td>School</td>
<td>08</td>
<td>09.00</td>
</tr>
<tr>
<td>Social gatherings</td>
<td>02</td>
<td>02.24</td>
</tr>
<tr>
<td>Friend/relatives</td>
<td>04</td>
<td>04.49</td>
</tr>
</tbody>
</table>

Figure 1: Sources from which participants had heard about MTCT and PMTCT
4.5 HIV Testing among Respondents

To explore the practices regarding PMTCT, women were asked if they had ever had an HIV test, since this is the gate way into PMTCT. Eighty of the 100 women said that they had ever had an HIV test.

Table 7: Percentage of Women who had had an HIV test at the time of the Study

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever had an HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81</td>
<td>81</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>19</td>
</tr>
</tbody>
</table>

4.6 Practices regarding PMTCT

Participants were then asked an open ended question as to whether they had ever done anything to prevent transmission of HIV from a mother to her baby. Out of the 100 women, 34 said they had personally done something to prevent MTCT.

Most said they had advised their friends to do HIV tests during pregnancy, to deliver from hospital and not to breast feed their babies.
“I told a known HIV-positive mother not to breastfeed her baby for fear she would infect her with the disease. She in turn chose to feed her with milk right after birth” said a 32 year old participant.

“I advised my friend who was pregnant and whom I knew was HIV-positive to visit the health centre regularly and adhere to her medication” reported a 28 year old woman.

Women reported actions they themselves had taken to prevent HIV transmission to their own children. These included undergoing HIV counseling and testing during pregnancy, delivering from health facilities and remaining faithful to their partners while they were pregnant.

“I myself delivered from hospital in order to get skilled attention”, reported a 26 year old participant.

“I decided to take an HIV test the last time I was pregnant, so that if I was found positive, I would get help and deliver a normal baby” said a 23-year old mother of three.

A student who had been taught about MTCT and PMTCT at school was very concerned that her own pregnant mother at home had not tested for HIV and therefore could infect the unborn baby in case she was positive.

“The teacher taught us about how an HIV-positive mother can infect her unborn baby during pregnancy. My mother was pregnant at that time with another child, and I knew she had not tested for HIV because she had not gone to the health centre. When I reached home, I told her everything that the teacher had told us. She went and tested and found she was HIV negative” said a 16 year-old secondary school student.

Some women also reported avoiding infection during pregnancy, as they had been told by health workers that it would increase the risk of HIV transmission to their babies if they got infected during pregnancy.

“Sometimes you can’t be sure that your husband is faithful even when for you you’re faithful. The nurse at the hospital had told us that HIV infection during pregnancy can increase the risk of transmission to the baby. Since I had tested negative, I convinced my husband to use condoms
during sexual intercourse as long as I was pregnant so that in case he gets infected by other women, my baby and I could be spared” said a 25 year old woman.

“When I was pregnant, I remained faithful to my partner so that I do not infect him and my baby with HIV” said a 39 year old participant.

Finally one participant who had participated in assisting a known HIV-positive woman to deliver had this to say:

“While helping a known HIV-positive woman to deliver, I quickly removed the baby from the mother’s blood and secretions to reduce the chance of them mixing with those of the baby” said a 29 year old participant.
5.0: DISCUSSION.

This study has described the knowledge and practices of women regarding MTCT and its prevention among women of child-bearing age in Mwizi sub-county, and also described the sources of information for these women regarding these topics.

5.1 Awareness regarding MTCT

This study found that about 9 out of ten women were aware that MTCT occurs. This is higher than what was found in Tanzania and Eriteria (Falnes et al., 2010; Berhane and Tesfazio, 2007; Harms, et al., 2005), and in earlier studies in Uganda by Bajunirwe and Muzoora, (2005); Harms et al., (2005) and Katushabe, (2005). This is surprising because most of these studies were done among ANC attendees, who were expected to have had special interest in MTCT messages compared to our study participants. One possible explanation is that most of these studies were done a while ago, when knowledge regarding MTCT was not yet widespread.

The high percentage of the participants (81.9%) in our study who knew that MTCT occurs during labour and delivery compares well with findings from an earlier study conducted in Uganda (Harms, et al., 2005). This is impressive since labour is the most important time for MTCT during which about 70% of all MTCTs occur (Chouquet, et al., 1997; Mofenson, 1997).

Breastfeeding was the second most mentioned timing of MTCT among our participants. This again correlates well with results of earlier studies conducted in Ugandan and Tanzanian mentioned above (Falnes, et al., 2005; Harms, et al., 2005). This also is impressive, because generally, breastfeeding is the second most important route of HIV transmission (Chouquet, 1997; Mofenson, 1997).

However, the low knowledge of MTCT during pregnancy is precarious, since it means that mothers may not find it important to start PMTCT practices before onset of labour.

Much as sharing of instruments is indeed one of the routes of horizontal HIV transmission; our study participants’ misconceive it as one of the ways of MTCT. Some mothers do not differentiate between actual maternal-to-child transmission on one hand and the non-vertical transmission that may occur between an HIV-infected mother and an older child through sharing of sharp
instruments. This may be because messages regarding MTCT and PMTCT do not clearly distinguish between horizontal and vertical transmissions.

5.2 Knowledge regarding PMTCT

Compared to the number of participants who were aware about MTCT (91), fewer (72) women were aware that it could be prevented. This is consistent with a number of previous studies done elsewhere on this subject (Falnes et al., 2010; Berhane and Tesfazio, 2007; Harms, et al., 2005). This percentage was however lower compared to what was found in Capetown, South Africa by Petrie, et al., (2007). This variation may be attributed to the fact that the later study enrolled pregnant mothers who could have taken special interest in MTCT and PMTCT messages.

The majority (68%) of the participants knew that MTCT could be prevented by delivering from a health facility under skilled attention. This also correlates well with the fact that most mothers are aware that MTCT occurs during labour and delivery; hence the need to deliver under skilled attention. About a third of the mothers were aware that ARVs reduce the risk of MTCT. However, they need to be started during pregnancy for optimum PMTCT to be achieved, and especially for mothers who have advanced HIV disease (WHO, 2010). It’s therefore concerning that fewer women are aware of MTCT occurring during pregnancy, since they may not see the need to attend to start ART for MTCT while pregnant.

About half of the participants were aware of modified breastfeeding as a method of PMTCT. While this is impressive, modified infant feeding, which may include replacement feeding and abrupt weaning at three or six months, has its accompanying problems such as poor hygiene, diarrhea and malnutrition. Consequently, it is now recommended that HIV-infected mothers in low resource areas breastfeed their children up to the age 12 months, while the mother or baby is on preventive ART (WHO, 2010). This being a recent guideline, may not have been understood by lower health care workers and consequently communicate it to their clients.

5.3 Adequacy of Knowledge regarding MTCT and PMTCT

It is paramount that mothers know all the risks of MTCT and the full package of PMTCT because inadequate knowledge may be as bad as no knowledge at all. For example, providing modified
obstetric care and replacement feeding for a baby who is already infected in-utero may not be useful. This study found low levels of adequacy of knowledge regarding both MTCT and PMTCT. No known similar study has used our definition of adequacy of knowledge regarding MTCT and PMTCT and therefore no comparable results of this kind.

However, this finding calls for strengthening of MTCT and PMTCT messages among health care workers and village health teams (VHT) from whom they can trickle down to the grass root women to improve the knowledge base.

5.4 Sources of Information regarding MTCT and PMTCT

Most of the women (70%) mentioned having heard MTCT and PMTCT messages from a health care worker. This figure is much higher than what Katushabe (2005) and Bajunirwe (2005) found in Mbale and Mbarara respectively. This may be explained by the fact that the later studies were done in urban centres, where participants may have had more access to radios and other mass media, hence reducing the importance of health care workers in providing health education to them. Women in rural settings have less access to mass media including radios and newspapers and most have only health care workers as their source of information.

The finding above highlights the importance of the health education talks given to mothers, mainly during ANC visits. The importance of health care workers as the main sources of information regarding MTCT and PMTCT has been underscored. There is need to adequately equip health workers with knowledge and skills regarding these important topics if these messages are to trickle down well to women at the grass roots. This is especially so since most mothers had inadequate knowledge regarding the topics and yet healthy workers are their main sources of information.

5.5 HIV Testing among Respondents

This study found that 81% of the study participants had tested for HIV in their life time. This correlates well with what was reported by Esiru (2010) but much higher than what was reported by Bajunirwe and Muzoora (2005) in Mbarara. This may mean that HIV testing services have been rolled out for example every pregnant mother attending ANC is offered an opportunity to test for
HIV. Additionally, most public health facilities currently provide routine HIV counseling and testing services for all patients that attend them. These initiatives which have been running in Uganda for over eight years now could explain the high HIV test rates we found in our study.

5.6 Practices regarding PMTCT

This study described what individual women have done to prevent MTCT, either for themselves or their friends. No study known to us has explored the same question before. Individual women have advised their peers to deliver from hospital, take drugs, and modify their infants’ feeding as ways of preventing MTCT. This is an important aspect of health education and information sharing, but also moral and social support. Women who have received information regarding any health issues could be good channels of that information for their colleagues. However, only 4.5% of respondents had mentioned that they had received information regarding MTCT and PMTCT from their friends and relatives.

The study also highlighted the involvement of unskilled labour in providing delivery care to fellow mothers. One of the respondents reported to having at one time assisted a known HIV infected mother deliver and then removed the baby from maternal blood and secretions. Many mothers in Uganda still get into labour far away from where they can possibly access skilled attention. The unskilled helpers may not know what to do in terms of MTCT, but also risk exposing themselves to infection.

5.7 Conclusions

- There are high levels of awareness regarding MTCT, but relatively lower levels of awareness regarding PMTCT among women of child-bearing age in Mwizi sub-county.
- In as much as there are high levels of awareness regarding MTCT and PMTCT, the adequacy of knowledge regarding the two issues is low.
- Many women in Mwizi do not know that MTCT can occur during pregnancy.
- The most known timing of MTCT is labour and delivery, and the most known strategy of PMTCT is delivering under skilled health supervision among women of Mwizi sub-county.
- Health workers are the most important sources of information regarding MTCT and PMTCT for women of Mwizi sub-county.
• A number of women have participated in promoting PMTCT utilization among their friends or have themselves carried a number of activities to prevent infecting their own children.

5.8 Study Limitations

The limited funds and time we had did not allow us to interview more women. This may have implications on the extent to which our findings can be interpreted. For the same reasons we were unable to carry out focus group discussions which would have exhausted the ideas communities have regarding these topics.

5.9 Recommendations

• Health workers need to be given continuous medical education regarding MTCT and PMTCT since they are the main sources of information for rural women.

• More attention and emphasis needs to be placed on educating women regarding PMTCT as the great majority know that MTCT occurs whereas relatively smaller proportion are aware of the remedies to reduce the risk.

• The fact that MTCT can occur during pregnancy should to be emphasized among women of Mwizi, as most of them are not aware of it.

5.10 Knowledge Translation

This study has established that 91 percent of women in Mwizi sub-county were aware that MTCT occurs, a while 72 percent of women are aware that it can be prevented. This means that there is a group of women who are aware that MTCT occurs but are unaware of the possibility of its prevention. Similarly, much as there’s high level of awareness regarding MTCT and PMTCT, the
adequacy of knowledge regarding these two issues is low. There’s therefore need for increased health education regarding MTCT and PMTCT among women in Mwizi. This can be implemented by HCU, the Mbarara District health department, and the Uganda Ministry of Health in order to increase knowledge and awareness regarding MTCT and PMTCT. This should result in increased utilization of PMTCT services and therefore less mother-to-child transmission of HIV to children, which in turn will result into better maternal and child health.

The study also established that health care workers are the main sources of information regarding MTCT and PMTCT for women in Mwizi sub-county. This means that health workers need continuous medical education regarding new MTCT and PMTCT guidelines and policies in order for this knowledge to reach women in the grass-roots. The Ugandan government, HCU, and other NGOs involved in HIV care and prevention in these communities, for example, The AIDS Support Organization (TASO) and Mbarara-Makerere Joint AIDS Program (MJAB), among others, can use this knowledge to organize workshops and seminars for health workers serving in rural areas. This should increase their knowledge base, from which they will teach women in the community regarding MTCT and PMTCT. this should in the end result into increased knowledge and awareness levels among the members of the community.

Mwizi sub-county is a typical rural Ugandan and African setting and studies done in Mbarara (Bajunirwe and Muzoora, 2005), other regions in Uganda (Katushabe, 2005) and other African countries (Berhane and Tesfazio, 2005; Harms, et al., 2005 and Falnes, 2010) showed similar results. These findings may therefore be used to make similar educational and policy interventions in most similar Ugandan and Sub-Sahara African settings.

5.11 Future Plans

This study has established that majority of women of child-bearing age in Mwizi know that MTCT can occur during labour and delivery, and that delivery from a health facility is the best modality for PMTCT. The study group would like to find out if this knowledge translates into change of reproductive health-seeking behavior among HIV positive women. In future, the group would like to compare the ANC attendance and hospital delivery levels among HIV positive and negative women.
REFERENCES


APPENDIX 1 QUESTIONNAIRE AND INTERVIEW GUIDE ENGLISH VERSION

Date of the interview             _____/_____/_____
Initials of the interviewer       _____|______
SECTION A: IDENTIFICATION AND DEMOGRAPHICS OF THE PARTICIPANT

1. Participant’s study number       ______/_______
2. Age in years        ______________
3. Level of education (choose one)
   i. None
   ii. Primary
   iii. Secondary
   iv. Tertiary
4. Religion (choose one)
   i. Roman catholic
   ii. Protestant
   iii. Moslem
   iv. Pentecostal
   v. Other (specify)_____________________________________
5. Marital status (choose one)
   i. Never married
   ii. Widow
   iii. Divorced
   iv. Married
   v. Other (specify)_____________________________________
6. Occupation (choose one)
   i. Peasant
   ii. Trader
   iii. Salaried worker
   iv. Others (specify)____________________________________

SECTION B: PARITY OF THE PARTICIPANT

7. Have you ever been pregnant?  
   i. Yes 
   ii. No
8. Are you currently pregnant?  
   i. Yes 
   ii. No
9. How many times have you ever been pregnant? ________ times.
10. How old is your youngest child? _______ months/years

SECTION C: PARTICIPANT’S KNOWLEDGeregarding MTCT AND PMTCT

11. Are you aware that a mother can transmit HIV to her child?
12. If yes, when does MTCT occur? (*choose all that the participant mentions*)
   i. Pregnancy
   ii. Labour
   iii. Breastfeeding
   iv. Other (*specify*)

13. Are you aware that MTCT can be prevented?
   i. Yes
   ii. No

14. If yes, how can it be prevented? (*choose all that the participant mentions*)
   i. HIV counseling and testing
   ii. ARVs during pregnancy and breastfeeding
   iii. Delivering from a health facility
   iv. Modified infant feeding
   v. Early infant diagnosis of HIV
   vi. Other (*specify*)

SECTION D: SOURCES OF INFORMATION REGARDING MTCT AND PMTCT

15. Where have you heard this information above from? (*choose all that the participant mentions*)
   i. Health workers
   ii. Mass media
   iii. Friends/relatives
   iv. School
   v. Social gatherings
   vi. Others (*specify*)

16. When did you hear about this information? _________

SECTION E: PRACTICE REGARDING PMTCT

17. Have you ever had an HIV done on you?
   i. Yes
   ii. No

18. Have you ever done anything to prevent MTCT as an individual?
   i. Yes
   ii. No

19. If yes above, what you’re your ever done?
20. Is there anything you would like to ask me?

APPENDIX 2 INFORMED CONSENT FORM ENGLISH VERSION

My name is……………….. from Mbarara University of Science and Technology and I would like to request you to participate in the study on knowledge and practices of Women Regarding Prevention of Mother-to-child Transmission of HIV (PMTCT) in Mwizi Sub-county. The purpose of this study is to explore knowledge and practices of women regarding PMTCT in this sub-county. Your participation in this study, will help to increase our understanding of the knowledge and practices of women regarding PMTCT in this area in order to improve on health care delivery.
I would like to ask you for information about your knowledge and practices in regard to PMTCT. If you agree to take part in the study, it’s possible that we might contact you again to re-interview you or follow up on the procedure. The information that you provide during the study will be kept confidential. Only the Researchers and Assistants will have access to them.

Your participation in this study is voluntary and you have the right to refuse to participate or answer any question that you feel uncomfortable with. If you change your mind about participating during the course of the interview, you have the right to withdraw at any time.

If there is anything that is unclear or you need further information, we shall be delighted to provide it.

**Declaration of the Interviewee**

*I have understood the purpose of the study and have had the opportunity to ask questions about it. All my questions have been answered to my satisfaction. I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time and the information I provide will be kept confidential.*

................................................................. .................................................................

Signature of participant Name/Signature of Interviewer

Tel No (Optional) ........................................... Tel No...........................................

Date: ....................................................... Date: ...................................................

**APPENDIX 3 CONSENT FORM RUNYANKORE VERSION**

*Izina ryange ni............................................................. ninduga omu yunivasite ya Mbarara erikwegyesa ebya sayansi n’ebymakorero. Ninkushaba ku oyetaba omukucoondoza ahabikwahirine n’okukingira omuzaire ow’omukazi obutaturira omwana weye akakooko ka sirimu omugomborora eya Mwizi. Ekigyendererya kyokucoondoza oku, n’okwetegyereza okumanya n’emikorere y’abakyara ba Mwizi ahabikwahirine n’okukingira omuzaire ow’omukazi okuturira omwana weye akakooko ka sirimu. Okwetaba kwaawe omukucoondoza oku nikuza kuyamba.*
okwongyera ahakwetegyereza kwaitu ahabikwatirine n’okukingira omuzaire ow’omukazi okuturira omwana weye akakooko ka sirimu omukyangya eki, kwenda ngu ebyamagara byongyere kubagye.

Ninyenda kukubuza ahabikwatirine okumanya n’emikorere y’abakazi ahabikwatirine n’okukingira omuzaire ow’omukazi okuturira omwana weye akakooko ka sirimu. Ku orayikirize kwetaba omukucoondozo’ku, nitubasa okwiija okukuronda ogundi murundi kugarukamu okuganiira naiwe ahabikwatirine n’okucoondoza oku.

Ebyoragarukyemu omukucoondoza oku nibiya nga kuguma biiri ebihama byaitu hamwe naiwe. Okwetaba kwawe omukucoondoza oku tikigyemo, kandi oyine obugabe kwanga kwetabamu, nainga okwanga kugarukamu ekibuuzu kyoona ekitarakushemeze.

Wayenda noreeka okugarukamu ebibuzo ebi nobuwakuba watandikire. Waaba oine ekyotayetegyereza ninga ekyorikwenda kubuuza, nitwaija kushemererwa okukikushoborera.

**Okusharamu kwomucoondibwa**

*Nayetegyereza ekiyendererwa kyokuyondoza oku. Natunga omugisha gw’okubuuza kandi ebibuuzu byangye byoona byakarukwamu nabyetegyereza kurungi.*

………………………………….   ……………………………………..

Ekinkumu ry’omucoondozibwa          Ekinkumu ky’omucoondoza

Esiimu ………………………….   Esiimu………………………………

Ebiro by’okwezi ___/___/______   Ebiro by’okwezi  ____/____/_____

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