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Factors affecting enrolment into the programme of prevention of mother-to-child transmission (PMTCT) of HIV, among post-partum women, in a public maternity centre in the Limpopo Province

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Factors affecting enrolment into the programme of prevention of mother-to-child transmission (PMTCT) of HIV, among post-partum women, in a public maternity centre in the Limpopo Province.

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A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of
Master of Family Medicine

Johannesburg 2009

DECLARATION

I, Olusesan Joshua Ajewole declare that this research report is my own work. It is being submitted for the degree of Master of Family Medicine in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

23rd day of July, 2009

In memory of my late mother

Mrs Juliana Ajewole

1926-1996

ABSTRACT

BACKGROUND Until recent years, uptake of voluntary counselling and testing for HIV (VCT) and enrolment into the programme of prevention of mother-to-child transmission of HIV (PMTCT) was very poor among pregnant women. This study aims to identify factors influencing enrolment into the programme of PMTCT among post-partum women.

METHODS Cross sectional interview of 200 consecutive post-partum women was conducted using an interviewer-administered questionnaire. Forms of those who declined to participate were kept and marked "refusal". Data was analysed using Epi info software.

RESULTS The response rate was 84.5%. VCT uptake was 96.9% among participants and PMTCT uptake among HIV+ve mothers was 90.9%. The mean age of participants was 25 years, ranged from 14 to 41 years. Women in the age-group 20-29 were more likely to accept VCT and enroll for PMTCT than women in the other age-groups (p=0.0114).

CONCLUSIONS AND RECOMMENDATIONS Provision of clear and well-defined policy guidelines and strong commitment to implementation of these guidelines have been largely responsible for impressive uptake of VCT among participants and high rates of satisfaction with PMTCT programme among HIV-infected women. Training of more lay-counsellors is recommended for its cost-effectiveness.

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ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
ANC	-	Ante Natal Care
ARV	-	Anti Retroviral
ART	-	Antiretroviral Therapy
HCT	-	HIV Counselling and Testing
HIV	-	Human Immunodeficiency Virus
MTCT	-	Mother to Child Transmission
PMTCT	-	Prevention of Mother to Child Transmission
UN	-	United Nations
UNGASS	-	United Nations General Assembly Special Session on HIV and AIDS
VCT	-	Voluntary Counselling and Testing
WHO	-	World Health Organization
WONCA	-	World Organization of National Colleges and Academies of General Practice/Family Medicine

CHAPTER 1

INTRODUCTION

The efficacy of the programmes of prevention of mother to child transmission of HIV (PMTCT), described in many studies across the globe, has offered relief to many of these countries which have been ravaged by HIV/AIDS, and indeed to the whole world.

The HIV epidemic in the paediatric population has reached alarmingly high rates and mother-to-child transmission of HIV (MTCT) is the main mode of spread of HIV in this 'innocent' population[1,2,3]. It is estimated that, to date, 5.1 million children worldwide have been infected by HIV[4]. The innocence of the unborn child justifies everything that could be done to prevent its acquisition of the deadly virus and guarantee its 'rights to life, survival and development'.[5]

HIV/AIDS is a major cause of infant and childhood morbidity and mortality in Africa. In children under 5 years of age, HIV/AIDS now accounts for a rise of more than 19% in infant mortality, and a 36% rise in under-5 mortality[6], since its earliest days in the 80s'.

Yet for the most part, HIV in children is preventable. In industrialised countries of North America and Europe, paediatric HIV has largely been controlled. In these settings, HIV testing as part of routine antenatal care, combinations of antiretroviral (ARV) drug regimens, elective caesarean section, and complete avoidance of breastfeeding have translated into mother-to-child transmission of less than 2%[6]. International and local

experience has shown that the provision of antiretroviral chemoprophylaxis and replacement feeding can cause a dramatic reduction in the risk of transmission from mother to infant in resource-constrained settings.[7-12]

More than 95% of HIV-infected infants in Africa acquire HIV from their mothers during pregnancy, at the time of delivery, or postnatally through breastfeeding[1]. The transmission risk for a child born to an HIV-infected mother in an African setting without interventions for PMTCT is about 30-40%[6]. In South Africa, the risk of vertical transmission from HIV-infected mothers to their infants is estimated to be between 19% and 36%, depending on whether or not the child is breastfed[13].

The use of antiretroviral therapy (ART) represents the first major breakthrough in the PMTCT and to date ART is the most important strategy to prevent MTCT of HIV. Since the potent effects of Zidovudine (AZT) in reducing the risk of vertical transmission were first published in 1994[11] , numerous studies have confirmed this effect and have shown similar effects using other antiretroviral drugs including Lamivudine (3TC), Didanosine (ddI), Nevirapine (NVP) and Stavudine (d4T), as monotherapy or in combination. The added advantage of Highly Active Antiretroviral Therapy (HAART) for PMTCT has also been established. Effective short courses of ART regimens for PMTCT include: (1) Nevirapine 200mg given to the mother at onset of labour and 2mg/kg single dose to the infant within 1 week (HIVNET012) and preferably within 72hours. (2) Short course AZT Regimen (Modified Thai) which gives oral AZT 300mg every 12hours from 32-34 weeks gestation during pregnancy and every 3 hours in labour; and for 1week to the infant,

4mg/kg/day every 12hours. (3) PHPT-2 Regimen (2004 Thai Regimen) which combines AZT (starting at 28 weeks or as soon as possible thereafter) with single dose of maternal and infant Nevirapine (HIVNET 012). The current South African PMTCT protocol is basically the Thai Regimen and modified Thai Regimen with little adjustments to the infant ARV regimen for optimal effectiveness, depending on when the pregnant woman was started on ARV. Table 1.1 below shows a detailed summary of the PMTCT Antiretroviral protocols for pregnant women and infants.

Table 1.1 South African Antiretroviral Protocols for pregnant women and infants

CLINICAL DECISION	REGIMEN FOR WOMAN	REGIMEN FOR INFANT
PMTCT regimen for ALL groups of women from 28 weeks of pregnancy unless already on HAART		
CD4 cell count >200, continue with this PMTCT regimen CD4 count ≤200, continue AZT up to point HAART initiated	• AZT started from 28 weeks onwards AND • sdNVP + AZT at onset of labour on a 3-hourly basis • If in false labour, continue with AZT	sdNVP + AZT for 7 days* AZT for 28 days if: • Mother received <4weeks AZT during pregnancy • Mother received <4 weeks HAART or • Mother only received sdNVP
HAART regimens (1a and 1b). If on AZT as above need to switch to regimens below		
CD4 cell count ≤200 or WHO stage IV group	• d4T + 3TC + NVP (Regimen 1b) preferred regimen for pregnant women. Begin at any age • d4T +3TC + EFV (Regimen 1a) For pregnant women on regimen 1a, switch 1b in the first trimester. • If presenting after first trimester, continue regimen 1a. • Continue through labour, delivery and postnatal periods. • After the first trimester, if women develop NVP-associated toxicity, then NVP should be substituted with EFV	sdNVP + AZT for 7 days* AZT for 28 days if • Mother received <4weeks HAART
Unbooked woman presents in labour	Also includes women of known status who have had no ARVs during pregnancy. Do not require testing	
Consent and test for HIV only in stage 1 labour. If advanced stage of labour, defer maternal testing till after delivery.	If HIV positive • sdNVP + AZT at onset of labour and on AZT at 3-hourly basis If she is in false labour, continue with AZT.	sdNVP + AZT for 28 days

(Adapted from Policy and Guidelines for the implementation of the PMTCT programme. National Department of Health. 11 February 2008)

A 4-pronged approach has been suggested for PMTCT of HIV (by UN/WHO).

(1) Primary prevention; (2) Prevention of unintended pregnancies in HIV-infected women; (3) PMTCT of HIV; (4) Provision of care and support for HIV-infected women, their infants, and their families.

PMTCT efforts to date have focused almost exclusively on preventing transmission after an HIV-positive woman is already pregnant.

Specific interventions of PMTCT include:

1. Use of ARV drugs.
2. Safer delivery practices.
3. Infant feeding.
4. Counselling.
5. Support.

Despite the UNGASS target, in 2005 only 15% of HIV-infected pregnant women received preventive drugs – barely making a dent in the number of infant infections. In 2006 the proportion was 23%.[14]

The results had been so poor that they prompted an unusually frank admission from a senior United Nations official in August 2006:

"These programmes have been a failure. Despite the fact that the global HIV response is now awash in funding, pregnant women still don't have access to the drugs that will

prevent them from passing the virus on to their children." - Dr. Arletty Pinel, Chief of UNFPA Reproductive Health Branch [15]

The main challenges of implementing PMTCT programmes in the sub-Saharan African region had been identified as low uptake of HIV testing by antenatal women, and low uptake of ART by HIV-positive women identified during pregnancy; and these in turn attributed to institutional factors (such as client flow and low staff levels) and inadequate community engagement (especially from male partners)[16].

The literature is scanty on why pregnant women generally do not embrace VCT, and why the HIV-infected women identified during antenatal care are reluctant to enrol for the PMTCT programmes. The precarious socio-economic situation of the populations in developing countries, and underdeveloped health structures and services has been identified as some of the obstacles to acceptance of PMTCT among pregnant women. "In addition anxiety and reluctance of general population in the face of HIV problem and the prevalence of maternal anaemia reduce the acceptability and safety of AZT treatment for pregnant women in developing regions[3]."

A study in the Khayelitsha district of Western Cape[17] demonstrated the feasibility and effectiveness of a PMTCT programme within busy routine obstetric services in urban primary health care settings. This study attributed the effectiveness of the programme to high rates of acceptance for testing and subsequent enrolment into the programme.

1.1 Statement of the problem

The researcher has witnessed poor uptake of PMTCT programme arising from denial and apathy to outright rejection of the programme, in various clinical settings from Lesotho to South Africa, and had wondered where the problem lay. Is it with the health institutions, the environment or with the patients themselves?

The researcher therefore attempts to study the problem from the patients' perspective so as to enrich our current knowledge and possibly improve our approach to solving the problem.

1.2 Justification for study

Medicine is changing from prescriptive to collaborative practice. General Practitioners have to do more talking, listening, and generally understanding and carrying the patient along in all aspects of patient's care, than used to be. These are the needed ingredients for the changing role of General Practitioners from predominantly curative and paternalistic stance to more of preventive, promotive and rehabilitative care through collaborative approach.

What the researcher had learnt in Family Medicine in the last 3 years can be summarised as 'prevention, no doubt, is better than cure'.

To date, there is no known cure for HIV/AIDS, and the best we can do is to help prevent it. The good thing is that it is preventable. The efficacy of the PMTCT programmes described in many studies across the globe is also cheering news in the care of the

innocent paediatric population, but the problem is the complex nature of human beings, patients and health care workers inclusive.

For those of us who are in position to know our right from left, good from bad, the choice is entirely that of the individual and we have the right to choose between life and death, health or disease in spite of all that the health care systems may offer us to make a healthy choice. But what about the unborn child who is not so privileged and whose rights to life, survival and development are determined by others? For this reason, some severely HIV-ravaged countries have taken bold steps to protect the innocent child by making it compulsory for pregnant women to go through PMTCT programmes.

The researcher has witnessed low uptake of this laudable programme, read about it, and believed this to be the prevailing situation in most countries in Africa.

It is also believed that the problem is either with the clients (individual), the environment (social), or the health care system (institutional factors), or a combination of these in varying degrees. Pregnant women are the ones at the very centre of the programme. They would be expected to recall some of the factors that influenced their acceptance of VCT and subsequent enrolment into the PMTCT where indicated. Post-partum women have been chosen for this study so that even those who entered the programme very late (including the unbooked, presenting in labour) could also be accommodated in the study. The South African PMTCT protocols have provisions for every pregnant mother up to immediately after delivery, to enter into the programme (see summary on Table 1.1)

The protocol for this study was prepared in 2006 with a background experience of the researcher in the previous years, of low uptake of VCT and PMTCT but at the end of the study in 2008, a lot of improvement was noted. As well as identifying factors hindering enrolment into the programme, this study also highlights some factors that have facilitated the improvement recorded. Together, these are the factors influencing enrolment into the PMTCT programme which this study aimed to identify.

1.3 Aim

The aim of this study was to identify factors influencing enrolment into the programme of prevention of mother-to-child transmission of HIV (PMTCT) among postnatal women.

1.4 Objectives of the study

The objectives of the study in the study population were:

a). To determine the demography of respondents.

b). To determine the knowledge, attitude, beliefs and practice of PMTCT among the respondents.

c). To identify retrospectively, factors (institutional, patient-related, environmental and others) which influenced uptake of VCT, among postnatal women.

d). To identify factors (institutional, patient-related, environmental and others) which influenced subsequent enrolment into the PMTCT programme during their pregnancy

e). To determine the relationship between the variables mentioned above.

1.5 Definitions: The following definitions apply in this report.

Prevention of mother-to-child transmission of HIV: - includes all interventions aimed ultimately at reducing or eliminating the risk of transmission of the HIV from a mother to her child at different stages of pregnancy, delivery and postnatally, during breastfeeding. These involve primary prevention of HIV among women of child bearing age; prevention of unintended pregnancies among HIV-infected women; prevention of transmission of HIV from infected pregnant woman to her baby in-utero and during breast-feeding; and provision of care and support to HIV-infected women, their infants and their family, as recommended by the WHO.

Mother-to-child transmission: Transmission of HIV from an HIV-positive woman during pregnancy, delivery or breastfeeding to her child. This term is used because the immediate source of the infection is the mother, and does not imply blame on the mother.

Post-partum period: Period from immediately after the birth of the baby to 42 weeks after. This term has been used inter-changeably with post-natal period

Institutions: refer to various health facilities- the clinics and the hospitals in particular.

CHAPTER 2

LITERATURE REVIEW

Worldwide, more than two million HIV-infected women give birth annually, but only 9% of them receive PMTCT intervention[18]. It was expected that having in place a simple PMTCT programme that provides ARV prophylaxis for HIV-infected mothers and children could increase the utilization of these services. However studies from both developed[19] and developing countries[20-22] have proven that the services were underused.

PMTCT is a politically and scientifically accepted approach to reduce the impact of HIV, especially on the children. In South Africa, PMTCT programme suffered a political setback until the Constitutional Court ruled in 2002 in favour of ARV roll out, against government's position then. South Africa is home to at least 5.6million people living with HIV (PLWH); at 11% has one of the highest population prevalence rates in the World (Dorrington, Johnson, Bradshaw and Daniel, 2006)[23]. Despite South Africa's high HIV prevalence rate the national government prevaricated on provision of ARVs for PMTCT[22], until after the court's ruling in 2002. Government cited economic reasons and concerns about side-effects of ARV for its position. Since then, the commitment of the government following the results of the pilot studies has brought about improvements in the national PMTCT programme.

"There are approximately 1million births per calendar year[24]. Based on antenatal statistics, the estimated number of HIV positive pregnant women in 2006 was 302,000

(30.2%) and 290,000 (29.0%) in 2007[24]. The total number of HIV positive pregnant women identified and enrolled into the PMTCT programme in 2006 was 186,646 (72.7%)".[24]

In the review of PMTCT uptake among South African Provinces, Limpopo had PMTCT uptake rate of 55% in 2006 and 62% in 2007 among HIV positive pregnant women. The highest rate was observed in the Western Cape, being 90%, in the two years[24]. In this study site, monthly antenatal HIV prevalence among pregnant women ranged from 11.1% to 39.5 % in the previous 12 months with an average of 28%.

Various studies[17,25-27] have demonstrated the effectiveness and feasibility of the PMTCT programme but there still exist a number of factors hindering the uptake of VCT (entry point to PMTCT), and enrolment into the PMTCT programme. A 3-dimensional view was taken of these obstacles viz – patient-related factors, institutional factors, and the environment or community factors.

PMTCT involves, or should involve every would-be mother. For many, (HIV-negative), it starts and ends with a 2nd VCT after the window period. Others have to go through the programme from VCT till probably 18 months after delivery when the outcome of the intervention can safely be verified. Mothers are expected to have a good knowledge of the programme. Knowledge is power. A good knowledge of the processes and expected outcome has empowered many of the participants in this study to take a bold step in accepting VCT and those who tested positive going ahead to enrol into the PMTCT

programme against all odds. “In multivariate analysis, factors associated with having an HIV test included being interviewed at an urban site, having a high PMTCT knowledge score, knowing someone receiving PMTCT or ART and having a partner who had been tested for HIV”[27]

In various settings[25-28] acceptance of VCT and subsequent enrolment into the PMTCT where necessary, have improved in the last 5 years from around 30-40% to between 70and 80% on the average. In South Africa which has the largest PMTCT programme in Africa[29], “close to 2.2million pregnant women have utilized the service in the last 4 years with testing uptake rates averaging 70%. Almost 60% of identified HIV positive women have received nevirapine”. The researcher set off in 2006 with the protocol for this study with his experience, in the previous years, of low uptake of VCT and PMTCT but at the end of the study in 2008, found out there had been a lot of improvement. Similar improvements have been recorded in many studies[27-28]. As well as identifying factors hindering enrolment into the programme, this study also highlights some factors that have facilitated the improvement recorded. Together, these are the factors influencing enrolment into the PMTCT programme which this study aimed to identify.

Health institutions implementing government policies and guidelines on PMTCT have made the most contribution towards the improvement in VCT uptake and enrolment into the PMTCT programme. Participants in this study and other studies[21,26,27] alluded to this.

The social stigma in the patients' environment or community represents the major obstacle to uptake of VCT and enrolment into PMTCT programme. This factor of fear of stigma and discrimination by the society cut across all studies on HIV and PMTCT. "Many women told the authors that fear of stigma and discrimination was the most important barrier for them to use HIV testing services"[30]

People in the community and partners of participants in this study generally contributed negatively by way of stigma and discrimination or apathy towards the HIV positive women. Most of the families were dysfunctional with the woman having no support from the partner. Thus the decision to take an HIV testing and enrol into the PMTCT programme was solely that of the pregnant woman in the majority of participants in this study.

In a study in Uganda by Bajunirwe and Mizoora[31] the strongest predictor of willingness to accept an HIV test and join the PMTCT programme was the woman's perception that her husband would approve of her testing for HIV. "In Francistown, Botswana, approximately 40% of pregnant women are HIV positive. PMTCT has been available since 1999, ARV therapy since 2001, and 95% of women have ANC and deliver in the hospital. However in 2002 only 33% of ANC clients tested for HIV. Neither fear of stigma nor resistance from partners were frequent reasons for refusing an HIV test."[27] Lack of awareness of the PMTCT programme was the main reason cited.

The contribution of mass media is also acknowledged in this study as have other studies[31,32]. In a retrospective study of local language radio programme[32] – The

Abstinence Be faithful for Youth (ABY), in Uganda, all the VCT records reviewed in all three health centres, showed an increase in number of VCT clients from 777 between November 2004 and August 2005 to 915 between September 2005 and August 2006. A year on year increase of 15%. PMTCT records showed an increase from 520 to 1542 during the same period. Service providers attributed the increase to the ABY programme. "The radio programme helped to remove the fear of testing. You know people naturally used to fear testing for HIV" concluded the officer in charge of PMTCT in Kapchorwa hospital.

As a result of the negative influence of the community the decision to have VCT and enrol in the PMTCT programme became largely personal- that of the individual participant, depending on how well informed she was and how well she could use her informed position to her own advantage.

CHAPTER 3

METHODS

3.1 Introduction

The aim of this chapter is to describe the methods used in the collection of the data. The chapter will include a description of the study design and the site of the study and the study population. It includes a description of the sampling method and the actual process of data collection. A description of the pilot study has been included. Ethical clearance is also discussed.

3.2 Study Design

This was a cross-sectional descriptive study.

3.3 Site of study

This study was conducted in the maternity ward of a secondary level hospital in a rural area of the Limpopo province, South Africa. The actual name of the hospital has been kept confidential for ethical reasons. High risks patients from about 12 feeder clinics and complicated deliveries from these clinics and surrounding hospitals were referred to this hospital, which also had a neonatal unit. Monthly antenatal HIV prevalence in the previous 12 months varied from 11.1% to 39.5% with an average of 28.5%. Nursing Sisters, some with advanced midwifery offered and provided VCT and PMTCT in the centre. All had undergone VCT and PMTCT training and ongoing refresher training. Lay counsellors were utilised in the clinics for voluntary counselling while the sisters pricked the patients. The lay counsellors too had undergone VCT training and ongoing

refresher training. Rapid HIV test algorithm was used. First response test results were confirmed with ACON HIV 1/2/0. Found highly consistent, sisters could not recall the last time they had to resort to ELISA confirmatory test.

Basically a rural setting, the antiretroviral used were still as in the National PMTCT protocol, the dual therapy for those not already on HAART.

3.4 Study population

Antenatal attendees of about 12 clinics around the hospital who were referred to the hospital for delivery or for assessment immediately post delivery in the clinic. An average of between 250 and 300 deliveries were taken in the maternity centre every month.

3.5 Sampling

3.5.1 **Sampling method:-**

A statistician had been consulted and it was recommended that consecutive post-partum women, who have just been delivered, shortly before being discharged, should be approached for the interview until 200 patients had been approached. Informed consent was obtained after adequate information had been given to the participant using a standard introductory format - The participants' information sheet (See Appendix 2).

Two hundred consecutive post-partum women were approached.

Those who consented were interviewed. Forms of those who declined were kept blank and marked as "refusal".

3.5.2 **Sample size:-** Two hundred consecutive postnatal women, as per Statistician's recommendation, were approached for interview. Based on approximately 30% national prevalence rate of HIV among pregnant women[29] and estimated response rate of at least 75%, it was hoped that about 50 HIV-positive women would respond and this would make for a good analysis. This sample estimate is expected to be within 5-10% of the study population, with a 95% confidence interval.

A response rate of 80% was earlier recorded at the pilot to this study.

3.6 Data collection

Data collection began on 21 July 2008, and stopped with the 200th patient on 20th August 2008. A semi-structured interviewer-administered questionnaire designed in English and translated into the 2 local languages (Sotho and Xonga) was used for data collection. The validity of the measuring instrument had been improved upon by back-translating into English language by 2 different sets of translators to ensure consistency. A nurse was identified, briefed on the research objectives and trained on the use of the questionnaire to obtain accurate data in a consistent manner.

Each participant was asked to confirm the language she preferred (most speak the 2). She would then be given a copy of the introductory format (in her language), which introduced the researcher and the Nurse translator, the purpose of the study, and formal invitation to voluntarily participate. She was then invited into a private room in the post-

natal ward, where we established rapport and sought her informed consent verbally and in writing. Those who declined were reassured of their right to do so and their forms kept blank and marked 'refusal'. The Researcher administered the questionnaire with the English version, to those who gave consent. The Nurse/translator with a relevant copy of the translated questionnaire, assisted when and where necessary. Those who needed counselling by the Psychologist were referred to her after the interview session**.** Some were ruffled by the interview especially those who tested and enrolled without their partners' knowledge or against their partners' wish as in a particular participant.

3.6.1 **Measuring Instrument/Tool:** Semi-structured interviewer-administered questionnaire designed in English, translated into the two local languages - Sotho and Xonga, and back-translated to English. (See Appendix 1). Translations and back-translations were done (vice-versa) by 2 doctor colleagues and 2 nurse translators who were indigenes and were working in the community.

3.6.2. **Inclusion criteria:** All post-partum women booked and unbooked, who delivered in the maternity irrespective of age, parity, and mode of delivery were included in the study.

3.6.3 **Exclusion criteria:** Criteria for exclusion were those with stillbirths or early neonatal deaths, non-English speaking or non-speakers of any of the 2 major languages – Sotho and Xonga. Those with serious obstetric complications e.g. eclampsia and

psychiatric patients who were either depressed or mentally incompetent were also excluded in the study.

3.6.4 **Data entry & analysis** Data was entered and analysed using the Epi info soft ware. Student t-test and chi square statistics were used to determine the relationship between the demographic variables and uptake of VCT as well as enrolment into the PMTCT programme. The significant p-value of <0.05 was used for the analysis.

3.7 Pilot study

A pilot study was done in another hospital 4 months before the main study to test the usefulness of the measuring tool and practicality of data collection and analysis. Participants understood the questions very well and were pleased with the explanations in the participants' information sheet (see appendix 2) inviting them to participate in the study. We interviewed 10 patients and only two refused to participate, giving a response rate of 80%. Two of the eight who participated had no knowledge of PMTCT and were not interviewed further on the subject. Of the remaining six only one was HIV-infected and was enrolled in the PMTCT programme. She cited the safety of her unborn baby as her reason for enrolment. The remaining five tested negative. Awareness of PMTCT programme was high among respondents, six out of eight or 75%.

3.8 Ethics

Approval for this study was obtained from the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg. Ethics clearance number is - M060726 (see appendix 3)

Approval of the Postgraduate Committee of the Faculty of Health Sciences Medical School was also obtained. (see appendix 4)

The protocol for this study also got the approval of the Ethics clearance Committee of the University of Limpopo on behalf of the Provincial Government. Ethics clearance number is - 012/2008 (appendix 5).

Finally, the approval for the study was given by the Provincial Government. Ref: 4/2/2 – (appendix 6)

Permission was given by the institutions where studies were carried out following approval by the Provincial Government.

Informed consent was obtained of participants based on participants' information sheet accompanying the questionnaire (appendix 2)

Questionnaires were anonymous and information gathered was kept confidential.

The identity of the study institutions was kept confidential as promised the participants.

A clinical Psychologist was arranged earlier on to attend to participants who might need further counselling.

3.9 Limitations of this study Information bias might still be inherent in this study as with any third party interview involving an interpreter. Either the interpreter still, had modified the question to make it friendlier or the interviewee withheld some information simply because of the presence of the third party. Confidential information as sensitive as one's HIV status are better divulged on one-on-one basis than with the presence of a third party.

There could also have been selection bias as the participants in this study were selected "high risk" patients and those with complications who were referred to this secondary level hospital for management. The participants therefore did not represent the broad spectrum of antenatal attendees from the various primary care levels.

3.10 Conclusion

In summary this chapter included a description of study design, site of study and the study population. It described the sample size methods of sampling and data collection and analysis. A description of the pilot study, ethical issues and study limitations were also discussed.

CHAPTER 4

RESULTS

4.1 Response rate

A total of 200 post-partum women were invited to participate in the study. Of these, 169 agreed to participate giving a response rate of 84.5%. 31, (15.5%) of these women refused to participate in the study.

4.2 Demographic information

The demographic characteristics of the study participants were as presented on **Table 4.1.** The mean age of pregnant women who participated in the study was 25 years, ranged from 14 to 41 years. Fifty-one percent of these women were in the age group 20 to 29 years.

Ninety-eight percent attended antenatal care. Sixty-four percent were single, 53% lived with a partner. Forty-nine percent of these women said this was their first pregnancy. About 22% said they had experienced miscarriage in their life time. The majority (84%) had secondary education. 60% had a household income of less than R2500-00 with only 5% having household income above R5000.00.

Table4.1: Demographic information

		No	%
Age (yrs)	(mean ±sd)	**25 ± 6.7 (range: 14 to 41)**	
	<20	33	19.5
	20-29	86	50.9
	30-39	45	26.6
	≥40	5	2.9
Attended Ante natal care			
	Yes	165	97.6
	No	4	2.4
Marital Status			
	Single	108	63.9
	Married	61	36.1
Live with partner			
	Yes	90	53.3
	No	79	49.7
No of babies before this		**(range: 0 to 5)**	
	None	83	49.1
	1-2	68	40.2
	>2	18	10.7
Miscarriage			
	Yes	21	12.4
	No	148	87.6
Level of Education			
	None	3	1.7
	Primary	15	8.9
	Secondary	142	84.0
	Tertiary	9	5.3
Household income			
	None	35	20.7
	<R2500	101	59.8
	R2500-R5000	23	13.6
	>R5000	10	5.9

4.3 Knowledge of Prevention of Mother to Child Transmission of HIV

The study participants were asked whether they were aware of Prevention of Mother to Child Transmission of HIV programme. 161 (95.2%) of these pregnant women said they were aware of the programme. Eight (4.7%) of the participants said they were not aware of the programme and they were not interviewed further, and so data on VCT and PMTCT were not collected for these eight participants. Of those who said they were aware of the programme, 93.7% got the knowledge of PMTCT programme from health workers. 63.6% others got additional information from the mass media. More than 70% of the pregnant women indicated that they knew the contents of the program, except knowledge about timing of medication (**Table 4.2**).

Table 4.2: Knowledge of PMTCT of HIV

	No	%
Aware of PMTCT		
Yes	161	95.2
No	8	4.7
Source of knowledge		
(a) Nurse/Doctor only	151	93.7
(b) Nurse /doctor + TV/Radio/Newspaper	96	59.6
(c) Nurse /doctor + School (love life)	16	09.9
(d) partner or friend	02	1.2
What do you know about the programme?		
VCT	161	95.3
Enrolment of HIV +ve mother	148	87.6
Medication for mother & child	153	90.5
Timing of medication	86	50.9
Testing of the child at certain age	127	75.2
Follow up of mother and child	137	81.1

4.4 Factors influencing enrolment into the PMTCT programme

Table 4.3 presents factors that influenced pregnant women to participate in PMTCT programme. Thirty-eight (23.6%) of these women who participated in the study were put in PMTCT programme in this pregnancy, and this also represents the HIV prevalence rate among the study participants. Six of the 161 participants whose data on PMTCT were captured did not test for some reasons, mainly because they were scared of knowing their status. VCT uptake among the study participants was about 96.9%. The majority of women put in the PMTCT program were happy with hospital staff (89.5%), organization of the programme (97.4%), and drug supply (81.6%). Five (13.2%) of pregnant women put in PMTCT programme experienced drug side effect. Twenty-seven (84%) of these women who were in the programme, said safety of their unborn baby motivated them to enrol in the programme. Only one of the participants recalled she did not enrol for PMTCT and knowing she tested HIV+ve. Six others were of unknown status and unsure of PMTCT treatment or not. PMTCT uptake can therefore be estimated to be between 38 of 45 (84.4%) and 38 of 39 (97.4%) of HIV+ve participants.

Table 4.3: Factors influencing enrolment into the PMTCT programme among HIV-infected postnatal women

	No	%
Were you put on this programme in this pregnancy?		
Yes	38	23.5
No	124	76.5
Unknown	7	
Are you happy with programme in the following areas?		
Hospital Staff		
Yes	34	89.5
No	4	10.5
Organization of the programme		
Yes	37	97.4
No	1	2.6
Drug supply		
Yes	31	81.6
No	7	18.4
Experience drug side effect		
Yes	5	13.2
No	33	86.8
What motivated you to enroll in PMTCT program?		
Safety of the baby	27	71.1
Partner	1	2.6
Self	2	5.3
Not sure of everything	7	18.4
Need treatment	1	2.6

4.5 Attitudes, beliefs and practice of PMTCT among participants

The majority 111(68.9%) of women said they did not participate in PMTCT programme because they tested negative. Six (3.7%) of the participants did not test. VCT uptake among those whose data on VCT were captured had been estimated at 96.9%. Of those who did not test, four (66.7%) said they were scared of knowing their status and afraid of social stigma, one (16.7%) did not believe in HIV, and one (16.7%) did not know how to go about it. None of the six who did not test had approached any health worker for help. Most (61.7%) of the participants said they discussed PMTCT with friends and/or relatives (**Table 4.4**).

Table 4.4: Attitudes, beliefs and practice of PMTCT among participants

	No	%
Reason for not enrolled in a program		
I didn't test	6	3.7
Test –ve	111	68.9
Scared of side effect	1	0.6
Others	6	3.7
VCT uptake among Participants	156	96.9
If didn't test, why?		
Don't believe	1	16.7
Don't know how to go about it	1	16.7
Scared of knowing my status	3	50.0
Social stigma	1	16.7
For reason given above, have you approached health worker for help?		
No	6	100.0
Discussed PMTCT with friends/relatives		
Yes	100	61.7
No	62	38.3

This table also highlights the factors influencing VCT uptake among the participants.

4.6 PMTCT programme by selected demographics

An attempt was made with statistical analysis to determine the relationship between some selected demographic variables of the participants and VCT uptake and PMTCT uptake. Significant association was found for age group (χ^2 =11.0654, df 2, p-value = 0.0114); Women in the age group 20-29years are more likely to accept VCT and possibly enrol for PMTCT than women in the other age groups. No significant association was found for marital status (χ^2 = 1.1669, df 2, p-value = 0.5580); and whether the woman lived with her partner or not (χ^2 corrected (Yates) =2.8651, Fisher exact p-value = 0.445681228).

Table 4.5: PMTCT program by selected demographics

Demographic variables	HIV-uninfected N=124		HIV-infected N=38	
	No	%	No	%
Age group				
<20	30	24.2	1	2.6
20-29	56	45.1	26	68.4
30-39	34	27.4	10	26.3
≥40	4	3.2	1	2.6
Marital Status				
Single	82	66.1	22	57.9
Married	42	33.9	16	42.1
Live with a partner				
Yes	61	49.2	25	65.8
No	63	50.8	13	34.2
***Attended Antenatal care**				
Yes	122	97.6	38	100.0
No	3	2.4	0	0.0

*Antenatal attendance is the gateway to PMTCT.

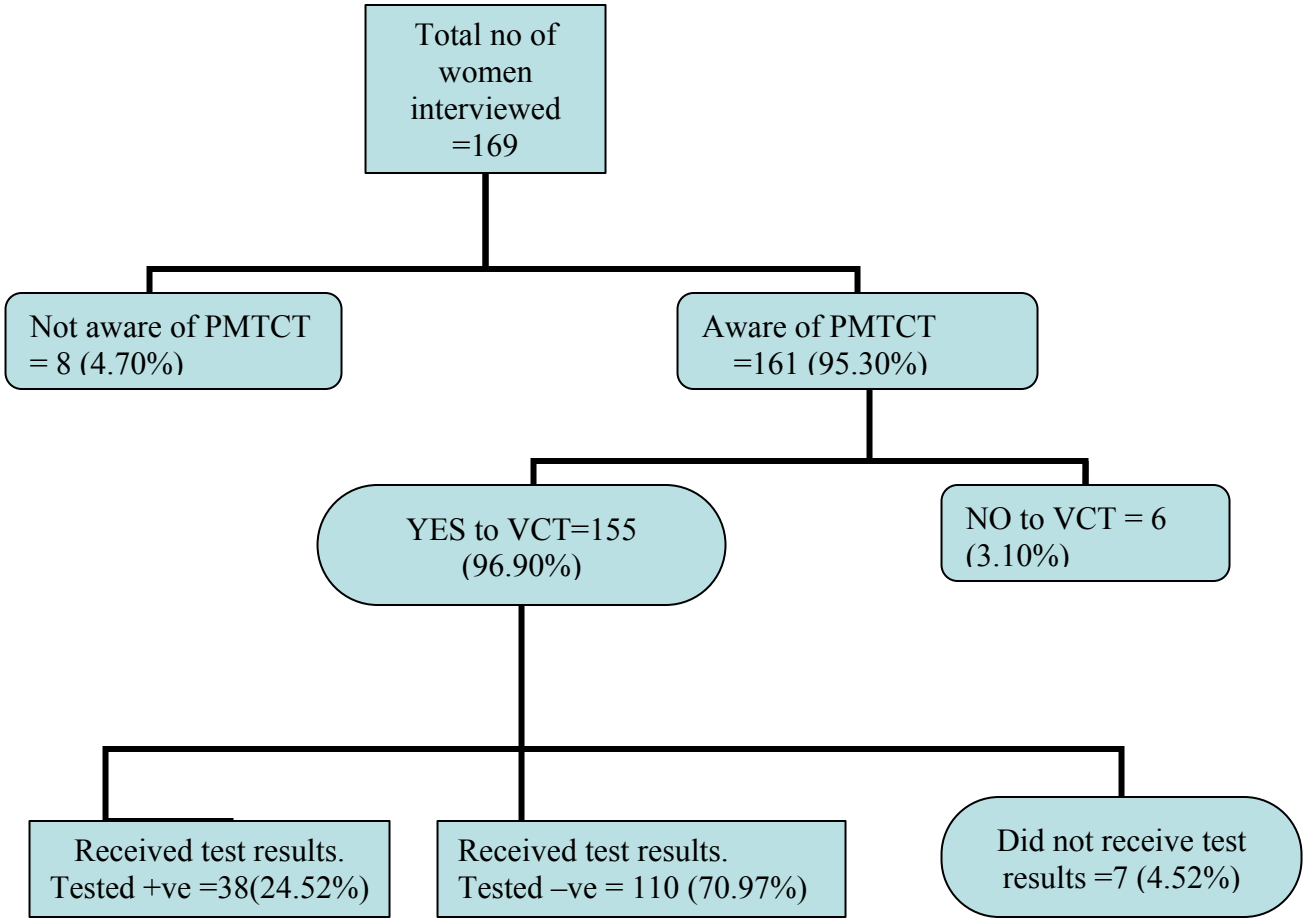


Figure 4.1 PMTCT CASCADE OF RESULTS

All HIV+ve women identified received intervention as per national PMTCT protocol.

CHAPTER 5

DISCUSSION

Worldwide more than 2 million HIV-infected women give birth annually but only 9% of them receive PMTCT intervention[18]. PMTCT uptake has however recorded a lot of improvement in the Southern Africa, where HIV prevalence is widespread among pregnant women, with Botswana said to be taking the lead, recording less than 4% HIV infections in the newborn, a rate comparable with USA and Western Europe[33].

As noted in the introduction, the result of this study showed an unexpectedly high uptake of VCT (96.3%) among participants, and similarly high average PMTCT uptake, (90.9%), among HIV-infected participants. Several studies[27,28] have reported similar findings, and nationally the average VCT uptake of 70% and PMTCT uptake of 60% had been recorded[29]

5.1 Factors influencing enrolment into PMTCT programme among participants

Factors that positively influenced enrolment into the PMTCT programme in this study are displayed on Table 4.3. These are discussed further below:

5.1.1. Government commitment

The efforts of health institutions implementing clear *and well defined government policy and guidelines on PMTCT* have turned around the initial problems associated with VCT uptake and PMTCT enrolment among pregnant women. In a study in Vietnam[34], a well

resourced setting, lack of knowledge and information due to poor counseling, gaps in PMTCT services and fear of stigma and discrimination were identified as most important barriers to uptake of PMTCT programme. Operational guidelines on PMTCT in Vietnam were not available. Other Asian nations reported same problem[19,35]

It would appear that governments in the sub-Saharan Africa have come to terms with the realities of the HIV problems and are facing up to it squarely with all the assistance and resources available. Unlike in Vietnam where accessibility to PMTCT services was about 44% due to various reasons, accessibility in South Africa "is 100% in all public hospital and more than 90% in primary health care centres countrywide"[29]. And so it is in Botswana, Zimbabwe and others.

5.1.2 Awareness and Knowledge of PMTCT processes

High level of awareness and good knowledge of the processes and expected outcome had empowered many of the participants in this study to take a bold step in accepting VCT and those who tested positive going ahead to enrol into the PMTCT programme against all odds. Most women in the Vietnam study were not aware that medication could prevent MTCT. . "In multivariate analysis, factors associated with having an HIV test included being interviewed at an urban site, having a high PMTCT knowledge score, knowing someone receiving PMTCT or ART and having a partner who had been tested for HIV."[27]

5.1.3 Hospital staff

Painter et al[36] (10BT2-6) presented the reasons for women not participating in a PMTCT programme in Abidjan. This qualitative study, conducted on a sample of 27 women, included interviews of non-participating women. Among the reasons, 70% cited difficulties with clinical staff or procedures and 48% did not believe test results.

Health care workers especially the Nurses in the antenatal clinics made the most contribution to the awareness and high level of knowledge among participants in this study. Continuous training and capacitating these health workers thus become paramount. Most of the participants enrolled in the PMTCT in this study were happy with the hospital staff.

5.1.4 Mass Media

The contribution of mass media is also acknowledged in this study as have other studies. In a retrospective study of local language radio programme[32] – The Abstinence Be faithful for Youth (ABY), in Uganda, all the VCT records reviewed in all three health centres, showed an increase in number of VCT clients from 777 between November 2004 and August 2005 to 915 between September 2005 and August 2006. A year on year increase of 15%. PMTCT records showed an increase from 520 to 1542 during the same period. Service providers attributed the increase to the ABY programme. “The radio programme helped to remove the fear of testing. You know people naturally used to fear testing for HIV” concluded the officer in charge of PMTCT in Kapchorwa hospital.

5.1.5 Organization of the programme

Participants enrolled in the PMTCT programme mostly agreed the programme was well organized. Patients' flow from one service point to the other was explored and vast majority of them (97.4%) were happy with the organization.

5.1.6 Availability of ARV medication

Availability of ARV's at no cost to the participant was one major factor that has positively influenced enrolment into the programme. Again in the Vietnam study "one reason for the disappointing record was that ARV was not consistently available. Often a single dose of NVP for women who were tested only at the time of delivery was lacking".

5.1.7 Side effects of ARVs'

It is good news that majority of participants (86.8%), enrolled in the PMTCT programme did not experience major side effects from ARVs'. Side effects are always a major setback. As noted in chapter 1 under introduction, the prevalence of maternal anaemia has reduced the acceptability and safety of AZT. Side effects of ARV was one major concern for government in South Africa to prevaricate on ARV roll out for PMTCT and HIV treatment, until the Constitutional court ruled against government's position in 2002.

5.1.8 Safety of baby

This was one strong motivator for enrolment into the programme among participants in this study. This factor had also been found consistently a strong motivator in some other studies

5.2 Factors influencing uptake of VCT among participants

Uptake of VCT is regarded as the entry point into the PMTCT programme. Therefore factors which influence uptake of VCT will also directly influence enrolment into the PMTCT programme.

5.2.1 Fear of stigma and discrimination

Majority of those who did not test were scared of knowing their status for fear of stigma and discrimination indicating that this factor is still a major barrier to uptake of VCT and PMTCT. Aside its incurable and debilitating nature, the greatest problem of HIV/AIDS which follows from this nature, is the stigma and discrimination associated with it. It has consistently shown its face in every study and discussions around HIV/AIDS. Every other reason for low uptake of VCT either directly or indirectly derived from this. Other incurable and debilitating diseases like diabetes mellitus have been accepted by the society. This problem will linger on for a long while, and strategies aimed at destigmatizing persons living with HIV and AIDS should be further explored and strengthened.

5.2.2 Quality of counselling

Uptake of VCT in most sub-Saharan Africa correllates well with PMTCT uptake. The study in Vietnam where VCT uptake of 85% strongly contrasted PMTCT uptake of 20%, highlighted the missing link of knowledge and information from high quality counselling on PMTCT. The counselling in PMTCT should specifically address the fears and needs of HIV positive pregnant women and the support available to them and their unborn

children as distinct from routine VCT services. In a study of factors influencing teen mothers' enrolment and participation in PMTCT in Limpopo Province[37], client-counsellor dynamics during pre-test counselling were pivotal in determining uptake and participation in PMTCT programme and counsellor profile strongly influenced the nature of the interaction.

5.2.3 Maternal age-group

Significant association was found for VCT uptake and maternal age-group. Mothers in the age-group 20-29 were more likely to accept VCT and possibly enrol for the PMTCT than mothers in the other age groups ($p=0.0114$). This age-group also represented the modal age-group in this study. Mothers in this age-group are more likely to be newly married with high hopes for the future. They perhaps would be more sexually-active than other age-groups, and perhaps more HIV-conscious than other age-groups. The exact reason or reasons for this finding could not be ascertained and more studies on this will therefore be important.

5.3 This study and others

Most studies on PMTCT uptake have been done during the antenatal period and have tended to equate VCT uptake with PMTCT uptake. While there is a good correlation between VCT and PMTCT uptake, this is not always so. One study in Zambia[38] found that 1/3 of patients given Nevirapine never ingested it. Also the study in Vietnam

mentioned above is a good example. This study was carried out in the postnatal period, among post-partum women who were expected to have gone through major stages of the PMTCT programme (see fig.5.1), and therefore had a good knowledge and rich experience of the programme to share.

The entire process is illustrated below.

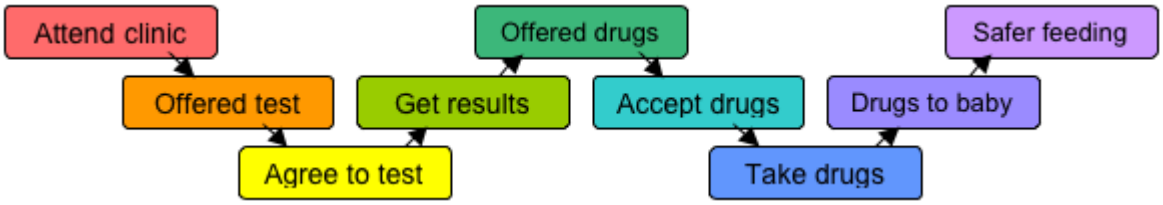


Fig.5.1. PMTCT Flow chart.

(Reproduced from the article Prevention of mother-to-child transmission Worldwide)

The actual uptake of PMTCT intervention can only more accurately be estimated in this period.

The principles[29] guiding the implementation of the policy and guidelines on PMTCT place the duty and responsibility on all health workers "to identify HIV positive women and their partners, HIV-exposed infants and HIV positive infants so that they can access HIV care". While health workers may therefore be seen as carrying out their duties, it must still be practised within a human rights framework. The guidelines enjoin health workers to offer VCT repeatedly, *at every visit* – some sort of pressure on clients to take up HIV test. Botswana that had since made HIV counselling and testing (HCT) part of routine antenatal screening has overcome this dilemma, has recorded the greatest uptake

of PMTCT and has been able to reduce MTCT to less than 4%, simply by making it a policy to include HCT as part of routine antenatal screening. No one seems to have been offended ever since.

In the stages of behaviour change model[39], participants were already past the stage of contemplation and were ready to change. It is now widespread knowledge that antenatal care encompasses VCT and PMTCT enrolment where necessary. Government only needs to make the pronouncement as a matter of policy while at the same time emphasizes confidentiality of test results as much as possible. It will help them maintain this readiness to change and increase their confidence too.

These concerns and others are some of what PMTCT counselling is supposed to address clearly as distinct from routine VCT services.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

In this study, attempts had been made to study the factors that affected or were still affecting uptake of voluntary counselling and enrolment into the programme of prevention of mother-to-child transmission of HIV among postnatal women. The study was conducted in the post-partum period, a period when pregnant women were supposed to not only have learnt much about the programme but have actually experienced the programme at its different stages.

The study took a 3-dmensional view of the factors – institutional, patient-related, and the environment or community. The study had been from the patient's perspective since they were the ones at the centre, being influenced either positively or negatively by the other two broad categories of factors.

The age participants ranged from 14to 41years, 63% of them unmarried, and 84% had education up to secondary school. About 60% had household income <R2500.00. Highlights of this study were very high uptake of VCT and high rates of satisfaction with the programme among HIV-infected women. Vast majority, (>90%), of participants had good knowledge of the PMTCT programme. Antenatal HIV prevalence rate of 24.52% in this study compared well with an average of 28% in the previous 12months in the study

centre. Women in the age-group 20-29 were more likely to accept VCT and enrol for PMTCT than in other age groups (p=0,0114)

The positive steps taken by various governments in the sub-Saharan Africa, South Africa inclusive, were highlighted in this study. The provision of clear and well-defined policy guidelines and strong commitment to implementation of these guidelines have left the various health institutions with no other choice but to follow suit. Positive institutional factors have been largely responsible for the improvements recorded in the enrolment into the PMTCT programme in this study. The community which represents the patients' immediate environment had either contributed negatively or none at all on positive disposition of pregnant women towards PMTCT.

6.2 Recommendations

The results of this study have shown that there was widespread knowledge of PMTCT among the participants. Many have come to term with the fact that antenatal attendees necessarily will be offered VCT as a possible entry point into the PMTCT programme. Only a little impetus is needed to instil confidence in the pregnant women to take up HIV testing.

Training of more PMTCT counsellors including lay counsellors from within the community is recommended for its cost-effectiveness.

Since PMTCT goes beyond administering ARV to mother and child, more studies on adherence to follow-up phase of the programme would help to consolidate on the improvements so far recorded.

APPENDIX 1

INTERVIEW QUESTIONNAIRE

(Final version)

Section 1:

Demographic details:

Where applicable please tick (√) in the following questions:

1. How old are you? (What year were you born?)……

2. Are you: Married □/ Single□/ Divorced□/ Widowed□/ Others……..

3. *Do you live with your partner?* Yes□/ No□

4. How many babies have you before this? ……...

5. Any miscarriages? Yes□/ No□/
   If Yes, how many? .....

6. What is your highest level of education? What grade?..... Matric □/ Diploma□/ Degree□/ Postgraduate□/ Others (please state)……

7. *If yes to question 3,* what is your partner's highest level of education? What grade?..... Matric □/ Diploma□/ Degree □/ Postgraduate□/ Others (please state)……

8. What is your total household income? *None (unemployed)* <R2, 500□/

R2, 501 – R5,000 □/ R5, 001 – R10, 000 □/ R10, 001 – R20, 000□/ >R20, 000 □/

Section 2:

1. Are you aware that there is a programme for prevention of mother to child transmission of HIV? Yes□/

   No□/

2. If yes how did you know about it? Prompts!!! Friend □/ Nurse□/

   Doctor□/ TV□/ Radio□/ Newspaper/Magazine □/ Partner□/

   Other □/(Please specify)……..

3. What do you know about the programme?

Content of the programme

- Voluntary counseling and testing Yes□/ No□/
- Enrolment of HIV +ve mothers so that they can have adequate information about the programme and regular antenatal visits Yes□/ No□/
- Medication for mother and child Yes□/ No□/
- Timing of medication Yes□/ No□/
- Testing of the child at certain age Yes□/ No□/
- Follow up of mother and child Yes□/ No□/

4. Were you put on this programme in this pregnancy? Yes□/ No□/.

Questions 5 – 7 are for those who answered "Yes" to question 4.

5. If yes, are you happy with the programme so far, particularly in the following areas?
   - With the…….
   - Hospital staff? Yes□/ No□/ Don't know□/
   - Organization of the programme? Yes□/ No□/ Don't know□/
   - Drug supply? (Is it always available) Yes□/ No□/ Don't know□/

   Have you experienced any serious side effects from the drugs?

   Yes□/ No□/ Don't know□/
   - Any other thing you would like to comment on? ……

6. That you are on the programme means that you chose to test and you tested positive, what motivated you to test? Friend□/ Patient□/ Partner□/ TV□/ Radio□/ Newspaper/magazine□/ Doctor□/ Nurse□/ Others (please state)…….

7. We also know that not all those who tested positive are subsequently enrolled into the programme, what motivated you to enroll? Please state…….....

Question 8 – 10 are for those who answered "No" to question 4.

8. If 'No' to question 4, why were you not enrolled into the programme? I did not test □/ Tested – ve□/ Scared of side effects□/ others please specify……..

9. If you did not test, why? Scared of knowing my status□/ Social stigma□/ didn't know how to go about it □/ don't believe in it□/ others specify……

10. For the reasons given in 9 above, have you ever approached any health worker for help? Yes□/ No□/

11. Have you ever discussed PMTCT with your friend or relative who is pregnant? Yes□/ No□/

12. Is there anything you would like to add?.....

Thank you.

APPENDIX 2

PARTICIPANTS INFORMATION SHEET

(Final version)

Hello Madam,

I am Dr. Joshua Ajewole, a general practitioner doing a research on the prevention of the spread of HIV, especially in the newborns. The study is for my Masters Degrees in Family Medicine of Wits Medical School, Johannesburg. I am asking Sister……. to help me translate my discussion with you in your mother tongue, for better understanding.

We would like to use this medium to formally invite you to participate in the study. If you choose to participate, we would then spend a few minutes asking you questions on this topic. We are aware that some of the questions may touch on your privacy. If you are not comfortable with any question you don't have to answer it. Also if you are not willing to participate in the study, you have a right to say so, and that will not affect the care being given to you by the doctors and nurses. You also have the right to withdraw your participation at any stage. Again, it will not affect your care in any way.

Your name or that of any other participant is not in the questionnaire, and nobody's name will be mentioned or published anywhere, at any stage, during the study. Even the name of this hospital will not be mentioned to anyone. All information gathered will be kept to ourselves, and will be used only for the purpose of this study.

Permission for this study has been obtained from Human Research Ethics Committee of Wits, and other relevant bodies.

For further information on this study, you can ask now or after leaving here, my contact telephone number is given at the bottom of this information sheet.

Thank you.

Dr. Olusesan J. Ajewole (MBBS. Lagos)
082 839 0243

APPENDIX 3

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Ajewole

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M060726**
PROJECT	Factors Affecting Enrolment into the Programme of Prevention of Mother to Child Transmission (PMTCT)...
INVESTIGATORS	Dr OJ Ajewole
DEPARTMENT	Dept of Family Medicine
DATE CONSIDERED	06.07.28
DECISION OF THE COMMITTEE*	APPROVED UNCONDITIONALLY

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 06.09.28 **CHAIRPERSON** .....
(Professor M Vorster)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Prof B Sparks

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX 4

Faculty of Health Sciences Medical School, 7 York Road, Parktown, 2193
Fax: (011) 717-2119 / Tel: (011)717-2075/6

Reference: Ms Tania van Leeve E-mail: tania.vanleeve@.wits.ac.za
24 January 2008
Person No: 0420265E
PAG

Dr O Ajewole
No.9 Siegfried Annecke Crescent
Phalaborwa
1390

South Africa

Dear Dr Ajewole

Master of Family Medicine: Approval of Title

We have pleasure in advising that your proposal entitled *Factors affecting enrolment programme of prevention of mother-to-child transmission (PMTCT) of HIV, among post-partum women, in a public maternity centre* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees commiffee and formally approved.

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences

University of the Witwatersrand
2008 -01- 24
Faculty of Health Sciences
York Road, Parktown 2193
JOHANNESBURG

APPENDIX 5

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT

ETHICS COMMITTEE
CLEARANCE CERTIFICATE
UNIVERSITY OF LIMPOPO
Polokwane/Mankweng Hospital Complex

UNIVERSITY OF LIMPOPO

PROJECT NUMBER: 012/2008

TITLE : Factors influencing enrolment into the programme of prevention of mother to child transmission (PMTCT) of HIV among post-partum women in a Public Maternity Centre

RESEARCHER: Olusesan Joshua Ajewole

DATE: 7 July 2008

Prof. A.J. Mbokazi

Chairman of Pietersburg Mankweng
Hospital Complex Ethics Committee

Note: The budget for research has to be considered separately. Ethics Committee is not providing any funds for projects.

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APPENDIX 6

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT

Enquiries: Ramalivhana NJ/ Malomane EL

Ref: 4/2/2

11 July, 2008
Dr Ajewole O
No.9 Siegfried Annecke Crescent
Palaborwa
1390

Dear Dr Ajewole O

Factors affecting enrolment into the programme of prevention of mother to child transmission of HIV, among post partum women in a public maternity centre

- Permission is hereby granted to Dr Ajewole O to conduct a study as mentioned above
- The Department of Health and Social Development will expect a copy of the completed research for its own resource centre after completion of the study.
- The researcher is expected to avoid disrupting services in the course of his study
- The Researcher/s should be prepared to assist in interpretation and implementation of the recommendations where possible
- The Institution management where the study is being conducted should be made aware of this,
- A copy of the permission letter can be forwarded to Management of the Institutions concerned

HEAD OF DEPARTMENT
HEALTH AND SOCIAL DEVELOPMENT
LIMPOPO PROVINCE

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