

# PREVALENCE OF HIV INFECTION AMONG ANTENATAL ATTENDEES AT UYO TEACHING HOSPITAL, AKWA IBOM STATE, SOUTH-SOUTH NIGERIA

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## ABSTRACT

This retrospective study was conducted at the maternity unit of the University of Uyo Teaching Hospital Uyo. The aim was to determine the prevalence of HIV infection among pregnant women receiving antenatal care in the center. The voluntary counselling and testing register, the partner notification and antenatal clinic registers of all patients that booked for antenatal care between 1<sup>st</sup> July 2005 and 31<sup>st</sup> December 2007 were reviewed. There were 5,635 new antenatal clients during the study period out of which 464 were confirmed HIV positive resulting in a prevalence of 8.2%. Most of the patients were between 21-30 years (70.0%). About 59.4% of the patients were multiparous while 49.4% booked for antenatal care in the third trimester of pregnancy. HIV was diagnosed in the antenatal clinic in 408 (87.9%) of the patients and 182 (39.2%) received antiretroviral drugs during pregnancy. Only 38.8% of the patients accepted to notify their partners. One hundred and eighty eight patients delivered in the hospital. One hundred and twenty (63.8%) had spontaneous vaginal delivery, 63 (33.5%) were delivered by caesarean section, 3 (1.7%) had assisted vaginal breech delivery and 2 (1.1%) had ventouse delivery. The high prevalence of HIV infection among women pregnant women who have antenatal care in our hospital is highlighted. The intensification of strategies aimed at primary prevention of HIV infection in the community, encouraging all pregnant women to avail themselves of orthodox antenatal care, and the need to emphasize the advantages of self disclosure of serostatus to partners during counselling sessions in the antenatal clinic are advocated.

**KEY WORDS:** HIV Positive women, antenatal attendees, Uyo

## INTRODUCTION

Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV/AIDS) remains the most devastating health problem facing the world today (Basse et al 2007). Available evidence indicates that about 40 million people are living with the HIV virus, the vast majority of which reside in developing countries (Aniekwu, 2002). Sub-Saharan Africa which is home to only about 10% of the world's population continues to bear the greatest burden of the HIV/AIDS epidemic and is reported to have approximately 63% of the total number of people

living with HIV, 65% of the 4.3 million new infections and 72% of the 2.9 million deaths in 2006 (National guidelines, 2007).

In Nigeria, since the first official report of HIV/AIDS's occurrence in 1986, the disease has attained unprecedented proportions with a current national sero-prevalence rate of 4.4% (National guidelines, 2007). By the end of 2006, it was estimated that 2.99 million Nigerians were living with HIV, with 305,080 new infections in adults and 75,520 in children (Federal Ministry of Health, 2007).

African women of child bearing age have been shown to be particularly vulnerable to HIV

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infection resulting in a large number of pregnant women in the continent infected with the virus (Ojukwu and Ibekwe, 2005). Human immunodeficiency virus infection in pregnant women has been shown to have several adverse effects not only on the mother, but also on the fetus. Prematurity, low birth weight, intra-uterine growth restriction, spontaneous abortions, fetal abnormality and neonatal sepsis have all been reported to be increased in HIV affected pregnancies (Ojukwu and Ibekwe, 2005, Segurado and Paiva, 2007). In addition, there is an increased risk of vertical or mother to child transmission (MTCT) of the virus which is currently estimated at 20-45% in sub-Saharan Africa (Asindi and Archibong, 2001). Mother to child transmission of HIV currently accounts for over 95% of infections in children and sadly, most reports indicate that 35-59% of African children infected with HIV die before their second birthday (Onakewhor and Airede, 2006).

The University of Uyo teaching hospital (UUTH), located in Uyo is a newly established teaching hospital and the only health facility that offers tertiary health care services to the people of Akwa Ibom State, in the South-South geopolitical zone of Nigeria. It is one of the anti-retroviral therapy centers established by the federal Government and has a 63 bed maternity unit and an annual delivery rate of about 1,500 deliveries. The hospital has three antenatal clinic sessions a week with an average clinic attendance of about 120 women. Antenatal care is provided routinely for all patients who present themselves for it and also for those with high risk pregnancies referred to the center. This study which is the first of its kind since the PMTCT program was established seeks to determine the prevalence of HIV infection among antenatal attendees, timing of HIV diagnosis and type of anti-retroviral treatment at the University of Uyo Teaching Hospital, Uyo.

## MATERIALS AND METHODS

This retrospective study was carried out at the maternity unit of UUTH Uyo. The voluntary counselling and testing (VCT) register, the partner notification and antenatal clinic registers of all patients that booked for antenatal care in the hospital between 1<sup>st</sup> July 2005 and 31<sup>st</sup> December 2007, were reviewed. Information abstracted from patients who only registered

once for antenatal care during the period of the study included their ages and parity, gestational age at booking, results of HIV testing, timing of HIV diagnosis and type of anti-retroviral treatment received. The registers were used for the study as some of the patients' case records were not found and in some others, part of the notes were missing. The data were analysed using tables and percentages and the results obtained formed the basis of the conclusion.

## RESULTS

During the study period, there were a total of 5,635 new antenatal clients out of which 464 were confirmed HIV positive resulting in a HIV prevalence of 8.2%.

The patients were aged between 18 and 42 years with the modal age group being 21-30 years 325 (70.0%). Two hundred and sixty five patients (55.2%) were Para 1-4, and 49.4% of the patients booked for antenatal care in the third trimester of pregnancy (Table I).

All the patients accepted the HIV test. Four hundred and fifty five patients (98.1%) were recorded to have had pre-test group counselling while 90 patients (19.4%) who were referred from other health facilities or the hospital's ARV clinic, were counselled individually. Four hundred and sixty one (99.4%) patients were recorded to have had post-test counselling while all the patients (100.0%) had infant feeding counselling.

Of the 464 cases, 56 (12.1%) were diagnosed before pregnancy and 408 (87.9%) were diagnosed in the ANC. A total of 182 clients (39.2%) had ARVs during pregnancy. Fifty-six of the patients (12.1%) were already receiving ARV drugs before pregnancy while 126 patients (27.2%) commenced theirs during pregnancy. One hundred and seventy one patients (36.9%) received highly active anti-retroviral therapy (HAART - Zidovudine, Lamivudine and Nevirapine) while 11 (2.4%) patients received Zidovudine and Lamivudine (double regimen). One hundred and eighty patients (38.8%) accepted to notify their partners.

One hundred and eighty women delivered in the hospital. One hundred and twenty (63.8%) had spontaneous vaginal delivery, 63 (33.5%) were delivered by caesarean section which were all for obstetric reasons, 3 (1.7%) had assisted vaginal breech delivery and 2 (1.1%) were delivered by vacuum extraction.

**Table I: Age, parity and gestational age at booking of the patients.**

N=464

<b>Variable</b>	<b>No (%)</b>
<b>Age (years)</b>	
<20	42 (9.1)
21-30	325 (70.0)
31-40	91 (19.6)
41-50	3 (0.6)
Not recorded	3 (0.6)
<b>Parity</b>	
P <sub>0</sub>	188 (40.5)
P 1-4	256 (55.2)
≥ P5	20 (4.3)
<b>Gestational age at booking (weeks)</b>	
14-26	52 (11.2)
27-40	183 (39.4)
	229 (49.4)

## DISCUSSION

This study reveals the prevalence of HIV infection among antenatal attendees in our center. HIV was diagnosed in the antenatal clinic (ANC) in majority of the patients. This is similar to what obtains in other Nigerian centers (Tukur et al, 2007). This highlights the important role the ANC plays in PMTCT and also in reducing the incidence of HIV/AIDS particularly in communities like ours where the ANC may be the only setting where women have contact with health personnel. The prevalence rate reported in this study is higher than those reported from most other Nigerian centers (Fawole et al, 2002, Ojukwu and Ibekwe, 2005, Ikechebelu et al, 2006, Akani et al, 2006) and much higher than the rates reported from the developed world (Lehtouitra et al 2005). This is probably a direct reflection of the situation in the state as the recent national HIV sentinel survey revealed a seroprevalence of 8.0 in the state.

Majority of the clients were multiparous (55.2%) and between 21-30 years of age (70.0%). This is in agreement with what obtains in most other Nigerian centers as youths usually form the highest proportion of antenatal clients (Ikechebelu et al, 2006, Akani et al, 2006). In addition, the findings of previous National HIV

sentinel surveys among ANC clients showed the highest age specific HIV prevalence in the 20-29 year age group (Ekanem and Gbadegesin, 2004).

It is most worrisome that only 38.8% of the patients accepted to notify their partners. This is lower than the rate reported from other Nigerian studies (Onakewhor and Erhabor 2006). Indeed data from previous Nigerian studies indicate that HIV positive patients do not always disclose their sero-status and infact may be ignorant of their sexual partner's sero-status. Non-disclosure of sero-status to partners has been attributed to fear of stigmatization, physical violence, social ostracism and fear of accusation of infidelity and abandonment (Olley et al 2004, Onakewhor and Erhabor 2006, Akani and Erhabor 2006). However, this has significant adverse public health consequences and remains a formidable challenge towards effective implementation of comprehensive PMTCT programmes (Olley et al, 2004). It jeopardizes the opportunity to an uninfected partner to adequately protect himself and an infected one who may not know his status to receive care.

All the patients in our center accepted HIV testing. This is because HIV testing after counselling is offered to all women who book for antenatal care with the right to opt out and there

was no opt out. Majority of women in developing countries have been shown to accept HIV testing if offered particularly if HIV treatment is available (Ekanem and Gbadegesin, 2004, Misiri et al, 2004). HIV counselling and testing during the ANC is the entry point for PMTCT and is also a central component of comprehensive HIV prevention strategies. It provides an opportunity for early diagnosis of HIV infection and therefore access to comprehensive PMTCT services which include ARV prophylaxis and treatment, safer delivery practices, safer infant feeding practices and prevention of opportunistic infections (Segurado and Paiva, 2007). It also provides an opportunity for referral, enables women make informed choices about future pregnancies and provides partners and other family members an entry point into comprehensive HIV services.

The safety and effectiveness of ARVs in reducing vertical transmission has been confirmed by several studies and their use is the most definitive ante-partum measure in PMTCT (Musoke and Mmiro, 2002). However, the number of women who received ARVs during pregnancy in our study was low. This is probably because most of the patients booked late for antenatal care and were therefore yet to complete all the baseline laboratory (lab) tests which include CD4 count, liver function test, renal function test, hepatitis B surface antigen estimation, and full blood count prior to commencing ARVs. In addition, prior to 2006, all the baseline lab tests required before ARVs were commenced used to cost about N12, 000 (US\$125.00) which in our resource constrained setting may have resulted in a barrier to some HIV positive pregnant women accessing ARVs. However, currently through the initiative of the Federal Government of Nigeria, with the assistance of foreign non-Governmental organisations, all the base-line lab investigations and also all ARV drugs are free in the hospital. Also with the introduction of the automated system, results of investigations are now obtained within 24 hours. Hence, the number of HIV positive pregnant women who would receive ARVs in our antenatal clinic is expected to greatly increase.

In conclusion, the prevalence of HIV among antenatal attendees is high but the number of pregnant women who assess ARVs is low. Thus, all health staff involved in PMTCT should ensure all pregnant women in the antenatal clinic receive ARVs. Monitoring units which will periodically review relevant health

records, ensure regular supply of ARVs, and make appropriate recommendations to the hospital management is urgently needed. Strategies aimed at the primary prevention of HIV in our communities should be intensified and the advantages of self disclosure of sero-status to partners should be emphasized during counselling sessions in the antenatal clinic.

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