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Knowledge of HIV and its transmission by women living with HIV/AIDS (WLWHA) attending HIV clinic in lagos university teaching hospital (Luth), Nigeria

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ABSTRACT

The scourge of HIV/AIDS is a serious problem that cannot be overemphasized. Half of all HIV infections occur in women in Africa. Young women are particularly at risk and they are the child-bearing population. About 90% of MTCT infections occur in Africa. MTCT of HIV can occur at any stage of pregnancy. The study was designed to be a baseline survey which would help document the knowledge of Women living with HIV/AIDS and its transmission modes and the PMTCT programme of the HIV Clinic in the Lagos University Teaching Hospital can be used as template for future work. A survey of women attending the HIV Clinic in the Lagos University Teaching Hospital, Idiaraba (LUTH) was carried out. Pretested questionnaires were administered to the target population at the HIV Clinic to document their knowledge of HIV and its transmission including awareness of the PMTCT services in the hospital. The results obtained revealed that though many of them are knowledgeable about the modes of transmission of HIV, most of them do not know of the existence of a PMTCT service in the hospital. It can be concluded that respondents in this survey were knowledgeable about HIV and the ways it can be transmitted. The study recommends that staff of the HIV Clinic should be involved in counseling PLWHAs, especially WLWHAs and informing them about all the service components available in the Clinic so that clients that may need these services are already aware and can utilize it as needed.

Key words: HIV/AIDS, Transmission of HIV, PMTCT, Hospital, Women, PLWHA & Patient Care.

INTRODUCTION

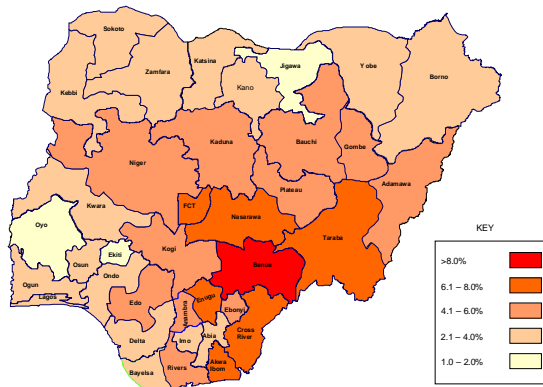
The scourge of HIV/AIDS is a serious problem that cannot be overemphasized. Nearly 70% of people living with HIV/AIDS live in sub-Saharan Africa and southern Africa (UNAIDS Report, 2004; Caldwell, 2000). Nigeria now ranks second among sub-Saharan African nations in the number of HIV-infected adults (UNAIDS Fact Sheet, 2004; Nasidi, 2006). The National HIV prevalence is put at 4.4% (with prevalence varying from 1 to >8% across the country) (FMOH Technical Report, 2005; FMOH Reproductive Survey, 2005, UNAIDS Nigeria Profile 2007) and with a population of 140 million people (NPC, 2006) this translates into a huge mass of People living with HIV/AIDS (PLWHAs) in the Country (UNAIDS Report, 2004; UNAIDS Fact Sheet, 2004).

Half of all HIV infections occur in women in Africa (Pathfinder 1999). In seven of 11 studies carried out previously in Africa, at least one woman in five, aged 20 to 25 was HIV positive (Pathfinder 1999). Women are particularly affected by the epidemic in Nigeria. In 2006, UNAIDS estimated that women accounted for 61.5% of all adults aged 15 and above living with

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Figure 1: HIV Prevalence by state (Nigeria 2005)

HIV (UNAIDS Report, 2004; UNAIDS Nigeria Profile 2007). Women make up an estimated 58% of the HIV-positive adult population in sub-Saharan Africa, compared to 50% worldwide (UNAIDS AIDS Epidemic Update, 2004; UNAIDS, June 2000; Royce, 1997). Young women are particularly at risk (UNAIDS, December 2000; WHO, 1999). This represents the child-bearing population. A complex combination of factors – ranging from the biology of the virus, to the anatomy of the female genital tract, to socio-cultural traditions – has increased women's vulnerability (WHO, 1999; Dabis, 2002). It has been documented that globally 2.3 million children living with HIV largely acquired it through mother to child transmission (MTCT), that 90% of HIV infections and AIDS related death in children occur in Sub-Saharan Africa and that HIV and AIDS now account for 6% of death in children less than 5 years of age in Sub-Saharan Africa (Osinusi, 2007; www.health24.com/medical/condition_centres/).

Mother-to-child transmission (MTCT) is when an HIV positive woman passes the virus to her baby. This can occur during pregnancy, labour and delivery, or breastfeeding. Without treatment, around 15-30% of babies born to HIV positive women will become infected with HIV during pregnancy and delivery. A further 5-20% will become infected through breastfeeding (De Cock, 2000). In 2005, about 700,000 children under 15 were said to be infected with HIV mainly through mother to child transmission. About 90% of MTCT infections occur in Africa where AIDS is beginning to reverse decades of steady progress in child survival (PMTCT, www.avert.org/motherchild; www.health24.com/medical/condition_centres/). In Nigeria in 2005, it was estimated that 240,000 children were living with HIV, most of who became infected from their mothers (HIV and AIDS in Nigeria, www.avert.org/aids-nigeria; UNAIDS Report, 2006). Several factors can increase the likelihood of MTCT such as a high viral load, the time the mother got infected with the virus, or if she was re-infected during pregnancy (WHO, 1999). In high income countries MTCT has been virtually eliminated thanks to effective voluntary testing and counseling (VCT), access to antiretroviral therapy, safe delivery practices, and the widespread availability and safe use of breast-milk substitutes. If these interventions were

used worldwide, they could save the lives of thousands of children each year (UNAIDS/WHO, AIDS epidemic update, December 2005; UNAIDS/WHO Q&A II, 2005). Stigma is an additional burden that complicates HIV/AIDS management (Adewole, 2006; FMOH National Policy on HIV/AIDS, 2003). Men, women and children living with HIV/AIDS often experience high levels of stigma and discrimination on the basis of their HIV status (Goffman, 1963). Stigma has been deemed so significant a barrier to HIV/AIDS prevention that the World AIDS Campaign took up the cause against it in 2002-2003 (AIDS Campaign, 2002). HIV/AIDS-related stigma is a real or perceived negative response to a person or persons by individuals, communities or society. It is characterized by rejection, denial, discrediting, disregarding, underrating and social distance (Herek, 1999). It frequently leads to discrimination and violation of human rights (Goffman, 1963). Consequences of stigma in PMTCT programmes include discouragement of access to ANC services, prevention of access to HIV testing, counselling and PMTCT services, discouragement of disclosure of HIV test results to partner(s), discouragement of acceptance of PMTCT interventions, inhibition of use of safer infant-feeding practices and conferring of secondary stigmatisation on child (Generic Training Manual, www.pmtct.org/pdf/p03-pi/pi-60-00/Module_5PM_2-05.pdf)

The PMTCT programme started in 2002 (Adewole, 2006). Nigeria really started its PMTCT program in 2003 with a goal of reducing mother-to-child transmission of HIV by 50% by 2010 and to increase access to quality confidential counseling and testing services by 50% by that same year (FMOH National Guidelines on Implementation of PMTCT, 2001; HIV and AIDS in Nigeria, www.avert.org/aids-nigeria) and to date 253 PMTCT sites are available nationwide (Osinusi, 2007). Current data indicates that only about 0.2% of pregnant women are reached with this service (UNAIDS Nigeria Profile, 2007; HIV and AIDS in Nigeria, www.avert.org/aids-nigeria). Prevention of MTCT (PMTCT) is now carried out globally using a four fold strategy involving preventing HIV infection among prospective parents; avoiding unwanted pregnancies among HIV-infected women; preventing the transmission of HIV from HIV positive mothers to their infants during pregnancy, labour, delivery and breastfeeding; and care and support of infected women and their infants and families (UNAIDS/WHO, Q&A III, 2005; Duer, 2005; HIV and AIDS in Nigeria, www.avert.org/aids-nigeria). The strategy of preventing the transmission of HIV from HIV positive mothers to their infants during pregnancy, labour, delivery and breastfeeding can be achieved by the use of antiretroviral drugs, safer infant feeding practices and other interventions (HIV and AIDS in Nigeria, www.avert.org/aids-nigeria). HIV-infected pregnant women are offered combination treatment with antiretroviral agents to help protect their health and to help prevent passing the infection to their babies. According to World Health Organization (WHO) guidelines, the regimen currently recommended for preventing mother-to-child transmission (PMTCT) in resource-limited settings uses a combination of Zidovudine (AZT) and single dose nevirapine (CDC 1994). A very simple and cheap drug regimen

also used in PMTCT is the administration of a single-dose of Nevirapine to the mother at the onset of labour and to the baby after delivery. This regimen has proven to half the rate of HIV transmission in babies (Guay, 1999; NIH News, 2003). However, the major concern about this regimen is the problem of drug resistance (Beckerman, 2003; Eshleman, 2001). Research has shown that the WHO recommended regimen is much more difficult to administer than single dose nevirapine on its own, but it is also significantly more effective, and is less likely to lead to drug resistance. AZT was first shown to reduce MTCT rates in 1994, and is the best-studied drug for this purpose (Connor, 1994). The woman should begin taking AZT after 28 weeks of pregnancy (or as soon as possible thereafter). During labour, she should take AZT and Lamivudine (3TC), as well as a single dose of nevirapine (Saba, 1999; Moodley, 2003). Her baby should receive a single dose of nevirapine immediately after birth, followed by a seven-day course of AZT. The mother should continue taking AZT and 3TC for seven days after delivery, to cut the risk of drug resistance still further. Studies have shown that single dose Nevirapine can make future treatment with Nevirapine or Efavirenz (a related drug in the same class – Non-Nucleoside Reverse Transcriptase Inhibitor - NNRTI) less effective (Jackson, 2003; Morris, 2003). Other research has shown that this resistance is short-lived (Lee, 2005; Jourdain, 2004).

A number of studies have shown that the protective benefit of drugs is diminished when babies continue to be exposed to HIV through breastfeeding (WHO New Data, 2000; De Cock, 2000). Mothers with HIV are advised not to breastfeed whenever the use of breast milk substitutes (formula) is acceptable, feasible, affordable, sustainable and safe. However if they live in a country or area where safe drinking water is not available then the risk of life-threatening infections and conditions from formula feeding may be higher than the risk from breastfeeding. An HIV positive mother should be counseled on the risks and benefits of different infant feeding options and should be helped to select the most suitable option for her situation (WHO, 2003).

This study sought to evaluate the awareness and knowledge of women living with HIV/AIDS about HIV/AIDS and its modes of transmission, and the PMTCT programme in the Hospital.

MATERIALS AND METHODS

100 pre-tested questionnaires were administered to randomly selected women living with HIV/AIDS (WLWHAs) in the Lagos University Teaching Hospital (LUTH) HIV Clinic. LUTH was chosen as the location for this study as it is one of the two HIV clinics in tertiary institutions in Lagos, and unlike the other HIV Clinic, it is located within a hospital and so has more patients than the other one. 100 women living with HIV were selected for this study. Pre-tested, semi-structured questionnaires were administered to find out demographic background and opinions of the patients on the research questions. The data collected was analyzed using Microsoft Excel and EPI Info 2002

statistical software and results were represented as frequencies and percentages as tables or charts.

RESULTS

A percentage recovery rate of 82% was obtained. Most of the respondents were in the age bracket of between 31 to 35 years (59.8%), followed by the 26-30 age group (22.0%). Most of the respondents are of the Christian religious faith and of the Igbo ethnic group (Table 1). Most of the respondents had at least a secondary school certificate (up to 72.2%) and most of them are engaged in vocational jobs (57.3%) (Table 2).

Most of the respondents indicated that they were on Lamivudine, Stavudine and Nevirapine combination. However, about 24% indicated monotherapy while 12% indicated that they do not know the names of the drugs they are on (Table 3).

52.4% of the respondents picked all the correct modes of transmission of HIV/AIDS (Table 4). On further analysis, 90.2%, 79.3% and 63.4% indicated knowledge of sexual intercourse, sharing of sharps and transmission from mother to child respectively as modes of transmission (Table 5).

Table 1: Demography I

Item	Frequency	Percentage (%)
Age group		
18 – 20 years	3	3.7
21 – 25 years	4	22.0
26 – 30 years	18	4.9
31 – 35 years	49	59.8
> 35 years	8	9.8
Religion		
Christian	63	76.8
Muslim	16	19.5
Blank	3	3.7
Ethnic Group		
Yoruba	26	31.7
Igbo	37	45.1
Hausa	1	1.2
Others	18	22.0

Table 2: Demography II

Educational level		
None	5	16.1
Primary	16	19.5
Secondary	30	36.6
First degree	20	24.4
Post-graduate	4	4.9
Others (computer, etc.)	6	7.3
Blank	1	1.2
Occupation		
Professional	13	15.9
Vocational	47	57.3
Housewife	9	11.0
Business-person	7	8.5
Clergy	2	2.4
Unemployed	1	1.2
Student	2	2.4
Blank	1	1.2

Table 3: Antiretroviral Therapy Respondents are currently using.

Item (n=82)	Frequency	Percentage (%)
Zidovudine only	2	2.4
Nevirapine only	11	13.4
Stavudine only	7	8.5
Zidovudine, Lamivudine, Nevirapine	19	23.2
Stavudine, Lamivudine, Nevirapine	33	40.2
I don't know	10	12.2

Table 4: Knowledge about Modes of Transmission of HIV.

Item	Frequency N=82	Percentage (%)
Through unprotected sexual intercourse	6	7.3
Blood transfusion with infected blood	3	3.7
Sharing of un-sterilized sharp objects	1	1.2
From mother to her baby	1	1.2
Through unprotected sex and transfusion of infected blood	2	2.4
Through infected blood and sharing sharp objects	1	1.2
Through unprotected sex and sharing of sharp objects	15	18.3
Through kissing	2	2.4
Through unprotected sex and from mother to her baby	3	3.7
Through unprotected sex, sharing of sharp objects and from mother to baby	5	6.1
Through unprotected sex, transfusions with infected blood, sharing of un-sterilized sharp objects and from mother to baby	43	52.4

Table 5: Respondents Knowledge of Modes of Transmission of HIV.

Item	Frequency	Percentage (%)
Through unprotected sexual intercourse (n=82)	74	90.2
Sharing of un-sterilized sharp objects (n=82)	65	79.3
From mother to her baby (n=82)	52	63.4
Blood transfusion with infected blood (n=82)	49	59.8
Kissing (n=82)	2	2.4

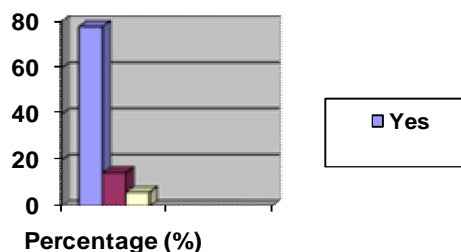
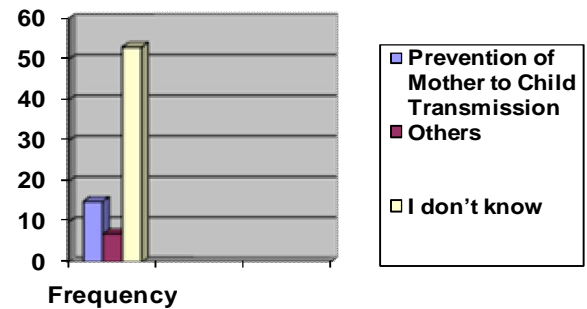
Table 6: Knowledge of existence of PMTCT in LUTH HIV Clinic.

Item	Frequency N=82	Percent (%)
Yes	22	26.8
No	53	64.6
I don't know	7	8.5

Table 7: Knowledge of existence of PMTCT in LUTH HIV Clinic.

If yes, What services are offered	Frequency N=22	Percent (%)
Giving ARVs only	3	13.6
Counsel on risks, benefits of pregnancy, delivery and breastfeeding only	2	9.1
Counseling & ARVs only	4	18.2
Counseling, ARVs & Antimalarials	3	13.6
Counseling, ARVs & VCT	9	40.9

78% know that a risk of transmission from mother to child exists (Figure 2) while 68.2% know the meaning of PMTCT (Figure 3). Only 27% know of the existence of a PMTCT service in the hospital (Table 6) and of these 42.9% indicated that service offerings within the PMTCT programme include counselling, laboratory testing and giving of antiretroviral agents (Table 7).

**Fig 2:** Knowledge of Risk of Transmission of HIV from Mother to Child.**Fig 3:** Respondents Understanding of the Meaning of PMTCT.

DISCUSSION

This survey was carried out at the HIV Clinic in the Lagos University Teaching Hospital (LUTH), Idiaraaba. The respondents are enrolled on the Government/Donor-funded antiretroviral programme which provides required services, materials and drugs free of charge as well as prophylaxis against malaria (UNAIDS Nigeria Profile, 2007; Adewole, 2006). This is necessary as the management of HIV is a very expensive venture which many Nigerians cannot afford on their own as many people are poor and access to managed healthcare is not currently nationally available. It is clear that in spite of Nigeria's abundant natural prosperity and oil wealth, the poverty level of the people is increasing. It is serious and extensive to differing degrees in all parts of the country and within all the states (Obadan, 1999). It is estimated that 70 per cent (United Nations, 2001) of the population is living below the poverty line in both rural and urban areas i.e. live below the \$2 a day advocated by the WHO as the required daily minimum (Sofu, 2003; HIV and AIDS in Nigeria, www.avert.org/aids-nigeria). The results confirmed earlier studies that people in the productive phase of life are the usual targets of the HIV virus (FMOH Technical Report, 2005; FMOH Technical Report, 2003). A UNAIDS report indicates that one third of all currently infected individuals are youth between the ages of 15 to 24 and half of all new infection occurs in youth of the same age (UNAIDS, June 2000). HIV, therefore, can be said to be an infection of the youth. From the results obtained, women of the Igbo ethnic group accounted for a larger percentage of the respondents. Though this could be coincidental, a point must be raised here. The 2003 Sentinel survey revealed that the state with the highest prevalence was Cross River state, one of the Igbo-speaking states (FMOH Technical Report, 2003). Although the 2005 survey gave Benue as the state with the highest prevalence now (FMOH Technical Report, 2005; FMOH Reproductive Survey 2005), a case must be made for targeting HIV prevalence messages to these highly affected states in order to reach as many people at greatest risk as possible in the shortest possible time. Awareness messages should be produced in various formats and languages that will adequately communicate the needed information in these communities.

The majority of clients are on the HAART therapy which is the recommended form for management of HIV/AIDS (Leake,

2000; Boyle, www.hivandhepatitis.com). However, from the result obtained about 12% of the respondents do not know the drugs they are placed on and another 24% indicated being on monotherapy. Though, this could be a reflection of the respondents literacy levels (Osborn, 2007), it does not augur well for HIV management. The drug counseling embarked upon at the Pharmacy in the HIV Clinics is supposed to be individualized to ensure adherence with the medication irrespective of the literacy levels of the client. It is known that adherence is better enhanced when the patient knows what he is taking in addition to other pertinent information about the drug and disease. The levels of adherence required for Highly Active Antiretroviral Therapy (HAART) to be successful is much higher than levels which might be adequate with other conditions and medications (Machtinger, 2006; Margolese, 2003; Paterson, 1999). A well-informed patient is a well-motivated patient and the goal of at least 90-95% adherence required for drug management of HIV will be realizable only with well-motivated and well-informed patients (Osborn, 2007; Margolese, 2003).

This study again confirmed earlier studies which indicate that public awareness about HIV/AIDS is improving (Akande, 1994; Pathfinder, 1994; Shenghi et al., 2004; Visser-Valfray, 2008 and Nwafor, 2009). Many of the respondents could accurately indicate the modes of transmission of HIV with all of them choosing various correct options though not all of the correct options. This result coupled with the slight decline in the seroprevalence rate from 2003 to 2005 is probably attributable to the nationwide prevention campaigns carried out in the Country (Nasidi, 2006).

Over 75% of the respondents indicated that they know that there is a risk of transmission of HIV from Mother to Child. This result was better than a previous unpublished report which indicated that majority of the respondents did not know that a risk of mother to child transmission existed if a pregnant woman is HIV positive (Joda, 2006).

The level of awareness of respondents about the existence of PMTCT services was quite low. Current data indicates that only about 0.2% of pregnant women are reached with the PMTCT service in the country (UNAIDS Nigeria Profile, 2007; HIV and AIDS in Nigeria, www.avert.org/aids-nigeria). This is quite low and disappointing, but not surprising. A lack of awareness of this service is obviously a contributor to this very low utilization rate. It means that much more advocacy needs to be done by government, non-governmental organizations and individual health care providers to inform women, not just about the HIV Centers and Clinics but about all the various services or programmes provided in these centers. The PMTCT program, Government funded antiretroviral programme, VCT services, etc. are some of the services provided at the centers and they should be equally publicized to ensure adequate awareness and utilization. Knowledge of actual service components rendered under the PMTCT programme was, therefore, also low. This is unlike studies conducted in Kenya and Uganda which indicates that women are aware of the PMTCT services in their country though not all that qualify are assessing the service (Painter, 2004). Considering that

the study was limited to only women living with HIV who may have cause to have a baby sometime in the future, health care workers at the HIV clinic need to add information on all the available services their clients may benefit from so that they know where to go when the need arises rather than running around in confusion if and when they do get pregnant.

CONCLUSION

It can be concluded that respondents in this survey were knowledgeable about HIV and the ways it can be transmitted. Majority of the respondents however, are not aware of the PMTCT service offered as a component of treatment/ care by the HIV Clinic. It is recommended that counseling services provided at the HIV Clinic should include information on PMTCT services as well as other services available for patients. This will go a long way in helping these clients when a future need arises. Also more focused intervention messages need to be produced and disseminated nationwide to ensure that sufficient numbers of people are made aware of, not only HIV and its modes of transmission and prevention but also the various management strategies being currently pursued by government and various other groups. To achieve a high success rate, PMTCT programmes must have well-trained, supportive staff who take great care to ensure confidentiality. They must be backed up by effective HIV testing and counseling programmes and by good quality HIV/AIDS education, which is essential to eliminate myths and misunderstandings among pregnant women, and to counter stigma and discrimination in the wider community. Under these conditions, antiretroviral drugs have the potential to save many thousands of babies' and mothers lives.

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