

## PREVALENCE PATTERN AND DETERMINANTS OF DISCLOSURE OF HIV STATUS IN AN ANTI RETROVIRAL THERAPY CLINIC IN THE NIGER DELTA REGION OF NIGERIA.

\*Ebuenyi, I. D., \*Ogoina, D., <sup>†</sup>Ikuabe, P. O., <sup>†</sup>Harry, T. C., \*Inatimi, O., \*Chukwueke, O. U.

\*Niger Delta University Teaching Hospital, Department of Internal Medicine, Okolobiri, Bayelsa, Nigeria.

<sup>†</sup>Niger Delta University, Department of Internal Medicine, Amassoma, Bayelsa, Nigeria.

E- mail: [desiykee@yahoo.com](mailto:desiykee@yahoo.com)

### Abstract

**Background:** In order to advance the extent of self-disclosure of HIV sero-status in Nigeria, we evaluated the prevalence, pattern and determinants of disclosure of HIV status amongst adult patients in a hospital in the Niger Delta.

**Materials and Methods:** In a three month cross sectional study undertaken in March 2012, the demographic and clinical data as well as HIV sero-status disclosure frequency and pattern were obtained using a pre-tested questionnaire from consenting HIV infected adults attending the Anti-Retroviral Therapy Clinic in the Niger Delta. Independent determinants of HIV disclosure to current sexual partner were determined using an unconditional logistic model.  $P < 0.05$  was considered statistically significant.

**Results:** A total of 260 patients were studied out of which 184(71%) were females. Disclosure to current sexual partner was found to be 62.0% and students had the least disclosure rate. Majority of study participants preferred to disclose to family members (57%) than past sexual partner (2.5%) or friend (4.9%). Although HIV disclosure was significantly associated with male sex, living with sexual partner, partner being HIV positive; the only independent determinants of HIV disclosure were partner being on ART (OR-12.7,95% CI 1.2-132.7) and being currently married (OR-8.8,95% CI 2.1-36.8).

**Conclusion:** The results of our study suggest low rate of HIV status disclosure among HIV infected patients in the Niger Delta. We found that receiving ART and being currently married promoted disclosure. There is need for clinicians and policy makers to foster disclosure of HIV sero-status in Nigeria especially among HIV infected students and unmarried sexual partners.

**Key words:** HIV Sero-status disclosure, receiving ART, being currently married.

### Introduction

Self-disclosure of sensitive information is generally thought to have beneficial effects on an individual's health, reduces stress, and lead to better psychological health (Collins and Miller, 1994). Disclosure of Human Immuno Virus (HIV) sero-status may increase opportunities of obtaining social support, implementation of HIV risk reduction with partners and improving access to treatment as well as motivate partners for voluntary counseling and testing (VCT). HIV Status disclosure is therefore an issue to be addressed for HIV prevention & treatment (Gari et al, 2010).

Overall rates of disclosure of HIV status vary between studies and countries. Rates of disclosure to sexual partners are higher in the developed world as shown by studies from United States of America where disclosure ranged from 42 percent to 100 percent (Maman and Medley, 2004). Similar studies from developing countries such as Burkina-faso, Kenya, Rwanda and Tanzania had revealed lower rates of disclosure to sexual partners varying from 16 percent to 86 percent. (Maman and Medley, 2004).

Nigeria has the second highest number of people living with HIV worldwide, second only to South Africa. In view of all the benefits linked with status disclosure, there is need to understand all aspects of the prevalence, patterns and determinants of HIV status disclosure in Nigeria. (Omololu, 2013) A cross sectional study undertaken in Lagos, South-West Nigeria showed that the rate of self-disclosure of HIV status to main sexual partner was 68%, with about a third of the study population yet to disclose their HIV sero-status to their main partner. (Daniel and Oladapo, 2004). Adeyemo et al, 2011, recorded a disclosure rate of 61% amongst patients at the Lagos University Teaching Hospital. A similar study of the 187 HIV infected people residing in a resource-limited setting in Port-Harcourt South-South Nigeria recorded that 144 (77.0%) had disclosed their HIV-serostatus while 43 (23.0%) had not (Akani and Erhabor, 2006). Partner disclosure of HIV status among HIV positive mothers from different studies showed a disclosure rate of 88% (Olagbuji et al, 2011), 89% (Sagay et al, 2006) and 90% (UNAIDS/WHO, 2005) in Edo South-South Nigeria, Nnewi, South-East Nigeria and Jos Northern Nigeria respectively. The disclosure rates for HIV positive mothers have been found to be higher than in the general population (Olagbuji et al, 2011 and Sagay et al, 2006).

This study carried out in a tertiary hospital in Bayelsa, South-South Nigeria evaluates the prevalence, pattern and determinants of disclosure of HIV status amongst patients in an Anti-Retroviral Therapy Clinic. Results of the study may assist clinicians and policy makers in instituting effective strategies to prevent and manage HIV infection in Nigeria.

### Study population

A cross-sectional survey was carried out among HIV positive patients attending the Anti Retroviral Therapy Clinic of Niger Delta University Teaching Hospital (NDUTH) Okolobiri, Bayelsa State. Ethical approval for the study was obtained from the hospital's ethical committee. NDUTH is a 200 bed hospital in Bayelsa state and the only state owned tertiary hospital in the state.

A total of 260 HIV infected patients who gave consent were enrolled for the study over a period of three months (March 2012 –June 2012). Information was collected with the aid of a pre-tested questionnaire by 5 trained medical personnel. The questionnaire covered the following areas: demographic data, clinical and sexual history related to HIV and HIV disclosure frequency and pattern. Confidentiality was ensured in data collection.

### Laboratory methods

HIV test was done by two serial testing using rapid test kit (Determine, Abbot laboratories UK) and confirmed the by Western blot technique (Immunetica Qualicole USA). CD4 was done by flow cytometer (Partec Munster Germany).

Data collected was face validated and analyzed using SPSS version-17 for Windows. Quantitative variables were reported as median and interquartile range (IQR). Differences in quantitative variables were determined with Mann Whitney test while qualitative analysis was

determined with Chi square and Fischer exact test Independent determinants of HIV status disclosure were ascertained using an unconditional binary logistic regression model.  $P < 0.05$  was considered statistically significant for all analysis.

## Results

### Demographics

Two hundred and sixty HIV positive participants were enrolled into the study consisting of 184 females (71.0%) and 75 males (29.0%). Males (median age-40, interquartile range (IQR) 34-48) were older than females (35, IQR, 30-42,  $p < 0.0001$ ). The demographic data of all study participants in relation to HIV disclosure status are summarized in table 1 below.

### HIV Clinical Data

Out of the 260 patients studied, 241(93.4%) were receiving ART for a median duration of 24 months IQR (12.48). The median CD4 cell count at diagnosis for the study was 225 IQR (104,352). There was no significant difference in ART status, duration of ART therapy and median CD4 cell count between patients that have or have not disclosed.

### Prevalence and Pattern of Disclosure

Out of 260 studied participants, 137(62%) had disclosed their HIV status to their current sexual partner. With regard to pattern of disclosure, majority of the studied participants were more likely to disclose their status to their current sexual partner (62%) and their family member (57%). Only few of the studied participants disclosed to past sexual partner (2.5%); while 26.1% of the studied participants had not disclosed to anybody (Table 2).

### Determinants of Disclosure profile to current sexual partner.

Table 1 shows that disclosure of HIV status was significantly associated with the male gender, being currently married, living with sexual partner, partner being HIV positive, partner receiving ART and being employed. Adapting unconditional logistic regression using significant variables on Uni-variate analysis showed that partner being on ART (OR-12.7,95% CI 1.2-132.7) and being currently married (OR-8.8,95% CI 2.1-36.8) were the only independent determinants of disclosure to current sexual partner (Table 3).

## Discussion

This study conducted in a major ART center in the south-south Nigeria had revealed that HIV disclosure to current (male) sexual partner is 62%. This disclosure rate is comparable to other studies from South-west Nigeria (Omololu, 2013; Daniel and Oladapo, 2004) but lower than disclosure rates of 74-91% (Maman and Medley 2004; O'Brien et al, 2003; Petrak et al, 2001) obtained from studies in developed countries of Europe and America. In view of the lower rates of disclosure observed in our study and other studies in Nigeria, there is need to develop and implement effective strategies that would increase disclosure in developing countries such as Nigeria.

Our study has shown that other than current sexual partner, participants are more likely to disclose to a family member than a friend or spiritual leader. This is consistent with other studies which opined that disclosure of sero-status to family members was significantly correlated to the participants' perception of family support (Antelman et al, 2001; Clarke et al, 2010). Family members therefore form a critical support group to promote disclosure of HIV status.

It is interesting to note that students had the lowest disclosure rates among all our studied participants. This finding has been corroborated by other studies (Adeyemo et al, 2011; Diamond and Bushkin, 2000) that showed that younger individuals are more likely not to disclose their HIV status. This finding is worrisome because studies have also confirmed that young persons are more likely to engage in risky sexual behavior post HIV diagnosis (Adeyemo et al, 2011; Diamond and Bushkin, 2000) with implication of transmission to unaffected sexual partner. It is therefore necessary to target students and young people in educational interventions to promote disclosure.

We found that being currently married and living with sexual partner was associated with disclosure as reported by other studies (Adeyemo et al, 2011; Akani and Erhabor, 2006; Olagbuji et al, 2011; UNAIDS/WHO, 2005). Hence, proximity to sexual partner to a great extent determines whether patients disclose their HIV status or not.

The common barriers reported in literature for non-disclosure of HIV status were fear of abandonment, fear of break-up in relationship and fear of stigma (Adeyemo et al, 2011; Daniel and Oladapo, 2004; Olagbuji et al, 2011). In these studies, up to 59.3% of women who disclosed reported negative partner reaction following disclosure. These barriers to disclosure may explain why the independent predictors of disclosure in our study were variables associated with established relationships i.e (being currently married) and HIV-status concordance i.e (partner receiving ART). Our study findings may form a basis for targeting of unmarried HIV positive patients and HIV patients with negative partners for disclosure counseling.

Our results also show that receiving ART and partner being HIV positive promoted disclosure. These findings are supported by similar studies from South –west (Daniel and Oladapo, 2004), Northern (Olagbuji et al, 2011) and South-eastern Nigeria (Sagay et al, 2006).

## Conclusion

The prevalence of disclosure to current sexual partner among HIV infected patients attending an ART clinic in the Niger Delta was found to be 62%. Majority of the studied participants preferred to disclose to a family member and of all occupational groups, students had the least disclosure rate. Being currently married and having a partner who is receiving ART were independent predictors of disclosure. Clinicians and policy makers in Nigeria and developing countries should intensify efforts to improve disclosure of HIV status especially amongst unmarried HIV infected patients and discordant couples.

## Acknowledgement

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**Table 1:** Demographic Data of Study Participants.

S/N	Variables	Disclosed		Total Population	P value for differences
		Yes	No		
1.	Age-Median(IQR)	36(32,41)	35(29,43)	36(31,43)	P=0.26
2.	Sex Male N(%) Female N(%)	55(77.5) 82(54.7)	16(22.5) 68(45.3)	75(29) 184(71)	P=0.001 X <sup>2</sup> =10.6
3.	Marital Status Currently Married N(%)  Not Currently Married N(%)	106(84.1)  30(31.9)	20(15.9)  64(68.1)	128(49.8)  129(50.2)	P=0.001 X <sup>2</sup> =62.2
4.	Educational Status Primary N(%) Secondary N(%) Tertiary N(%) None N(%)	33(67.3) 66(61.1) 33(58.9) 5(55.6)	16(32.7) 42(38.9) 23(41.1) 4(44.4)	61(23.6) 127(49) 61(23.6) 10(3.9)	P=0.81 X <sup>2</sup> =1.003
5.	Employment Status Government Employed N(%) Self Employed N(%) Unemployed N(%) Students N(%)	43(71.7) 56(65.4) 8(47.1) 3(16.7)	17(28.3) 44(34.6) 9(52.9) 15(18.9)	60(100.0) 127(100.0) 17(100.0) 27(100.0)	P=0.0001 X <sup>2</sup> =20.2
6.	Household Status Living with sexual Partner N (%) Not Living with sexual Partner N (%)	91(85.8) 46(39.7)	15(14.2) 70(60.3)	109(42.1) 150(57.9)	P=0.001 X <sup>2</sup> =50.02
7.	Duration of Current sexual Relationship (Months)Median(IQR)	84(36,132)	24(10,60)	72(24,120)	P=0.0001 z=4.57
<b>HIV Clinical Data</b>					
8.	Month since HIV diagnosis(Months) Median(IQR)	24(12,48)	24(12,36)	24(12,48)	P=0.57
9.	Patient Receiving ART Yes N (%) No N (%)	127(62.3) 10(62.5)	77(37.7) 6(37.5)	241(93.4) 17(6.6)	P=0.984X <sup>2</sup> =0.000
10.	Duration on ART(Months) Median(IQR)	24(12,48)	24(12,36)	24(12,48)	P=0.54
11.	CD4 at Diagnosis(Cells) Median(IQR)	252(99,480)	206(114,325)	225(104,352)	P=0.29
12.	CD4 at Disclosure(Cells) Median(IQR)	259(92,496)	200(66,321)	243(88,476)	P=0.32

**Table 2:** Prevalence and Pattern of Disclosure of HIV status among participants.

S/N	Disclosure Pattern	N (%)
1.	Disclosure to Current Sexual Partner	137(61.7)
2.	Disclosure to past Sexual Partner	6(2.5)
3.	Disclosure to Family member	139(57)
4.	Disclosure to Friend	12(4.9)
5.	Disclosure to spiritual leader	20(8.2)
6.	Disclosure to Others	7(2.9)
7.	Disclosure to Nobody	64(26.1)

**Table 3:** Logistic Regression showing independent determinants of HIV disclosure among study participants.

Variable	Adjusted OR	95% CI	P value for differences
1. Gender Male Female	1.46	0.39-5.48	0.576
2. Marital Status Currently Married Not currently Married	8.794	2.10-36.85	0.003
3. Household Status Living with sexual Partner Not Living with sexual Partner	2.71	0.77-9.51	0.120
4. Partner is Positive Yes No	0.91	0.13-0.91	0.927
5. Partner on ART Yes No	12.75	1.22-132.73	0.033

6.	Employment Status			
	Self Employed	5.59	0.75-41.53	0.09
	Unemployed	4.57	0.29-71.0	0.28
	Government Employed Students	1.72	0.19-15.4	0.63

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