

# **Incidence, prevalence and impact of HIV infections among older persons in Nigeria**

**By**

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## **ABSTRACT**

Due to the paucity of data on HIV infection among the older persons, the burden of this disease is almost always ignored, thus representing a significant blind spot in the fight against the disease. UNAIDSnaids (2016) stated that ‘globally’ around 2.8 million older persons lived with HIV in 2015. Also, aged 50 years and above accounted for 10% of the cumulative HIV infection in the USA. However, same is unknown for Nigeria. This study therefore elicited the required database. Data sources include social survey, world population prospects, and grey literature covering 2020-2022. Data therefore are derived from questionnaire schedule. The study found that 1/3 of a million of older persons representing 2.1% of the total Nigerian population have HIV compared to above 2millions of those aged 15-49 (3.1 % of the population). There is need to integrate the needs of the older persons into responses to the HIV epidemic.

## **INTRODUCTION**

Nigeria reported her first AIDS cases in 1986 and since then, the HIV and AIDS epidemics have continued to spread and attract due attention. In 1991, the country initiated a HIV sero-prevalence sentinel survey among the antenatal clinic attendees; the survey commenced with a few states and progressively expanded until all the states became involved by 1999. The Ante Natal Clinic (ANC) biological survey conforms to the first generation surveillance system. It determines HIV prevalence among the sentinel population at fairly regular and short intervals and it is used to track the trend and distribution of the HIV epidemic across the country. The HIV prevalence obtained from the ANC survey is used to estimate prevalence in the general population. The 2020 round of the ANC HIVsentinel survey is the ninth in the series in Nigeria. In 2018, the survey included the simultaneous collection of data from the

HCT/PMTCT services of the participating sentinel sites for the purpose of comparison with the ANC survey data. This exercise was maintained in 2020.

In line with the World Health Organization (WHO) guidelines for progress towards the second generation surveillance system, a Behavioral Surveillance Survey (BSS) was introduced in 2002; it expanded to an Integrated Bio- Behavioral Surveillance Survey (IBBSS) in 2007. Similarly, a general population-based behavioral survey termed National HIV/AIDS and Reproductive Health Survey (NARHS) was introduced in 2003. In order to generate general direct population HIV prevalence, a biological component was incorporated into NARHS in 2007.

Worldwide, Nigeria has the second highest number of new infections reported each year, and an estimated 3.7 percent of the populations are living with HIV. Although HIV prevalence is much lower in Nigeria than in other African countries, such as South Africa and Zambia, the size of Nigeria's population (around 166.6 million) means that by the end of 2021, there were an estimated 3.4 million people living with HIV. Approximately 210,000 people died from AIDS in Nigeria in 2021 and, in 2022, the national life expectancy was 52 years. Although national life expectancy remains low, this figure has been rising since access to antiretroviral therapy became available in the mid-2000. The HIV infection has generated global attention. However, the focus of such has been on population aged 15-49, being most vulnerable cohort. This has resulted in little or no attention for those aged >50 years, thus leading to a total neglect of this perceived less vulnerable cohort. This neglect is capable of affecting negatively global response to the epidemic. For instance, the 2016 report on the epidemic shows that globally about 2.8million older persons were living with HIV in 2015. This is quite alarming especially in this period of global aging. This figure if not captured for intervention, can further make nonsense previous successes in the epidemic. In the United States, about 10 percent of cumulative HIV infection is among the older persons. There is therefore, the urgent need to better understand the incidence, prevalence and impact of HIV epidemic on the socio-economic well being of the older persons.

## **HIV TRANSMISSION ROUTES IN NIGERIA**

There are three main HIV transmission routes in Nigeria:

- **Heterosexual sex.** Approximately 80 percent of HIV infections in Nigeria are a result of heterosexual sex. Women are particularly affected by HIV; in 2021 an estimated 1.7 million women were living with HIV and prevalence was 3 percent among young women aged 15-24. Factors contributing to this include a lack of information about sexual health and HIV, low levels of condom use, and high levels of sexually transmitted diseases. However, gender inequality among women has been identified as a key driver of the HIV epidemic among women.
- **Blood transfusions.** HIV transmission through unsafe blood accounts for the second largest source of HIV infection in Nigeria. Not all Nigerian hospitals have the technology to effectively screen blood and

therefore there is a risk of using contaminated blood. The Nigerian Federal Ministry of Health have responded by backing legislation that requires hospitals to only use blood from the National Blood Transfusion Service, which has far more advanced blood-screening technology.

- **Mother-to-child transmission.** Most children infected with HIV acquire it from their mothers. An estimated 69,400 children were newly infected with HIV in 2021.

## **Data and methods**

The target population of the study is the older persons aged 50 years and above, this age range was used in view of the average life expectancy at birth of Nigerians, which is presently 52 years. Lagos state was purposively selected due to its cosmopolitan nature with over 20 million populations, about 10 percent of them over 50 years of age. The number of People living with HIV in Lagos is approximately 5.1% of the total population of Lagos according to Local Epidemic Appraisal of Lagos State AIDS Control Agency. Lagos State has 20 Local Government Area councils and HIV treatment centre is spread across the LGAs. Earlier, the Nigerian Institute of Medical Research (NIMR) had commenced the treatment of people living with HIV. Resultantly, the studied populations were out-patients of Nigerian Institute of Medical Research (NIMR), Lagos State University Teaching Hospital (LASUTH) and Badagry General Hospital. Each of these treatment centers comprised of older persons from different socio-Economic and demographic backgrounds.

The study drew up a sample frame and stratified sampling technique was used based on sex, age category and educational levels. In each of these centers (strata) a total of Fifty (50) elements was randomly selected using simple random sampling. This principle of randomization ensured that every element in the population have an equal chance of appearing in the selection hence the treatment centers provides ample opportunity to assess the incidence, prevalence and impact of HIV on wellbeing of older persons. The questionnaires were analyzed with the aid of predictive analytical software otherwise known as statistical package for social sciences (SPSS) version 26. Chi-square test and logistic regression were used for analysis and interpretation of results.

## **Findings**

The pilot study shows that about a third of a million older persons representing 2.1 percent of the total Nigerian population are HIV positive compared to about 2million of adults aged 15-49 years (3.1 percent of the total population). Further analysis revealed about 12.5% of all HIV infection in Nigeria occurs among the older persons. Older persons are also less likely to be aware of and knowledgeable about HIV prevention measures than adults aged 15-49 years. Also, older persons were more likely to have 2 or more sexual partners than adults aged 15-49 years. Thus, dismissing old assertion that old age affects sexual activity especially among older men. The poverty level among the older persons is higher than among the adults, thus making them more vulnerable and unable to afford sufficient health services.

**However**, about three-fifths of the respondents were female older persons while the rest were male older persons. This further corroborates the vulnerability of the female gender in the HIV pandemic irrespective of age due to the polygynous nature of African culture. In terms of age, about 10 percent of the respondents are between the ages of 50-54 years, 20 percent are between the age of 55-59 years, 33 percent are between the ages 60-64 years, 17 percent are between 65-69 years and 20 percent of the respondents are 70 years and above. With respect to marital status, about 57 percent were either divorced or separated and 43 percent were either married or remarried.

About 33 percent of the respondents are Secondary School holders, 10 percent are Diploma holders, 20% of the respondents are BSC/HND holders, 13% are Masters Holder and 24% of the respondents had primary education. Therefore, more than two-thirds of the respondents never had tertiary education. When asked if they were on anti-retroviral (ARV), about 63.3 percent of the respondents are currently on anti-retroviral while 36.7% are not.

The study thereafter sought to know the age at first sexual intercourse, about 23.3% of the respondents said between the ages of 15-19 years, 20% said between the ages of 20-24 years, 30% said between the ages 25-29 years, 16.7% said between 30-34 years and 10% of the respondents said between 35 years and above when they had their first sexual intercourse.

When probed further if they used condom during their first sexual intercourse, about 36% of the respondents claimed that they used condom while the remaining 64 percent claimed that they did not use condom at their first sexual intercourse. Despite, their HIV status about 70 percent of the respondents still have sex at least once in a week while the remaining 30 percent they have sex once in a month or as time and opportunity comes.

**When asked to remember their last sexual partner before testing positive to HIV**, about 13.3% of the respondents agreed that their last sexual partner was their spouse, 33.3% of the respondents agreed that their last sexual partner was a casual partner, 20% agreed that their last sexual partner was a commercial sex worker, 24.7% agreed that their last sexual partner was either their employer or their colleagues and 8.7% of the respondents agreed that their last sexual partner fall in the category of other sexual partner. Indeed, the majority expressed casual sex as likely source of their HIV status.

The status sought to know if they had ever double dated, about 70 percent of the respondents claimed affirmed that they did while the remaining 30 percent claimed never to have double dated. As a corollary to the above, more than 93 percent of the respondents agreed that they currently have at least one sexual partner while the rest claimed otherwise.

**TABLE 1: Odds ratios from two logistic regression models examining effect of selected characteristics on likelihood of impact of HIV on the older persons.**

Characteristics	MALE		FEMALE	
	Odds	S.E	Odds	S.E
<b>AGE</b>				
50-59	1.41	0.446	0.74	0.324
60-69	1.00	Rc	1.00	Rc

70+	1.81	0.539	0.82	0.408
<b>Education</b>				
Primary	0.78	0.537	0.74	0.354
Secondary	1.16	0.473	1.31	0.435
Tertiary	1.00	Rc	1.00	Rc
<b>Marital status</b>				
Married	0.34	0.657	0.88	0.357
Divorced/Separate	0.34	0.848	1.35	0.510
Widowed	1.00	Rc	1.00	Rc
<b>Religion</b>				
Christians	1.14	0.425	1.04	0.299
Islam	1.00	Rc	1.00	Rc
Traditionalist	0.65*	0.596	2.47**	0.573
<b>Nature of Family</b>				
Monogamy	1.67*	0.682	1.57*	0.476
Polygamy	1.00	Rc	1.00	Rc
<b>Others</b>	0.21	0.335	0.33	0.254

-2 log likelihood

382.463

598.217

Model chi-square

64.767\*\*

64.502\*\*

\*Significant at P < 0.05    \*\* Significant at P < 0.01

RC -reference category

### Impact of HIV on the older persons

In this section, impact of HIV on the wellbeing of the older persons is examined with respect to selected socio-demographic variables. Table 4 presents the odd ratios of two logistic regression models examining the effects of some basic characteristics on the likelihood of impact of HIV on the older persons. In this regard, separate models are developed on the basis of gender, examining the effects of the independent variables on the likelihood of impact of older persons by sex of the respondents. The variable is coded 1 for those who reported impact, and 0 if otherwise. The aim is to assess the effect of each of the independent variables (with respect to defined categories) on impact of HIV on older persons while others are held constant.

According to the Table, nature of family, type of family, education and living arrangement are significantly related to impact of HIV on older persons. In the male model, with the exception of nature of family and religion, all the characteristics are insignificantly associated with impact of HIV on older persons. In this model, while those in monogamy are 1.7 times more likely, those in other nature of family are 22 percent less likely to have reported impact of HIV on older persons than those with polygamous family. With respect to religion,

those who are traditionalists are 65 percent less likely to have reported impact of HIV on older persons than the Muslims.

In the female model, while those in monogamous family are 1.6 times more likely, those in other type of family are 33 percent less likely to have reported impact of HIV on older persons than those with polygamous. With regard to religion, those who are traditionalists are 2.5 times more likely to have reported impact of HIV older persons than the Muslims.

### **Discussion of findings**

This study has been able to provide some useful information's as regards the incidence, prevalence and impact of HIV on older persons and that there is a significant relationship between Sexual behavior and HIV infection. It also explains the fact that there is a relationship between old age and risky behaviors and that there is a significant relationship between risky behavior and incident of HIV.

### **Conclusion**

The attainment of menopause, cultural practice of wife inheritance, ritual cleansing increase the incidence and prevalence of the virus. There is therefore the need to integrate the needs of the older persons into responses to the HIV epidemic. In accordance to the relevant questions asked and data collected from respondents, several conclusions have been drawn.

It was discovered that more than half of the respondents were female, most of the respondents were between the ages of 60-69 years, most are Yoruba and most of them are Diploma holders. It was also gathered that the majority of respondents were traders, followed by those that were not employed. Most respondents did not use condom during their first sexual encounter. Most of the respondents agree to the fact that their last sexual partners were casual partners, that they double date or co-habit and also took alcohol before sex.