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Trend of Human Immunodeficiency Virus (HIV) or Acquire Immunodeficiency Syndrome (AIDS) and Care for People Living with HIV and AIDS in Benue State, North Central, Nigeria

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Abstract

This article reveals trend of HIV/AIDS in Benue State, north central, Nigeria. The method adopted was a descriptive analysis of the HIV epidemiology in Nigeria using Benue State as a case study. This review article was through the report of periodic epidemiological surveys of Antenatal Clinic (ANC) sentinel surveys, National HIV and AIDS and Reproductive Health Surveys (NARHS), Nigeria Demographic Health Surveys (NDHS), Integrated Biological and Behavioural Surveillance Surveys (IBBSS), National Agency for the Control of AIDS (NACA), United Nations Agency for AIDS (UNAIDS) and Benue State Agency for the Control of AIDS (BenSACA). This study reveals that, out of the current 1.9 million people representing 1.4% (15-49 years) living with HIV in Nigeria, Benue State accounts for 188,482 representing 4.9%. Thus, Benue State is now second as against the previous reports which have consistently placed Benue State as the state with highest prevalence of HIV/AIDS in Nigeria since the beginning of the pandemic in the country. The new prevalence estimates by states, however, still categorize Benue state and six other states with high prevalence of 2.0% and above. The national prevalence among females is significantly higher at an estimated 1.9% than the male prevalence estimated at 0.9%. In conclusion, the effort of peer educator trainers, awareness of HIV/AIDS on radio and television programs and efforts of other stake holders who are working towards ending the AIDS epidemic have been the secret behind the compliance of Benue people towards spreading news of AIDS not the virus. However, much still need to be done to consolidate on this success.

Key words: HIV, Adolescents, Antiretroviral drugs, Peer educators, Prevalence, Benue

Introduction

The Human Immunodeficiency Virus (HIV) is a lentivirus belonging to the family Retroviridae. HIV-1 and HIV – 2 are the two major types of the virus. HIV-1 is common all over the world while HIV-2 is more prevalent in some West African countries of which Nigeria is not exempted. It is a leading cause of death in Africa, accounting for over 20% of deaths and the second leader of diseases worldwide (1). Apart from Ebola which gained more popularity due to its epidemic in the year 2014 and the current COVID-19 pandemic, HIV seems to take a lead in terms of popularity among other viruses. According to NACA(2), Nigeria has relied upon a combination of periodic epidemiological surveys -Antenatal Clinic (ANC) sentinel surveys, National HIV and AIDS and Reproductive Health Surveys (NARHS), Nigeria Demographic Health Surveys (NDHS) and Integrated Biological and Behavioural Surveillance Surveys (IBBSS) – together with routinely collected programme data to monitor and estimate the population level HIV epidemic trends in the country. This approach however had some limitations. To bridge the limitations, the country with support from her partners conducted the largest ever population-

based HIV survey known as the Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) (3-7). According to Joint United Nations Epidemiological Fact Sheet, there are indications that the epidemic has slowed down as a result of the progress in Anti-retroviral Therapy (ART) administered for the preventive interventions.

Hence, fact sheet on global AIDS update 2019 reveals 2018 global HIV statistics with 37.9 million ranging from 32.7 million to 44.0 million people globally were living with HIV, 23.3 million ranging from 20.5 million to 24.3 million people were accessing ART, while 1.7 million ranging from 1.4 million to 2.3 million people became newly infected with HIV and 770 000 ranging from 570 000 to 1.1 million people died from AIDS-related illnesses(2,7-8). Also, 74.9 million ranging from 58.3 million to 98.1 million people have become infected with HIV since the start of the epidemic and 32.0 million ranging 23.6 million to 43.8 million people have died from AIDS-related illnesses since the start of the epidemic. Since the first case of AIDS was reported in 1986, Nigeria's HIV/AIDS prevalence based on Ante-Natal Clinics (ANC) trends increased steadily from 1.8% in 1991, to 4.5% in 1995, peaked at 5.8% in 2001 and declined to 5% in 2003 and stabilized at 4.1% in 2010(3,10) (Figure 2). In spite of the stabilization of Nigeria's HIV prevalence in the past decade, the epidemic still presents a major public health challenge that requires revolutionary action in prevention, treatment, cares and impact mitigation generally in order to make a difference. The prevalence when compared to other African countries over the past decade may seem low but in terms of absolute numbers of people infected and affected, Nigeria had an estimated 3.4 million people living with HIV, second only to that in South Africa. In this regard, Nigeria bears nearly 10% of the global burden of HIV/AIDS(9-11). Benue state has been considered among the 'hot zones' for HIV/AIDS in Nigeria. Yet, there is paucity of information on the prevalence of HIV/AIDS in Benue State(11-13). This work is a review article that unveils the current trend of HIV/AIDS in Benue State, north central, Nigeria.

Materials and Sources of Data

Study Area and Population

Benue State lies within the lower river Benue trough in the region north central of Nigeria. Its geographic coordinates are longitude 7° 47' and 10° 0' East. Latitude 6° 25' and 8° 8' North; and shares boundaries with Nassarawa State, Taraba State, Cross-River State, Enugu State and Kogi State. The state also shares a common boundary with the Republic of Cameroon on the south-east. Benue occupies a landmass of 34,059 square kilometres. Makurdi, the state capital was established in the early twenties and gained prominence in 1927 when it became the headquarters of the then Benue Province. In 2007, Makurdi had an estimated population of 500,797 [14]. However, 10 years after the inception of Benue state, the first case of AIDS was reported in Lagos, Nigeria.

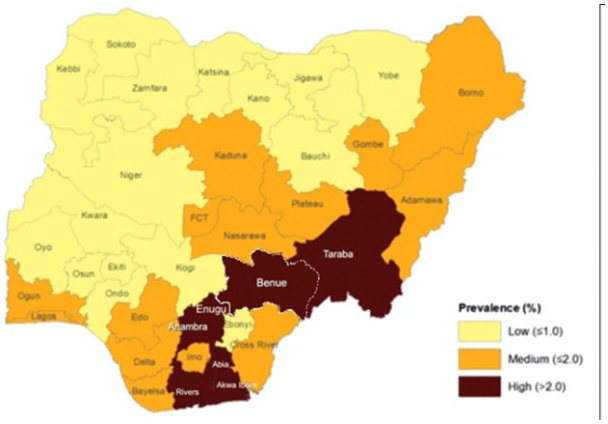

Figure 1: Map of Nigeria showing HIV prevalence distribution across the country (2)

Sources of Data

The method adopted in this paper was a descriptive analysis of the HIV epidemiology in Nigeria using Benue State as a case study and based on the valid researches in different

perspectives about HIV and AIDS in the study area. The data on HIV/AIDS in Benue State, Nigeria is through the report of periodic epidemiological surveys of Antenatal Clinic (ANC) sentinel surveys, National HIV and AIDS and Reproductive Health Surveys (NARHS), Nigeria Demographic Health Surveys (NDHS), Integrated Biological and Behavioural Surveillance Surveys (IBBSS), National Agency for the Control of AIDS (NACA), United Nations Agency for AIDS (UNAIDS) and Benue State Agency for the Control of AIDS (BenSACA). The study reviewed the trend of HIV/AIDS prevalence in Benue State in the last decade.

The Trend of HIV/AIDS in Nigeria

The trend of HIV/AIDS in Nigeria is not new and it is well documented; thus, average HIV prevalence for all the states in the country calculated from 1991 to 2010 is shown in Figure 2. The figure shows the graphical presentation of the trend of the epidemic at national level.

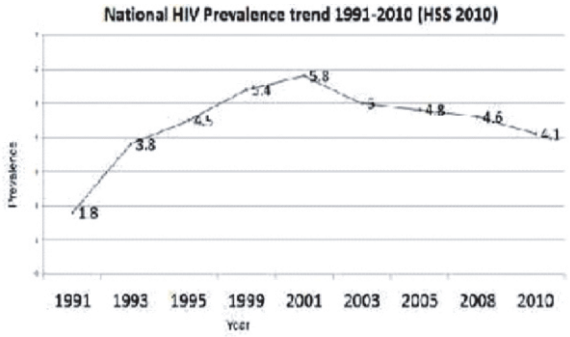

Figure 2: National HIV/AIDS Prevalence trends, 1991- 2010 (3).

It should be mentioned here that the antenatal sentinel survey was initiated in 1996 in 4 states and in 1999 in 16 states. However, in the remaining 17 states the survey was initiated in 1991. As shown in Figure 3, more than10 states have HIV prevalence rates which are higher than the national average of 4.38% for 1991-2010(15). Benue, Plateau, Akwa Ibom, Kaduna and Cross River states have the highest average HIV prevalence for the period 1991-2010.

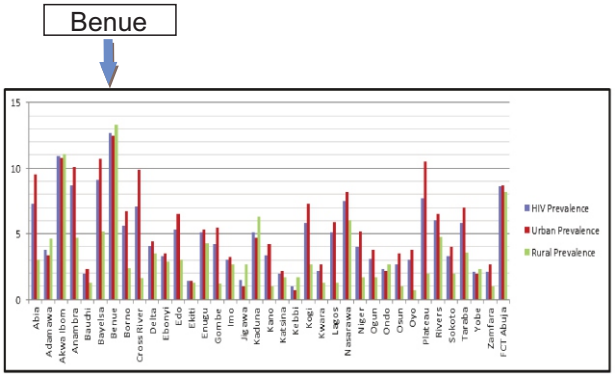

Figure 3: HIV prevalence in states in Nigeria (17)

The threat of HIV has made the public health to be up and doing in curbing the menace it posed in the recent time. The epidemiology of the virus has been studied up to date in Nigeria. Thus, HIV/AIDS prevalence increased steadily from 1.8% in 1991, to 4.5% in 1995, peaked at 5.8% in 2001 and started to decline to 5% in 2003, 4.1% in 2010(3).

Figures 4 is the spectrum projection of prevalence of HIV/AIDS in the Nigeria from 1990 to 2013.

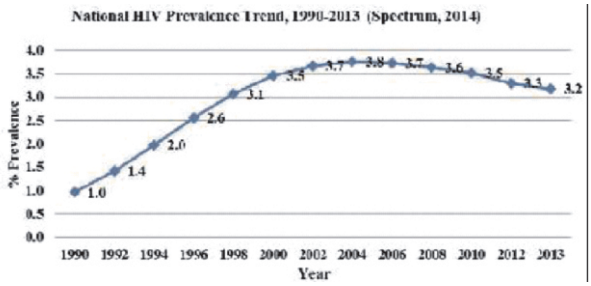

Figure 4: National Projected HIV Prevalence (16).

Moreover, figure 5 is the chart of Benue State and other states with progressively rising HIV prevalence from 2003 to 2010.

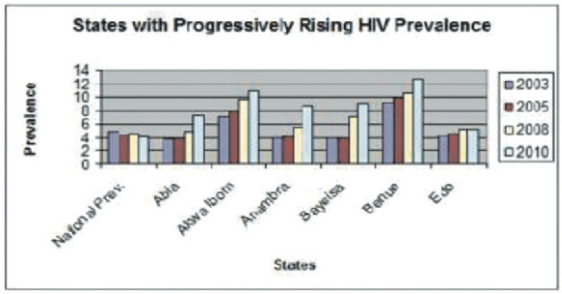

Figure 6: States with progressively dropping HIV prevalence followed by a sudden rise (16).

Some other states in Nigeria have however, recorded continuous decrease HIV prevalence from 2003 –2010 as seen in figure 7. These include Bauchi (4.8% to 2.0%), Jigawa (2% to 1.5%), Katsina (2.8% to 2.0%), Yobe (3.8% to 2.4%) and Zamfara (3.3% to 2.1%). To explain this, studies have pointed at socio-cultural and religious practices which favour chastity and less promiscuous sexual behaviour in the communities (17). So, Obioha pointed out the fact to this factor in a study executed by UNICEF in 2012 on HIV vulnerabilities in Nigeria, "religion and culture influence HIV-related vulnerabilities." The mainly Christian southern regions have a higher HIV prevalence than the mainly Muslim northern regions. This can be attributed partly to lower alcohol consumption and to circumcision practices in the north (17).

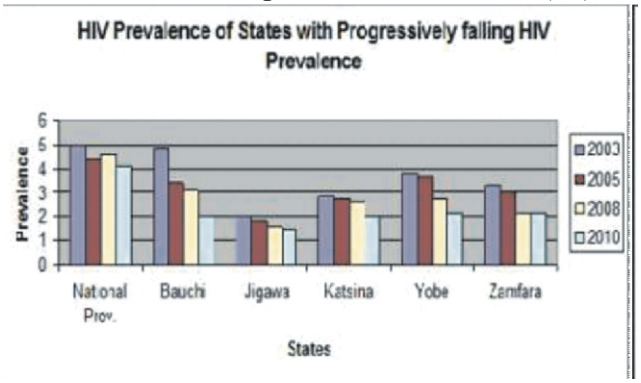

Figure 7: HIV Prevalence of States with Continuous Decreasing HIV Prevalence (8)

Nonetheless, there seems to be a distinctive finding in rural-urban distribution of HIV/AIDS prevalence in Nigeria when compared to other countries, Kenya and Uganda for example.

Urban HIV prevalence started dropping from 5.1% in 2003 to 4.4% in 2005 and then began to rise to 4.5% in 2008 and up to 4.8% in 2010 (17). Conversely, rural prevalence which is lower than the urban has been consistently reducing from 3.7% to 3.2% between 2003 and 2005; a spike to 3.5% in 2008 and reduced to 2.6% in 2010. Prevalence is not only lower among the rural population but the declines are phenomenal. In general, the prevalence is on the average slightly higher in urban (3.8%) than in rural (3.5%) areas (14,16). However, there are many states, including Adamawa, Yobe, Jigawa and Kaduna, which have overall higher HIV prevalence in rural than in urban areas.

Out of the 27 states where the HIV Epidemic Appraisal was done in 2013, the highest density of key population greater than 5000 is in eight states: Gombe, Adamawa, Nasarawa, FCT, Benue, Cross River, Abia and Ondo. It is important to note that these are also states with progressively rising HIV/AIDS epidemic. The distribution of the hotspots as shown in table 1 below indicates that Lagos state (38%) has the highest number of key population hotspots followed by Abuja (14%) and Nassarawa (12%)

According to NARHS (2012), the HIV prevalence in the general population was 3.4% but in 2019, a national prevalence of 1. 4% among adults aged 15–49 years and 0.2% among children aged 0–14 years was reported (4,17). In addition, HIV prevalence is relatively higher in some high burden states, such as Abia (7.3%), Akwa Ibom (10.9%), Anambra (8.7), Bayelsa (9.1%), Benue (12.7%), and Edo (5.3%). On the other hand, some states recorded progressively decreasing HIV prevalence from 2003 to 2010 such as Bauchi (4.8% to 2.0%), Jigawa (2% to 1.5%), Yobe (3.8% to 2.4%) and Zamfara (3.3% to 2.1%). Sequentially, Nigeria has a huge HIV/AIDS burden with an estimated 3,459,363 people living with HIV/AIDS in 2013 and an estimated 388,864 new infections occurring in 2011; 240,374 as of 2012 and 222,315 as of 2013 (17).

In general, since the first case of AIDS in Nigeria reported in 1986, national HIV prevalence has increased exponentially from 1.8% in 1991 peaking at 5.8% in 2001 and progressively declining since then to 3.1% in 2014(3). Nigeria has the second highest burden of HIV globally

with 3.4 million PLHIV as at 2014. There is a considerable regional and state to state variation in HIV prevalence in the country; ranging from 1% in Kebbi State to 12.7% in Benue State the state with highest prevalence (17). A report by Nigeria National Agency for the Control of AIDS (NACA) in the year 2012 shows progress in institutional reforms and political commitment to tackle the AIDS in Nigeria as the government has seen more citizens placed on life saving medications of Highly Active Antiretroviral Therapy (HAART) to increase the survival of such HIV sero-positive individuals (19-21).

Table 1: Number of Key Population Hot Spots. Source: Local Epidemic Appraisal, 2013 (2).

Number of Hot Spots by Most-at-Risk Population Group				
State	FSW (%)	IDU (%)	MSM (%)	Total (%)
Abuja FCT	1,446 (14%)	22 (5%)	120 (24%)	1,588 (14%)
Anambra	618 (6%)	24 (5%)	50 (10%)	692 (6%)
Benue	825 (8%)	32 (7%)	57 (12%)	914 (8%)
Cross River	692 (7%)	8 (2%)	15 (3%)	715 (6%)
Gombe	348 (3%)	254 (57%)	36 (7%)	638 (6%)
Lagos	4,056 (38%)	95 (21%)	191 (39%)	4,342 (38%)
Nassarawa	1,409 (13%)	12 (3%)	19 (4%)	1,440 (12%)
Ondo	1,187 (11%)	0	7 (1%)	1,194 (10%)
Total	10,581 (100%)	447 (100%)	495 (100%)	11,523 (100%)

AIDS remains a major cause of deaths in Nigeria among adults and children, the National Bureau of Statistics in 2012 estimated deaths caused by HIV/AIDS at 170.2 deaths per 100,000 populations. Lack of accurate death records has been a major barrier to estimating the deaths from HIV/AIDS and other diseases. Spectrum outputs from this study indicates that AIDS deaths rose from 141,225 in 2000 to 209,340 in 2006 to 218,996 in 2012 and 233,604 in 2013. Death from HIV/AIDs has been associated with ignorance, poor access to health and social services including ART stigma and discrimination, gender issues and poverty (16).

The 6 priority states (Kaduna, Akwa Ibom, Benue, Lagos, Oyo and Kano) jointly contribute 26% of annual AIDS deaths while the priority 12+1 states (Kaduna, Akwa Ibom, Benue, Lagos, Oyo, Kano, Rivers, Sokoto, Taraba, Nassarawa, FCT, Imo, and Cross River) are jointly responsible for 51% of annual deaths (17).

HIV/AIDS knowledge though increasing is still unacceptably low in the general population and across all sub-populations. The NDHS 2008 puts knowledge among the general population at 35.6% for male and 23.6% for females. In the general population especially among the youths, males seem to have a more accurate knowledge of prevention methods compared to their female counterparts. The findings from NARHS 2013 corroborate this as slightly more males (27%), reported correct knowledge compared to females (22%) of the same age group. The proportions significantly rise when respondents report on two prevention methods, with male accounting for 63% compared to 52% by females (4,5). In the northern states, knowledge is higher especially among men in FCT (75.6% for men; 61.6% for women), Taraba (73% for men and 16% for women, and Kaduna (66% for men and 63.9% for women). Knowledge is generally low around 10%-20% in Benue, Niger, Yobe, Sokoto and Zamfara. A distinctive finding for which further research is needed is the higher levels of knowledge among women than men in Zamfara and Kebbi states where the opposite should be expected in predominantly Islamic states. In most of the southern states, HIV/AIDS knowledge ranges from 40% - 70% for males and 15% - 40% for women (4,5).

The NAIIS survey was an extraordinary undertaking in scale and complexity, made more impressive by the speed with which it was accomplished, the robust protocols followed, and the logistical and operational challenges that were overcome. The results will establish a new baseline for understanding the epidemic in our country. Initial findings from the survey, which

are informing this revised strategic framework, have urgent important implications for programming. It is however important to recognise that, because the scale and methodology of the NAIIS is so much greater and more sophisticated than previous surveys, understanding of trends will require modeling and restatement for comparability. Simple comparisons with past estimates will necessarily be misleading given the discontinuities. The high prevalence states (Abia, Taraba, Benue, Enugu, Anambra, Akwa Ibom and Rivers- table 2) are among the most affected populations in the country - they need to prioritise proven targeted interventions and resources (2).

Table 2: High HIV prevalence states (15-49 years) - spectrum estimates using NAIIS data (2).

S/N	States	Prevalence %	Burden
1	Akwa-Ibom	5.6	200,051
2	Benue	4.9	188,482
3	Rivers	3.8	196,225
4	Taraba	2.7	52,856
5	Anambra	2.4	87,312
6	Enugu	2.1	66,768
7	Abia	2.1	51,261

There is a great need for increased state political and domestic investment in the response coupled with a strong partnership between the federal government and state governments, civil society, international donors and the research community. As part of our efforts to continuously strengthen the national response, last two years Nigeria re-established the National Treatment and Prevention of Mother to Child Transmission Programme under the Federal Ministry of Health of Nigeria (21) . The programme commits our Government to expanding HIV testing, eliminating mother-to-child transmission, expanding HIV treatment, and strengthening care, support and adherence with the goal of ending AIDS as a public health threat in Nigeria by 2030. The programme which has been up and running with over 65,000 patients on treatment in Abia and Taraba is being expanded to Benue, Cross River, Lagos, Kaduna, Nasarawa and the FCT. The programme is funded by the Federal Government, which is committed to putting a further 50,000 patients on treatment annually.

Therefore, epidemic with a view to better guiding future investments, has risen significantly for all stakeholders. This justified the important investment in a new and comprehensive population-based HIV survey. The NAIIS was designed as a two-stage, cross-sectional cluster survey of 88,775 randomly selected households, sampled from among 3,551 nationally representative sample clusters. When fully analysed, the NAIIS will characterise HIV incidence, prevalence, viral load suppression, CD4 T-cell distribution, prevalence of detectable antiretroviral (ARV) drugs and antiretroviral drug resistance, as well as risk behaviors and the uptake of key HIV prevention, care and treatment services amongst our children and adults, men and women, at each life stage. The NAIIS will further estimate the prevalence of Hepatitis B (HBV) and Hepatitis C (HCV) infections, and HBV/HIV and HCV/HIV co-infections (2).

Based on findings from the NAIIS, the current national prevalence of HIV is estimated at 1.4% (15-49 years), with a total estimated 1.9 million persons living with HIV in Nigeria. Prevalence among females is significantly higher at an estimated 1.9%, with male prevalence estimated at 0.9%. The new prevalence estimates by state may be categorised as follows: Seven states are considered to have high prevalence of 2.0% and above.

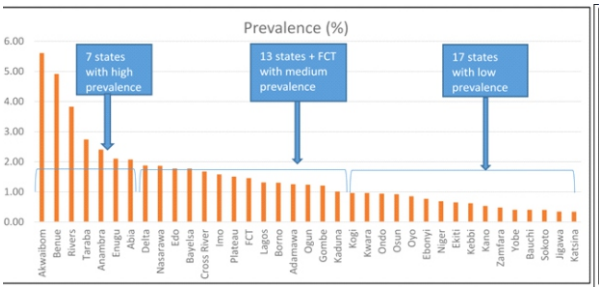

Figure 8: HIV prevalence by state (2)

These include Abia, Taraba, Benue, Enugu, Anambra, AkwaIbom and Rivers; a further thirteen states plus the Federal Capital Territory have medium prevalence between1.0% and 1.9%, including Borno, Gombe,Adamawa, Kaduna, Plateau, Nasarawa, Cross River, Imo, Edo, Delta, Bayelsa, Lagos, and Ogun; the other sixteen states are considered to have low prevalence, below 1.0%.(Figures 8 and 9).

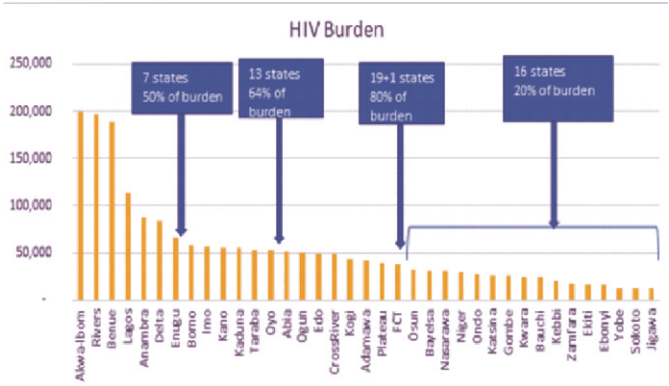

Figure 9: PLHIV burden by state (Spectrum estimates using NAIIS data) (2)

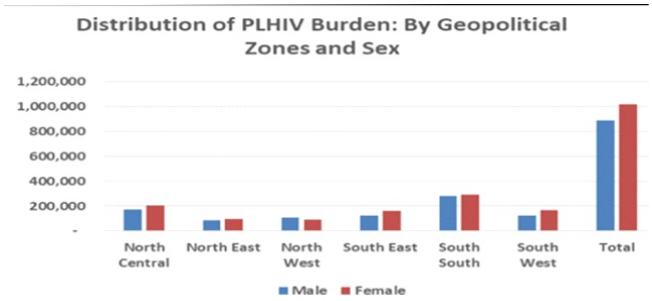

Figure 10: Distribution of PLHIV burden by geopolitical zone and sex (Spectrum estimates with data from NAIIS (2).

All states in the North-West, except for Kaduna have low HIV prevalence. All states in the South-West, with the exception of Lagos and Ogun also have low HIV prevalence. In terms of geographical distribution, the estimated number of persons living with HIV is highest in zone that has a mix of low, medium and high prevalence, with the low prevalence states being to the West of the zone, while the high prevalence states are to the extreme east. The South-South geopolitical zone of the country accounts for highest number of people with HIV/AIDS followed by the North-Central and lowest in the North-East (Figure 10). Females make up the majority of the persons living with HIV overall and in all geopolitical zones with the exception of the North-West, where this trend is reversed.

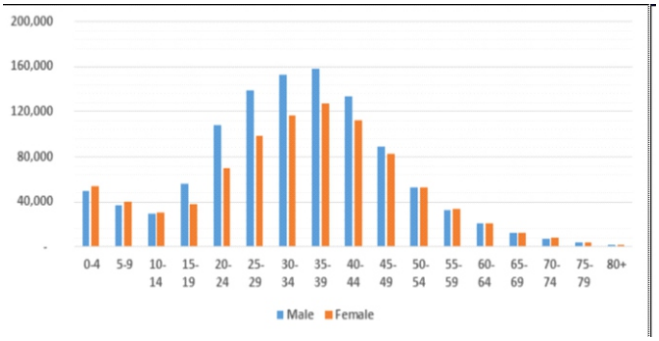

Figure 11: Distribution of PLHIV burden by age and sex (Spectrum estimates with data from NAIIS) (2)

The distribution of HIV burden across age bands indicates 12% of persons living with HIV are between the ages of 0-14 years while 75% are between 15-49 years and 13% are 50 years and above. Adolescents (10-19 years) account for 8% of persons living with HIV. Females have a significantly higher burden compared to men between the ages of 15 to 44 years (Figure 11).

Table 3: Medium HIV prevalence states (15-49years)-spectrum estimates using NAIIS data (2)**.**

S/N	States	Prevalence	Burden
1	Delta	1.9	83,300
2	Nasarawa	1.9	31,756
3	Edo	1.8	48,824
4	Bayelsa	1.8	31,830
5	CrossRiver	1.7	48,473
6	Imo	1.6	57,553
7	Plateau	1.5	39,594
8	FCT	1.5	38,293
9	Lagos	1.3	113,523
10	Borno	1.3	57,632
11	Adamawa	1.3	42,376
12	Ogun	1.2	50,798
13	Gombe	1.2	25,464

Current Trend of HIV/AIDS and Care for PLWHA in Benue State

Table 4: Low HIV prevalence states (15-49 years)- spectrum estimates using NAIIS data (2)

S/N	States	Prevalence	Burden
1	Kaduna	1.0	55,266
2	Kogi	1.0	43,373
3	Kwara	1.0	24,849
4	Ondo	0.9	27,789
5	Osun	0.9	32,197
6	Oyo	0.9	52,388
7	Ebonyi	0.8	16,479
8	Niger	0.7	29,463
9	Ekiti	0.7	16,756
10	Kebbi	0.6	20,476
11	Kano	0.5	55,910
12	Zamfara	0.5	18,509
13	Yobe	0.4	13,005
14	Bauchi	0.4	23,997
15	Sokoto	0.4	12,844
16	Jigawa	0.3	12,804
17	Katsina	0.3	26,597

The latest trend of HIV/AIDS revealed that out of the current 1.9 million people representing 1.4% (15-49 years) living with HIV in Nigeria, Benue State accounts for 188,482 representing 4.9%. Thus, Benue State is now second as against the previous reports which have consistently placed Benue State as the state with highest prevalence of HIV/AIDS in Nigeria since the beginning of this pandemic in the country. The new prevalence estimates by states still categorize Benue state and six other states as high prevalence of 2.0% and above. The national prevalence among females is significantly higher at an estimated 1.9%, while male prevalence is estimated at 0.9% (19-21).

Nigerian government has been making tenacious effort through the Federal Ministry of Health (FMoH) based on (since) the first AIDS case reported in 1986, likewise individual researchers in the country, West Africa states, other African states and the rest of the world at large. To examine the trend of HIV/AIDS care as well as the support treatment of people affected by AIDS in Benue, all and sundry must be informed about the menace of the virus. People of the state already know that the disease is prevalent in the state through various sensitisation programmes executed in the state.

In addition, the Federal Ministry of Health (FMoH) in the year 1986 set up the National Expert Advisory Committee on AIDS (NEACA) and requested the assistance of WHO leading to the establishment of several HIV testing centres in the country and the coming up with a comprehensive medium-term plan for the nation's battle against HIV/AIDS (17,19.21). This effort has been narrowed to the state level in order to build healthcare providers' skills for effective service delivery and communication with people, to provide information and support for people to make informed decisions about their health, their engagement with health care, management of their disease and offer a patient appointment system and acceptable frequency of clinic visits (2). This is to ensure that there are health systems in place to track patients who default on their appointments, or avoid long waiting times during clinical consultation, medication pickups and laboratory services (19-20). So, Benue State Agency for the Control of AIDS (BENSACA) has put in place health facilities in some points such as Federal Medical Centre River HIV/APIN clinic in Wadata at Makurdi to encourage People Affected By AIDS (PABA) and as well decongest ART clinics, pharmacies and other service delivery points (22).

Awofala and Ogundele report shows the dynamics of HIV transmission in Nigeria, its emerging trends and the sentinel surveillance system put in place by the governmental and non-governmental institutions, and international organizations (22). Notwithstanding, HIV/AIDS prevention and the high risk taken to be infected by individuals and care for PABA in Benue State is buttress in this research (19).

A press release by the Government of Nigeria on the 14th March 2019 indicated a national HIV prevalence in Nigeria of 1.4% among adults aged 15–49 years as against the previous estimates which had indicated a national HIV prevalence of 2.8%. UNAIDS and the National Agency for the Control of AIDS estimate that there are 1.9 million people currently living with HIV in Nigeria

(24,25).

In addition, youthful exorbitance of the adolescents usually allows many of them into sex risky behaviour. It is of necessity to ascertain adolescents' knowledge with respect to their safe practices pertaining to HIV in the study area. A report that showed a critical impact on the prevention of contracting and spreading HIV in Benue was carried out in Makurdi (23). Thus, Agbecha and Gberindyer (2017) reports have shown that adolescents in the general setting engage in activities that enhance the spread of the virus. Two hundred randomly selected adolescent students from 10 different schools in Makurdi were involved in the cross-sectional study (23). Primary data were collected on students' HIV/AIDS knowledge, attitude toward people living with HIV/AIDS (PLWHA), and safe practices preventing the spread of HIV/AIDS revealed that majority of the students had good knowledge about HIV/AIDS, had good attitude toward PLWHA, and engaged in safe practices that prevent the spread of HIV. The sources of HIV/AIDS information were hospital, school, home, electronic, and print media. The study also found that HIV/AIDS knowledge instilled good attitudes and behavioural practices in the students. Hence, school sex education, as well as health promotion campaigns through media platforms, could impact positively on the knowledge, attitude, and behavioural practices of adolescents in curbing the spread of HIV/AIDS because HIV/AIDS knowledge is considered as the most important weapon to fight against its spread. Or else, all efforts to curb its spread will be in vain unless adolescents including students are knowledgeable about it. Therefore, it is important that secondary school students understand HIV prevention and transmission and have developed humanistic attitudes. The findings in the present study reiterate the need for re-enforcing school AIDS education by inclusion of sex education in secondary school curriculum, organization of health education/HIV preventive programs for schools, empowerment of teachers as effective health educators and counsellors for HIV/AIDS prevention, intensification, and encouragement of the use of mass media in disseminating HIV/AIDS information (22).

A case study of motorcyclists in Makurdi in a report to determining the HIV risk perception and sexual behaviour among commercial motorcyclists in Makurdi, Benue State, Nigeria showed that, among the 344 consenting, registered commercial motorcyclists, aged 18 years and above working in Makurdi examined by Bako *et al.* (2017) (25), the sexual behaviours of approximately 93% of the participants reported in the study ever having sex and majority of them (52.6%) had their first sexual intercourse 15-19 years (mean age at first sex was 19.0 ± 3.66 years). The average lifetime number of sexual partners was 8.9 (± 20.26) with 99 (28.8%) having had more than 10 lifetime sex partners. About 153 (48%) of the respondents reported having had more than one sexual partner in the previous one year. A two–third, 204 (66.7%) of respondents used condom during their last sex with a non-regular partner while 102 (33.3% don't use condom during sex with a non-regular partner. Slightly below a quarter 83 (24.1%) of the respondents have paid to had sex in the previous one year. But, two third of the respondents (66.7%) reported use of condom during their last sex with a non-regular partner, while slightly less than a quarter (24.1%) of the respondents have paid to have sex in the previous one year. So, only 29.6% perceived themselves as been at moderate or high risk of contracting HIV (25).

The people of Benue state are known for agricultural activities as the food basket of the nation, therefore there are strategies to see that both elites and non-elites are aware of HIV/AIDS in the state. Thus, a report on campaign AIDS

among farmers in Makurdi Local Government Area (LGA) of the state had also been reported (22). A total of 140 farmers were selected for interview using a simple random sampling technique. The collected data in the study showed that HIV/AIDS radio programmes packaged in Pidgin English, local language or dramatized enhance farmers' interest, listenership and positive change in behaviour. In addition, farmers' level of education, gender and ownership of radio sets were found to positively improve their level of satisfaction with HIV/AIDS radio programmes. Based on the findings, it was recommended by Oboh and Sani that intervention polices aimed at combating HIV/AIDS scourge should package more radio programmes in Pidgin English, drama and local languages (26). In general, strategies mapped out in Benue to sensitize the public about the virus especially at the grass root level through peer educator trainer (PET)who were trained by UNICEF (United Nations Children Emergency Fund) in conjunction with ARFH (Association for Reproductive and Family Health) and supported by SFH (Society for Family Health) and other stake holders. They are working towards ending the AIDS epidemic in Benue state. The PETs (Peer Educator Trainers) train and mentor adolescents in schools known as Peer Educators (PEs); after which each PE trains ten other adolescents by spreading the news and not the virus. Short drama acted on the local radio both in English language and other major local languages with local accent help those who lives in the rural setting understand message better. This effort has led to landslide in dropping of the HIV/AIDS in the state.

Conclusion

Human Immunodeficiency Virus (HIV) infection and AIDS which is the disease due to the infection is no longer new only in Nigeria but even across the globe. Since much emphasis is on HIV/AIDS virus and the infection in Nigeria but no much-documented information made available worldwide about Benue state, hence, information about Benue State has been the main view of the researchers of this work. In Benue, strategies were mapped out to sensitize the public about the reality of the virus especially at the grass root level. This include activities of the peer educator trainer (PET), Short drama acted on the local radio both in English language and other major local languages. This effort has led to the drop in the spread of the virus from the state with the highest prevalence of HIV/AIDS in Nigeria to second. The major secret behind the slide dropping is teamwork on the HCT from health workers and other trained personnel from government owned hospitals, private hospitals and NGOs. Therefore, as time goes on; this will definitely have impact on dropping in the prevalence of the virus in Nigeria, West and Central African sub-region and the whole world at large.

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