

## Trends of the HIV Epidemic in North Eastern Uganda

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### **Abstract**

*The purpose of this study was to investigate the trends of the HIV pandemic in North Eastern Uganda to assess the current status and guide future programs aimed at ending HIV as a public health threat in this region by 2030. The study established that awareness about HIV was at 75% among the adolescents in the region and that only 63% of the population in the region had tested for HIV. These levels are below the desired target of 95%. Overall HIV prevalence was found to be 3.7%, which is below the national average of 5.8%. ART coverage was 53.6% among men and 69.9% among women living with HIV in the region; this too is below the desired target of 95%. Viral Load Suppression was found to be at an average of 78%, which is significantly lower than the target of at least 95%. 36% of the people living with HIV felt significant levels of stigma and discrimination, thus reducing their quality of life. Overall, the study found that most of the key HIV indicators had stagnated in the region, with some heading away from, rather than towards the targets for HIV epidemic control. Recommendations for improvement include reviving HIV prevention and awareness programming for young people, as well as addressing the multiple obstacles hampering HIV control efforts in the region.*

**Keywords:** *AIDS, HIV, Health, Karamoja, Trends, Teso.*

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### **Introduction**

The HIV pandemic has caused suffering and death for well over 40 years since CDC characterized AIDS [1] but it continues to be a leading cause of death for women in the reproductive age group [2]. Countries have been affected at different levels depending on their economic status and the state of their health systems. Uganda is one of the countries that has been most severely impacted by the HIV/AIDS pandemic. Over the years, various interventions have been implemented to control HIV/AIDS in Uganda. In line with international targets and commitments, The Presidential Fast Track Initiative of the Government of Uganda [3] aims to put an end to HIV as a public health threat by 2030.

The success of the various program interventions in the North Eastern region of Uganda has not been comprehensively

reviewed. A study was conducted to assess the impact of the various HIV control programs that have been implemented in the region.

The goal of the study was to review the progress towards attaining HIV epidemic control in the North Eastern region of Uganda. The specific research objectives were to:

1. Review the trends of HIV in the North East Region of Uganda.
2. Identify public health interventions that are necessary for expediting progress towards HIV epidemic control in the region.

### **Methodology**

Uganda is one of the countries in East Africa. The North Eastern region of Uganda is home to semi-nomadic cattle keepers, as well as a sedentary community that practices mixed farming [4]. The region experienced armed conflict for many years, and this left it behind

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other regions of the country in terms of social and economic development [5]. Social services, including health services, are inadequate with limited access to the majority of the population. The region is the least developed in the country with most development indicators being below the national average. Over the years, several initiatives have been implemented to help the community catch up with the rest of the country in terms of health indicators.

The study was mixed methods; largely a qualitative unstructured approach coupled with a quantitative analysis of available secondary data. This approach was found appropriate for the study because it provided for a review and assessment of available data while also exploring the factors behind the trends of the HIV pandemic in the region.

Data from previous studies was reviewed and opinions and insights from key informants were obtained. The structure of the Key Informant Interviews was flexible and allowed for in-depth probing to understand the HIV trends in each district of the region as demonstrated by the available data.

This study analyzed published and publicly available epidemiological data, including reports from the Uganda AIDS Commission, Ministry of Health of Uganda, UPHIA reports, NGO reports and other studies that have been undertaken in the region over the last 10 years.

## Results

The findings of the study are presented under the themes of HIV Awareness, HIV Testing Services (HTS), HIV Prevalence, Anti-Retroviral Therapy (ART) Coverage, and Stigma and Discrimination.

HIV awareness was found to be at 75% among the adolescents in the region [6]. It was also found that there were wide variations in HIV awareness across districts and between age groups in the region. The level of awareness is suboptimal given that the global target of HIV status awareness by 2025 is 95% [7].

In terms of HIV testing services (HTS), a UNFPA study in the region found that coverage of HIV testing remains low in Karamoja, with only 63% of the population having tested for HIV compared to 79% which is the national average, and the global target of 95% [8].

Overall HIV prevalence in Karamoja is at 3.7%, which was lower than the national average of 6.2% [9]. This study observed that HIV prevalence in the region increased from 3.4% in 2011 to 3.7% and 2016 [10]. This is a negative trend and cause for concern in the region.

ART coverage in the region was 53.6% among men and 69.9% among women living with HIV; with the overall percentage being 63% [11]. These figures are lower than both the national average, as well as the global target of 95% of people living with HIV being on ART [12].

The Ministry of Health UPHIA documented in 2016 that Viral Load Suppression among people living with HIV who are on ART was found to be at an average of 70% [13]. Five years later, the follow-on UPHIA 2020 assessment established that Viral Load Suppression was now at 78% [14], which was an improvement, but still significantly lower than the target of at least 95%. Table 1 below shows the HIV clinical cascade in sampled districts in North Eastern region of Uganda:

**Table 1.** Clinical Cascade in Sampled Districts of the Region

District	Tested and Received	Found HIV positive	Linked to Care	Proportion found HIV positive	Proportion Linked to Care
Kaabong	45,855	146	96	0.3%	66%
Kotido	44,007	210	173	0.5%	82.4%

District	Tested and Received	Found HIV positive	Linked to Care	Proportion found HIV positive	Proportion Linked to Care
Nakapiripirit	23,322	245	208	1.1%	84.9%
Moroto	25,151	263	237	1.0%	90.1%
Napak	21,477	209	197	1.0%	94.3%
Katakwi	38,384	472	459	1.2 %	97.2%
Soroti	143,200	1,634	1,388	1.1%	84.9%
Serere	96,592	531	515	0.5 %	97.0%
Bukedea	34,892	276	249	0.8%	90.2%
Kumi	67,522	765	514	1.1%	67.2%

Source: Ssebunya [15], et al, 2018.

In a related study, UNAIDS documented the following PMTCT cascade in sampled districts

of the North Eastern region as shown in table 2 below [16]:

**Table 2.** ART Coverage, EID and Positivity in Sampled Districts of North-Eastern Region

District	ART Coverage	EID Coverage	Positivity Rate at 1 <sup>st</sup> PCR test
Alebtong	85%	66%	6%
Kotido	78%	19%	9%
Kaabong	35%	30%	9%
Moroto	96%	34%	17%
Napak	99%	66%	12%
Nakapiripiri	89%	52%	10%
Katakwi	95%	71%	4%
Kaberamaid	98%	96%	10%
Kumi	94%	67%	5%
Serere	93%	68%	8%
Soroti	89%	78%	7%
Bukedea	54%	33%	6%

Source: Uganda Country Progress Report July 2016 to June 2017 - UNAIDS, 2017

This study established that 36% of the people living with HIV experienced significant levels of stigma and discrimination and so were not able to disclose their HIV status to other people. This figure is similar to the national average [17] but quite far from the national and global

target of 0% of people living with HIV experiencing stigma and discrimination.

The kind of stigma experienced ranges from that shown by health workers and neighbours to self-stigma that arises from an individual's self-consciousness about being HIV positive.

## Discussion

The study was able to obtain answers to the key research question on the trends of the key HIV program indicators in the region. The core indicators are HIV awareness, HIV testing services, HIV prevalence, ART coverage, and Viral Load Suppression. The trend of these indicators was not consistent, with most of them far from the desired state for purposes of achieving epidemic control, and the performance against the 95-95-95 [18] commitments was very far off the mark. The results from the available data portray a mixed picture in the North Eastern region of Uganda, with some indicators moving in the right direction, while others are either stagnating or retrogressing.

At only 75%, the level of HIV awareness is suboptimal, especially among the youth. This lower-than-expected awareness implies that young people will continue to be vulnerable to HIV infection, which in turn means that HIV will continue spreading in the community. This is a significant issue in the region and the country at large because failing to control new infections means that the country will not achieve its fast-tracked objective of ending HIV as a public health threat by 2030. The government and its health partners need to put more effort into this program area.

HIV testing services (HTS) were found to be generally available at the Health Centre III level. The concern is that some HC IIIs are quite distant from the communities they serve. The Government and its partners need to promote innovative solutions to this challenge; including making HTS services available at the HC II level and scaling up the distribution of HIV self-test kits so that more people can know their HIV status. Various studies gave different estimates of the proportion of people living with HIV in the region who know their HIV status. The highest estimate was that 82% of the people who live with HIV in the region know their HIV status. While this may appear to be good, it is actually below the UNAIDS target of

having 95% of the people living with HIV know their status. The shortfall of 13% means that the region is below the UNAIDS target and so more effort is needed to achieve this goal [19].

At 3.7%, HIV prevalence in the region is lower than the national average, which would appear to be a good finding. However, the trend of HIV prevalence is of concern. In 2016, HIV prevalence in the region was 3.4% so 3.7% represents an increase in HIV prevalence. This change is probably a result of complacency among public health practitioners in the region. There is a need to step up HIV prevention interventions to reverse this trend.

The ICAP UPHIA 2016 [20] survey presented age-disaggregated data which showed that HIV prevalence among the 20 – 24-year-olds in the region was 3.7%. By 2020, this proportion had risen to 4.5%, which is a worrying development. This is of great concern because it shows that one of the most sexually active age groups is getting increasingly vulnerable to HIV. This presents challenges because this threatens the attainment of HIV epidemic control. Therefore, interventions aimed at preventing further spread are urgently needed in both sub-regions of North Eastern Uganda to reverse these trends.

The available data shows that the average ART coverage in the region was only 63%; meaning that 37% of the people who need ARVs are not able to access them. There are various implications of this finding. At the individual level, the people who are unable to access treatment suffer from poor health, which reduces their quality of life, increases the cost of health care, and reduces their productivity. In this era of universal access to health care, it is important to ensure that all people have access to ART. The international commitment is that at least 95% of people living with HIV should be on ART and so 63% is far off this target.

Viral Load Suppression (VLS) is a measure of how well the ARVs are working to contain the virus in a person's body. A person is said to have achieved Viral Load Suppression then the

amount of virus in their blood is less than 200 copies of HIV per millilitre of blood. At this stage, the risk of HIV transmission is minimal. UPHIA2016 documented that Viral Load Suppression in the region was at 70%. Five years later, the UPHIA2020 established that Viral Load Suppression was now at 78%. While this is a considerable improvement, the current situation is still significantly far from the national and international target of 95%. Though performance in this indicator was a little better than the other indicators, it is still below the desired level. From a public health perspective, people who have not achieved Viral Load Suppression pose a risk of infecting their sexual partners, which would sustain the spread of HIV. This study found that the limited availability of nutritious food discourages the clients from fully adhering to treatment because the medicines require one to eat well. Therefore, while food security may seem outside the mandate of the Health Sector, the Government and its partners need to ensure that the challenges of food security in the region are addressed. Further study should be done to establish other factors limiting VLS in the region.

A significant portion (36%) of the people living with HIV in the region continue to experience HIV stigma and discrimination. HIV stigma hinders service delivery. The stigma is experienced at various levels, including the public, health workers, and individuals living with HIV themselves. The public continues to stigmatize HIV infection, considering it an infection resulting from promiscuity or carelessness. Health workers are often accused of stigmatizing people living with HIV, particularly the Key Populations. In addition, people living with HIV themselves tend to harbour self-stigma; believing that the public holds them in contempt even when that might not be the case. Stigma impacts people in different ways depending on its source and severity; as well as the resilience of the individuals experiencing it. Stigma and

discrimination are not only a matter of human rights violation, but it is also a concern because when people experience stigma, they end up keeping their HIV status secret. This secrecy presents risks at various levels. First, the individual may not adhere to treatment, which compromises their health. In addition, the individual may not disclose their HIV status to their sexual partners and may not insist on protected sex for fear of being suspected. Therefore, where people with HIV experience stigma and discrimination, HIV may continue to spread in the community. It is important that the Government and all partners in the health sector implement programs to eliminate stigma and discrimination in the region. Resolving stigma calls for active interventions specially designed to combat stigma at various levels.

The fluctuations in the trends on the indicators pose challenges to the attainment of epidemic control in the region. Discussions with Key Informants in the region revealed that most of them are not surprised by these findings and seem to be resigned to these trends because they are not adequately facilitated to implement HIV programs.

Though this study was able to obtain answers to the key research questions, data was not readily available at the standard level of disaggregation. Therefore, there is a need for more focused research on these questions because the availability of data on key questions on the impact of HIV programming in the region is limited. The Government of Uganda and its partners in the health sector need to invest in consistent and regular data collection to facilitate comparative studies in this region.

## **Conclusions**

The findings show unfavourable trends in most of the key HIV indicators in the region. HIV awareness, HTS coverage, HIV prevalence, ART coverage, and Viral Load Suppression are all suboptimal.

Some areas that are essential for success in HIV programming, in particular HIV prevention interventions, are not adequately prioritized; this allows new infections to emerge at a time when there should be no, or very few new infections.

Significant levels of HIV stigma and discrimination continue to be felt by people living with HIV in North Eastern Uganda. Stigma and discrimination must be prioritized in HIV programming in the region.

## Recommendations

The Ministry of Health and its health partners working in the North Eastern region of Uganda need to take urgent actions to reverse the negative trends and put the region back on track to achieve epidemic control.

All aspects of the HIV/AIDS response in the region; including public health, clinical and social-economic interventions should be urgently scaled up to achieve the global and national targets of eliminating HIV as a public health threat by 2030 are to be achieved.

The most urgent interventions that must be prioritized include scaling up sensitization of the youth about HIV, increasing the availability of HIV testing services, increasing access to ARVs for people living with HIV, addressing the social and economic factors hampering adherence to treatment, and proactive action to address HIV stigma and discrimination in the region.

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## Significance of the Study

This study reviews progress towards attaining control of HIV in the region, which is an ongoing public health challenge. The findings and recommendations of this study are of significance to and have direct application for the Ministry of Health and other public health professionals who are working to control HIV in this region, as well as in other regions of Uganda and other countries that may be in a similar situation.

## Conflict of Interest

I confirm that I have no conflicts of interest to declare, and I have no financial interest to report. Furthermore, I certify that this manuscript is my original work and has not been submitted to any other publication.

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