HOTSPOTS OF RECENT HIV INFECTIONS AMONG ADULT PEOPLE LIVING WITH HIV IN NIGERIA

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Amobi Andrew Onovo[1,2], Pamela Gado[3], Angela Agweye[4], Abiye Kalaiwo[5], Ughweroghene Omo-Emmanuel[6], Konrad Bradley[7], Kristina Bishop[8], Helina Meri[9], Rachel Goldstein[10]
[1]U.S Military HIV Research Program, Walter Reed Army Institute of Research, Bethesda, US, [2]The Henry M. Jackson Foundation for the Advancement of Military Medicine Inc., Bethesda, US, [3,4,5,6,9,10]HIV/AIDS and TB Office, USAID, Nigeria, [7,8]USAID Washington DC, US

BACKGROUND

- Reliable and accurate mapping of HIV infection hotspots is necessary for strategic placement of services and allocation of limited resources for targeted interventions.
- In Nigeria, recency testing was introduced in 2020 to assist in identifying those who had recently acquired HIV infection so that prevention programs can focus on preventing incident infections and ultimately break further transmission to control the epidemic.

OBJECTIVES

To prioritize program resources for control efforts in Nigeria, this study aimed to:

- investigate the spatial distribution pattern of recent HIV infections among adult people living with HIV (PLHIV)
- identify new HIV infection Hotspots and its associated factors among adult PLHIV in Nigeria

METHODS

- This was an ecological descriptive and analytical design conducted between October 2019 and December 2021.
- We georeferenced recent HIV case reports from 197 of 774 Local Government Areas (LGAs) spread across all of Nigeria's six geographic regions.
- Percent of recent HIV infections among adult PLHIV was calculated from data extracted from the national Recency testing registers.
- Spatial autocorrelation of recent HIV infection was analyzed via a Global Moran's I test. Hotspot analysis using Getis-Ord-Gi* statistic highlighted regions of significant clusters of recent HIV infection among neighbouring geographic regions, and
- Poisson regression model identified correlates of recent HIV infection in Nigeria.

The global spatial autocorrelation Moran's I statistics (z-score=10.7, p<0.0001, Moran's Index=0.104) revealed a clustered distribution of the spatial pattern of recent HIV infection. In the Poisson model, knowledge of HIV prevention (p<0.004) and ART coverage (p<0.0001) were significantly associated with recent HIV infection.

RESULTS

- Among the 62,382 PLHIV tested for recent infection, 61% were females.
- Of the 4,077 (6.5%) PLHIV identified as having recent HIV infection, 1,499 (6.3%) were males and 2,578 (6.7%) were females.
- Females between the ages of 15-19 (10%) had the highest recent infection when compared to other female age groups, while males (16%) aged 50 and over were four times more likely than females (4%) in this age group to have recently contracted HIV.
- Hotspot analysis identified significant clusters of recent HIV infection that were confined to local government areas (LGA) in the North Central, North West, South West, South East and the South South regions of the country..

CONCLUSIONS

- This study identified geographical areas to prioritize for intensified HIV case finding, thus demonstrating that geographical information system technology is a useful tool to inform interventions for epidemic control of HIV infection.
- Given the effect of knowledge of HIV prevention and ART coverage on recent HIV infection among adult PLHIV, adopting policies and strategies to enhance awareness and encourage people to seek early HIV testing and implementation of intensified community ART delivery services can break the transmission of HIV infection.

Table 1: Percent recent HIV Infection distribution by Sex

Sex	HTS Recent	Recent	Long-term	% Recent
Male	23,688	1,499	22,189	6.3%
Female	38,694	2,578	36,116	6.7%
Total	62,382	4,077	58,305	6.5%

Figure 1: Percent recent HIV Infection distribution by Age and Sex

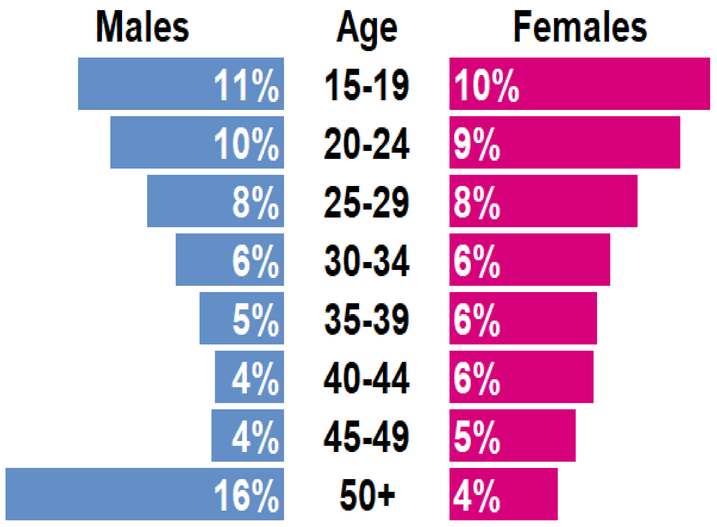


Figure 2: Hot-Spots of Recent HIV infection in Nigeria

