

AIDS and the City: Examining the Spatial Characteristic of the HIV/AIDS Pandemic in Nairobi

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- (1) Objective:** Human immunodeficiency virus/ acquired immunodeficiency syndrome (HIV/AIDS) surveillance on pregnant women and population and health surveys has shown that urban areas have higher HIV prevalence. Cities in the developing countries, especially in sub-Saharan Africa are characterised by high population growth rates, disparities in infrastructure provision, urban poverty and deteriorating environmental conditions. These factors present an arena where the spatial characteristic of the AIDS epidemic would be as heterogeneous as depicted at national and regional level. This paper presents an analysis effort on the spatial characteristic of the HIV/AIDS epidemic in the city of Nairobi through a survey of the distribution of people living with HIV and AIDS (PLWAs).
- (2) Methods:** A survey of PLWAs whose welfare and self-support groups are networked by an umbrella non-governmental organisation in the city of Nairobi, the capital of Kenya, was carried out in January 2005. About 200 persons already infected by HIV were accessed and interviewed. Questions relating to their current residence, residence when they got HIV infection, current living environmental conditions, education level, occupation and income level were sought. Utilizing some attributes from the 1999 population and housing census, the urban structure of the city is depicted at the ward level. The spatial distribution of the PLWAs is then analysed with the aid of the mapping and spatial

analysis capabilities of ArcView GIS software against this urban structure.

- (3) Originality:** Geographical characteristic of the HIV/AIDS pandemic in countries with generalized epidemic has always been carried at country level or for specific 'risk' groups. Studies to understand the spatial characteristics of the AIDS pandemic in the urban set-up in sub-Saharan Africa are few. This study can serve as an example in analysing the HIV/AIDS characteristics in a typical African city where the infection is not confined to a specific 'risk' group like drug users and homosexuals, and as an application of geographic information systems in understanding health issues.
- (4) Results:** Mapping the residential localities of the PLWAs reveal that HIV/AIDS is spatially present in all administrative divisions of the city of Nairobi with high concentration in the densely populated wards of the city, especially those characterised by economic and infrastructure deprivations, and informal settlements. In these areas residents can easily afford basic living necessities such as housing and food, have easy access to economic survival opportunities which include engaging in risky behaviours, and, the PLWAs have access to medical, social and economic support from welfare groups. The study reveals the spatial heterogeneity of the HIV/AIDS in the city, mainly due to the pockets of densely populated wards in all the administrative divisions of the city.

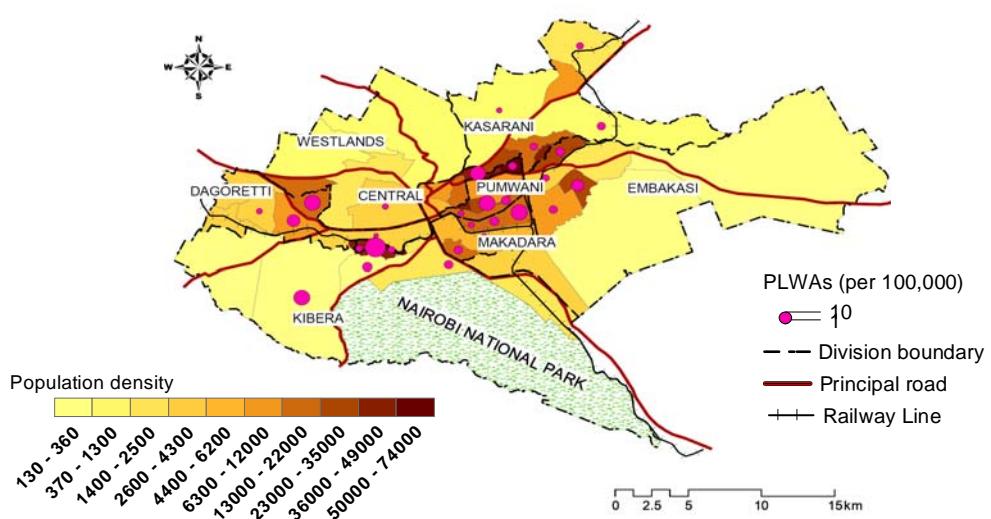


Figure 1: Spatial distribution of the PLWAs interviewed against population density