
Authors: Tapera O*, Munjoma M, Mapingure MP, Mutedzi B, Zambuko V, Gudukeya S, Hatzold K, Taruberekera N.

Background
Zimbabwe is one of the countries in sub-Saharan Africa most affected by HIV, with a prevalence rate of 15.2% according to ZDHS (2011). Geographical structure of the epidemic is influenced by some driving factors and it has implications on the susceptibility of infection amongst some populations. PSI Zimbabwe embraced the universal 90-90-90 concept and it endeavours to reduce HIV transmission by targeting populations with high positivity in Zimbabwe. This study was aimed at identifying geographic clusters of HIV based on positivity threshold of 10% countrywide.

Methods
Routine data from the outreach HIV testing and counselling programme administered by PSI Zimbabwe’s New Start Centre network and collected between January and March 2016 was used for this analysis. A database with a total of 87,695 clients was used for this study. Sixty-three districts where the outreach HIV testing and counselling services were provided were considered as the geographic epidemic clusters for the analysis, by classifying them according to HIV positivity based on the 10% threshold.

Results
The average HIV positivity was 11.8 % across the 43 districts with sufficient data selected in this analysis. Twenty-four out of 43 (56%) districts were identified as having HIV positivity at least 10%. Seventy percent (70%) of the clients were first time testers. Nine districts (14%) had HIV positivity greater 15%. Results suggest geographic variation in the transmission of HIV in Zimbabwe.

Conclusions
This study provides strong evidence of HIV geographic clustering. The findings identify priority geographic areas for HIV programming and support the need for targeted interventions amongst populations at high risk in order to achieve the desired 90-90-90 targets by 2030.