

## HIV impact in population surveys in Eastern and Southern Africa

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### Introduction

To achieve HIV treatment goals, data are needed on the impact of programs. Epicentre has conducted 6 district based population surveys in 5 countries to measure coverage and impact in HIV programs supported by MSF. The results measured progress toward 90-90-90 goals and guided priorities.

### Method

A total of six cross-sectional population surveys were implemented in Ndhiwa (Kenya, 2012), Chiradzulu and Nsanje (Malawi, 2013 and 2016, respectively), Eshowe (South Africa, 2013), Gutu (Zimbabwe, 2016), and Kasese (Uganda, 2016). Using multistage cluster sampling, we recruited individuals aged  $\geq 15$  years living in 2 400 selected households in Gutu and 2 443 households in Nsanje, and individuals aged 15-69 years living in 828 households in Kasese. Individuals who agreed to participate were interviewed and tested for HIV at home. All participants who tested positive had their viral load measured, regardless of their ART status. In some studies, we also evaluated CD4 counts, HIV incidence as well as transmitted and acquired resistance.

### Results

Among 34 386 adults eligible from 15 473 included households, 30 245 (88.0%) were included and tested for HIV+, ranging from 1 738 in Kasese (inclusion 95.9%) to 7 269 in Chiradzulu (inclusion 87.8%).

The overall HIV prevalence ranged from 12.1% (95%CI 11.2-13.0) in Nsanje to 25.2% (95%CI 23.6-26.9) in Eshowe. In each site, the prevalence was higher among men compared to women ( $p < 0.01$ ).

Overall progress toward the 90-90-90 target was: 59/67/83 in Ndhiwa, 77/84/91 in Chiradzulu, 86/94/86 in Gutu, 77/91/89 in Nsanje, and 86/89/68 in Kasese. Each study highlighted that men and HIV-positive individuals younger than 30 were less likely to be diagnosed compared to respectively women or older individuals ( $p < 0.01$ ).

### Conclusion

These six surveys, with the exception of the first one conducted in Ndhiwa in 2012, showed overall high coverage and highlighted remaining gaps in the cascade of care. In all sites, coverage outcomes were better among women than men, and among older than younger adults, mostly because they were less likely to be diagnosed. Interventions in these settings should emphasize detection of undiagnosed men and young adults.

We performed population-based surveys in 6 sites in 5 African countries to evaluate the coverage and impact of HIV programs. In these settings, we showed that high levels of coverage are achieved. However, detection of undiagnosed men and young adults needs to be reinforced.