

# ZIMBABWE POPULATION-BASED HIV IMPACT ASSESSMENT

## ZIMPHIA 2015-2016



The Zimbabwe Population-Based HIV Impact Assessment (ZIMPHIA), a household-based national survey, was conducted between October 2015 and August 2016 in order to

measure the status of Zimbabwe's national HIV response. ZIMPHIA offered HIV counseling and testing with return of results, and collected information about uptake of HIV care and treatment services. This survey is the first in Zimbabwe to measure national HIV incidence and viral load suppression (VLS). The results provide information on national and subnational progress toward control of the HIV epidemic.

ZIMPHIA was led by the Government of Zimbabwe through the Ministry of Health and Child Care (MOHCC), conducted with funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and technical assistance through the U.S. Centers for Disease Control and Prevention (CDC). The survey was implemented by ICAP at Columbia University in collaboration with local partners, including the National AIDS Council (NAC), Zimbabwe National Statistics Agency (ZIMSTAT), and Biomedical Research and Training Institute (BRTI).

### KEY FINDINGS

HIV Indicator	Female	95% CI	Male	95% CI	Total	95% CI
Annual incidence (%)						
15-49 years	0.57	0.29-0.85	0.30	0.07-0.53	0.44	0.25-0.62
15-64 years	0.50	0.25-0.75	0.33	0.10-0.55	0.42	0.25-0.59
Prevalence (%)						
15-49 years	15.9	15.1-16.7	10.7	9.9-11.5	13.4	12.7-14.1
15-64 years	16.0	15.3-16.8	12.0	11.1-12.8	14.1	13.4-14.8
0-14 years	1.5	1.0-1.9	1.7	1.2-2.3	1.6	1.2-2.0
Viral load suppression (%)						
15-64 years	63.7	61.3-66.0	53.6	50.2-57.0	59.6	57.4-61.8

95% CI (confidence interval) indicates the interval within which the true population parameter is expected to fall 95% of the time. Viral load suppression is defined as HIV RNA <1,000 copies per ml of plasma among HIV-positive adults.

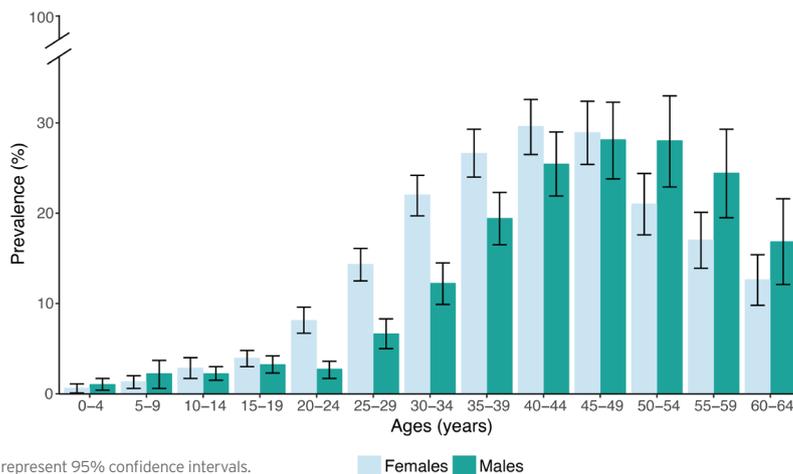
Annual incidence of HIV among adults ages 15 to 64 years in Zimbabwe is 0.42 percent: 0.50 percent among females and 0.33 percent among males. This corresponds to approximately 29,000 new cases of HIV annually among adults ages 15 to 64 years in Zimbabwe.

Prevalence of HIV among adults ages 15 to 64 years in Zimbabwe is 14.1 percent: 16.0 percent among females and 12.0 percent among males. This corresponds to approximately 1.2 million people living with HIV (PLHIV) ages 15 to 64 years in Zimbabwe.

Prevalence of VLS among HIV-positive adults ages 15 to 64 years in Zimbabwe is 59.6 percent: 63.7 percent among females and 53.6 percent among males.

## HIV PREVALENCE, BY AGE AND SEX

HIV prevalence peaks at nearly 30 percent for both females (29.6 percent) and males (28.1 percent), but occurs at a slightly older age among males (45 to 49 years) as compared to females (40 to 44 years). The disparity in HIV prevalence by sex is most pronounced among young adults: HIV prevalence among 20- to 24-year-olds is nearly three times higher among females (8.1 percent) than males (2.7 percent).



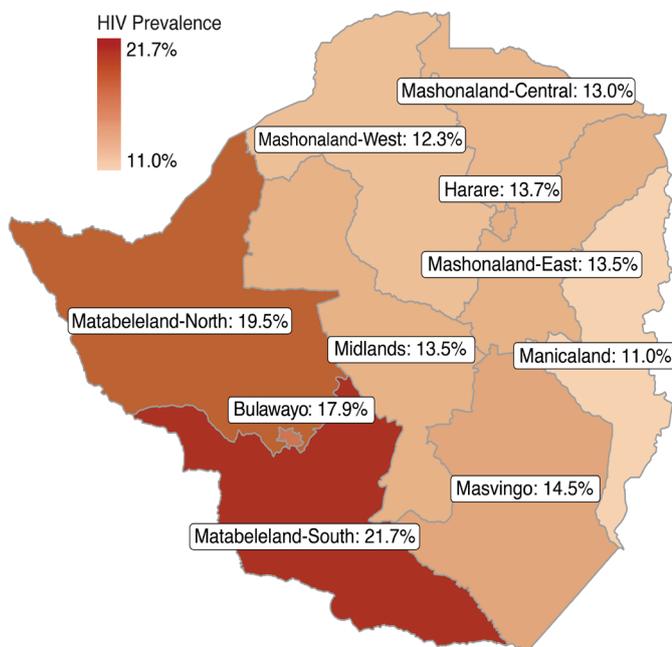
Error bars represent 95% confidence intervals.

Females Males

## HIV PREVALENCE AMONG ADULTS, BY PROVINCE

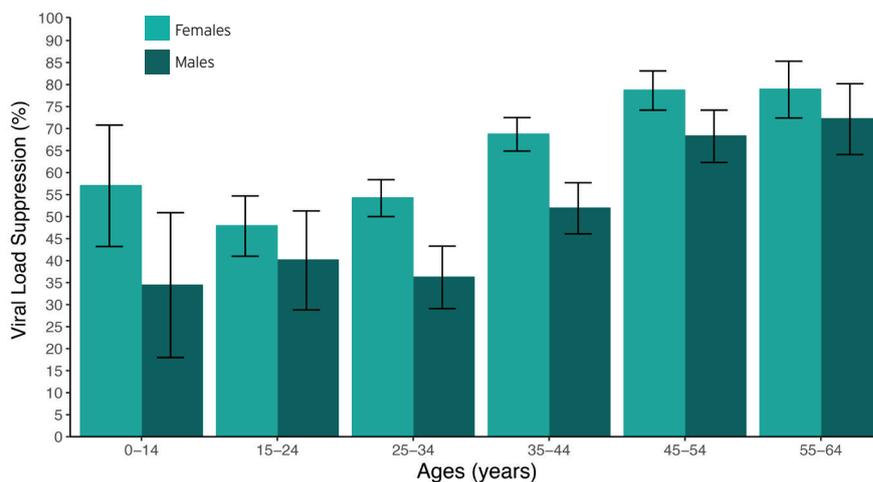
Among adults ages 15 to 64 years, prevalence of HIV varies geographically across Zimbabwe, ranging from 11.0 percent in Manicaland to 19.5 percent in Matabeleland North and 21.7 percent in Matabeleland South.

Province	HIV Prevalence	95% CI
Manicaland	11.0	9.5-12.6
Mashonaland Central	13.0	10.9-15.1
Mashonaland East	13.5	11.3-15.6
Mashonaland West	12.3	10.1-14.6
Matabeleland North	19.5	17.0-21.9
Matabeleland South	21.7	19.2-24.2
Midlands	13.5	11.4-15.5
Masvingo	14.5	12.2-16.8
Harare	13.7	12.0-15.3
Bulawayo	17.9	16.3-19.5



## VIRAL LOAD SUPPRESSION AMONG HIV-POSITIVE PEOPLE, BY AGE AND SEX

Prevalence of VLS among HIV-positive people in Zimbabwe is highest among older adults. Among HIV-positive people ages 55 to 64 years, VLS is 78.9 percent among females and 72.2 percent among males. Among HIV-positive people ages 45-54 years, VLS is 78.7% among women and 68.3% among men. In contrast, prevalence of VLS is distinctly lower among younger adults: 47.9 percent among HIV-positive females and 40.1 percent among HIV-positive males ages 15 to 24 years.

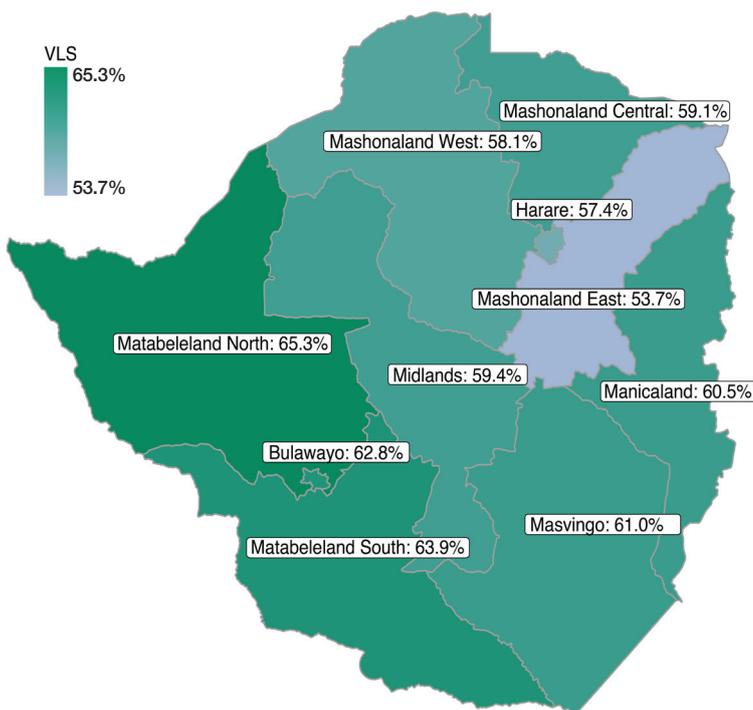


Error bars represent 95% confidence intervals.

## VIRAL LOAD SUPPRESSION AMONG HIV-POSITIVE ADULTS, BY PROVINCE

Among HIV-positive adults ages 15 to 64 years, prevalence of VLS varies geographically across Zimbabwe, ranging from 53.7 percent in Mashonaland East to 65.3 percent in Matabeleland North.

Province	VLS Prevalence	95% CI
Manicaland	60.5	51.4-69.2
Mashonaland Central	59.1	54.1-64.1
Mashonaland East	53.7	45.9-61.6
Mashonaland West	58.1	52.9-63.3
Matabeleland North	65.3	61.1-71.2
Matabeleland South	63.9	60.2-70.4
Midlands	59.4	51.6-67.1
Masvingo	61.0	54.6-67.4
Harare	57.4	50.8-64.1
Bulawayo	62.8	56.4-69.2



## ACHIEVEMENT OF THE 90-90-90 GOALS AMONG HIV-POSITIVE ADULTS, BY SEX

### 90-90-90: an ambitious treatment target to help end the AIDS epidemic

By 2020, 90 percent of all PLHIV will know their HIV status; 90 percent of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART); and 90 percent of all people receiving ART will be virally suppressed.

#### Diagnosed

In Zimbabwe, 76.8 percent of PLHIV ages 15 to 64 years are aware of their HIV status: 80.1 percent of females and 72.1 percent of males. Awareness was defined as self-reporting HIV positive and/or having a detectable antiretroviral (ARV) in the blood.

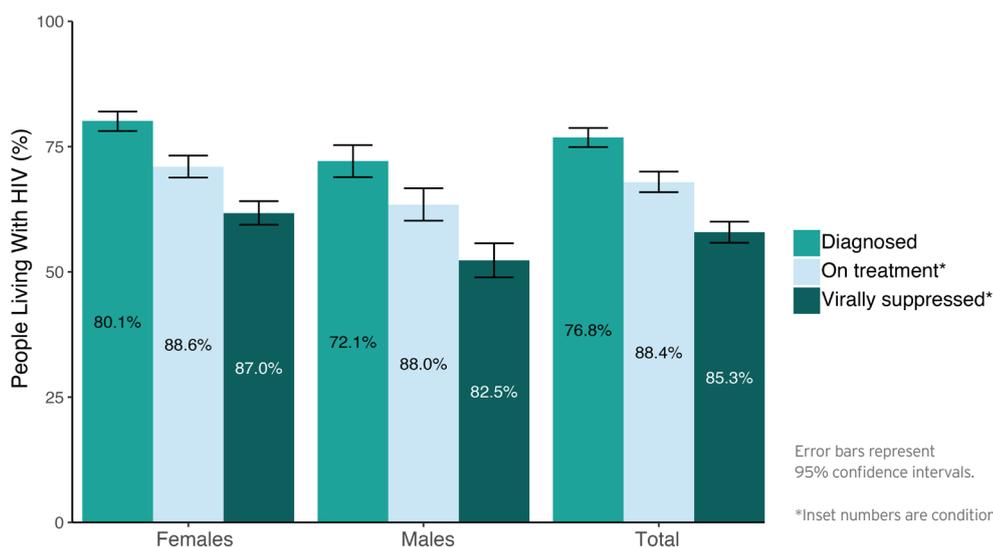
#### On Treatment

Among PLHIV ages 15 to 64 years who know their HIV status, 88.4 percent are on ART: 88.6 percent of females and 88.0 percent of males.

and 88.0 percent of males who know their HIV status self-report current use of ART. Being on ART was defined as self-reporting current use of ART and/or having a detectable ARV in the blood.

#### Virally Suppressed

Among PLHIV ages 15 to 64 years who self-report current use of ART and/or had a detectable ARV in their blood, 85.3 percent are virally suppressed: 87.0 percent of females and 82.5 percent of males.



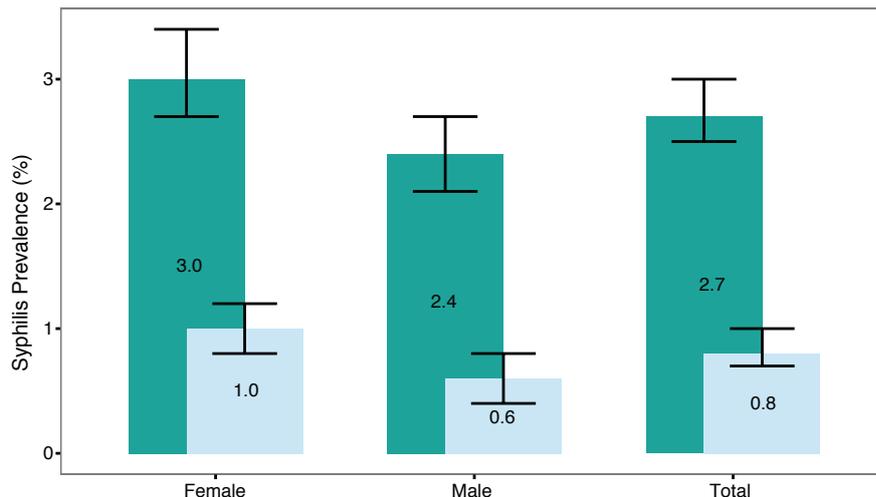
## SYPHILIS PREVALENCE AMONG ADULTS, BY SEX

Among adults ages 15 to 64 years in Zimbabwe, 3.0 percent of females and 2.4 percent of males have ever been infected with syphilis. Prevalence of active syphilis infection is 1.0 percent among females and 0.6 percent among males ages 15 to 64 years.

Syphilis testing was conducted in each household using a serological dual non-treponemal and treponemal rapid diagnostic test.

The percentage of adults ever infected with syphilis includes people with active infection.

Ever infected  
Active infection



## CONCLUSIONS

- Progress toward the 90-90-90 goals in Zimbabwe demonstrates that the national HIV program has made great strides in responding to its HIV epidemic.
- ZIMPHIA's estimate of national HIV incidence provides further evidence of an improving epidemic.
- The goal of ending the AIDS epidemic in Zimbabwe by 2030 is within reach, provided there is continued expansion of HIV treatment programs and targeted HIV testing, especially for men and young women.

## RESPONSE RATES AND HIV TESTING METHODS

Of 13,828 eligible households, 83.9 percent completed a household interview. Of 14,033 eligible women and 11,098 eligible men ages 15 to 64 years, 86.8 percent of women and 75.6 percent of men were interviewed and tested for HIV. Of 9,599 eligible children ages 0 to 14 years, 73.2 percent were tested for HIV.

HIV prevalence testing was conducted in each household using a serological rapid diagnostic testing algorithm based on Zimbabwe's national guidelines, with laboratory confirmation of seropositive samples using a supplemental assay. A laboratory-based incidence testing algorithm (HIV-1 Limiting Antigen (LAG) avidity plus viral load and ARV results) was used to distinguish recent from long-term infection, and incidence estimates were obtained using the formula recommended by the World Health Organization Incidence Working Group and Consortium for Evaluation and Performance of Incidence Assays, with time cutoff (T)=1.0 year and residual proportion false recent (PFR)=0.00. Survey weights are utilized for all estimates.

The PHIA Project is a multi-country project funded by PEPFAR to conduct national HIV-focused surveys that describe the status of the HIV epidemic. Results will measure important national and regional HIV-related parameters, including progress toward 90-90-90 goals, and will guide policy and funding priorities. ICAP at Columbia University is implementing the PHIA Project in close collaboration with CDC and other partners.

See [phia.icap.columbia.edu](http://phia.icap.columbia.edu) for more details.



The mark "CDC" is owned by the US Dept. of Health and Human Services and is used with permission. Use of this logo is not an endorsement by HHS or CDC of any particular product, service, or enterprise.

This project is supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through CDC under the terms of cooperative agreement #U2GGH001226. The findings and conclusion are those of the authors and do not necessarily represent the official position of the funding agencies.