



MALAWI

POPULATION-BASED HIV IMPACT ASSESSMENT

MPHIA 2020-2021



The Malawi Population-based HIV Impact Assessment (MPHIA 2020-2021) was a household-based national survey among adults (defined as those aged 15 years and older) to measure the impact of the national HIV response. Conducted from January 2020 through April 2021 (with a pause from June 2020 until March 2021 due to the COVID-19 pandemic), MPHIA 2020-2021 offered HIV counseling and testing with return of results and collected information about uptake of HIV care and treatment services. This was the second survey in Malawi to estimate national HIV incidence and national and subnational viral load suppression (VLS), defined as HIV RNA <1,000 copies per milliliter (mL). The first MPHIA was conducted from November 2015 through August 2016. The results of these surveys provide information on national and subnational

progress toward control of the HIV epidemic.

MPHIA 2020-2021 was led by the Government of Malawi through the Ministry of Health and the National AIDS Commission. The survey was conducted with funding from the United States (US) President's Emergency Plan for AIDS Relief (PEPFAR) and through technical assistance and partnership with the US Centers for Disease Control and Prevention (CDC). MPHIA 2020-2021 was implemented by ICAP at Columbia University in collaboration with government of Malawi at national and district levels. The government of Malawi, local civil society organizations, and international development partners participated in steering committees and technical working groups during study implementation.

KEY FINDINGS

HIV Indicator	Women	95% CI	Men	95% CI	Total	95% CI
Annual incidence (%)						
15-49 years	0.31	0.13-0.50	0.15	0.00-0.32	0.23	0.11-0.36
15 years and older	0.29	0.12-0.45	0.12	0.00-0.27	0.21	0.10-0.32
Prevalence (%)						
15-49 years	10.0	9.4-10.6	5.8	5.2-6.4	8.0	7.5-8.5
15 years and older	10.5	9.9-11.1	7.1	6.5-7.7	8.9	8.4-9.4
Viral load suppression (%)						
15-49 years	87.1	85.0-89.2	83.0	79.5-86.5	85.7	83.8-87.6
15 years and older	88.4	86.6-90.1	85.5	82.9-88.1	87.3	85.7-88.8

Viral load suppression is defined as HIV RNA <1,000 copies per milliliter among all HIV-positive adults.

Annual incidence of HIV among adults (defined as those aged 15 years and older) in Malawi was 0.21%, which corresponds to approximately 20,000 new cases of HIV per year among adults. HIV incidence was 0.29% among women and 0.12% among men.

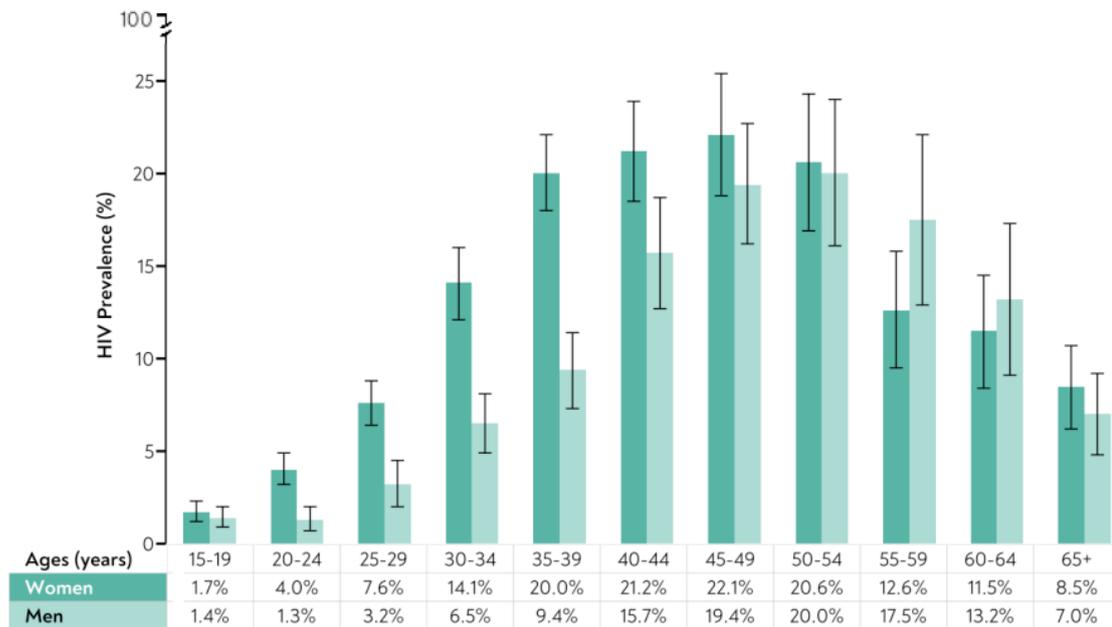
Prevalence of HIV among adults in Malawi was 8.9%, which corresponds to approximately 946,000 adults living with HIV. HIV prevalence was higher among women (10.5%) than among men (7.1%).

Prevalence of VLS among HIV-positive adults in Malawi was 87.3%: 88.4% among women and 85.5% among men. Note, these estimates of VLS are among all adults living with HIV regardless of their knowledge of HIV status or use of antiretroviral therapy (ART).

See phia.icap.columbia.edu for more details.



HIV PREVALENCE AMONG ADULTS



Error bars represent 95% CIs.

HIV PREVALENCE, by AGE and SEX

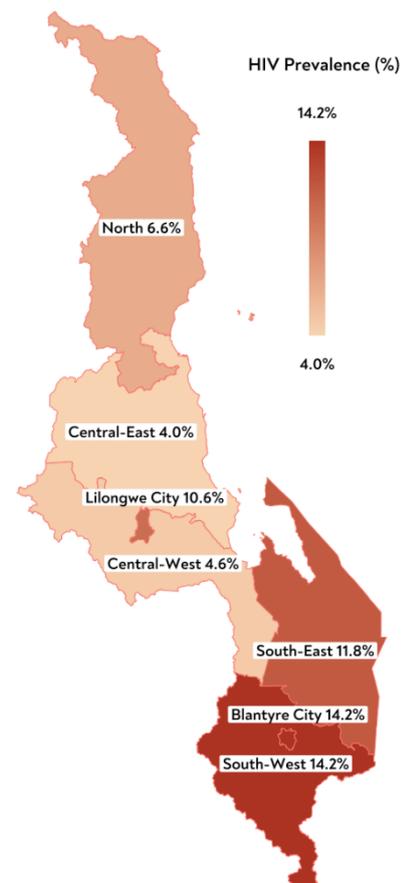
Among adults (ages 15 years and older), HIV prevalence ranged from 1.7% among older adolescent girls aged 15-19 years to 22.1% among women aged 45-49 years, and from 1.4% among older adolescent boys aged 15-19 years to 20.0% among men aged 50-54 years. HIV prevalence was twice as high among women than among men in each 5-year age group from ages 20-24 years through 35-39 years.

HIV prevalence was markedly higher among women with increasing age through ages 35-39 years and HIV prevalence was almost twice as high with each 5-year age group, until reaching that age group.

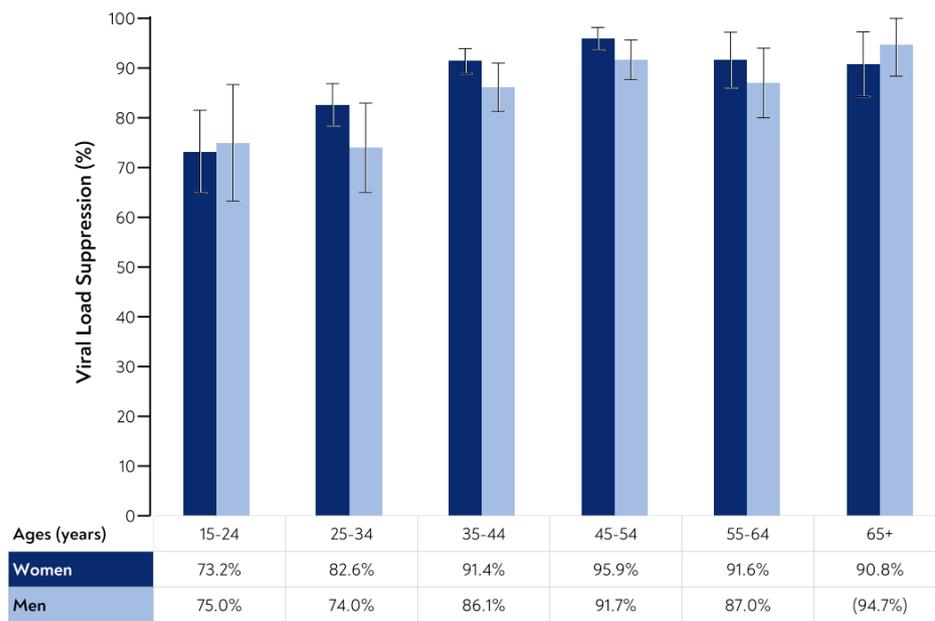
HIV PREVALENCE, by ZONE

Among adults, there were considerable differences in HIV prevalence by geography across Malawi. For instance, HIV prevalence was markedly lower in Central-East, Central-West and North, at 4.0%, 4.6%, and 6.0%, respectively, than in other zones, and peaked at 14.2% in South-West and Blantyre City.

Zone	HIV Prevalence (%)	95% CI
North	6.6	5.3 - 7.9
Central-East	4.0	3.2 - 4.9
Central-West	4.6	3.8 - 5.5
Lilongwe City	10.6	8.6 - 12.6
South-East	11.8	10.7 - 12.9
South-West	14.2	12.7 - 15.6
Blantyre City	14.2	12.4 - 16.1



VIRAL LOAD SUPPRESSION AMONG ADULTS LIVING WITH HIV



Error bars represent 95% CIs.

Estimates based on a denominator between 25 and 49 are included in parentheses and should be interpreted with caution.

VIRAL LOAD SUPPRESSION, by AGE and SEX

Among adults (ages 15 years and older) living with HIV in Malawi, prevalence of VLS varied by age but not sex.

Among women, the prevalence of VLS among those aged 15-24 and 25-34 years was markedly lower (at 73.2% and 82.6%, respectively) than among women of most other age groups. VLS prevalence peaked at 95.9% among women aged 45-54 years.

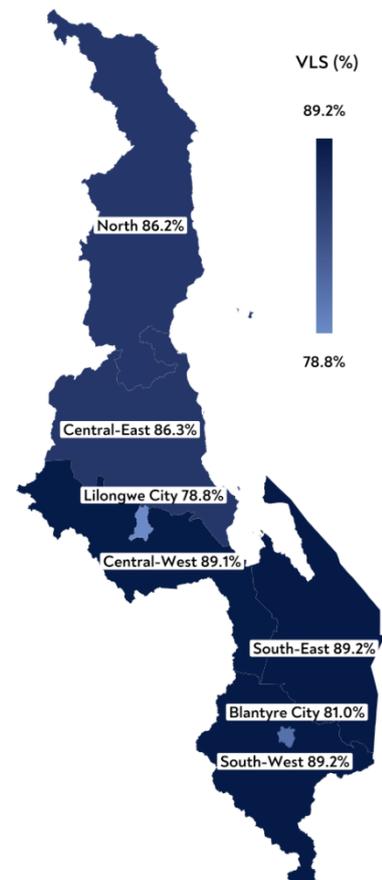
Among men, the prevalence of VLS among those aged 15-24 years and 25-34 years (75.0% and 74.0%, respectively) was lower than among those aged 45-54 years (at 91.7%) and men aged 65 years and older (at 94.7%), although the latter estimate was based on a denominator between 25 and 49 and should be interpreted with caution.

VIRAL LOAD SUPPRESSION AMONG HIV-POSITIVE ADULTS, by ZONE

Among adults living with HIV, prevalence of VLS ranged across Malawi, from 78.8% in Lilongwe City and 81.0% in Blantyre City up to 89.2% in South-East and South-West. For most zones, the 95% CIs for VLS prevalence overlapped, but the proportion of adults living with HIV with VLS in Lilongwe City was markedly lower than in both South-East and South-West.

Zone	VLS Prevalence (%)	95% CI
North	86.2	80.9 - 91.4
Central-East	86.3	80.7 - 91.8
Central-West	89.1	84.4 - 93.9
Lilongwe City	78.8	71.4 - 86.2
South-East	89.2	86.5 - 91.9
South-West	89.2	86.4 - 91.9
Blantyre City	81.0	75.2 - 86.9

VLS=Viral load suppression.

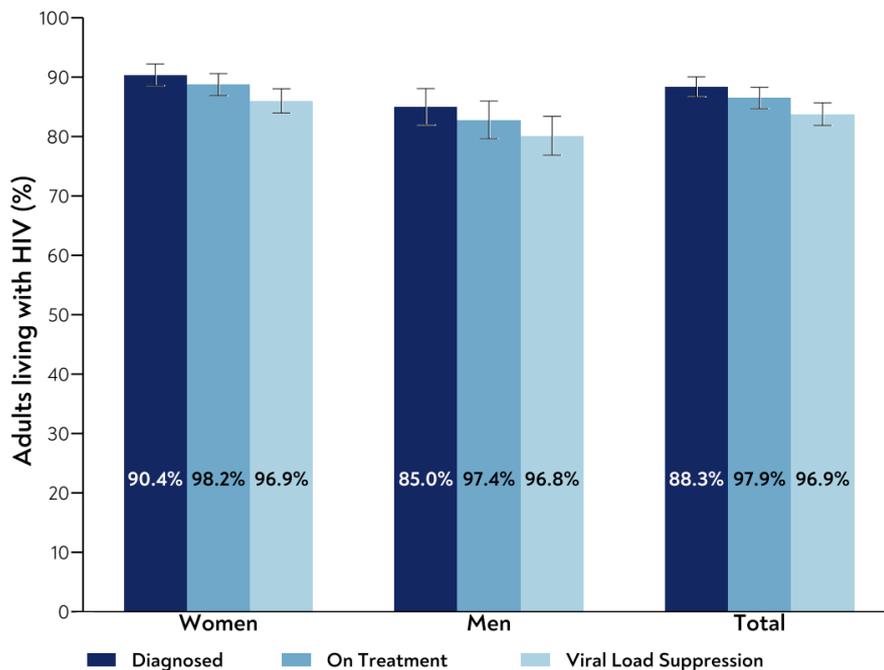


ACHIEVEMENT OF THE 95-95-95 TARGETS AMONG ADULTS LIVING WITH HIV

95-95-95: Treatment targets to help end the HIV epidemic

The Joint United Nations Programme on HIV/AIDS (UNAIDS) set the 95-95-95 targets with the aim that by 2025, 95% of all people living with HIV will know their HIV status; 95% of all people with diagnosed HIV infection will receive sustained ART; and 95% of all people receiving ART will have VLS.

ACHIEVEMENT OF THE 95-95-95 TARGETS, by SEX



*Percentages shown in the graph refer to the conditional 95-95-90 targets described in the text above and to the right. The heights of the bars represent the unconditional percentages for each indicator among all people living with HIV. Error bars represent 95% CIs.

Diagnosed: In Malawi, 88.3% of HIV-positive adults (aged 15 years and older) were aware of their HIV-positive status: 90.4% of women and 85.0% of men. Individuals were classified as aware if they reported their HIV-positive status or had a detectable antiretroviral (ARV) in their blood.

On Treatment: Among adults living with HIV who were aware of their status, 97.9% were on ART: 98.2% of women and 97.4% of men. Individuals were classified as being on ART if they reported current ART use or had a detectable ARV in their blood.

Viral Load Suppression: Among adults who were on ART, 96.9% had suppressed viral loads: 96.9% of women and 96.8% of men.

CONCLUSIONS

- Malawi has met the second and third 95-95-95 targets years in advance of the 2025 target date, providing evidence of the strength of the country's treatment programs. However, the target for HIV awareness remains below 90%.
- Despite the high population VLS, there were still an estimated 20,000 new HIV infections among adults annually.
- HIV prevalence generally increased with age until approximately middle age. Women continue to bear a higher burden of HIV than men.
- The VLS prevalence was lower among younger adults. There was also an indication that VLS prevalence in Lilongwe and Blantyre cities remained lower than other areas although 95% confidence intervals overlapped.
- More than 87.0% of all adults living with HIV had VLS, suggesting that Malawi is well positioned to achieve the UNAIDS goal of ending the AIDS epidemic by 2030.
- The country can reach this target by improving the timely diagnosis, effective linkage to care and retention on ART, particularly among younger adults. Additionally, there should be emphasis on performing ongoing surveillance to detect increases in HIV incidence and respond in a timely manner.

RESPONSE RATES AND HIV TESTING METHODS

Of 13,958 eligible households, 91.6% completed a household interview. Among 30,049 eligible adults (16,745 women and 13,304 men), 22,662 (13,067 women and 9,595 men) were interviewed and tested for HIV. The overall response rate for adults was 69.1%: 71.5% for women and 66.1% for men.

HIV prevalence testing was conducted in each household using a serological rapid diagnostic testing algorithm based on Malawi's national guidelines, with laboratory confirmation of seropositive samples using a supplemental assay. For confirmed HIV-positive samples, laboratory-based testing was conducted for quantitative evaluation of viral load and qualitative detection of ARVs (efavirenz, dolutegravir, atazanavir, and nevirapine). A laboratory-based incidence testing algorithm (HIV-1 limiting antigen-avidity assay with correction for viral load and detectable ARVs) was used to distinguish recent from long-term infection. Incidence estimates were obtained using the formula recommended by the WHO Incidence Working Group and Consortium for Evaluation and Performance of Incidence Assays. Survey weights were utilized for all estimates.