SUMMARY SHEET | MARCH 2022

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 April 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 prevalence of HIV and viral load suppression (VLS), defined as HIV RNA <1,000 copies per milliliter. 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 the government of Malawi at national and subnational levels. In addition, the government of Malawi, local civil society organizations, and international development partners participated in steering committees and technical working groups to provide input on survey planning and 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 (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%).

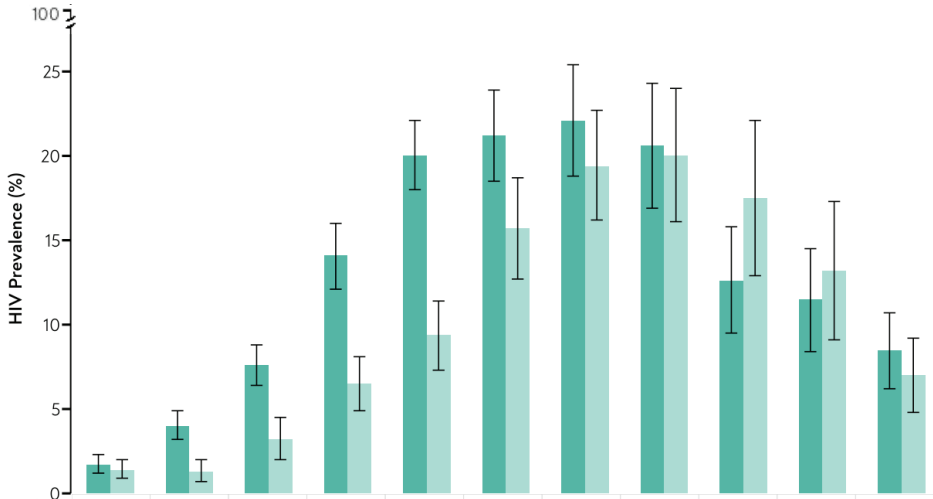
Prevalence of VLS among HIV-positive adults in Malawi was 87.3%: 88.4% among women and 85.5% among men. Note, these estimates of VLS are among all adults living with HIV regardless of their knowledge of HIV status or use of antiretroviral therapy (ART).

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



This project is supported by the US President's Emergency Plan for AIDS Relief (PEPFAR) through CDC under the terms of cooperative agreement #U2GGH002173. The findings and conclusions are those of the authors and do not necessarily represent the official position of the funding agencies. The results presented here should be considered preliminary and are subject to change.

HIV PREVALENCE AMONG ADULTS



Ages (years)	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Women	1.7%	4.0%	7.6%	14.1%	20.0%	21.2%	22.1%	20.6%	12.6%	11.5%	8.5%
Men	1.4%	1.3%	3.2%	6.5%	9.4%	15.7%	19.4%	20.0%	17.5%	13.2%	7.0%

Error bars represent 95% CIs.

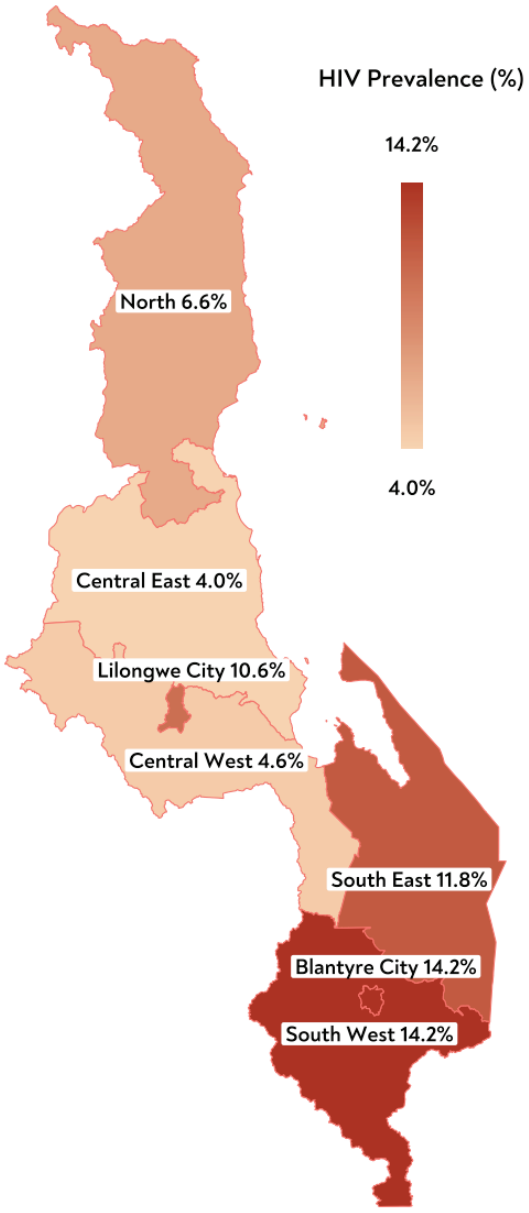
HIV PREVALENCE, by AGE and SEX

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 between ages 20 and 39 years.

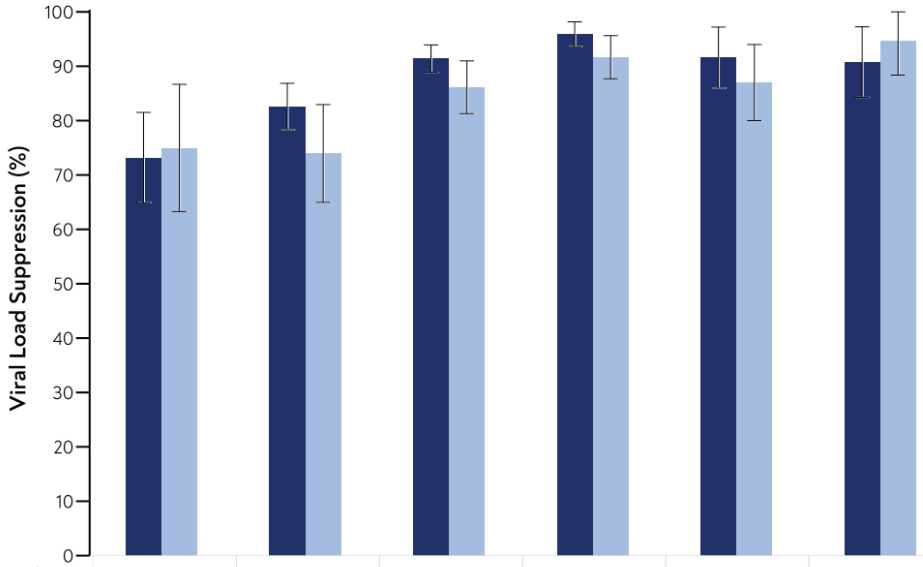
HIV PREVALENCE, by ZONE

HIV prevalence varied considerably across geographical areas in Malawi; it was markedly lower in the Central East, Central West and North zones, at 4.0%, 4.6%, and 6.6%, respectively, than in other zones. Prevalence of HIV peaked at 14.2% in the South West zone 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



Ages (years)	15-24	25-34	35-44	45-54	55-64	65+
Women	73.2%	82.6%	91.4%	95.9%	91.6%	90.8%
Men	75.0%	74.0%	86.1%	91.7%	87.0%	(94.7%)

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

VLS prevalence among adults (ages 15 years and older) living with HIV varied by age but not by sex.

Among women aged 15-24 years and 25-34 years (73.2% and 82.6%, respectively) VLS rates were considerably lower than among women aged 35-44 years and 45-54 years (91.4% and 95.9%, respectively).

There was a similar pattern among men, where 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 (91.7%) and men aged 65 years and older (94.7%*).

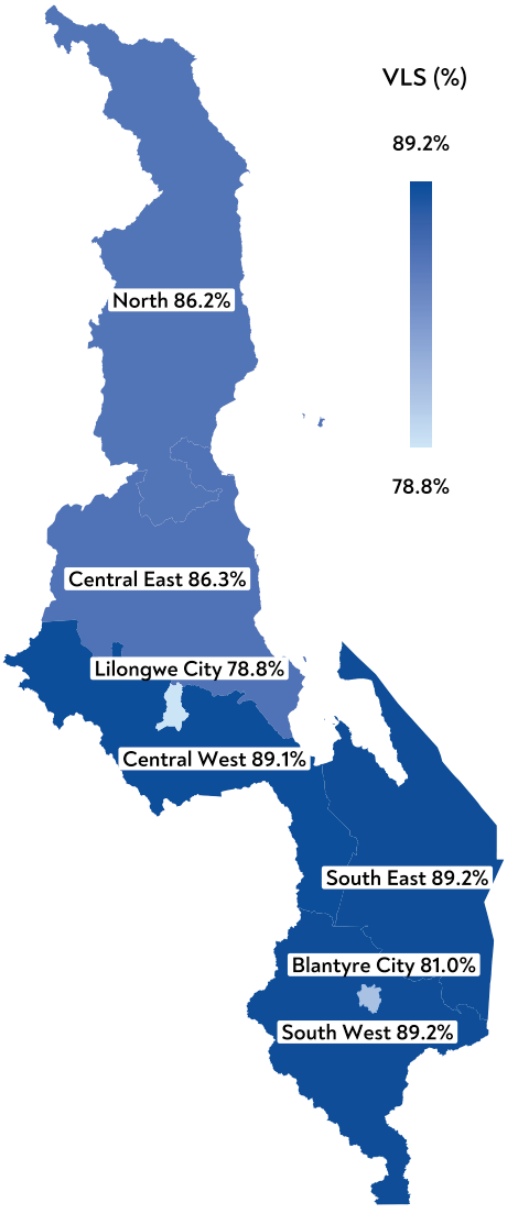
* Please note this estimate was based on a denominator between 25 and 49 and should be interpreted with caution.

VIRAL LOAD SUPPRESSION AMONG ADULTS LIVING WITH HIV, by ZONE

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

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.

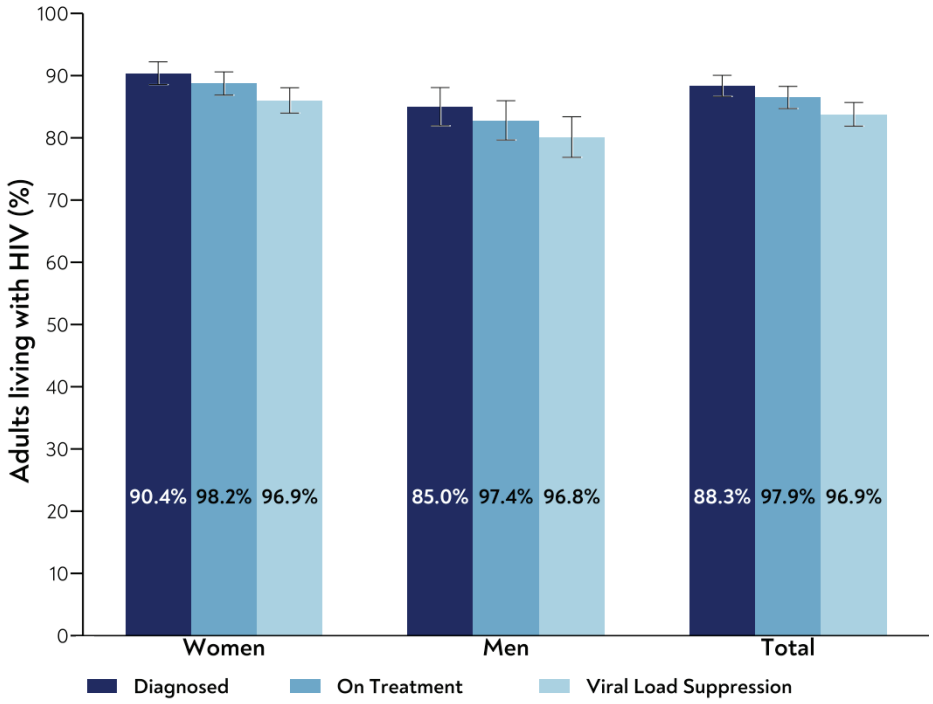


ACHIEVEMENT OF THE 95-95-95 TARGETS AMONG ADULTS LIVING WITH HIV

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 95-95-95 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 adults (aged 15 years and older) living with HIV 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 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 well 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 prevalence of VLS at the population level, there were still an estimated 20,000 new HIV infections among adults annually.
- HIV prevalence generally increased with age until the late 40s for women and the early 50s for men. Women continue to bear a higher burden of HIV than men.
- The VLS prevalence was lower among younger adults. There was also an indication VLS prevalence in Lilongwe and Blantyre cities remained lower than other areas, although 95% CIs overlapped.
- Among all adults living with HIV in the country, 87.3% 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 goal by improving timely diagnosis, effective linkage to care, and retention on ART, particularly among younger adults. Additionally, there should be an emphasis on performing ongoing surveillance to detect increases in HIV incidence and respond in a timely manner with prevention activities tailored to the context.

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 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 World Health Organization Incidence Working Group and Consortium for Evaluation and Performance of Incidence Assays. Survey weights were utilized for all estimates.