SUMMARY SHEET | DECEMBER 2022

ESWATINI
POPULATION-BASED HIV IMPACT ASSESSMENT 3
SHIMS 3 2021

SHIMS3 2021 Eswatini Population-based HIV Impact Assessment

SHIMS 3, an Eswatini Population-based HIV Impact Assessment (PHIA), 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 May 2021 through November 2021, SHIMS 3 offered HIV counseling and testing with return of results and collected information about uptake of HIV care and treatment services. Like SHIMS 1 in 2011 and SHIMS 2 in 2016-2017, SHIMS 3 estimated national HIV incidence, the national and regional HIV prevalence, and the prevalence of viral load suppression (VLS), defined as HIV RNA <1,000 copies per milliliter of blood among adults living with HIV in Eswatini. The results of these surveys provide information on national and regional progress toward control of the HIV epidemic.

SHIMS 3 was led by the Government of the Kingdom of Eswatini (GKoE) through the Ministry of Health and the Central Statistical Office (CSO). 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). SHIMS 3 was implemented by ICAP at Columbia University in collaboration with GKoE entities including the National Health Research and Innovation Department, Eswatini Health Laboratory Services, Eswatini National AIDS Program, Health Promotion Unit, the Environmental Health Department, and the National Emergency Response Council on HIV/AIDS (NERCHA). The GKoE and international development partners participated in steering committees and task teams 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	1.45	0.69-2.20	0.20	0.00-0.48	0.77	0.39-1.15
15 years and older	1.11	0.53-1.68	0.17	0.00-0.41	0.62	0.31-0.93
Prevalence (%)						
15-49 years	31.6	29.8-33.4	15.6	14.3-16.9	23.7	22.6-24.9
15 years and older	30.4	28.8-31.9	18.7	17.4-20.0	24.8	23.7-25.9
Viral load suppression (%)						
15-49 years	88.6	87.0-90.2	82.4	79.3-85.5	86.6	85.0-88.1
15 years and older	90.1	88.7-91.4	86.1	83.6-88.6	88.6	87.4-89.9

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 Eswatini was 0.62%, which corresponds to approximately 4,000 new cases of HIV per year among adults. HIV incidence was nearly seven times higher among women (1.11%) than among men (0.17%).

Prevalence of HIV among adults in Eswatini was 24.8%, which corresponds to approximately 185,000 adults living with HIV. Prevalence of HIV was higher among women (30.4%) than among men (18.7%).

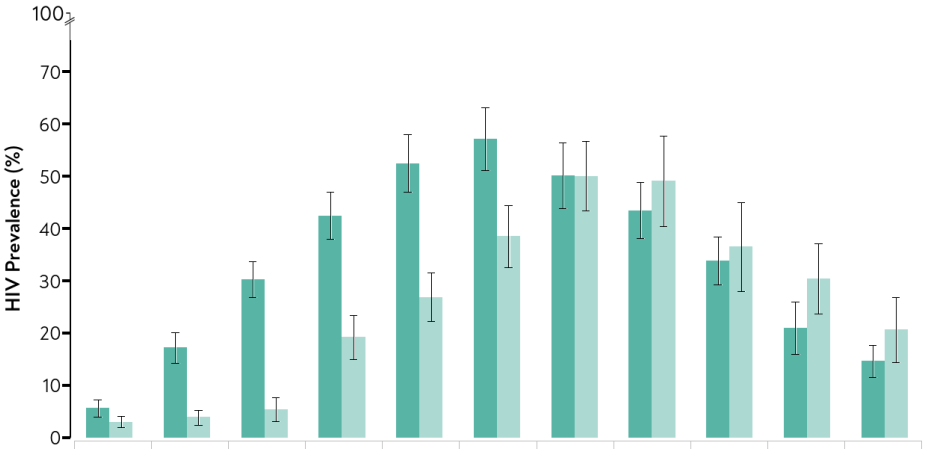
Prevalence of VLS among HIV-positive adults in Eswatini was 88.6%: 90.1% among women and 86.1% among men. Note, these estimates of VLS are among all adults living with HIV regardless of their knowledge of HIV status or use of antiretroviral therapy (ART).

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

PEPFAR U.S. President's Emergency Plan for AIDS Relief | CDC Centers for Disease Control and Prevention | Westat | icap Global Health

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	5.6%	17.2%	30.3%	42.5%	52.5%	57.2%	50.1%	43.5%	33.8%	21.0%	14.7%
Men	3.0%	3.9%	5.4%	19.2%	26.9%	38.5%	50.0%	49.2%	36.5%	30.4%	20.7%

Error bars represent 95% CIs.

HIV PREVALENCE, by AGE and SEX

HIV prevalence ranged from 5.6% among older adolescent girls aged 15-19 years up to a peak of 57.2% among women aged 40-44 years; and from 3.0% among older adolescent boys aged 15-19 years up to 50.0% among men aged 45-49 years.

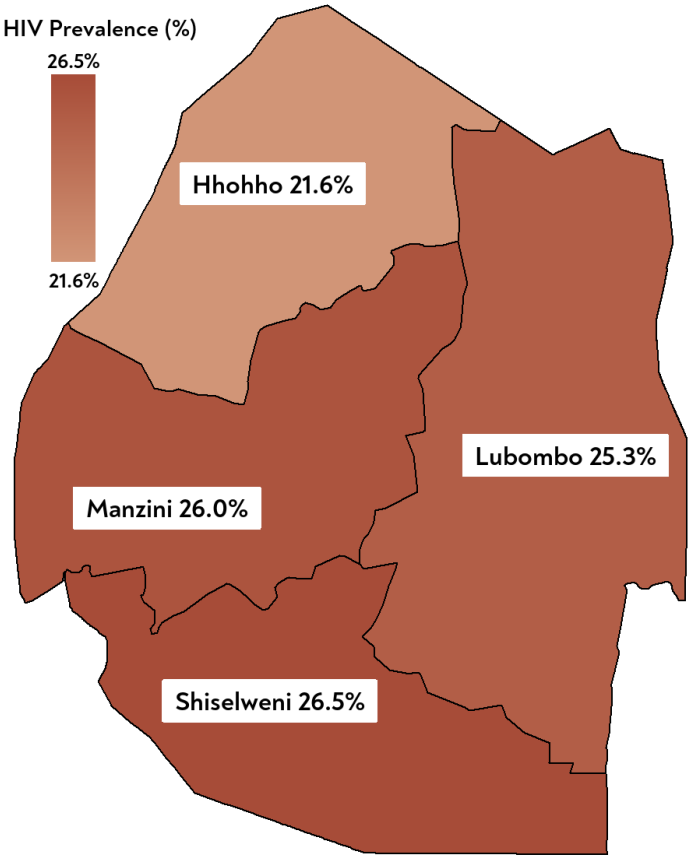
HIV prevalence was consistently higher (often at least twice as high) among women than men up to the 45-49-year age group. Among those aged 25-29 years, HIV prevalence was more than 5 times higher among women than men.

HIV prevalence was markedly higher with increasing age among women until they reached their 40s. More than half the women in the age groups between 35-49 years are living with HIV. HIV prevalence among women was also three times higher among those aged 20-24 years than among those aged 15-19 years. HIV prevalence is markedly higher among men in their early 30s than among younger men.

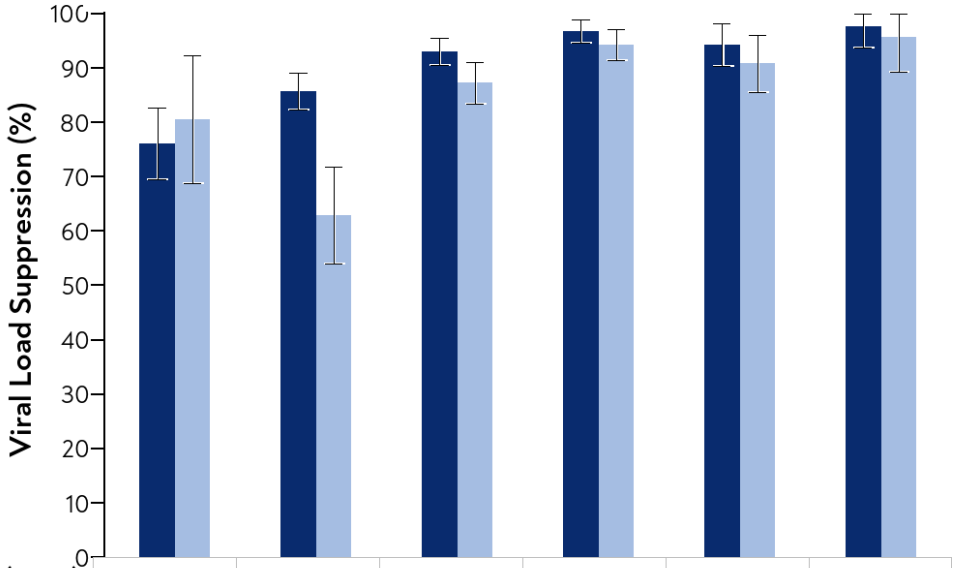
HIV PREVALENCE, by REGION

HIV prevalence ranged from 21.6% in Hhohho up to 26.5% in Shiselweni.

Region	HIV Prevalence (%)	95% CI
Hhohho	21.6	19.7-23.6
Lubombo	25.3	22.8-27.9
Manzini	26.0	24.0-27.9
Shiselweni	26.5	23.1-29.8



VIRAL LOAD SUPPRESSION AMONG ADULTS LIVING WITH HIV



Ages (years)	15-24	25-34	35-44	45-54	55-64	65+
Women	76.1%	85.7%	93.0%	96.8%	94.3%	97.6%
Men	80.5%	62.9%	87.2%	94.2%	90.8%	95.6%

Error bars represent 95% CIs.

VIRAL LOAD SUPPRESSION, by AGE and SEX

Among adults aged 15 years and older living with HIV, the prevalence of VLS was above 90% among women aged 35 years and older, and men aged 45 years and older. The prevalence of VLS peaked among those 65 years and older, at 97.6% and 95.6% among women and men, respectively.

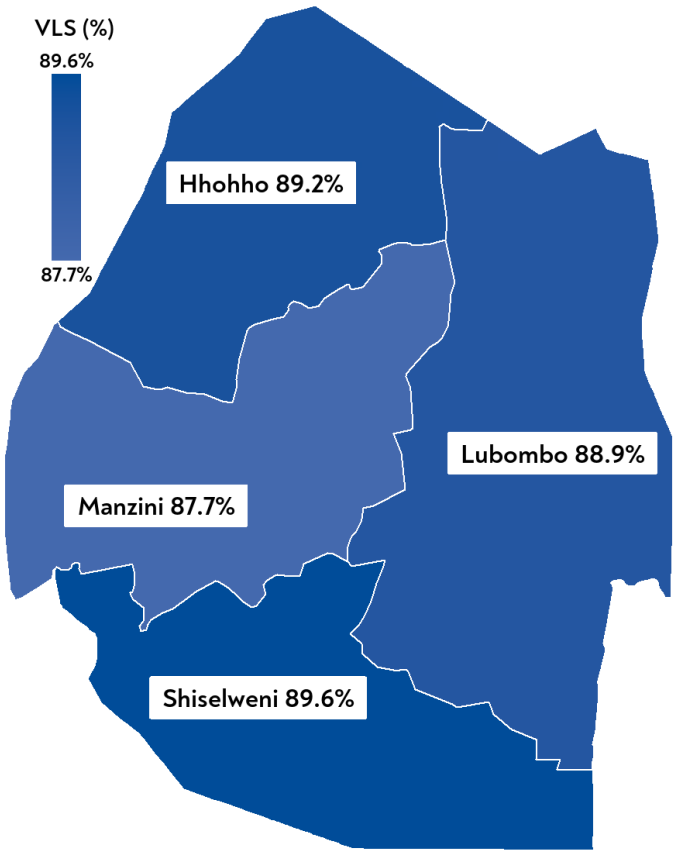
VLS rates were substantially lower among young women aged 15-24 years, at 76.1%, and among men aged 25-34 years, at 62.9%.

VIRAL LOAD SUPPRESSION AMONG ADULTS LIVING WITH HIV, by REGION

There were no statistical differences in the regional prevalence of VLS, which ranged from 87.7% in Manzini to 89.6% in Shiselweni.

Region	VLS Prevalence (%)	95% CI
Hhohho	89.2	87.2-91.2
Lubombo	88.9	85.6-92.2
Manzini	87.7	85.5-89.9
Shiselweni	89.6	86.1-93.2

VLS=viral load suppression.

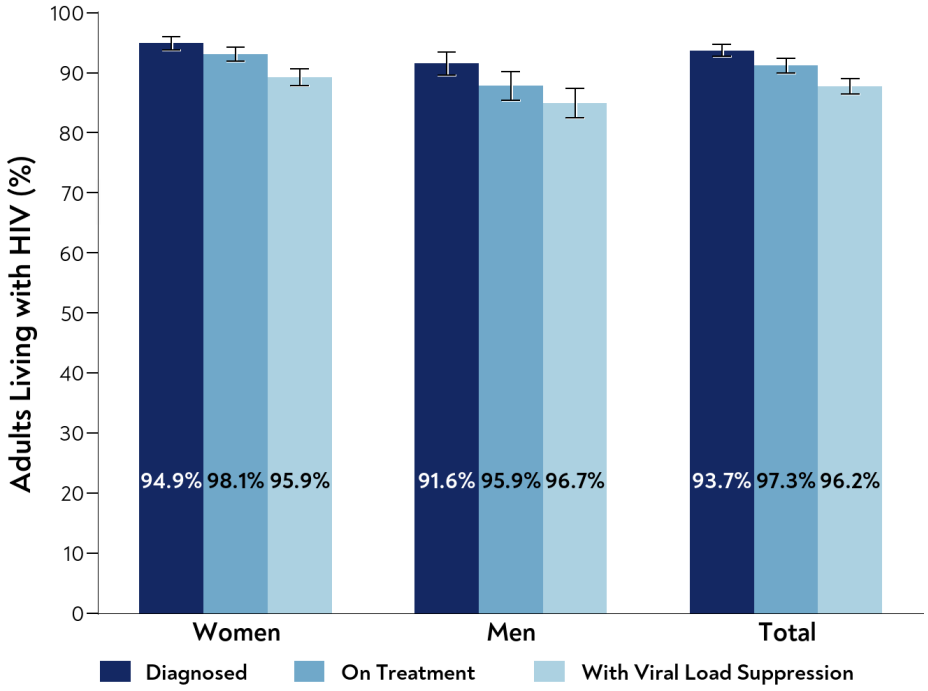


ACHIEVEMENT OF THE 95-95-95 TARGETS AMONG ADULTS LIVING WITH HIV

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 diagnosed with HIV 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 Eswatini, 93.7% of adults (aged 15 years and older) living with HIV were aware of their HIV-positive status: 94.9% of women and 91.6% 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, 97.3% were on ART: 98.1% of women and 95.9% 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, 96.2% had suppressed viral loads: 95.9% of women and 96.7% of men.

CONCLUSIONS

- At 94-97-96, Eswatini has surpassed the UNAIDS targets for treatment and viral suppression in advance of the 2025 target date, providing clear evidence of the effectiveness of the country's HIV treatment programs.
- Eswatini demonstrated noteworthy program accomplishments in HIV testing, ART initiation, and VLS, which is encouraging in the context of health, social and economic disruptions and challenges associated with the COVID-19 era. Gaps remain in ensuring all adults living with HIV in Eswatini, particularly men and young people, are diagnosed.
- While overall VLS is high in Eswatini, gaps remain in achieving VLS among men aged 25-34 years. Programs tailored to diagnose, link, and retain these men in the prime of their lives on treatment should improve their health outcomes.
- Women continue to bear a higher HIV disease burden than men. More than half the women in the age groups between 35-49 years are living with HIV.
- An estimated 4,000 annual new HIV infections occurred among adults. As Eswatini seeks to achieve zero new infections, the observed declines in incidence show the effects of expanding treatment coverage and adherence, and the benefits of the treatment as prevention approach. Yet, a significant disparity in incidence remains between adult men (0.17%) and women (1.17%). While expansion of voluntary medical male circumcision provided additional prevention benefit for men, intensified evidence-based prevention interventions are needed to further reduce the risk of HIV acquisition among women, particularly young women. Along with ongoing HIV surveillance to detect and respond to wherever HIV infections are occurring, these actions could help Eswatini achieve the UNAIDS goal of ending the AIDS epidemic by 2030.

RESPONSE RATES AND HIV TESTING METHODS

Of 6,485 eligible households, 83.2% completed a household interview. Among 14,010 eligible adults (7,697 women and 6,313 men), 12,043 (6,985 women and 5,058 men) were interviewed and tested for HIV. The overall response rate for adults was 66.5%: 70.7% for women and 61.3% for men.

HIV prevalence testing was conducted in each household using a serological rapid diagnostic testing algorithm based on Eswatini'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, lopinavir 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.