

OVERVIEW OF SURVEYS

1. What is the Population-based HIV Impact Assessment (PHIA) survey?

PHIA are national surveys that provide a direct measurement of progress toward global targets to control the HIV epidemic in several countries. These surveys are implemented under the leadership of each country's Ministry of Health and by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), CDC, and ICAP at Columbia University.

2. Why are PHIA surveys being conducted?

Global targets for HIV epidemic control call for finding and diagnosing more people living with HIV, and ensuring that these individuals receive sustained treatment to become virally suppressed – which reduces HIV transmission and saves lives. Modeled estimates show that new HIV infections would dramatically decline if 73 percent of all people living with HIV are virally suppressed by 2020.

Since 2000, population-based surveys, predominantly Demographic and Health Surveys (DHS+) and AIDS Indicator Surveys (AIS), have been an important surveillance tool to measure HIV prevalence, or the total number of people living with HIV. However, these surveys do not provide direct estimates of viral load – the amount of HIV virus in a person's body – which is necessary to measure treatment success and progress toward the global targets. Nor do most of these surveys directly estimate HIV incidence – the rate of new HIV infections – which helps assess the impact of HIV prevention and treatment programs.

Building on the success of the 2012 Kenya AIDS Indicator Survey – which provided essential data to evaluate the HIV response and inform future treatment and prevention policies – PHIA surveys directly measure HIV incidence, prevalence and viral load among those living with HIV. Together, these indicators will help to measure progress toward reaching the global targets and also determine who still needs to be reached to cross the finish line and control the epidemic. These population-based, HIV-focused household surveys are a critical part of PEPFAR's priority to make evidence-based decisions and evaluate program impact.

3. What is CDC's role in PHIA?

As a key partner in PEPFAR, CDC supports countries to effectively respond to their HIV epidemics and other global health threats, ultimately protecting Americans at home. Working with Ministries of Health, other U.S. government agencies and ICAP at Columbia University, CDC is lending its expertise in epidemiology, laboratory science, and data analysis to help partners design and implement PHIA surveys and rapidly harness the results for program improvement. CDC developed the LAg-Avidity EIA – a simple, rapid laboratory test that can simultaneously diagnose HIV and identify if an infection is recent – that was used in the PHIA surveys to directly measure population incidence.

4. What are the selected PHIA countries?

Fourteen PEPFAR-supported countries, mostly in sub-Saharan Africa – the region that is most severely affected by HIV were selected for PHIA. These countries include: Cameroon, Cote d'Ivoire, Ethiopia, Haiti, Kenya, Lesotho, Malawi, Namibia, Rwanda, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe.

5. What is the time frame for conducting the surveys in these countries?

Six countries have already conducted and released their PHIA results: Malawi, Zambia, Zimbabwe, Swaziland, Uganda, and Lesotho. Preliminary results from Malawi, Zambia, and Zimbabwe were released on World AIDS Day (December 1, 2016), from Swaziland in July 2017, and from Uganda and Lesotho in September 2017. PHIA results are expected to be reported from Tanzania in the coming months. Other PHIA surveys are slated to be conducted in several additional countries.

SURVEY METHODS

6. How are people selected to participate in the PHIA surveys?

Households visited by PHIA survey teams are randomly selected. Consenting participants are asked questions about their knowledge of HIV, testing history, awareness of their HIV status, use of HIV care and treatment services, including voluntary medical male circumcision, and behavior risk factors. They also receive home-based HIV counseling and testing, including return of results. Participants have the option not to answer questions about their use of HIV care and treatment services. They can also choose to decline participation in the home-based testing and counseling. Participants can withdraw at any time after starting the survey or participating in testing and counseling.

7. How are the PHIA surveys being conducted?

Basic information is collected about the household from the head of household. Individual participants are asked about self-reported HIV status, exposure to HIV care and prevention services including voluntary medical male circumcision and HIV testing and counseling, and behavioral risk factors. A core group of questions are being used across all country surveys to obtain indicator data. Existing supplementary questions and country developed questions may be added to the questionnaires.

The survey offers home-based HIV testing and counseling to measure HIV prevalence. Blood samples are drawn by a needle for adults and children over two years old, or by a finger/heel stick for children under the age of two. These samples are tested in the home using the standard rapid HIV test protocol that has been established by each country. Blood samples from children under 18 months are tested in the laboratory. All HIV-positive samples are retested with a confirmatory test in the laboratory. Persons identified as HIV-positive are provided their test results and offered a referral for HIV care and treatment or other relevant services.

All participants who undergo HIV testing receive pre- and post-test counseling, conducted according to national and [WHO guidance](#). Counseling is conducted in a location that ensures participant confidentiality is maintained.

8. What happens to the HIV test results once the survey is completed?

Only participants who opt to get tested and receive their results are included in the estimates of HIV prevalence, incidence, and viral suppression. Their HIV and CD4 test results are returned to them through home-based testing and counseling programs. Some countries have included non-HIV tests, such as syphilis and Hepatitis B. Viral load testing is conducted in a central laboratory, and these results are sent to the clinic specified by the participant.

9. How are HIV-positive participants linked to treatment?

All HIV-positive participants are provided a referral form which they could use to seek care at a health facility of their choice. Viral load test results are returned to their chosen health facility within approximately 6 to 8 weeks. When viral load results are available to be sent to clinics, the participants receive a reminder text message or phone call. HIV infected children and newly diagnosed adolescent and adult participants may receive enhanced or active referral. In some PHIA surveys, participants are contacted by a PHIA team member who helps them enroll in care at their chosen health facility, unless they prefer not to be contacted.

SURVEY IMPACT ON PUBLIC HEALTH

10. How will PHIA results improve our understanding of HIV epidemics?

While the PHIA results demonstrate tremendous progress against HIV epidemics by achieving high coverage particularly among women and older people, we can only truly control these epidemics by achieving higher results among men and youth as well. In all six surveys, HIV positive men under age 35 and younger women were less likely to know their status, be on HIV treatment, or be virally suppressed than older adults. These PHIA results will help inform future programs to confront the global HIV epidemic, and focus country efforts and resources for maximal impact and efficiency. The methods developed for the PHIA surveys can be a model for other countries that are conducting their own HIV-focused household surveys.

11. How will PHIA affect HIV programs on the ground?

Survey data measure access to and the impact of HIV prevention and treatment services, and provide data for global health and development indicators. Because the PHIA surveys include HIV data by age, gender, and location, program planners and donors will be able to maximize impact by making smarter investments to reach the right people in the right places. Additional laboratory testing will help assess transmitted and acquired drug resistance. This information is very important as we further expand treatment of HIV-positive persons in affected countries.

12. How do PHIA results compare to previous estimates of HIV prevalence, incidence and viral suppression?

New results from Lesotho add to findings from four other African countries (Malawi, Swaziland, Zambia, and Zimbabwe) showing that these countries are approaching epidemic control. In 2016, 67 percent (67.6 percent) of those living with HIV in Lesotho were virally suppressed. New results from Uganda indicate that the country's previously expanding epidemic has now stabilized. In 2016, nearly 60 percent (59.6 percent) of all people living with HIV in Uganda had achieved viral suppression.

Key shared findings across PHIA countries include:

New HIV infections are declining in several countries compared to previous surveys or modeled estimates. Between 2011 and 2016, Swaziland nearly halved the rate of new HIV infections (from 2.48 percent to 1.39 percent). PHIA results also revealed significant declines in new HIV infections among adults in Malawi (76 percent), Zambia (51 percent), and Zimbabwe (67 percent), when compared to modeled estimates from 2003.

All six countries surveyed to date demonstrate that **more people living with HIV are receiving life-saving treatment and are virally suppressed**. In 2016, the percentage of people living with HIV who were virally suppressed was nearly 70 percent (67.6 percent) in Malawi, nearly 60 percent (59.8 percent) in Zambia, and more than 60 percent (60.4 percent) in Zimbabwe. Between 2011 and 2016, the proportion of people living with HIV who were virally suppressed in Swaziland nearly doubled (from 34.8 percent to 73.1 percent).

AVAILABILITY OF SURVEY RESULTS

13. When will PHIA survey results be available to the public?

[Summary sheets](#) from PHIA surveys are available for six countries – Zimbabwe (ZIMPHIA), Malawi (MPHIA), Zambia (ZAMPHIA), Swaziland (SHIMS2), Uganda (UPHIA), and Lesotho (LePHIA). Detailed final reports will be made available approximately one year after the preliminary report is released. Datasets for use by public health professionals will be released along with the final PHIA report, and will be available in multiple statistical formats, including SAS and Stata.