THE AFRICAN COHORT STUDY (AFRICOS)

10 YEARS 2013-2023

AFRICOS

African Cohort Study

Scope

Now in its 10th year, AFRICOS has enrolled more than 4,000 participants. The study allows for an unparalleled longitudinal characterization of the HIV epidemic in the African context, tracking the impact of clinical practices, biological factors and socio-behavioral issues on HIV and disease progression. AFRICOS also evaluates the prevalence and incidence of HIV related coinfections and comorbidities, with particular emphasis on tuberculosis, viral hepatitis, malaria, malignancy, mental health and the metabolic and cardiovascular complications of HIV.

Impact

AFRICOS findings influence host-nation HIV policy and PEPFAR programming by providing data for evidence-based guidelines and interventions. For example, AFRICOS findings have informed Kenya's national HIV treatment guidelines regarding viral load monitoring and case management of viral non-suppression. The benefits of AFRICOS also go beyond HIV. Infrastructure and capabilities developed to help support AFRICOS have been integrated into local health systems and leveraged to help manage other diseases, like COVID-19.

> *"AFRICOS helps us capture the broader picture of the overall health of our patients with HIV. Researchers are gaining a better understanding of what leads to the best clinical outcomes, which in turn facilitates the sharing of best practices between sites."*
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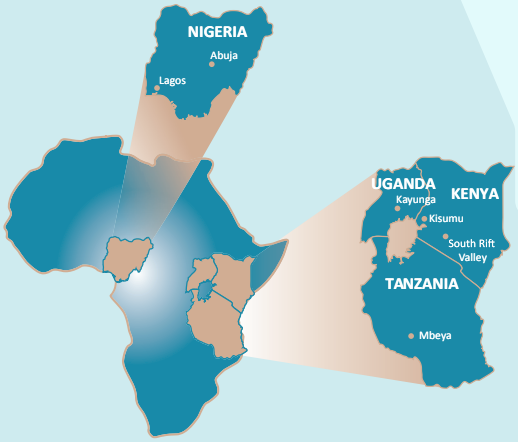
> **— COL Julie Ake, M.D.**
> **MHRP Director and AFRICOS lead investigator**

The African Cohort Study (AFRICOS), launched in 2013 by the U.S. Military HIV Research Program (MHRP) at the Walter Reed Army Institute of Research, is an open-ended prospective cohort study that evaluates HIV prevention, care and treatment services funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).



AFRICOS, the first study of its kind in sub-Saharan Africa, is conducted at MHRP's partnering PEPFAR-supported clinical sites in Kenya, Nigeria, Tanzania and Uganda.

Study participants are recruited from health facility patient populations, and include both inviduals without HIV and people living with HIV. This cohort allows researchers to monitor the impact of HIV-directed health and prevention services and facilitates PEPFAR evaluative research with implications for HIV clinical care and treatment.

A Collaborative Endeavor

A broad, multi-disciplinary approach is required to carry out a research mission on the scale of AFRICOS. MHRP established collaborative partnerships with many leading HIV research groups in order to ensure the effort has the greatest impact possible on such a broad scope of related health issues. AFRICOS is guided by a Scientific Advisory Board of internationally renowned leaders from academia, industry, interagency teams and the Bureau of Global Health Security and Diplomacy (GHSD)/PEPFAR.

An AFRICOS Success Story: A Shining Example of Resilience and Hope

Deborah is one of the oldest stories of PEPFAR's impact in Kenya and, as a participant from the early days of AFRICOS, exemplifies how the study complements and builds on PEPFAR's mission.

More than 20 years ago, Deborah was diagnosed with HIV. In 2003, MHRP began implementing PEPFAR's prevention, care and treatment program in Kenya, and she became the second PEPFAR patient to be put on lifesaving antiretroviral treatment.

Deborah was also the first volunteer to enroll in AFRICOS in Kenya. After enrollment, she was screened and treated for cervical cancer.

> *"If it was not for AFRICOS, I wouldn't have known that I had cervical cancer. They saved my life."*

Today, Deborah teaches tailoring skills to those who are vulnerable to or affected by HIV. She is one of millions of Kenyans who is able to live with hope, thanks to PEPFAR's long-term, multi-layered support. In her own words:

"I am proud of myself, because I don't think about whether I am HIV positive now... we used to be stigmatized, but since starting ARVs, I am free, I can do anything that I want to do, and I am seeing that I am somebody."

Sarah Day Smith / PEPFAR

Recent Publications:

The AFRICOS team has published a presented at many international scientific conferences and published more than 37 manuscripts in academic journals since the launch of the study, including these recent papers:

- "Achieving the third 95 in sub-Saharan Africa: application of machine learning approaches to predict viral failure," by Esber et al., compared the performance of two supervised learning algorithms to predict sociobehavioral, clinical, and context-specific factors of viral failure in four African countries.
- "Impact of weight gain with dolutegravir on antiretroviral adherence and viral suppression in four African countries," by Romo et al., found that, although a substantial proportion of participants experienced weight gain after switching to a TLD ART regimen, there was not a significant impact on adherence or virological outcomes.
- "Epidemiology of tuberculosis among people living with HIV in the African Cohort Study," by Ganesan et al., described incidence and characteristics of tuberculosis comorbidity among people living with HIV over 8 years of AFRICOS. Researchers identifed factors associated with comorbidity and shed light on gaps in TB screening and diagnosis.
- "High-risk human papillomavirus genotype distribution among women living with and at risk for HIV in Africa," by Chachage et al., was a collaborator-led evaluation of HPV genotype prevalence within the AFRICOS cohort and found that HR-HPV was common in four African countries, particularly among women with low CD4 + cell count. Scale up of HPV vaccines and development of vaccines with broader activity against less common HR-HPV types may improve cervical cancer prevention in Africa.
- "Perinatal depressive symptoms and viral non-suppression among a prospective cohort of pregnant women living with HIV in Nigeria, Kenya, Uganda, and Tanzania," by Concepcion et al., was a collaborator-led study that found that, in 21 percent of pregnancies among women living with HIV in the cohort, women reported depressive symptoms, and depressive symptomatology was associated with increased odds of viral non-suppression.

PEPFAR

WRAIR Walter Reed Army Institute of Research

HJFMRI℠

This flyer was developed by HJF. This work was supported by a cooperative agreement between HJF and the U.S. Department of Defense (DoD). The views expressed are those of the authors and should not be construed to represent the positions of the DoD or HJF. Depiction of individuals in photographs does not indicate HIV status; alias names may be used.

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