

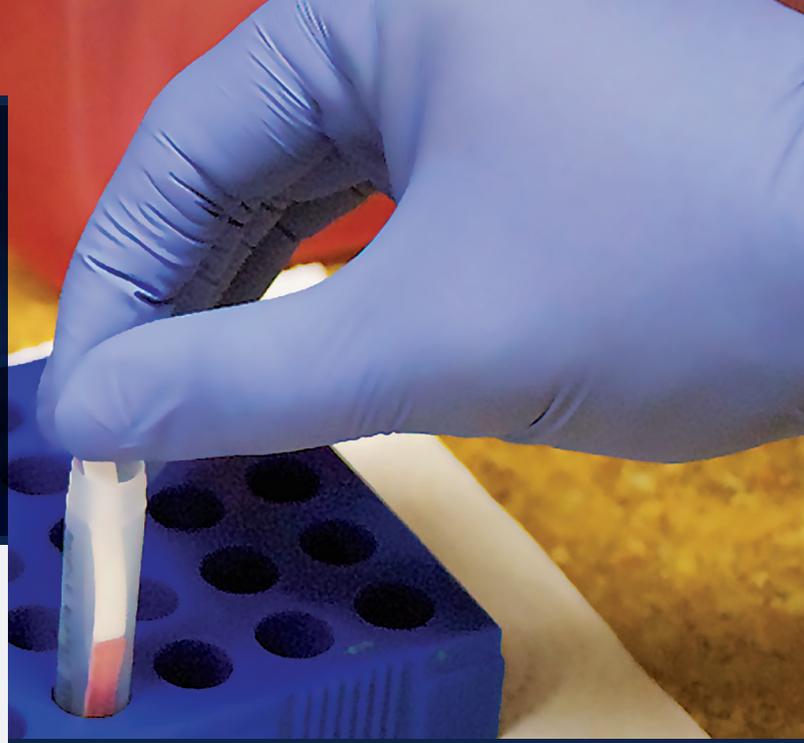
# TRACE

## TRACKING WITH RECENCY ASSAYS TO CONTROL THE EPIDEMIC

### Disease surveillance to stop HIV transmission in its tracks

Remarkable progress has been made toward HIV epidemic control, but many gaps remain. Identifying people with undiagnosed HIV infection, especially those who have been recently infected, is essential to realize the individual benefit of rapid treatment initiation and to prevent HIV transmission to others.

A new rapid HIV test that can distinguish a recent HIV-1 infection (acquired within the last 12 months) from a long-term infection (acquired more than 12 months ago) now offers new opportunities to target prevention efforts, improve the health of people living with HIV, and accelerate epidemic control.



**HIV recency testing shines a light on recent infections and provides real-time data to help target resources and accelerate epidemic control.**



### What is the TRACE Project?

With funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the Centers for Disease Control and Prevention (CDC), ICAP at Columbia University is working in collaboration with CDC, ministries of health, and local implementing partners to roll out rapid HIV recent infection testing in selected countries as part of a comprehensive approach to respond to the HIV epidemic.

### Why HIV Recency Testing?

People who have recently acquired HIV are often unaware of their positive status or are not on antiretroviral treatment. Their elevated viral load has health consequences for themselves and makes it more likely that they will spread the infection to others. In addition, individuals with recently acquired HIV infection may have sexual or injecting partners who are unaware of their own HIV infection, not on treatment, or are on treatment but are not virally suppressed.



Identifying individuals with recently acquired HIV infection is the first step towards offering interventions to improve health outcomes for the infected person and prevent viral transmission to their sexual and injecting partners.

Recent infection testing can also identify geographical areas with high numbers of recent infections, enabling HIV programs to launch a rapid program response tailored to a specific population and context.

## How Does HIV Recency Testing Work?

HIV recent infection tests take advantage of a specific feature of the immune response to infection. Individuals who acquire HIV-1 will, over months, develop HIV-1 antibodies with increased avidity to specific HIV viral proteins. The presence of high avidity antibodies suggests long-term infection; the absence of high avidity antibodies suggests recent infection.

This type of testing was used to estimate national HIV incidence in the surveys conducted as part of the [Population-based HIV Impact Assessment \(PHIA\)](#) project.

New rapid tests for HIV-1 recent infection that can be done in minutes with whole blood at point-of-care without the need for a laboratory or special equipment, are now available. This innovation allows wider roll-out of recent infection testing and its potential incorporation in routine HIV testing. The recent infection tests cannot be performed on those who have HIV-2 infection only.

## Treat Recent Infections. Prevent Further Transmission.

In the current era of “test and start,” people diagnosed with HIV are strongly encouraged to begin treatment as soon as possible. This is especially important for those with recent infection, since they are likely to have a higher viral load than those with long-term infections. Linking people recently diagnosed with HIV to treatment services can save lives, and successful treatment prevents further transmission. Additionally, those with recent infection should be prioritized for index testing to help identify and treat positive partners and offer prevention services to negative partners.

At a population level, knowing where and among whom recent infections are occurring can inform rapid action to prevent new infections through precision prevention efforts as well as targeted interventions to improve treatment adherence and retention in HIV care.

## Bringing Different Data Streams Together

HIV recent infection testing offers a valuable data point to help understand the trajectory of the HIV epidemic in a country. Together, the combination of data from recent infection testing and other surveillance data, including surveys and program data, will go a long way toward enabling policymakers to make informed decisions about focusing resources to geographical areas and subpopulations with high number of recent infections to maximize the impact of their response efforts.

## ICAP-Supported TRACE Countries TRACE Project | 2020



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