RECENT INFECTION SURVEILLANCE

Countries with a high HIV burden have made excellent progress toward HIV epidemic control in recent years and specifically UNAIDS’ call to reach the 95-95-95 targets by 2030. As countries move closer to reaching “95-95-95,” it has become clear that real-time epidemiological monitoring of recent HIV infections would allow countries to target the public health response to sub-populations and locations where high levels of transmission may be occurring. New point-of-care tests for recent infection, that provide results within minutes, pave the way for recent infection surveillance to detect and characterize recent HIV infection among newly diagnosed HIV cases. Recency results aid in the identification of individuals who have acquired HIV within the past several months and may therefore be at high risk of transmitting HIV to their unborn child, infants, and uninfected sexual partners due to a high viral load (VL) in the early stage of chronic infection.

In partnership with the Centers for Disease Control and Prevention and the Government of Malawi, the International Training and Education Center for Health (I-TECH) established a recent HIV infection surveillance system by including a rapid test for recent infection (RTRI) in routine HIV testing services at entry points such as antenatal care clinics and voluntary counseling and testing sites. Data from this system can provide information on the proportion of newly diagnosed individuals who test recent and characterize these individuals to inform HIV prevention interventions. At the population-level, routine epidemiological analyses can be conducted to monitor trends and identify hot-spot locations and sub-populations associated with HIV recent infections to inform targeted interventions.

PROGRAMME OBJECTIVES

The objectives of the programme are as follows:

1. Monitor trends in the proportion testing recent on the recent infection testing algorithm (RITA) among newly diagnosed people living with HIV (PLHIV).

2. Identify geographic areas associated with testing recent on the RITA to inform geographic prioritization of HIV prevention interventions.


4. Describe health workers’ experiences integrating RTRIs into HIV testing services (HTS), including perception of the test and additional time spent on the activity.

\[1\] A RITA is a combination of laboratory tests used to classify an HIV infection as recent or long term. A RITA helps to reduce false recent classification when individuals are on antiretroviral therapy (ART) and virally suppressed or are elite controllers. If a client tests recent using RTRI, VL testing should be conducted to improve the accuracy of classification.
Recent Infection Surveillance System
Malawi’s integration of recent infection surveillance into routine HIV testing began in April 2019. To implement recent infection surveillance, an RTRI is given to all consenting clients aged 13 years and older who screen positive for HIV at a participating health facility.

Recency Implementing Sites
The map below shows the 251 participating facilities conducting recent infection surveillance in Malawi. There are more recency implementing sites in the central and southern regions of Malawi compared to the northern region due to the higher population size in the south.

Recency Results
From April 2019 to June 2022, 53,180 clients were enrolled in recent infection surveillance in Malawi after they satisfied the eligibility criteria. Of the participants enrolled, 52,730 (99.2%) had either a new HIV-positive test result or a confirmatory-positive test result (for HIV self-testers only). Of the participants enrolled who had a new or confirmatory HIV-positive test result, 52,227 had a valid RTRI long-term or recent test result, representing 98.4% of all participants enrolled (N=53,180). Of the 52,227 participants with a documented valid RTRI result, 3,073 (7.0%) were RTRI recent. Confirmatory VL samples were collected from 2,962 (96.4%) of participants with RTRI recent results and 2,861 (96.6%) of these had their VL result processed at the National Reference Laboratory. Of the RTRI recent results with available VL results, 1,680 (58.7%) were classified as RITA recent, bringing the overall RITA recent rate to 3.2%.

SURVEILLANCE HIGHLIGHTS
- Females in younger age groups represent a larger proportion of persons newly diagnosed with HIV than males in younger age groups, particularly among those aged 15-19 years.
- RITA results show that the proportion of RITA recent is highest in the younger age groups and among females.
- Given the discrepancy between RTRI recent at 7.0% and RITA recent at 3.2%, the Malawi Recency Team is continuing to address misclassification of recent infections, which is slightly over 40%.
- The high number of long-term infections detected points to a continuing need for early HIV diagnosis and treatment.
- Breastfeeding women have a high proportion of RITA recent at 8.1% compared to the general population rate of 3.2%.

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