RECENT INFECTION SURVEILLANCE

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 test for recent infection (TRI) 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. They can also provide sentinel event data for HIV cases on the point of HIV infection in for countries with HIV case-based surveillance systems.

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 towards 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 subpopulations 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 higher risk of transmitting HIV to their fetuses, breastfeeding infants, and uninfected sexual partners, than persons who were infected earlier, due to high viral load (VL) in the early chronic infection stage.

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 implementing rapid tests for recent infections (RTRIs) into HIV testing services (HTS), including perception of the test and additional time spent on the activity.
Recent Infection Surveillance System
Malawi’s integration of recent infection surveillance to routine HTS began in April 2019. An RTRI is given to consenting clients 13-years and older who screen positive (Alere DetermineTM reactive) during Malawi’s HTS implemented throughout participating health facilities.

Recent Infection Cluster Detection
The figure below shows geospatial clusters of recent HIV-1 infection among participating health facilities across Malawi from October 2019-March 2020.

Recency Results
From October 2019 to September 2020, 12,935 clients were newly diagnosed with HIV at 485 testing points activated at 155 participating facilities across Malawi. All 155 facilities reported data. Of the newly diagnosed PLHIV, 12,779 (99%) clients received an RTRI test. The remaining 156 (1%) were either not offered the test or did not consent. Of the 12,779 clients who received a test with a documented valid RTRI result, 7% (n = 843) were RTRI recent and 93% (n = 11,936) were long-term. Confirmatory VL samples were collected from 99% of clients with RTRI recent results. Of the 843 RTRI recents with available VL, 52% (n=442) were classified as RITA recent, bringing the overall RITA recent proportion to 3%.

SURVEILLANCE HIGHLIGHTS
- Females in younger age groups represent a larger proportion of persons newly diagnosed with HIV than men 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% and RITA recent at 3%, the Malawi Recency Team is continuing to address misclassification of recent infections.
- The high number of long-term infections detected points to a continuing need for early diagnosis and treatment.
- In persons older than 45-years, the proportion of clients testing RITA recent tends to be slightly higher among males.

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