



HIV Recent Infection Surveillance is providing timely data on where and among whom new infections are occurring and insights to improve testing strategies to accelerate and sustain HIV epidemic control

Correlates of recent infection among persons newly diagnosed with HIV in Nigeria, March 2020–September 2021

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Background

In 2020, Nigeria implemented HIV-1 recent infection surveillance program to identify sub-populations where transmission may be high to accelerate progress towards epidemic control. We examined correlates of recent infection to identify characteristics that can help inform where and among whom case finding and prevention efforts should be intensified.

Methods

- Used data collected during March 2020–Sept 2021 from 223 health facilities that participated in the recent infection surveillance program.
- Used data collected for individuals ≥15 years of age, newly diagnosed with HIV, who did not opt out and tested for recent infection using the Recent Infection Testing Algorithm (RITA).
 - RITA combines a rapid test for recent infection (RTRI) assay with viral load testing to reclassify those with HIV RNA <1000 copies/mL as not having a recent infection (Figure 1).
 - Recent infection was defined as RITA recent result which likely indicates HIV infection acquired < 12 months ago.
- Conducted bivariate logistic regression to assess associations between recent infection and potential correlates in unadjusted models.
- Stepwise backward multivariable logistic regression was performed to determine adjusted odds ratios (aORs) of recent infection by socio-demographic and geographic characteristics.
- Data analysis was conducted using SAS® 9.4 (SAS Institute Inc., Cary, NC).

Results

- Among 27,792 newly diagnosed clients tested on the RITA, 660 (2.4%) had a RITA recent infection.
- In the adjusted multivariable analysis, increased likelihood of recent HIV infection was associated with being (Figure 2):
 - Male (aOR=1.2; 95% CI=1.0–1.5) or pregnant female (aOR=1.7; 95%CI=1.1–2.5) vs non-pregnant female;
 - Age 15–24 years (aOR=2.1; 95% CI 1.2–3.5) vs ≥55 years;
 - Single (aOR=1.3; 95% CI=1.1–1.7) vs married;
 - Counseled as a couple (aOR=2.1; 95% CI=1.2–3.6) vs individually;
 - Tested for HIV at a key population (KP) facility (aOR=1.3; 95% CI=1.1–1.7) vs non-KP facility;
 - Tested HIV negative (self-report) <12 months ago (aOR=1.5; 95% CI=1.2–1.8) vs not; and
 - Tested within their state of residence (aOR=1.8; 95% CI=1.1–3.2) vs out of state of residence.

Conclusions

Recent infection surveillance can distinguish new infections among newly diagnosed individuals and spotlight sub-populations that may be part of high transmission clusters. Additionally, the data can inform testing strategies that facilitate identifying recent infections, a critical need to reach and sustain epidemic control.

Figure 1: Rapid recency assay recent infection testing algorithm (RITA)

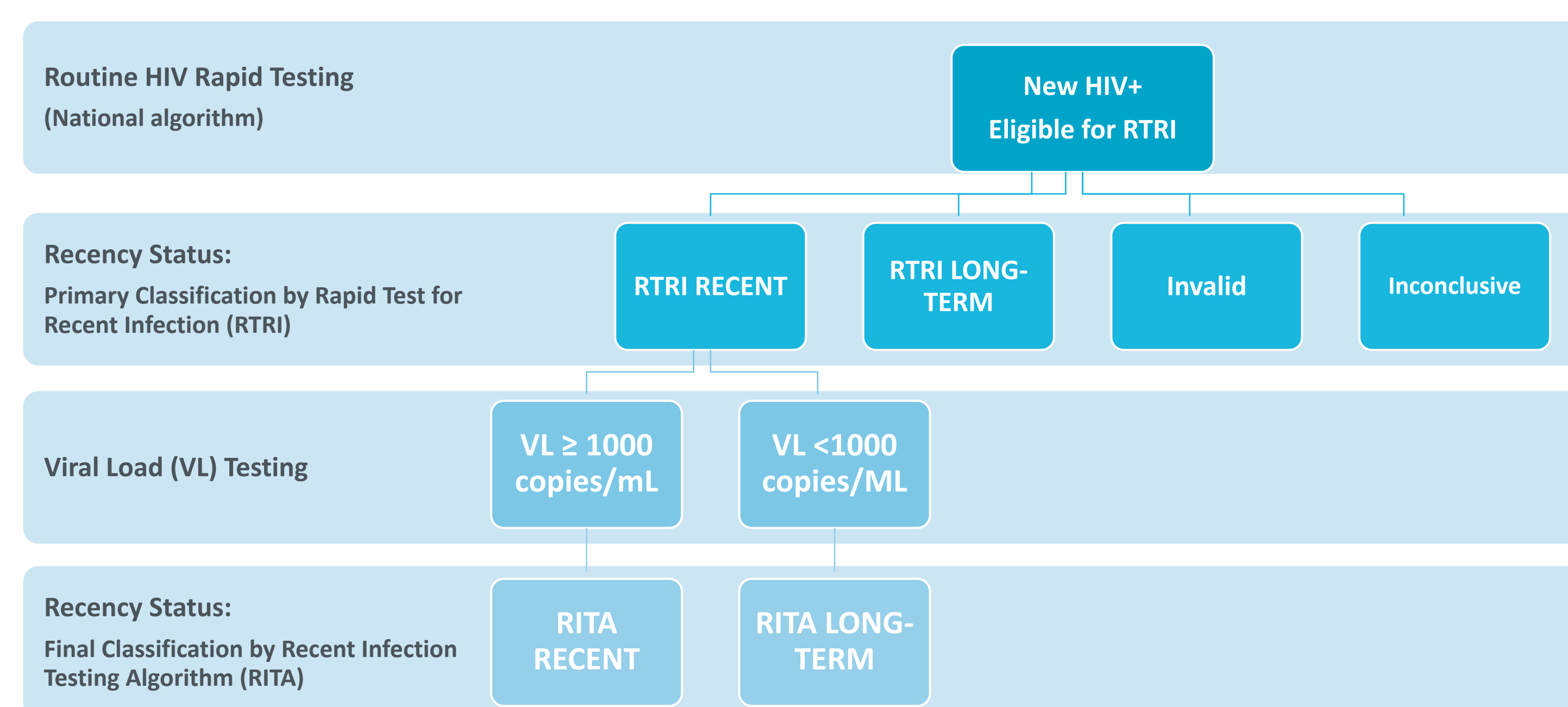
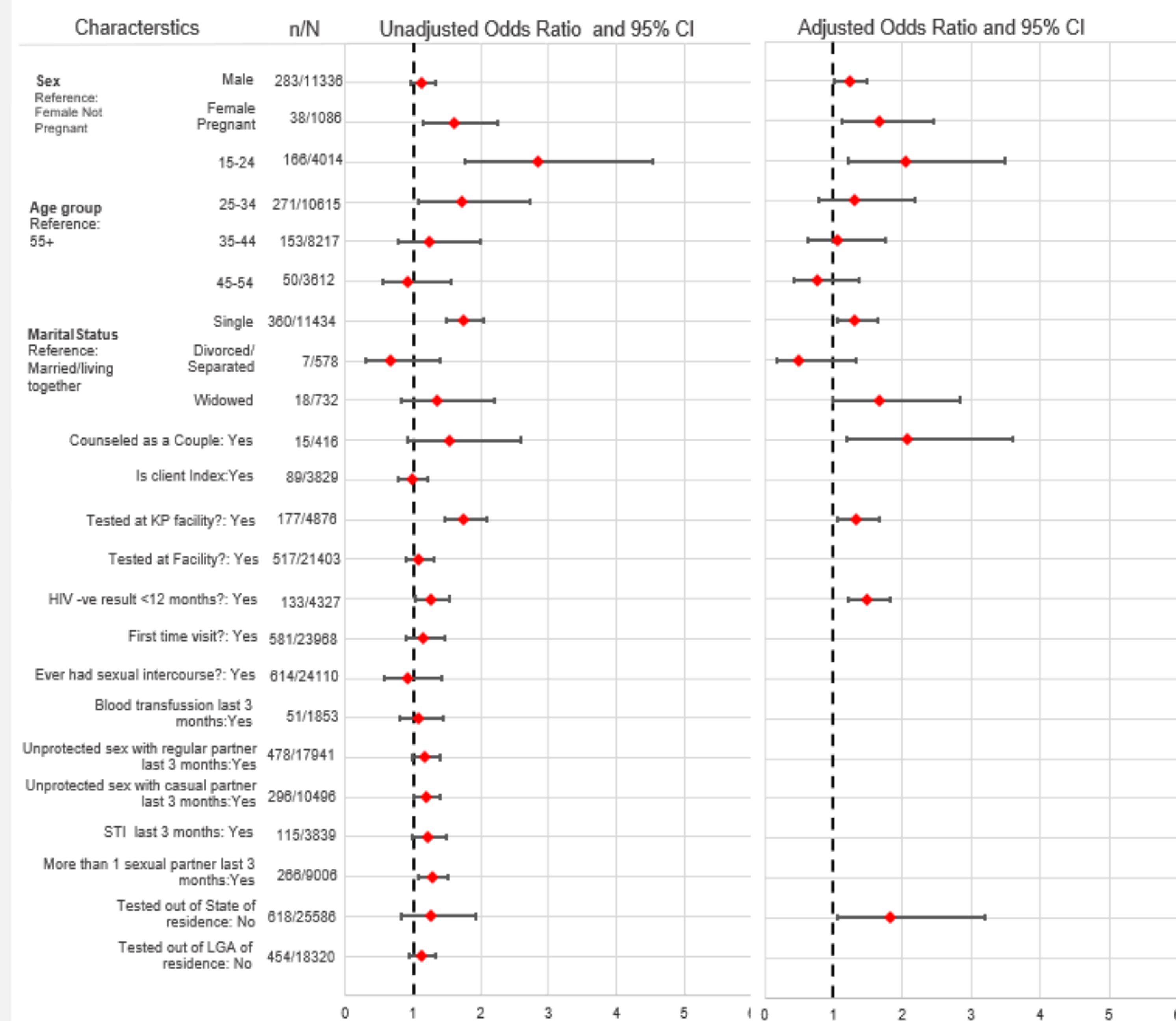


Figure 2: Unadjusted and adjusted odds ratios with 95% confidence intervals for correlates of RITA recent infection



Additional Resources



TRACE website
trace-recency.org



More about the TRACE Program (ICAP website)
icap.columbia.edu/trace

