

# Improved tuberculosis case finding among patients with Advanced HIV Disease in Nigeria through the deployment of a point of care tuberculosis diagnostic test

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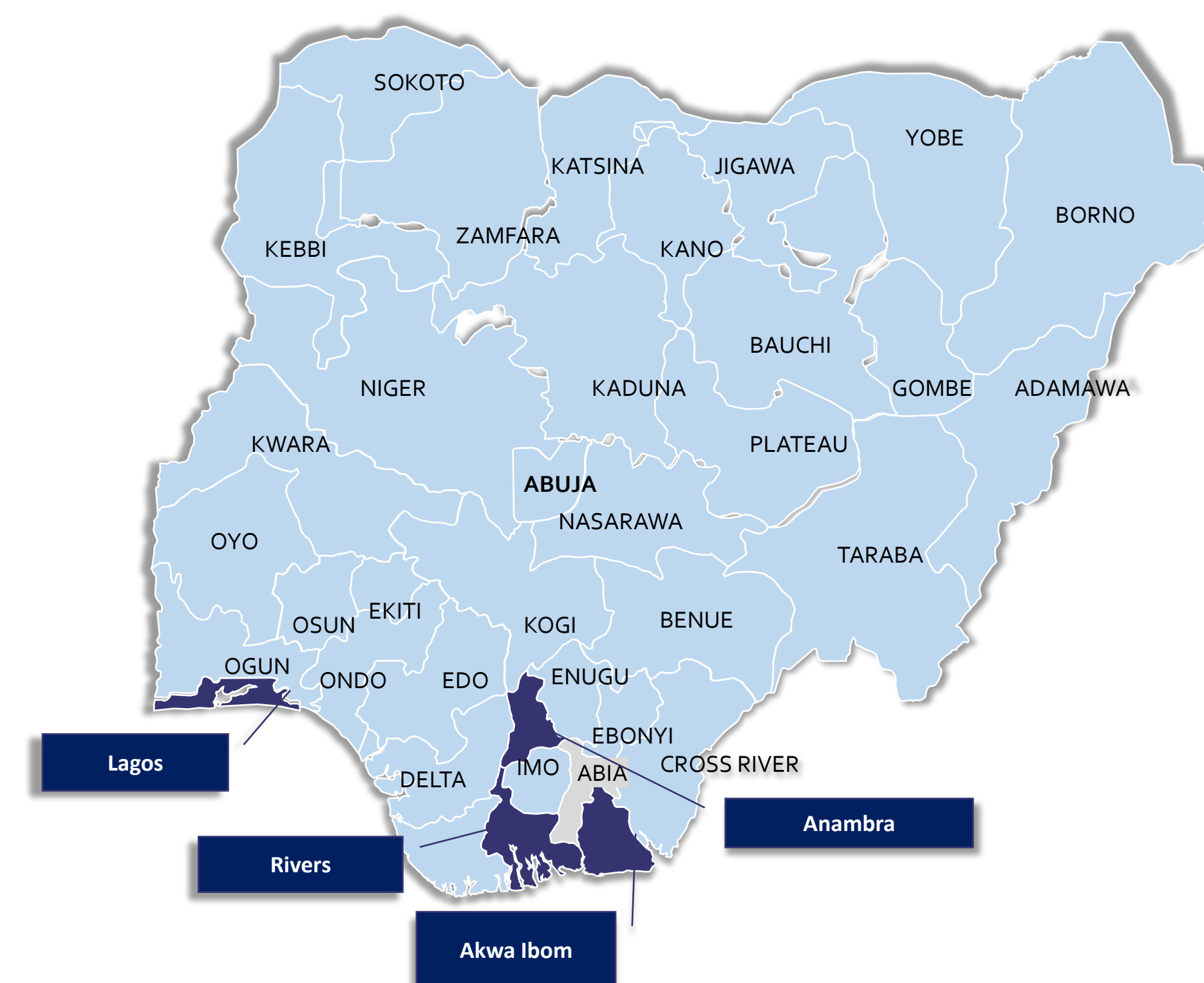
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## Background

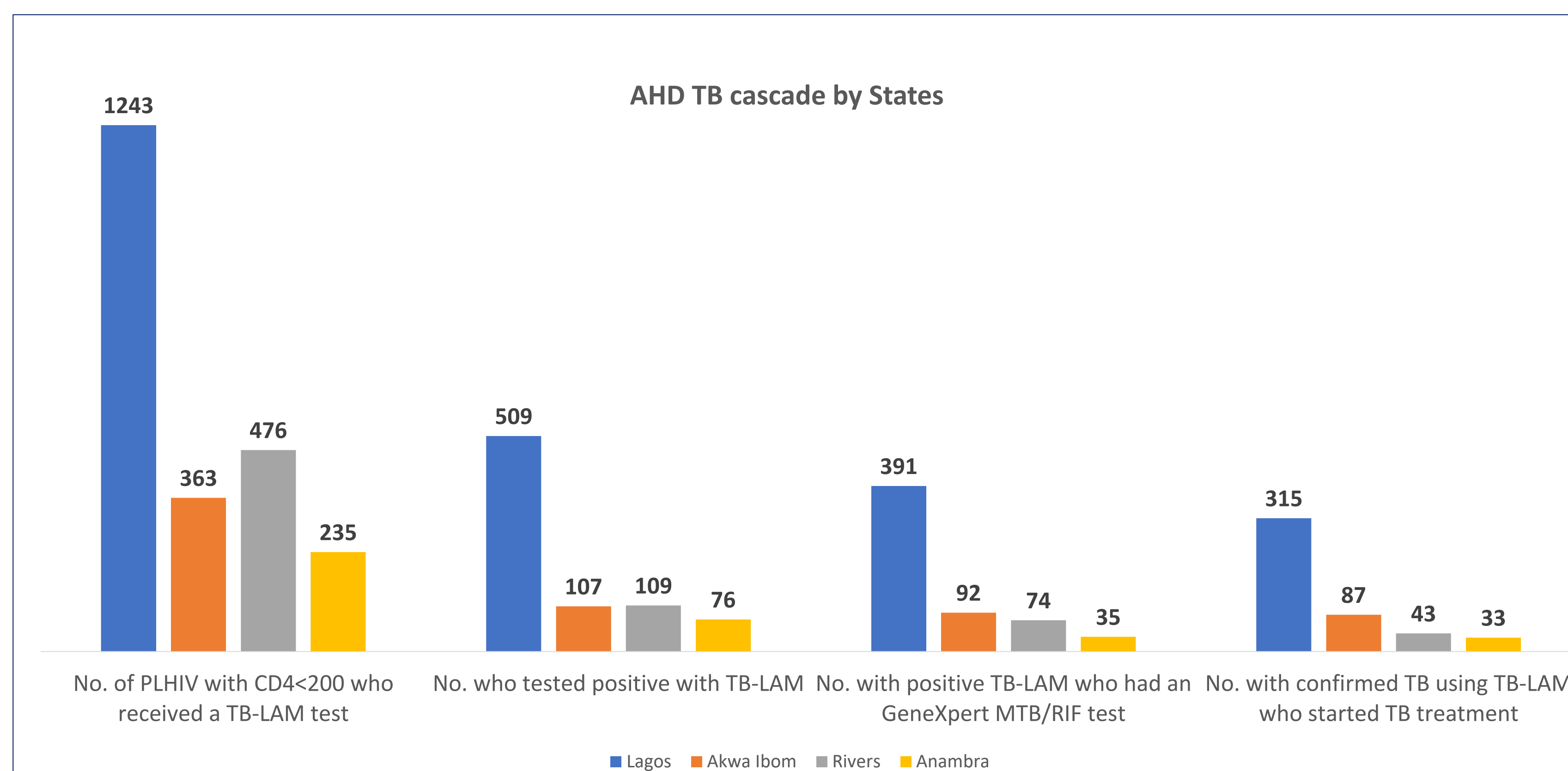
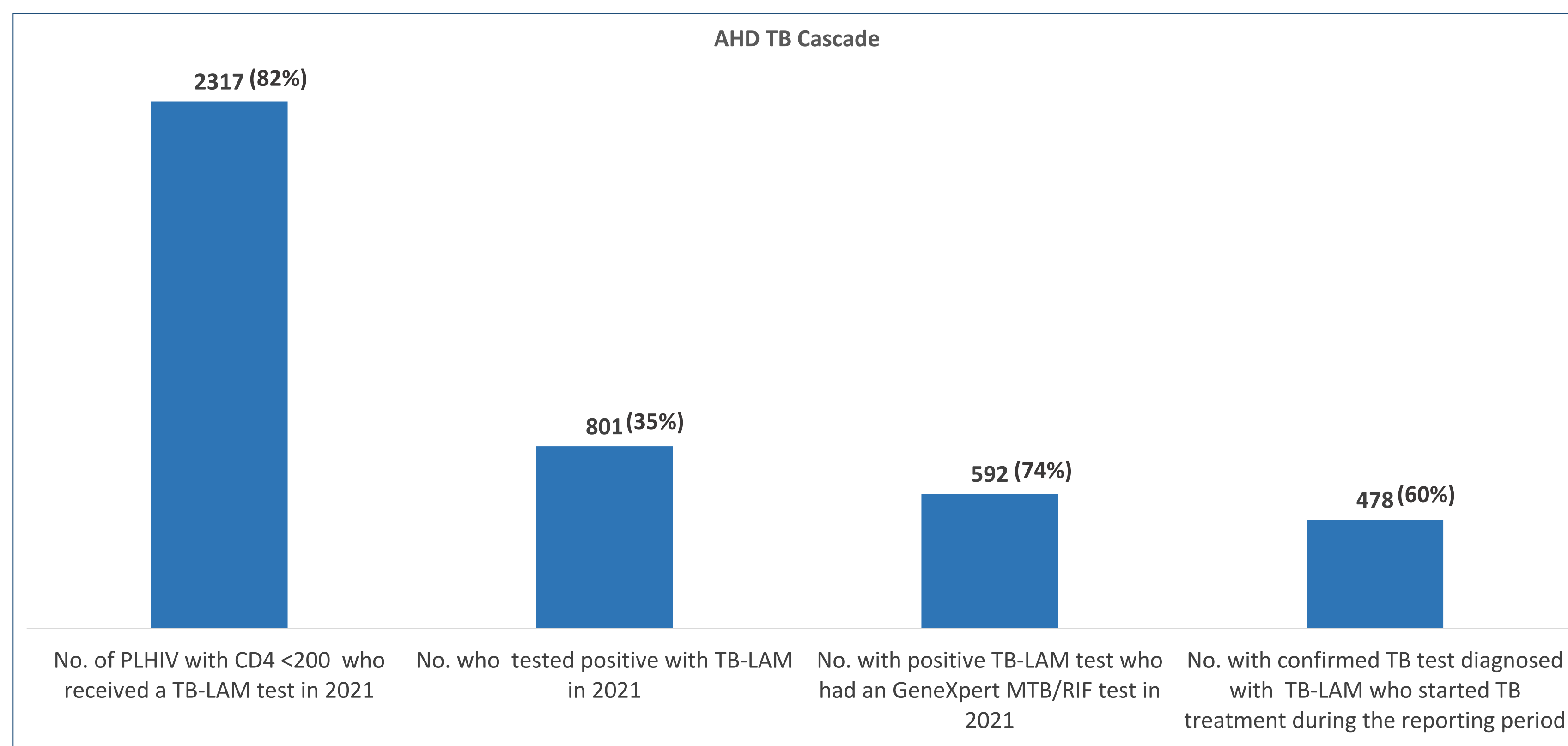
Nigeria recently rolled out a package of care to manage Advanced HIV Disease (AHD) among people living with HIV (PLHIV). The AHD PoC recommends screening for opportunistic infections and the use of tuberculosis lateral flow urine lipoarabinomannan assay (TB-LAM), a point of care test, to complement the GeneXpert MTB/RIF test for prompt identification of Tuberculosis (TB) in AHD patients. Prior to TB-LAM introduction, only presumptive TB cases had access to TB diagnostic services. This is a documentation of early lessons from the deployment of TB-LAM in Nigeria.

## Description

- Facility implementation of the AHD package of care commenced in February 2021 following the revision of the National Guidelines for HIV Prevention Treatment and Care in 2020, review of Monitoring and Evaluation (M&E) and Logistics Management Information System (LMIS) tools, development of training curriculum, procurement and distribution of commodities.
- The implementation involved 28 health facilities across 4 states with high HIV burden and high unmet antiretroviral therapy (ART) needs. The states included Lagos (11 sites), Akwa Ibom (6 sites), Rivers (6 sites), and Anambra (5 sites).
- Healthcare workers (HCWs) conducted TB-LAM tests for AHD patients regardless of TB symptoms, and those with positive results were referred for GeneXpert MTB/RIF, the gold standard for TB diagnosis in Nigeria.
- Diagnosed TB patients were managed for TB and commenced ART after 2 weeks of TB treatment.



## Lessons Learned



### AHD TB Cascade

- By December 2021, 8,109 new patients were newly enrolled, of which 6,697 (83%) had CD4+ cell count test, 2,896 (43%) had CD4+ cell count <200cells/ml. 2,317 (82%) of patients with CD4+ cell count <200 had TB-LAM tests, 801 (35%) were positive.
- Proportion of AHD patients who received TB-LAM test increased across the quarters with 56%, 81%, 90%, and 81% recorded in Q1, Q2, Q3 and Q4 2021, respectively.
- TB-LAM positivity among AHD patients was 35%, a marked increase in TB case finding compared to the pre TB-LAM period where only presumptive cases had access to TB diagnosis.

### Congruence with GeneXpert

- In Q3 & Q4 2021, 1,413 had a TB-LAM test. Of these, 29% (409 of 1,413) were positive. Of the positive TB-LAM result, 81% (332 of 409) received a GeneXpert MTB/RIF test, of which 57% (188 of 332) were positive and 43% (144 of 332) tested negative.
- TB-LAM was useful in identifying extra-pulmonary TB cases that may have been missed by sputum GeneXpert MTB/RIF.

### Other lessons

- Some HCWs did not conduct GeneXpert MTB/RIF for TB-LAM positive patients without TB symptoms and did not treat GeneXpert negative TB-LAM positive patients as there was no clear guidance from the TB program.
- Limited availability of urine sample cups in Q1 impacted TB-LAM testing.
- Ensuring availability of all commodities required for TB-LAM testing and enhanced collaboration between TB and HIV programs at facility and national levels will improve AHD patients' outcomes

## Conclusion

The introduction of TB-LAM test as part of the AHD package of care has improved TB case finding among PLHIV. Lessons learned from the implementation contributed to the development of a clear guidance recommending treatment of TB-LAM positive patients across the HIV and TB programs. The guidance recommends TB-LAM as a diagnostic test for TB regardless of molecular assay result. However, a molecular assay is still recommended for all positive TB-LAM cases to confirm rifampicin resistance and inform management approach.

This work was made possible through the support of Unitaid. The project also acknowledges all the health care workers at each of the facilities in Nigeria.