Improving TB Screening Efficiency Through Physician-Led Screening Approaches in Akwa Ibom State, Nigeria: A Retrospective Analysis

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Background

Tuberculosis (TB) diagnosis remains a major public health challenge, especially in settings with high HIV prevalence.[1] To improve this, In October 2023, the PEPFAR/USAID-funded Accelerating Control of the HIV Epidemic (ACE-5) project revised the clinical processes for people living with HIV (PLHIV) initiating antiretroviral therapy in Akwa Ibom.

Aim

This study compares TB screening outcomes among PLHIV initiating ART before and after the intervention in Akwa Ibom, Nigeria.

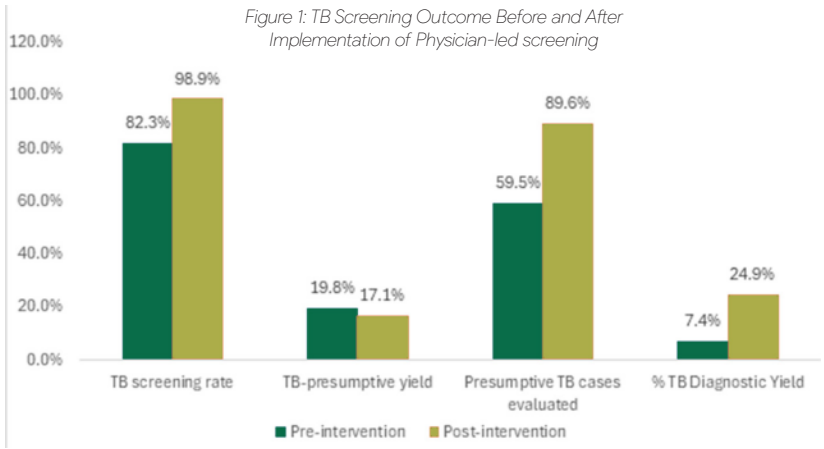
Methods

This retrospective cross-sectional study analysed data of PLHIV initiated on ART across 162 PEPFAR-supported health facilities in Akwa Ibom State, Nigeria. Before the intervention (Oct 2022-Sep 2023), TB screening was conducted by lay workers prior to ART initiation. The intervention which was implemented between Oct 2023 and Sept 2024 involved integrating TB screening into the ART initiation services provided by physicians. We extracted data from the electronic medical records for the period October 2022 to September 2024 for analysis. Chi's square tests assessed TB-screening uptake (proportion screened for TB); TB-presumptive yield (proportion presumed to have TB); TB evaluation (proportion of presumed cases evaluated); and TB-diagnostic yield (proportion diagnosed with TB) before and after the intervention. A significant p-value was set at 0.05.

Results

Among the 14,549 PLHIV initiated on ART, 68.4% (9,949) were female and the median age was 33 years (IQR:25-41). Of these 54.6% (7.939) were initiated prior to the intervention. TB screening rates significantly increased during the intervention (98.9% [6536/6610] vs. 82.3% [6530/7939], p<0.001). The TB-presumptive yield decreased from 19.8% (1,290/6,530) pre-intervention to 17.1% (1,117/6,536) post-intervention (p < 0.001). However, the proportion of presumptive TB cases evaluated increased significantly from 59.5% (768/1,290) to 89.6% (1,001/1,117), p < 0.001 and TB diagnostic yield increased from 7.4% (57/768) to 25.0% (249/996) p=<0.001.

Figure 1: TB Screening Outcome Before and After Implementation of Physician-led screening



> ***TB diagnostic yield increased with implementation of a Physician-led screening***

Conclusions and recommendations

Physician-led TB screening significantly improved TB screening uptake, evaluation rates, and diagnostic yield among PLHIV in Akwa Ibom. More research is needed to unravel the factors responsible for this improvement.

Acknowledgments

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References

1. World Health Organization. (2021). Global Tuberculosis Report 2021. Geneva, Switzerland: WHO.

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