



Evaluation of diagnostic microbiology capacity and barriers in testing for HIV and TB at peripheral hospital-based laboratories in Oyo-State, Nigeria

Bankole T. Oluwayomi^{1,2}, Ajayi O. IkeOluwapo¹

¹Department of Epidemiology and Medical Statistics, College of Medicine, University of Ibadan, Ibadan, Oyo State, Nigeria

²Department of Biological Sciences (Microbiology unit), Elizade University, Ilara-Mokin, Ondo State, Nigeria

Abstract:

Tuberculosis (TB) (caused by *Mycobacterium tuberculosis*) and human immunodeficiency virus (HIV) (a Lentivirus) are two interrelated infectious diseases that continue to threaten public health in several parts of the world. In Nigeria, a maximum of 52,000 people died from HIV and TB in 2017. The prevalence of HIV and TB co-infection in Nigeria currently stands around 19.1% which suggests that the two diseases are still a burden on the nation's health. Improved diagnostic testing at peripheral hospitals is therefore required to facilitate case detection which will reduce the incidence of the two diseases. Thus, this study sought to evaluate the diagnostic microbiology capacity and barriers in testing for HIV and TB at peripheral government-owned secondary hospital-based laboratories in Oyo State, Nigeria. For HIV, 14 (82.4%) of the laboratories had 'low capacity' and 3 (17.6%) had 'fair capacity' to test serum for HIV antigen and blood for viral load. Analysis of type of assay performed at the laboratories indicated that 9 (52.9%) of the laboratories could carry out acid-fast bacilli (AFB) smear using Ziehl-Neelsen stain, 8 (47.1%) Rhodamine/Auramine stain and no laboratory could perform AFB culture and sensitivity. Seven (41.2%) of the laboratories could carry out serological test for HIV and 3 (17.6%) could test blood for viral load. The low capacity of laboratories in this state underscores the need for interventions to improve supply of testing kits, reagents and culture facilities which will enhance prompt detection of HIV and TB cases. It will also improve local health demands and reduce unnecessary influx of health service seekers to laboratories in tertiary institutions which are already congested.

Biography:

Bankole Oluwayomi Temitope is a young researcher in public health microbiology and epidemiology. He has



strong interest in controlling infectious disease through consultancy and academia. He currently works as a university lecturer at Elizade University, Ilara-Mokin, Ondo State, Nigeria. Oluwayomi has completed a Bachelor of Science and Master of Public Health degrees in microbiology and field epidemiology respectively. In addition to his educational background, he is currently studying a Ph.D. programme in Environmental and Public Health Microbiology. Oluwayomi started his work experience as research consultant for many NGOs. These NGOS were into various health interventions targeted at reducing burden of infectious diseases in Nigeria. Oluwayomi has attended some conferences, published part of his work and still in active research both on the field and in the laboratory.

Recent Publications:

1. Healthcare Service Payment Methods and Coping Strategies of Nomads and Labor Migrants in Oyo State, Nigeria; 2020
2. Assessment of laboratory capacity of public secondary health facilities in performing assay of selected epidemic-prone diseases in Oyo State, Nigeria; 2019

New Frontier's in Applied and Environmental Microbiology; April 24, 2020; London, UK

Citation: Bankole T. Oluwayomi; Deciphering Evaluation of diagnostic microbiology capacity and barriers in testing for HIV and TB at peripheral hospital-based laboratories in Oyo-State, Nigeria; Applied Microbiology 2020; April 24, 2020; London, UK