

ISID Small Grants Program Final Report

by *Adedayo Adeyemi, MD, MPH* • Projects Director • Healthmatch International • Lagos, Nigeria

Antiretroviral Therapy Use, Clinical and Virologic Outcomes for a Cohort of HIV-Infected Adults in Mainland General Hospital, Lagos, Nigeria

A large scale antiretroviral therapy (ART) program was introduced in Nigeria by a variety of groups, including government, private organizations, and international donor agencies beginning in 2004. There were significant challenges posed by treatment and virologic outcomes as a result of drug resistance, adherence and adverse effects which may have had impact on the current national policy of first line treatment using stavudine or zidovudine, lamivudine and nevirapine. According to the report submitted in March 2006 to the Minister of Health by the National Committee on antiretroviral (ARV) drug resistance, it was discovered that HIV RNA levels had increased after 6–12 months on first line ARV, which is a threat to the success of current roll-out and future scale-up of the HIV treatment program.^{1,2} About 15,000 patients were enrolled in the government treatment program as of December 2005. World Health Organization 2007 report projected 636,000 people living with HIV and AIDS would need treatment by December 2006 in Nigeria.³ Unfortunately, less than 30% are on treatment.

Mainland General Hospital is a Lagos State secondary facility and is a referral center for treatment of infectious diseases including HIV/AIDS, tuberculosis and malaria. The hospital has over 4,000 HIV positive patients and a 150 bed capacity. Antiretroviral therapy has been in use in Mainland Hospital since March 2005 and was one of the early treatment centers in Nigeria. The hospital was chosen because of its leadership in the management of infectious diseases in Southwestern Nigeria. The hospital has a well-organized pharmacy with laboratory facility. The hospital does CD4 count, full blood count, liver function test and other auxiliary tests but has no facility for viral load within the hospital.

Consequently, in order to improve future provision of antiretroviral therapy (ART) in Nigeria, it is important to evaluate the present roll-out of ART and its impact on clinical and virologic outcomes among HIV positive patients. Additionally, the treatment program ought to be examined to appreciate adherence, drug resistance, and good laboratory and clinical practice towards effective treatment and care of HIV positive individuals. Likewise, there is a need for evidence based evaluation of the Lagos State treatment program⁴ using this ARV site as a pilot project. This is imperative since the country is involved in massive scaling-up⁵ of access to treatment. In order to improve the design for successful ARV program in Nigeria, more information and data on the impact of the current ARV provision is crucial—data on morbidity and mortality, treatment failure, level of adherence, tolerability, and the emergence of drug resistant strains are very important. Preliminary findings from this pilot program are important to deliver cost effective long-term⁶ and large scale treatment interventions.

The method used was a retrospective chart review of patients from the time of introduction of antiretroviral (ARV) drugs in March 2005, to March 2007 and was conducted from August 2007–November 2007. Patients enrolled in Mainland Hospital were sampled from medical records, and information was obtained to evaluate the virologic and immunologic outcomes. 460 patients were selected. 230 patients that were on treatment were randomly selected from the medical records and another 230 patients who were not on HIV treatment with CD4 count 200–700 cells/mm³ were selected as comparison group. As in the national guideline, ARV is commenced in Mainland Hospital with CD4 count less than 200 cells/mm³. Additionally, this research stimulated a clinical meeting to improve antiretroviral therapy and provide mentorship opportunity.

At the end of this study, improvement in both clinical and virologic outcomes as a result of antiretroviral use was ascertained, and the predictors of these outcomes were also assessed. Similarly, level immunological-virologic responses were ascertained with the current treatment.

In conclusion, it is possible to effectively and rapidly scale-up clinically effective antiretroviral therapy program in resource poor settings. Understanding challenges that may threaten successful optimal treatment outcomes is important in the planning. This study investigated the current level of treatment interventions. The lessons from this study will help in the design of future interventions to improve adherence and good clinical, pharmacologic and laboratory practices toward efficient and effective ARV program delivery in other or new treatment sites. Finally, future researches to investigate HIV drug resistance surveillance; effective therapy combination for HIV and TB; and best practices in the management of adverse effects should be promoted in Nigeria. The findings will be useful to both clinicians and policy makers to guide and assist future roll-out of successful ARV programs. ❖

References:

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Adedayo Adeyemi, MD, MPH



Adedayo Adeyemi is the Projects Director at Healthmatch International, a research and outreach-oriented organization based in Lagos Nigeria that is concerned with HIV/AIDS prevention and research. He has a medical degree from University of Ilorin, Nigeria and Master of Public Health from Harvard University, US. He has ten years experience in HIV prevention and research. He is committed to adult HIV management, scale-up of prevention of mother to child transmission of HIV and infectious diseases epidemiology.