MODIFICATION OF ANTIRETROVIRAL THERAPY IN HIV-INFECTED PATIENTS AT THE KENYATTA NATIONAL HOSPITAL COMPREHENSIVE CARE CLINIC BETWEEN YEARS 2005-2011

A PROPOSAL FOR DISSERTATION SUBMITTED AS PART FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF DEGREE OF MASTER OF MEDICINE IN INTERNAL MEDICINE – UNIVERSITY OF NAIROBI.

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DECLARATION

I certify that this dissertation is my own original work and that there has been no presentation of this work at any other university for the award of a degree.

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ABSTRACT

Background: The initial ART regimen is widely considered to be the most important regimen in HIV treatment because it is associated with the greatest probability of achieving sustained virologic response. Modification from the initial ART regimen results in a lower probability of virologic suppression and frequent modifications may exhaust future options for effective treatment.

Objective: To determine the proportion of, reasons for, duration of initial ART modification among HIV patients at Kenyatta National Hospital (KNH) HIV/AIDS Outpatient Clinic.

Design: A retrospective cross-sectional clinical record review.

Methods: All patients who commenced ART from January 2005 to June 2011 and had at least 1 follow-up visit were evaluated. We recorded baseline and follow-up data, including drug prescriptions and reasons for changing to alternative first-line regimens (drug substitution for any reason but failure) or second-line regimens (switch for failure).

Results: Out of 4820 patients 1775 patients modified their initial ART at a rate of 36.8% (95% confidence interval [CI] 35.4-38.2%). The median CD4+ count at initiating ART was 149cells/ml (IQR 55-248). The most common first-line regimens were stavudine (d4T) and zidovudine (AZT) based at 63% and 13.3% respectively. The commonest reasons for modifying ART were toxicity accounting for 66.5%, treatment failure 12.9%, and co-morbid conditions 9.4%. The most frequent toxic effects were lipodystrophy (41.3%), peripheral neuropathy (10.6%) and anemia (5.9%). The median time to modifying therapy was 28 months (IQR 15-41). Immunological outcome of modification pre and post-modification was 335cells/ml (IQR 8-497) to 399cells/ml (IQR 257-611) with p=0.001. In the multivariate analysis WHO clinical stage III (odds ratio [OR], 2.9 [95%CI 1.7-2.8]; p=0.001), and IV (5.5 [2.8-11.0]; p=0.001), CD4+ count $\leq$ 200cells/ml (2.4 [1.5-4.0]; p=0.001) were associated with likelihood of modifying ART.

Conclusion: There was a high rate of ART modification in this study. Drug toxicity was the most frequent reason for treatment modification; however it did not affect treatment success. The median duration to modification of first-line ART was 28 months. Low CD4+ count, increasing WHO stage and longer duration of ART was associated with likelihood of ART modification.