

**Effectiveness of Anti-Retroviral Treatment and Nutrition among HIV infected Patients at
Eldoret – Kenya**

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ABSTRACT

HIV/AIDS is a tragedy of devastating proportions in Kenya. The lives of infected individuals, their families, communities and agencies they work for, and the society as a whole is all affected by HIV/AIDS pandemic. Use of antiretroviral therapy improves the lives of HIV/AIDS patients. Use of nutrition supplement is part of comprehensive care for HIV/AIDS patients. The objective of the study was to determine the effectiveness of antiretroviral treatment and nutrition, in HIV infected patients. The study design was prospective cohort study. The study was carried out in AMPATH centre in Eldoret. Seventy one patients were randomly recruited in the study proportionate to size of each stratum. The HIV patients were recruited from Moi Teaching and Referral Hospital (MTRH) AMPATH Module one clinic. Some HIV patients were on a combination of antiretroviral therapy and nutritional supplementation; others were on ARVs alone, while others were not on ARVs. Blood samples were obtained from patients at the clinic then taken to the AMPATH Reference laboratory where the CD4 count and T_H1 cytokines (IL-2 and IFN- γ) were determined. The patients were given ARV therapy and nutritional supplementation then monitored for six months when the same measurements were repeated. The heights, weights and BMI for the patients were determined monthly. The patients were given appointments monthly or after a fortnight to collect ARVs and prescription for the food supplement. Questionnaires were used by the nutritionist to establish the socio-economic variables of HIV

patients, the diet history before giving food supplement. Wilcoxon signed ranks and paired T-tests were used to test median and mean differences between initial and measurements after six months respectively. A total of 64 (90.1%) subjects completed the study, of which 47 (73.4%)

were female and 35 (54.7%) were married. 38 (59.4%) were in WHO stage 1, 6 (9.4%) in stage 2, 6 (9.4%) and in stage 3, 20 (31.3%). There was a significant change in Weight in all the three groups. There was no significant change in IL-2 and interferon gamma in the groups that were on ARV Alone and those on ARV and food supplement but this was significant in those who were not on ARV. This suggests suppression in viral load and opportunistic infection, hence less immune stimulation with reduction in T_H1 cytokines. The CD4 count and CD4% increased significantly in those subjects on ARV and food supplement and those on ARV alone ($p < 0.05$). The change in BMI was not significant in any group ($p > 0.05$). The implications of the findings in this study are that, nutritional supplementation does not only improve the health of HIV/AIDS patients, but it also enhances immune reconstitution for those on ARV, boosting their immunity. Since good nutrition improves the health of patients as well as boosting their immunity, it would be recommended that food security in this region of study and other regions be addressed if there has to be meaningful results in comprehensive care among HIV/AIDS patients. Up to date there is neither cure nor vaccine for HIV and the disease can only be managed by positive living, management and control.