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Effectiveness Evaluation of Antiretroviral Therapy of HIV+ patients and Associated Factors at Yeka Health Center, Addis Ababa, Ethiopia

The world has committed to ending of the AIDS epidemic by 2030. So, it is planned to put 90% of people living with HIV/AIDS (PLWA) on treatment. Despite recent promising progresses, about 8,000 people still die of AIDS every day worldwide, while millions more with HIV may lose a third of their life spans. So, is antiretroviral therapy (ART) effective? Assessing clinical, immunological and functional impacts of ART on users at Yeka Health Center (YHC) was deliberated in this study. Retrospective cross-sectional study was conducted at Yeka Health Center on documents of ART users. Data was gathered from 1061 patients' medical records by being categorized into two groups (Group A, who has been stayed on ART for at least for 10 years; and Group B, who have been stayed on ART from 5 to 10 years). Group A was 602; and Group B was 459. Of this total, 93.78% of them were found alive and using ART; 2.83% were either died or lost to follow up; 0.66% had interrupted their medication and restarted; 0.60% were transferred to other facility for the service in the study periods; 0.47% were dropped using their medications. The CD4 counts of ART users have shown visible improvements throughout the selected periods. Those who were stayed on ART for more than 10 years have better CD4 increment with respect to those who stayed on ART care for less than 10 years and more than 5 years by 6.6%. Similarly, the more stay on ART, the better increment of hemoglobin was observed, with 3.1% increment. The mean weight increment difference between Group A and Group B was 5kg. The mean base-line weight was 46kg for group A, while that of group B was 56kg. At the end of this study period, these figures were shifted to 55kg and 60kg respectively. For both groups, base-line count of CD4 of patients are directly correlated to final immunological improvement ($p < 0.05$, Corr. Coef= 0.475 and 0.546 for group A and B respectively).

WHO base-line clinical stages are inversely correlated to CD4 count increments ($p < 0.01$, Corr. Coef= -0.323 and -0.376); base-line hemoglobin (g/dL) ($p < 0.05$, Corr. Coef= -0.195 and -0.081); base-line weight ($p < 0.05$, Corr. Coef= -0.323 and -0.376) for group A and B respectively. ART intervention is found effective program in terms of clinical, functional and immunological outcomes. It is reducing both morbidity and mortality.

Keywords: ART, Clinical impact, Immunological impact, Functional impact, HIV