

**Factors Associated with First Line and Second Line Antiretroviral Treatment Failure
among Adult HIV/AIDS Patients at
Mbagathi District Hospital**

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**A thesis submitted in partial fulfillment for the Degree of Master of Science in Public
Health in the Jomo Kenyatta University of Agriculture and Technology**

2009

ABSTRACT

Although the introduction and scale up of antiretroviral therapy (ART) has reduced morbidity and mortality associated with HIV/AIDS, a new challenge of antiretroviral treatment failure is emerging which if not well addressed may reverse the gains made so far.

This study was conducted at Mbagathi District Hospital to determine the factors associated with first line and second line antiretroviral treatment failure at the HIV clinic. These included the demographic and socio-economic characteristics of the patients; adherence to treatment; side effects and interruptions; effects of alcohol and herbs on treatment and some biological markers.

A sample of 227 patients participated in the study. A quarter of second line patients had unsatisfactory adherence compared to 1.4% of first line patients and were 23 times more likely to fail treatment compared to those with good adherence (Odds ratio-OR=22.8, p-value< 0.001). A quarter of second line patients had a treatment interruption and were thirteen times more likely to fail than first line patients (OR=12.6, p-value 0.001). Non naïve patients were eleven times more likely to fail than naïve patients, (OR=10.6, p-value 0.001). Four fifths of second line patients had at least one side effect compared to a fifth of first line and were seven times more likely to fail treatment than first line patients, (OR=6.5, p-value<0.001). Patients with baseline CD₄ less than 100/ml were four times more likely to fail compared to those with higher CD₄ (OR=3.8, p-value 0.004).

In conclusion the main factors associated with treatment failure were unsatisfactory adherence; history of previous ARV use; ARV side effects; treatment interruptions and low baseline CD₄. It is recommended that more investments be put in ART programs to focus on adherence including

better adherence monitoring tools; more attention be paid to non naïve patients through intense monitoring; better ARV regimens with less side effects be considered for HIV patients and post test clubs as well as treatment literacy be strengthened to add to patients' psychosocial support.