

PREDICTORS OF ADHERANCE TO HAART IN MBAGATHI DISTRICT HOSPITAL.

Helen Kiarie - W61/60031/2007

This report was submitted in partial fulfilment of the Post Graduate Diploma in Research Methodology (PGD-RM) in the University of Nairobi Institute of Tropical and Infectious Diseases (UNITID).

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DECLARATION

This research is my original work and has not been presented for academic award in any other university.

Signature

Date.....

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This research project has been submitted with my approval as the University Supervisor

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ABSTRACT

Background

Adherence to highly active antiretroviral therapy (HAART) medications is critically important for the success of therapy in patients treated for Human Immunodeficiency virus - Acquired Immunodeficiency Syndrome (HIV/AIDS). Successful long-term treatment of HIV/AIDS requires at least 95% adherence to HAART, which, based on a twice a day regimen, translates into missing no more than two doses per month. This high level of adherence is necessary to prevent emergence of drug-resistant HIV variants that lead to regimen failure, and limit options for future therapy. Several factors have been described in various settings as being associated with adherence. These are Psycho-Socio Support, Time on ART, Financial support, Psychosocial and Antiretroviral side effects. Patient factors have been found to be the most important predictors of adherence in most studies.

The impact of unpunctuality for clinic appointments is closely associated with treatment outcomes for HAART. Virologic failure has been shown to occur more quickly in patients with gaps in refilling their medication than those with no gaps, as adherence will often be interrupted when patients run out of medication.

Measurement of adherence was by self report and pill counts based on the last 4 days and one month respectfully. Although it's important to compare adherence to biological markers, it was not able to corroborate patient self-reported and pill counts adherence with viral loads and CD4 responses in this study due to financial and logistical barriers., Several observational studies however have shown that these measurements correlate well with the plasma HIV RNA, supporting their value in HIV ARV medication adherence studies.

Objectives

The aim of this study was to measure the level of adherence, and its predictors among 251 patients receiving HAART treatment at Mbagathi District Hospital in Nairobi Kenya.

Study design

Cross sectional study.

Methodology

Adherence was measured based on a four day recall by self reports, using interviewer administered questionnaires and pill counts, and was computed as the actual number of doses taken divided by the number of doses prescribed and expressed as a percentage. This was dichotomised at 95% level into adherent and non adherent.

Data analysis

Predictors of adherence were explored by employing logistic regression using the pill count adherence as the outcome. In this study, the extent to which lateness to keep appointments is associated with adherence was specifically investigated, in the context of the duration between appointments given to patients.

Results

251 patients participated in the self report while 250 had their pill counts measured. 68 (26.7%) were male and (189) 73.5% were female, Age ranged from 20 to 70 years with a mean age of 39.8years. Most patients were very knowledgeable about HIV/AIDS and majority had a positive attitude towards their positive HIV status.

The mean 4-day adherence by self report was 99.7%, ranging from 79.2% to 100%. 98% reported 95% and above adherence. Of 250 patients who had pill count adherence measurement, only 70(28%) had 95% and above adherence. The mean adherence by pill count was 89.4% and ranged from 43.3% to 100%. Mean 1-month self reported adherence was 98.8%, ranging from 66.7% to 100%.

On multivariate logistic regression analysis, duration between appointments and being late for appointments did not predict poor adherence.

On average, the level of pill count adherence among latecomers was 89.2% compared to 89.5% among non-late-comers. The difference of 0.3% was not statistically significant, $p= 0.8$ based on a two sample t-test.

Further, based on a chi-square test of independence, there was no association between adherence and lateness. The percentages of poor and good adherents were similar between the late comers and non-late comers. Among those who came late for appointments, being away from home was the most common reason for reporting late for appointments.

Moreover, there was no agreement between adherence measured using pill count and that estimated using self-reports. A negative value (-1.85) was obtained using using Cohen's chance-corrected kappa statistic.

Side effects was the most common challenge encountered while taking medication (27.8%). Rash was the most common side effect reported - 47.3% of total cases.