

# **DOT-HAART IN A RESOURCE LIMITED SETTING: THE USE OF COMMUNITY TREATMENT SUPPORT CAN BE EFFECTIVE**

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## **Background**

- Data from Paterson et al demonstrated that a 95% rate of adherence to antiretroviral therapy was associated with a superior virologic outcome and a greater increase in CD4 counts (1). Other reports have emphasized the importance of maintaining high levels of adherence to antiretroviral drugs in order to increase the likelihood of complete and durable viral suppression (2).
- In Nigeria, the widespread use of ART in a setting of limited monitoring of viral response, poor adherence education, and an interrupted medication supply has the potential to quickly result in wide scale resistance.
- Adherence to antiretroviral therapy may therefore be particularly challenging and hence may require the exploration of different interventions in Resource limited Settings.

## **Patients and method**

- A twelve months observational study enrolling 175 antiretroviral naïve patients into four (4) arms to examine various community treatment support models using family and community members was carried out.
- The study employed sustained adherence education and (A) Daily DOT-HAART, (B) Twice Weekly Observation therapy, (C) Weekly

Observational therapy, and (D) Self Administered Therapy. All patients received generic combination of d4T, 3TC and Nevirapine.

- Community treatment support personnel ranged from patients' spouses or partners, family members, friends and members of the hospital HIV positive support group.

## **Results**

- Results at Week 48 showed a self reported adherence of 98% for the DOT and the self treatment groups.
- Weight increases over the 48 week study period were **6.6kg, 6.5kg, 6.3kg and 6.4kg** respectively for groups A, B, C and D.
- CD4 counts increased by **218, 267, 205 and 224** in groups i, ii, iii and iv respectively after 6 months treatment.
- Plasma HIV-1 RNA reached undetectable levels (<400 copies/ml) in **91%, 88%, 84% and 78%** of patients in groups A, B, C and D respectively at week 48.

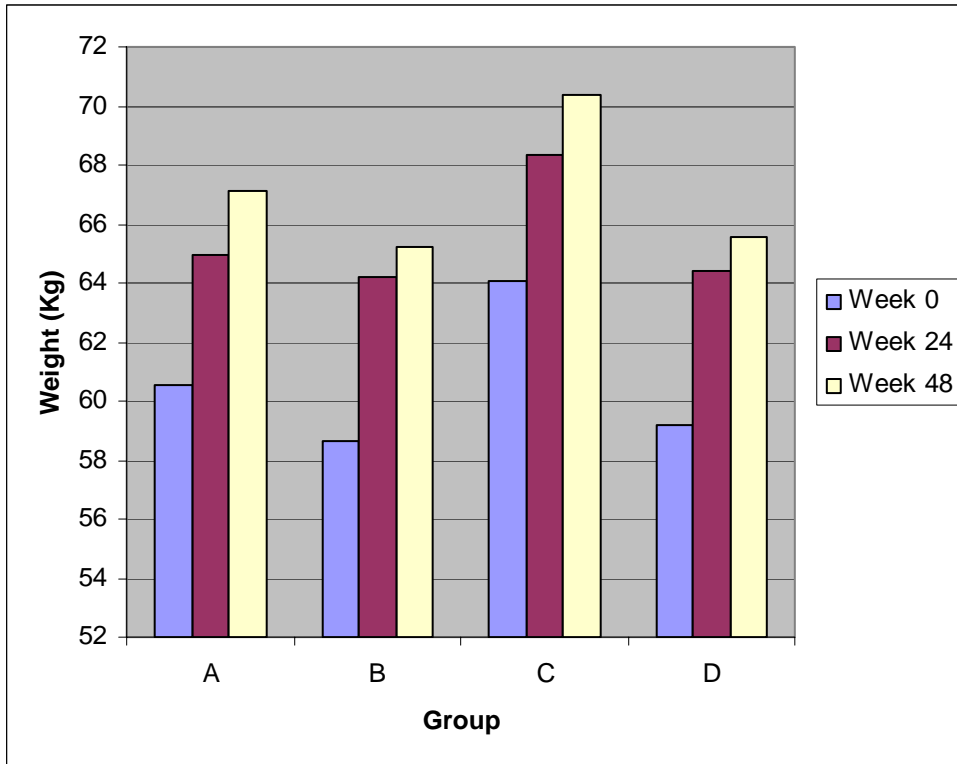


Figure 1: Mean weight increase of patients

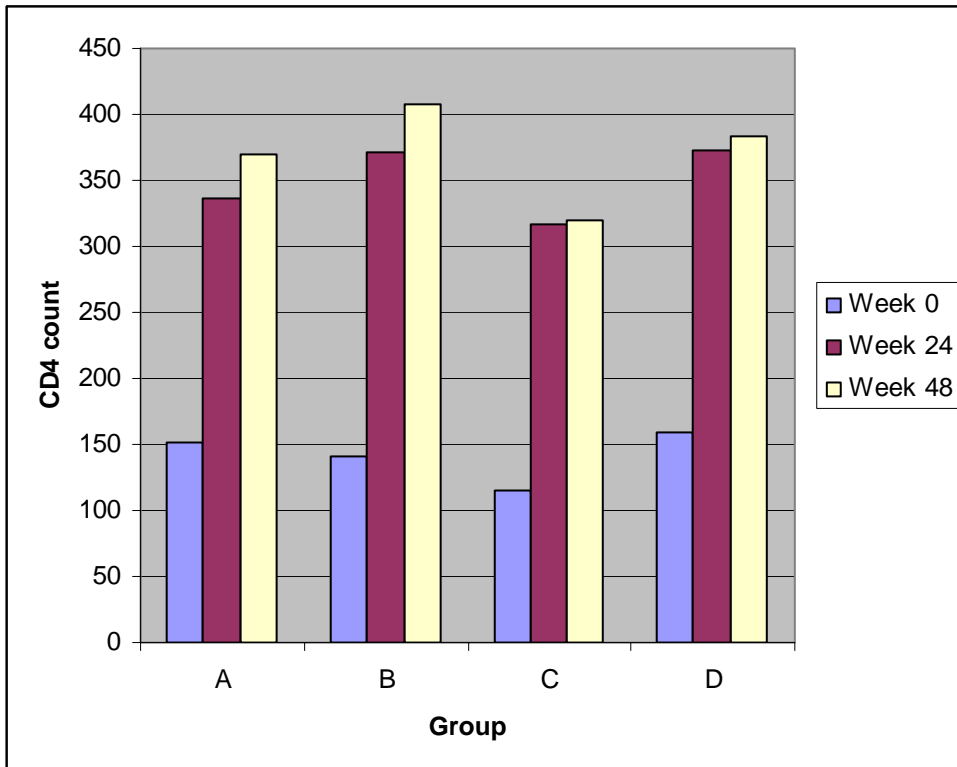


Figure 2: Mean CD4 count of patients

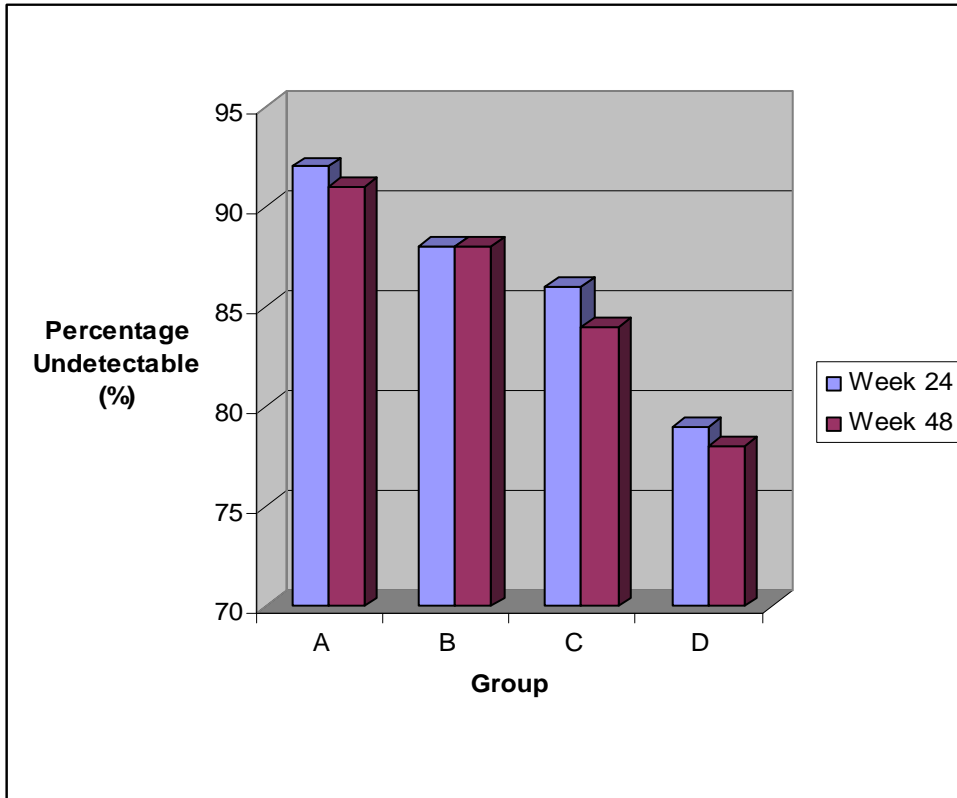


Figure 3: Viral load (<400 copies/ml) of patients at 24 and 48 weeks

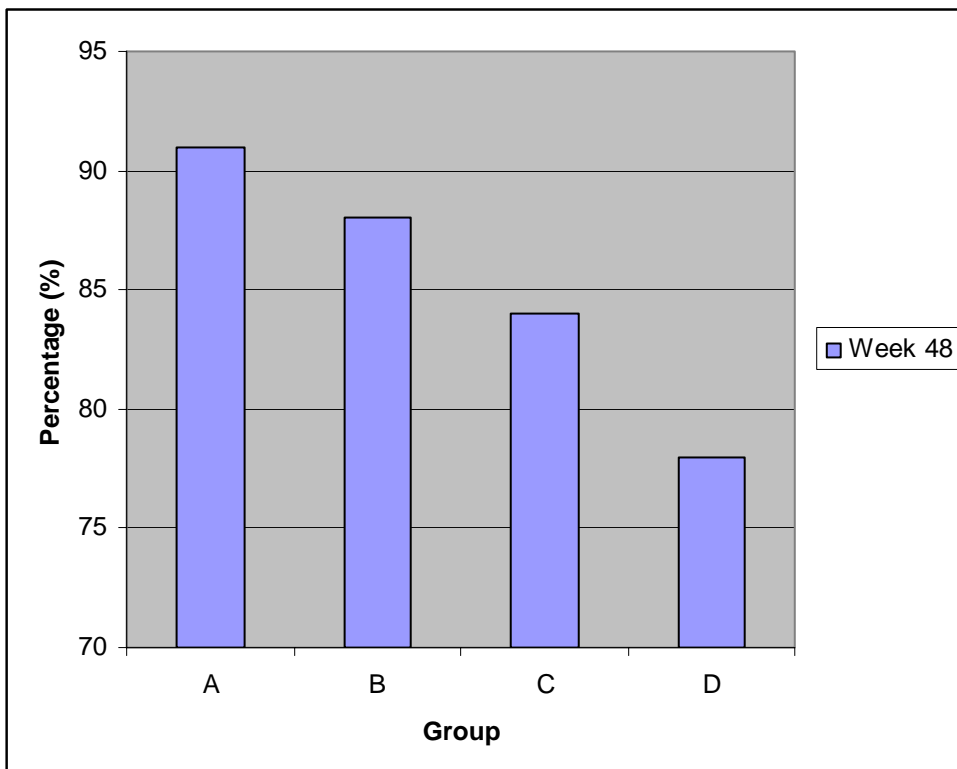


Figure 4: Viral load at week 48 (<400 copies/ml)

## **Conclusions**

- Despite concerns of weak adherence, this study has shown that it is possible to achieve good treatment outcomes with ART in Resource Limited Settings in Africa
- Community involvement through education and support activities can greatly enhance drug adherence which leads to durable viral suppression
- This strategy may prove useful with the massive scaling up of ART programs envisaged in sub-Saharan Africa, particularly those to be supported through PEPFAR, Global Fund and the various Government efforts

(1) Paterson D et al. *Ann Intern Med.* 2000;133:21-30, (2) Press N et al. *J Acquir Immune Defic Syndr.* 2002;31(suppl 3):S112-S117