Community-Based Adherence Support Improves Outcomes for Patients Receiving Antiretroviral Treatment in South Africa

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Background

- The antiretroviral treatment (ART) program in SA has expanded rapidly since 2004, now includes > 2 million people.

- However, long-term patient retention in public programs is challenging, with 35% of patients reported lost to care after 3 years of ART.

- Viral resistance and treatment failure rates are increasing.

- To attempt to improve ART adherence, viral suppression and long-term patient retention, community-based adherence support (CBAS) programs have been introduced by Kheth’Impilo.

- Kheth’Impilo is an NGO that supports DOH HIV care and treatment facilities, and implements community-based programs.
Patient Advocates (PAs)

- Are lay community-based health workers who provide adherence and psychosocial support for ART patients to address household challenges affecting adherence.

- Drawn from community, must have matric. Are trained for 1 month re HIV, ART, TB, adherence, psychosocial support.

- Perform home visits & assess patients with household to identify potential issues that adversely affect adherence: eg. non-disclosure of HIV status, substance abuse, nutrition security, domestic violence.

- Do pre-treatment education to ensure understanding around adherence

- Patients encouraged to adhere to positive lifestyle choices that include taking treatment & keeping clinic appointments.

- Plan support to suit individual client needs through planned home visits and clinic based support.

- Special attention paid to those ill, pregnant women, with TB, children, those with irregular clinic attendance.
Study methods

Aim:

• To evaluate the effectiveness of community adherence support for patients receiving ART in routine settings in SA.
• A multicentre cohort study was performed at 77 facilities supported by Kheth’Impilo (four provinces).
• Included adults, adolescents, children and starting ART.
• Prospectively collected routine clinical data were analysed.
• Outcome measures were mortality, loss to follow-up, patient retention and viral suppression after starting ART.
• Outcomes compared between patients who received and did not receive CBAS, using an intention-to-treat approach.
Results

- 71,806 patients were included, 20,650 (28.8%) received CBAS and 51,156 (71.2%) did not.

- Adult baseline median CD4 cell count 125 cells/µl (IQR: 65-175)

- Children baseline median CD4 cell percentage 12.0% (IQR: 7.0-17.1%).

- Observation time: 105,143 person-years
Mortality after starting ART in adults

35% reduction in mortality (adjusted hazard ratio 0.65 [95% CI: 0.59-72]) amongst CBAS patients
Loss to follow-up in adults

37% reduction in loss to follow-up (aHR 0.63 [95% CI: 0.59-0.68])
Viral suppression on ART (by intention to treat)

CBAS vs. non CBAS adults: (adjusted odds ratio 1.49 [95% CI: 1.40-1.58]).
Retention in care amongst children

43% reduced hazard of attrition of patients with CBAS:
\[ \text{aHR 0.57 (CI: 0.35–0.94)} \]
Mortality amongst children

60% reduction in children with CBAS: aHR 0.40 (CI: 0.15–1.06)
Viral suppression in children (by ITT)

Greater virological suppression in children with CBAS (aOR 1.60 [95% CI: 1.35-1.89]).
Adolescents and Youth: Mortality and loss to follow-up

33% reduction in mortality  
aHR 0.67 [95% CI: 0.51-0.86]

32% reduction in loss to follow-up  
aHR 0.68 [95% CI: 0.58-0.80]
Adolescents: Viral suppression (ITT)

28% higher amongst those with CBAS (aOR 1.28 [95% CI: 1.16-1.41]).
Conclusions

• Patients receiving community-based adherence support had reduced mortality, reduced LTFU and improved viral suppression after starting ART.

• Community adherence support is important for ensuring good ART outcomes & should be closely linked and coordinated with primary level healthcare services.

• Low-cost intervention (mean R15 - R30 /patient /month) that can be introduced and developed in resource-poor settings.
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