

ICAP Journal Club

ICAP's Journal Club is designed to inform ICAP staff and colleagues of the latest scientific literature by providing a succinct summary and critical analysis of important studies, and by discussing the implications of the research on clinical work.

Article

F. Vogt, L. Kalenga, J. Lukela, F. Salumu, I. Diallo, E. Nico, E. Lampart, R. Van den Bergh, S. Shah, O. Ogundahunsi, R. Zachariah, J. Van Griensven. **Decentralizing ART Supply for Stable HIV Patients to Community-Based Distribution Centers: Program Outcome from an Urban Context in Kinshasa, DRC.** *J. Acquir Immune Defic Syndr* 2017;74:326-331.

Background and Context

Global and national HIV treatment guidelines increasingly recommend the use of differentiated care models for stable HIV patients.^{1,2,3} Key elements of this approach include re-assessing the “when, where, who, and what” of HIV services for patients doing well on antiretroviral treatment (ART) with the goal of improving quality, efficiency, and patient satisfaction.⁴ In recent years, innovative pilot programs have explored such approaches as fast-track appointments, multi-month ART prescribing, decreased visit frequency, clinic-based ART “clubs”, and community-based ART groups (CAGs).^{5,6} This study evaluated the impact of a novel community-based ART distribution model on retention in an HIV treatment program in Kinshasa, DRC.

Study Summary

This retrospective cohort study used routine programmatic data from June 2011 through September 2014 to assess decentralization of stable adult patients on ART from the HIV clinic at a large referral hospital in Kinshasa to three community-based drug distribution centers. Eligible patients were at least 18 years of age, had been on first-line ART for at least six months, had been clinically stable for at least three months, had a CD4 cell count of 250 cells/mm³ and were not pregnant.

The community-based ART distribution model – called “PODI” for “poste de distribution communautaire” – was established by Médecins sans Frontières (MSF) and Réseau National des Organisations d'Assises Communautaires, a local network of people living with HIV (PLHIV), in an effort to decongest the HIV clinic at Kabinda Hospital and to provide more efficient services to patients. Other differentiated care models, such as CAGs, were not felt to be a good fit for Kinshasa, a congested megacity of 11 million with a relatively low HIV prevalence of 1.6%.

Patients were scheduled to visit the PODI every three months, and to make a single annual visit to the hospital for clinical consultation and laboratory testing. PODIs were staffed by lay workers, usually PLHIV, who dispensed drugs, measured weight, conducted symptom screening, provided adherence support, and conducted tracing when patients missed appointments. A typical visit took less than 15 minutes. No clinical services were available, but up-referral to the hospital was arranged when needed.

The primary outcome for the analysis was retention status, defined as retained, died, transferred out or loss to follow up (LTFU). Attrition was defined as either death or LTFU. Monthly cumulative incidence was calculated for each outcome and a multilevel Poisson regression model was used to

identify risk factors for attrition.

Study Population:

- 2,603 patients were decentralized to PODIs during the study period. Of these, 246 (9.4%) did not meet decentralization criteria and an additional 98 (3.7%) were missing data, such as the date of decentralization.
- 2,259 were included in the analysis, contributing 4026.9 person-years with a median follow-up of 2.0 years (interquartile range [IQR] 1.1 – 2.4).
- Average age was 45 years (standard deviation [SD] 9.3); 76.1% were female; 40.6% were married and 67.6% had secondary level education.
- Mean time on ART at time of decentralization was 4.4 (SD 2.6) years.
- Median CD4 count at the time of decentralization was 545.5 cells/mm³ (IQR 407-727).
- 72.3% had a travel time to the PODI of under 45 minutes.

Outcomes:

- Loss to follow up was 2.2% at six months, 4.8% at 12 months, and 9.0% at 24 months.
- Death was 0.1% at six months, 0.2% at 12 months, and 0.3% at 24 months.
- Crude attrition incidence was 5.66/100 person-years (95% confidence interval [CI] 4.97 – 6.45), with little variation over time.
- No demographic variables were associated with attrition.
- On multivariate analysis, the risk of attrition was lower for patients receiving nevirapine (as compared to efavirenz), not receiving D4T, with BMI ≥ 18.5 kg/m², and on ART for ≥ 3 years at the time of decentralization.

Critical Analysis

This study demonstrated low attrition rates for the unique PODI model of differentiated care for stable adult patients. Twelve-month retention was comparable to that seen in community-based adherence clubs (CACs) in Cape Town,⁷ and slightly lower than that seen in community ART groups (CAGs) in rural Mozambique.⁸ The data are consistent with other studies showing that decentralized models of care are associated with significantly higher retention rates than conventional facility-based models.⁹

The following points should be considered when interpreting the study findings:

- The cohort has no comparison group and baseline data on retention rates at the hospital ART clinic are not provided.
- There are no data on patients who met criteria for decentralization but were not referred to PODIs.
- There are no data on clinical or laboratory outcomes, such as CD4 count, viral load, or clinical disease progression.
- The PODI model was developed for a specific urban low-prevalence context and may be less relevant in other settings.

Implications

The PODI model combined elements of decentralization, task shifting and visit spacing to de-

link clinical care from drug distribution. This study's findings add to the growing evidence base supporting the effectiveness of diverse differentiated models of care for stable patients on ART.

This article synopsis was written by Miriam Rabkin. Share your thoughts on this article or suggest an article for Journal Club by emailing her at mr84@columbia.edu.

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