



# Retention of Clinically Stable ART Patients in a Rapid Model of Care in Haiti

# #1017

Colette Guiteau Moise<sup>1</sup>, Clovy Bellot<sup>1</sup>, Kelly Hennessey<sup>2</sup>, Vanessa Rivera<sup>1,4</sup>, Patrice Severe<sup>1</sup>, Darley Aubin<sup>1</sup>, Fabienne Homeus<sup>1</sup>, Alix Sainvil<sup>1</sup>, Serena P. Koenig<sup>3</sup>, Jean W. Pape<sup>1,4</sup>

1. Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections (GHESKIO), Port-au-Prince, Haiti; 2. Analysis Group, Boston, MA, USA. 3. Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA. 4. Center for Global Health, Weill Cornell Medical College, New York, USA

## INTRODUCTION

GHESKIO (Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections) is the largest provider of HIV services in the Caribbean. GHESKIO is located in downtown Port-au-Prince, Haiti; most patients live on < \$US 1 per day. Long clinic waiting times are a major contributor to attrition among patients on antiretroviral therapy (ART). We evaluated outcomes for clinically stable ART patients enrolled in a new rapid model of care, the "Rapid Pathway" (RP), in one ART clinic at the GHESKIO Center in Port-au-Prince, Haiti.

## METHODS

Clinically stable patients who had received at least 6 months of ART, with good clinical evolution, and no WHO stage 3 or 4 conditions were eligible for RP care. Patients were evaluated on a consecutive basis for RP enrollment. Once enrolled in RP, patients were scheduled for clinic appointments every two months. At each visit, patients were contacted one day in advance by a community health worker (CHW). Patients who were asymptomatic were eligible for RP care, and those with symptoms or poor adherence were referred to a physician for evaluation. Patients in RP received care by a nurse, who evaluated health status, dispensed ART and other medications at the point of service, and completed a visit form in the electronic medical record. Patients' clinic time was measured using Samsung Galaxy Nexus 4G Android mobile phones equipped with a "time and motion" application.

## GHESKIO'S RP MODEL OF CARE

*GHESKIO Data Management generated a weekly list of potential patients for RP care with upcoming clinic appointments one week before scheduled visits. The list was generated from GHESKIO's EMR and was sent to the ART Clinic for review one week before patients' RP appointments.*

### First Check:

The CHW reviewed the list to select potential RP patients with stable or increasing CD4 counts.

### Second Check:

The physician reviewed the list generated by the CHW, and evaluated the clinical and immunologic status of each patient to confirm RP visit eligibility.

### Third Check:

The nurse prepared the final weekly list for patient calls.

## RP MODEL OF CARE cont.

### Reminder Phone Calls

The CHW called each patient on the final list one day before their scheduled appointment, and reviewed a symptom checklist, health status, and confirmed attendance for the next day's visit.

*CHW spoke with patient and patient was available to come to scheduled appointment*

CHW prepared ART and other medications for next-day clinic visit

*CHW didn't speak with patient*

CHW notified physician and deployed team for patient tracking and home visits

*CHW spoke with patient but patient was unavailable to come for visit*

CHW verified patients' medication supply and re-scheduled clinic visit

## RESULTS

1,799 patients were enrolled in RP care from June 1 to August 31, 2014. Of these, 950 (53%) were female, the median age was 46 (IQR: 39 to 53), 1,024 (57%) lived in or near a slum in downtown Port-au-Prince, 632 (35%) lived on < \$US 125/year, 860 (48%) had no school or primary school only, and 319 (18%) were single. 1,663 patients (92%) were retained in care at 12 months. Median 12-month adherence was 97% (IQR: 86-100%).

In multivariable analysis, predictors of 12-month retention in care included female gender (aOR 1.62; 95% CI: 1.08-2.43) time on ART (aOR 1.13; 95% CI: 1.05-1.21), and high adherence in the 6 months prior to RP enrollment (aOR 1.01; 95% CI: 1.01-1.02), as defined by being <5 days late to any visit, with adherence  $\geq 95\%$  by medication possession ratio.

Of the 1,799 clinically stable patients who were enrolled in RP, 1,165 (65%) were highly adherent in the 6 months prior to RP enrollment. The adherent patients were older ( $p < 0.001$ ), but had no difference in income ( $p = 0.95$ ) education ( $p = 0.10$ ), or marital status ( $p = 0.19$ ), compared with clinically stable patients who did not meet adherence criteria for RP.

## RESULTS

Among patients with high adherence prior to RP enrollment, at 12 months after RP enrollment, median adherence was 99% (IQR: 94 to 100%), 1113 (96%) of patients were retained in care, 50 (4%) were LTFU, and 2 (<1%) had died. Median CD4 count increased from 481 (IQR: 329 to 662) to 530 cells/mm<sup>3</sup> (IQR: 373 to 708).

	All patients enrolled in RP	Highly adherent prior to RP enrollment
Retention – no. (%)	550 (87%)	1,113 (96%)
Median adherence (IQR)	97 (86-100%)	99% (94-100%)

## CONCLUSIONS

Clinically stable and adherent ART patients had outstanding retention with expedited, nurse-led care. Patients with poor adherence, however, need additional support to improve retention. Further studies are planned to assess the feasibility and effectiveness of scaling up this intervention in Haiti. This program may also serve as a model for other resource-poor settings.