Using an electronic medical record system to identify factors associated with attrition from the HIV antiretroviral therapy program at two hospitals in Haiti

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BACKGROUND
Patient retention is important for the success of Haiti’s national antiretroviral therapy (ART) program.

METHODS
This retrospective cohort study examined ART attrition among adult patients enrolled on ART from 2005-2011 in two large public-sector Departmental hospitals, using the Santdé electronic data system. The study characterized ART attrition levels according to definitions of attrition based upon ART dispensing data and clinic encounter data. The study explored the patient demographic, clinical, temporal, and service utilization factors associated with ART attrition. The study used time-to-event analysis methods.

RESULTS
Among the 2,023 patients in the study, ART attrition on average was 17.0 per 100 person years (95% CI: 15.8-18.3). In adjusted analyses, risk of ART attrition was up to 89% higher for patients living in distant communes compared to patients living in the same commune as the hospital (HR: 1.89, 95% CI: 1.54-2.33; p<0.001). Hospital site, earlier year of ART start, spending less time enrolled in HIV care prior to ART initiation, receiving a non-standard ART regimen, lacking counseling prior to ART initiation, and higher body mass index were also associated with attrition risk.

CONCLUSIONS
The findings suggest quality improvement interventions at the two hospitals, including: enhanced retention support and transportation subsidies for patients accessing care from remote areas; counseling for all patients prior to ART initiation; timely outreach to patients who miss ART pick-ups; “bridging services” for patients transferring care to alternative facilities; routine screening for anticipated interruptions in future ART pick-ups; and medical case review for patients placed on non-standard ART regimens. The findings are also relevant for policy-making on decentralization of ART services in Haiti.

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Figure 1: Conceptual Model for Factors Associated with ART Attrition

Table 1: Kaplan-Meier Estimates of ART Attrition at 2 Hospitals in Haiti, by Attrition Definition (2005-2011)

Table 2: Adjusted Hazard Ratios for ART Attrition at 2 Hospitals in Haiti, 2005-2011

- ART= antiretroviral therapy; BMI=body mass index; TB=tuberculosis; WHO=World Health Organization
- Hôpital St. Jérémie, HSM=Hopital St. Michel.
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- Site; # ART counseling sessions before initiation; time enrolled in pre-ART care
- Site; ART counseling sessions per 6 month period; time enrolled in pre-ART care
- Site; counseling sessions prior to ART start (None=reference)