## Retention in Care Among HIV-infected Patients Receiving or Not Receiving Antiretroviral Therapy in Eastern Africa

To the Editor-We share results from a study we conducted of patients "lost to follow-up" (LTF) from human immunodeficiency virus (HIV) care in Kenya, using methods similar to those described by Geng at al [1] to our knowledge in a population that has not been previously targeted using these methods—patients not receiving antiretroviral therapy (ART) (pre-ART patient group). As outlined by Geng et al, LTF status—which includes patients no longer in care at a given clinic, with unknown outcomes—presents a barrier to accurately assessing patient engagement in care.

Our study was conducted at a large HIV clinic in Gatundu District Hospital, Kenya, and was designed to determine patient engagement in care and vital status among patients classified as LTF in the pre-ART and ART groups. We analyzed routinely collected patient-level data and data collected prospectively via tracing for a random sample of adult patients classified as LTF. Patients with any HIV clinic visit between April 2008 and April 2012 were assessed for LTF status, defined as no visit in the final 6 months (pre-ART group) or final 3 months (ART group) of the period and not documented as dead or transferred out to another clinic. Of these, a 15% random sample, stratified

by pre-ART or ART status, was selected for tracing. Tracers tracked patients and completed a questionnaire with patients or contacts on vital status, engagement in care, and reasons for not continuing care at the facility. Tracing data were merged with the larger facility data set to provide updated information on care engagement and vital status for those sampled patients successfully traced. Rates and the percentage dead or in care were weighted to represent all patients LTF. Patients reported by a contact as alive were classified as in care (optimistic scenario) or not in care (pessimistic scenario) in separate analyses.

A total of 413 (21%) of 1974 clinic patients were LTF, of whom 66 (16%; 40 pre-ART and 26 ART) were sampled. In mid-2012, tracing was conducted and questionnaires were completed for 65 (98%) of the patients (46 patients, 19 contacts). Only 7 (18%) in the pre-ART and 6 (23%) in the ART patient group reported being disengaged from care. Nine (23%) in the pre-ART and 5 (19%) in the ART group were reported to have died. Updating the initial data with sample outcomes increased retention in care for the pre-ART group from 61% to 69% (pessimistic) or 75% (optimistic) and for the ART group from 84% to 88%; deaths increased from 10% to 18% and from 8% to 10%, respectively. Incidence rates for death were lower, and the rate of LTF status was substantially higher in the initial data than the rate of disengagement from care in the updated

Table 1. Incidence Rates for Lost to Follow-Up Status, Disengagement From Care, and Death in Pre-Antiretroviral Therapy (ART) and ART Patient Groups at Gatundu District Hospital, Kenya, 2008–2012, Using Initial Data and Data Updated With Weighted Results From Study Tracing

Patient Group	Incidence Rate per 100 Person-Years	
	LTF (Initial) or Disengaged (Updated)	Death
Pre-ART		
Initial data	12.8	3.5
Updated data	2.3 <sup>a</sup> or 4.6 <sup>b</sup>	6.4
ART		
Initial data	5.5	3.6
Updated data	1.2 <sup>a</sup> or 1.3 <sup>b</sup>	4.7

Abbreviations: ART, antiretroviral therapy; LTF, lost to follow-up

<sup>&</sup>lt;sup>a</sup> Optimistic scenario

<sup>&</sup>lt;sup>b</sup> Pessimistic scenario

data, for both pre-ART and ART patient groups (see Table 1).

Using the sampling based method described by Geng and colleagues [1], we found that death rates were underestimated and only a minority of patients in the pre-ART and ART groups classified as LTF were actually disengaged from care. LTF status has limited utility as a measure of care engagement for both pre-ART and ART populations.

## **Notes**

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## Reference

 Geng EH, Odeny TA, Lyamuya R, et al. Retention in care and patient-reported reasons for undocumented transfer or stopping care among HIV-infected patients on antiretroviral therapy in Eastern Africa: application of a sampling-based approach. Clin Infect Dis 2016; 62:935–44.

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