

HIV ART OUTREACHES ACHIEVE MORE THAN 90% VIRAL SUPPRESSION AND BETTER CLIENT RETENTION COMPARED TO THE ART CLINIC IN EASTERN UGANDA.

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BACKGROUND

An efficient antiretroviral therapy (ART) delivery system is necessary for viral suppression. This is a requirement by the UNAIDS 90-90-90 goals to end the AIDS epidemic by 2030 in particular the 3rd 90. HIV ART Outreach is a care model targeting stable patients in the community designed to implement an efficient delivery system to encourage long term retention into care by supporting patients. The aim of the study was to compare HIV viral suppression and retention among patients receiving care from the ART clinic and outreach and also determine factors associated with detectable viral loads.



Photo: ART outreach in May 2017, at Toroma County, Katakwi District in a hard to reach area of North Eastern Uganda. There is a clinician, Counselor and a SEEP field officer from Soroti HCC delivering services to that community. The cluster has about 60 clients. The site is about 60km from Soroti HCC. AHF-Uganda Cares has used a hired vehicle in the background. All costs are met by AHF.

METHODS

Data from HIV positive patients receiving ART from Soroti clinic and ART outreaches who had had a viral load test by June 2016 were included in the study. Patients' files and open MRS were used to extract clinical and demographic information. Patients were considered lost to follow up if they spent at least ≥ 91 days without returning to the ART clinic or outreach. Logistic regression was used to determine the factors associated with detectable viral loads.

RESULTS

Of the 447 participants, 293(65.5%) were receiving care from the ART clinic and 154(34.5%) from ART outreaches. HIV viral suppression was achieved in 93.7% overall, being 95.2% in the ART clinic and 90.9% in the ART outreach. There was no statistical difference between virological suppression in the ART clinic and outreach, $P=0.118$. Participants in the ART clinic registered more loss to follow up 22(7.5%) as compared to 1(0.7%) in the ART outreach, P -value 0.002. The independent factors associated with detectable viral load were age, 41-50 years [HR 0.13(95% CI: 0.03-0.56), $P=0.006$], current WHO stage 3 and 4 [HR 5.12(95% CI: 1.19-22.07), $P=0.029$], baseline ART regimen containing AZT [HR 4.22(95% CI: 1.14-15.68), $P=0.031$] and baseline ART regimen containing D4T [HR 5.89(95% CI: 1.16-29.97), $P=0.033$].

CONCLUSIONS

Patients in HIV ART outreaches are achieving more than 90% viral suppression surpassing the UNAIDS target. The same group registered more retention in care compared to clients in the ART clinic. Therefore we need to scale up HIV ART outreach services to suitable populations in order to end the AIDS epidemic by 2030.

TABLE 1: DEMOGRAPHIC (BASELINE STUDY) CHARACTERISTICS

Characteristic(s)	Categories	Static		Outreach	
		n	%	n	%
Sex	Male	165	56.3	76	49.4
	Female	128	43.7	78	50.6
Age	Median (InterQuartile Range -(IQR))	39	33-45	43	36-51
Baseline Weight	Mean (SD)	59.8	11.09	57.9	10.34
Baseline CD4	Median (InterQuartile Range -(IQR))	159	78-254	198.5	123-336
Baseline WHO Stage	1&2	272	92.8	153	99.4
	3&4	21	7.2	1	0.6
Baseline ART regimen	TDF based	77	26.3	53	34.4
	D4T Based	18	6.1	22	14.3
	AZT Based	197	67.2	78	50.7
	Second Line	1	0.3	1	0.7

The study recruited 447 participants, of which 293 were receiving care from ART clinic (static) and 154 were receiving care from the ART outreach. Demographic characteristics are summarized in table 1. Of all the participants, 53.9% were male. The median age was 39 (33-45) and 43(36-51) for participants in the ART clinic and outreach respectively. The baseline CD4 count was 159(78-254) and 198.5(123-336) for the ART clinic and outreach respectively.

TABLE 2: HIV VIRAL LOAD AND PATIENTS' STATUS BY GROUP

Variable(s)	Category	Static		Outreach		P-value
		n	%	n	%	
HIV Viral Load	Not Detected (<1,000 copies)	279	95.2	140	90.9	0.118
	Detected (1,000+ Copies)	14	4.8	14	9.1	
Patients' Status	LTFU	22	7.5	1	0.7	0.002
	Active	271	92.5	153	99.4	

There was no statistical difference between viral suppression in the ART clinic and outreach. In the ART clinic, 279(95.2%) of the participants had undetectable viral loads as compared to 140(90.9%) in the ART outreach, P -value 0.074. Participants in the ART clinic registered more loss to follow up 22(7.5%) as compared to 1(0.7%) in the ART outreach, P -value 0.002.

TABLE 3: FACTORS ASSOCIATED WITH DETECTABLE VIRAL LOAD

Demographic factors	Crude Hazard Ratio 95% CI	Adjusted Hazard Ratio 95% CI	P-value
Sex	Female	1	0.198
	Male	0.67 (0.31-1.47)	
Age	<31 Years	1	0.074
	31-40 Years	0.49 (0.16-1.49)	
	41-50 Years	0.30 (0.08-1.10)	
	51+ Years	0.62 (0.18-2.16)	
Group	Static	1	0.033
	Outreach	1.85 (0.85-4.04)	
Patients' status	LTFU	1	0.002
	Active	0.40 (0.11-1.44)	
Grouped weight	49Kgs and below	1	0.074
	50-74	0.83 (0.30-2.31)	
	75+	1.10 (0.25-4.87)	
WHO Stage	1&2	1	0.029
	3&4	2.63 (0.73-9.52)	
CD4	≤ 100	1	0.074
	101-200	1	
	201-350	0.56 (0.20-1.59)	
	351+	0.21 (0.03-1.66)	
Baseline ART	TDF Based	1	0.033
	D4T Based	6.05 (1.38-26.55)	
	AZT Based	3.14 (0.91-10.81)	
	2nd Line	1	

Over all, viral suppression was achieved in 279(95.2%) and 140(90.9%) of all the participants in the ART clinic and outreach respectively. The factors associated with detectable viral load in this patient group were assessed using logistic regression and both crude and adjusted hazard ratios are presented in table 3 with their 95% Confidence intervals. The independent factors associated with detectable viral load were age range 41-50 years [HR 0.13(95% CI: 0.03-0.56), $P=0.006$], receiving care from the ART outreach [HR 1.85(95% CI: 1.09-6.87), $P=0.033$], current WHO stage 3 and 4 [HR 5.12(95% CI: 1.19-22.07), $P=0.029$], baseline ART regimen containing AZT [HR 4.22(95% CI: 1.14-15.68), $P=0.031$] and baseline ART regimen containing D4T [HR 5.89(95% CI: 1.16-29.97), $P=0.033$].

