

# OUTCOMES OF COMMUNITY-BASED ANTIRETROVIRAL TREATMENT PROGRAM IN NAMIBIA

Poster #1117

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## Background

- Namibia is a sparsely populated country of 2.5 million people, with an HIV prevalence 12.6% (persons aged 15-64 years).
- About 52.1% of the population lives in rural areas, having to travel, on average, 25-59 km for HIV care.
- During 2007–2014, communities and health care facilities (HCF) in two high HIV burden districts in northern Namibia collaborated to establish Community-Based Antiretroviral Treatment (C-BART) services.
- Community members constructed basic structures close to their homes where healthcare workers visited quarterly to provide HIV clinical assessment, viral load (VL) and CD4 specimen collection, and antiretroviral therapy (ART).
- We evaluated clinical outcomes at these C-BART sites to inform program expansion



## Methods

- We conducted a retrospective cohort review of patients who were down-referred from HCFs to C-BART sites for continued HIV care during January 01, 2007–July 31, 2017, in Okongo (16 sites) and Eenhana (18 sites) Districts.
- Patient demographic characteristics, baseline CD4 count, clinical encounters, ART dispensation, and VL results were abstracted from electronic and paper records.
- Outcomes of retention (3-60 months) and viral suppression (<1000 copies/ml) were calculated.
  - Retention was defined as being alive and on ART with a documented clinical visit within 90 days of appointment date
  - Viral suppression was calculated by retention time points among patients who were alive and on ART within 90 days of data abstraction (November 30, 2017), and who had a VL test conducted at least 3 months after down-referral; VL test result closest to data abstraction date was used.

## Results

- Among the 909 adults, 65% were females, the median age was 38 years, and the median time on ART before down-referral to C-BART was 45 months. Among 122 children, 56% were males, the median age was 5.7 years, and the median time on ART before down-referral was 38 months (Table 1)

**Table 1. Demographic and clinical characteristics of patients in C-BART care at antiretroviral treatment initiation in two districts in Namibia, 2007–2017**

Characteristic	Adults (≥15 years)			Children (<15 years)		
	All patients N=909	Okongo N=504	Eenhana N=405	All patients N=122	Okongo N=62	Eenhana N=60
Overall N	909 (100.0%)	504 (55.4%)	405 (44.6%)	122 (100.0%)	62 (50.8%)	60 (49.2%)
Sex						
Female	586 (64.5%)	294 (58.3%)	292 (72.1%)	54 (44.3%)	25 (40.3%)	29 (48.3%)
Male	323 (35.5%)	210 (41.7%)	113 (27.9%)	68 (55.7%)	37 (59.7%)	31 (51.7%)
Age at ART initiation						
< 2 years	-	-	-	34 (27.9%)	15 (24.2%)	19 (31.7%)
2–4 years	-	-	-	26 (21.3%)	13 (21.0%)	13 (21.7%)
5–9 years	-	-	-	40 (32.8%)	22 (35.5%)	18 (30.0%)
10–14 years	-	-	-	22 (18.0%)	12 (19.4%)	10 (16.7%)
Median age (IQR), years	-	-	-	5.7 (1.8–9.0)	6.1 (2.0–9.0)	4.8 (1.6–9.1)
15–24 years	41 (4.5%)	29 (5.8%)	12 (3.0%)	-	-	-
25–34 years	279 (30.7%)	159 (31.6%)	120 (29.6%)	-	-	-
35–44 years	344 (37.8%)	194 (38.5%)	150 (37.0%)	-	-	-
45–85 years	245 (27.0%)	122 (24.2%)	123 (30.4%)	-	-	-
Median age (IQR), years	38 (32–46)	38 (32–45)	39 (33–48)	-	-	-
CD4 count (cells/μL) at ART initiation						
Sample size	855	486	369	-	-	-
Median CD4 count (IQR)	204 (142–311)	200 (140–314)	208 (144–308)	-	-	-
Duration on ART before down-referral to C-BART <sup>a</sup>						
Sample size	909	504	405	122	62	60
Median (IQR), months	45 (20–74)	31 (14–57)	64 (37–93)	38 (20–69)	25 (12–38)	62 (37–94)

- Among 909 adults and 122 children, almost 100% were retained in care at 3 months and 99% of adults (n=522) and children (n= 71) were retained at 12 months. In Okongo District, 91% of adults (n=141) and 96% of children (n=28) were retained at 60 months. (Table 2)

**Table 2. Retention in HIV care following down-referral to C-BART from healthcare facilities in two districts in Namibia, 2007–2017**

Retention Time Point	Adults (≥15 years)			Children (<15 years)		
	Number of patients retained / Number of patients down-referred (% retained) <sup>a</sup>			Number of patients retained / Number of patients down-referred (% retained) <sup>a</sup>		
	All patients	Okongo	Eenhana <sup>b</sup>	All patients	Okongo	Eenhana <sup>b</sup>
3 months	904/907 (99.7%)	502/503 (99.8%)	402/404 (99.5%)	122/122 (100%)	62/62 (100%)	60/60 (100%)
6 months	809/816 (99.1%)	457/461 (99.1%)	352/355 (99.2%)	110/110 (100%)	57/57 (100%)	53/53 (100%)
12 months	517/522 (99.0%)	359/364 (98.6%)	158/158 (100.0%)	70/71 (98.6%)	53/53 (100%)	17/18 (94.4%)
24 months	285/297 (96.0%)	285/297 (96.0%)	-	46/47 (97.9%)	46/47 (97.9%)	-
36 months	203/216 (94.0%)	203/216 (94.0%)	-	37/38 (97.4%)	37/38 (97.4%)	-
48 months	174/187 (93.0%)	174/187 (93.0%)	-	31/32 (96.9%)	31/32 (96.9%)	-
60 months	128/141 (90.8%)	128/141 (90.8%)	-	27/28 (96.4%)	27/28 (96.4%)	-

C-BART= Community-based Antiretroviral Treatment

<sup>a</sup> Percentage retained is the number of patients alive and on ART at the retention time point in C-BART divided by the total number of patients down-referred to C-BART and expected to be alive and on ART in C-BART at the retention time point, including those who died, were LTFU, and stopped ART, but excluding those who transferred out of the health district.

<sup>b</sup> Because C-BART sites in Eenhana District were opened in 2016, C-BART patients were followed for less than 24 months.

- Overall, 98% of adults (n=568) and 87% of children (n=77) retained in care at 3 months with available VL results 3+ months after down-referral had VS; additionally, 98% of adults (n=428) and 84% (n=58) of children retained in care at 12 months, and 98% of adults (n=121) and 83% (n=23) of children retained in care at 60 months (Okongo) had VS (Table 3).

**Table 3. Viral Suppression at least 3 months after down-referral to C-BART among patients alive and on ART within 90 days of November 30, 2017 in two districts in Namibia, 2007–2017**

Retention Time Point	Adults (≥15 years)		Children (<15 years)	
	Total <sup>a</sup>	% VS	Total <sup>a</sup>	% VS
3 months	554/568	97.5%	67/77	87.0%
6 months	545/558	97.7%	67/77	87.0%
12 months	418/428	97.7%	49/58	84.5%
24 months	238/245	97.1%	30/37	81.1%
36 months	177/182	97.2%	26/31	83.9%
48 months	156/161	96.9%	22/27	81.5%
60 months	119/121	98.4%	19/23	82.6%

C-BART= Community-based Antiretroviral Treatment; VS= viral suppression

<sup>a</sup> Number of patients with viral suppression (<1000 copies/ml) / number of retained patients alive and on ART (as of November 30, 2017) with available results on a viral load test conducted at least 3 months after down-referral to C-BART and closest to the data abstraction date (November 30, 2017).

- VS did not differ by the time on ART in CBART (range: 3 months–10 years) (p=0.49 and p=0.81, respectively).

## Conclusions

- The C-BART program demonstrated high levels of retention and Viral suppression among its patients, including children, alleviating concerns about providing ART to children.
- High retention rates were sustained up to 60 months after down-referral to C-BART sites, demonstrating the utility of C-BART as a long-term model for managing patients on ART, particularly in rural settings.
- An effort is underway to upgrade C-BART delivery sites structures to facilitate quality care



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