

## Follow-up of patients on antiretroviral treatment, included in community support and adherence group in Zambézia and Nampula, Mozambique

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### Background

Mozambique has a national HIV prevalence of 11.5% among the adult population (INSIDA, 2009). The Ministry of Health of Mozambique (MISAU) has launched an ambitious scale up plan to improve national coverage of antiretroviral treatment (ART) in an already overburdened health system. Patients on ART must come to the health facility (HF) for ARV drugs refill on a monthly basis and for clinical consultation every six months when clinically stable. Transport costs, distances to HFs and long waiting time are challenges to retain patients in HIV care and treatment. National SAPR13 12-month on ART retention is 64% with ICAP reporting 60% 12-month retention rate on ART. New strategies to improve retention have been a priority for the Mozambique national HIV program. An innovative strategy based on community support and adherence groups (GAAC – Grupo de Apoio a Adesão Comunitário) was first piloted by MSF, then adopted by MISAU as part of the National Acceleration Plan to increase ART uptake. The main objective of the strategy is to increase retention of patients on ART through greater involvement of patients and reduction of number of appointments at the HF. The strategy also aims at reducing the workload for health staff at HFs and strengthening the link between the HF and the community. In this strategy, a HF establishes a cohort of stable, adherent patients on ART who form a GAAC group. Each member of the group goes to the HF once every six months for medical appointment and collects the drugs for other members of the group. In each of the following five months a different member of the group will go to the HF. ICAP supports MISAU in the implementation of the strategy in the Provinces of Zambézia and Nampula.

### Methods

A retrospective observational cohort analysis was performed for HIV-positive patients enrolled in the GAAC program from September 2011 to June 2013 (Nampula) and to September 2013 (Zambézia). Inclusion criteria for GAAC: patients must be on ART for at least six months with good adherence, be clinically stable, with CD4 above 200 and be older 15 years of age. Key programmatic elements included baseline social and immunological characteristics at GAAC enrollment, time of follow-up in the GAAC program, and reasons of exit of GAAC program. Non-retention in GAAC was defined as the proportion of patients not remaining in the GAAC program at six, 12 and 24 months among those enrolled in the GAAC program.

### Findings

A total of 1,562 patients were found to be eligible and have been enrolled in the GAAC program with ICAP support since September 2011 (869 in Zambézia and 693 in Nampula, Figure 1). By the end of the reporting period, 1,263 (81%) of the eligible patients enrolled were still alive, retained on ART and actively followed in the GAAC program (82% in Zambézia and 80% in Nampula).

- Characteristics of patients:** Table 1 shows social and immunological characteristics of the 1,562 eligible patients enrolled in GAAC. The majority were women (71%) with a median age of 36 years. Median time on ART before enrollment in GAAC was 31 months, and CD4 at GAAC enrolment was 446 cells/ml. Median patient follow-up in the GAAC program was 12 months. Follow-up time under GAAC was significantly higher for patients exiting from GAAC and returning to usual facility based care and for those still alive and in GAAC (overall, 18.9 and 12.6 months, respectively), compared to those who died, were transferred or were lost-to-follow-up (median test,  $p < 0.0001$ ).
- Retention in GAAC:** In Nampula Province, the probability of remaining in the GAAC program was 97%, 86% and 72% at six, 12 and 18 months, respectively and in Zambézia Province, the probability of remaining in the GAAC program was 97%, 90% and 85% at six, 12 and 18 months, respectively (Figure 2), significantly higher than facility based retention rates.

### Conclusion

High retention rates are reported for patients eligible and enrolled in GAAC. But challenges such as lack of ownership of the strategy at HF level from MISAU staff, poor involvement of clinicians in identification of eligible patients and inclusion of patients not meeting eligibility criteria (children, unstable patients) need to be addressed to sustain high program effectiveness over time.

Figure 1: Patients enrolled in GAAC, eligibility and FU, Nampula and Zambézia, N=1,734

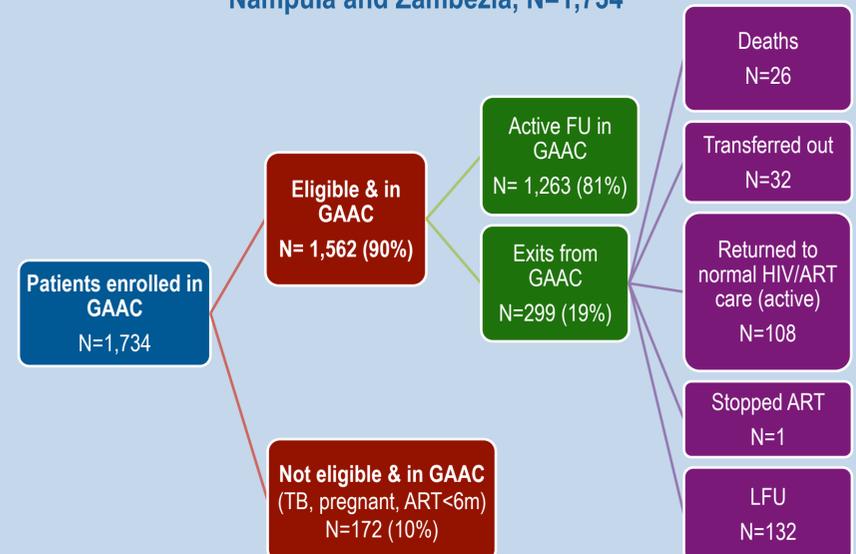


Table 1: Characteristics of eligible patients enrolled in GAAC, Zambézia (N=869) & Nampula (N=693)

Characteristics	Zambézia	Nampula	Total
Sex (Women) N (%)	648 (74.6)	465 (67.1)	1,113 (71.3)
Age, median [IQR]	35.8 [29.1- 43.1]	37.4 [30.8-43.3]	36.5 [30.1- 43.2]
Marital status N (%)			
In couple/Married	487 (56.0)	453 (65.4)	940 (60.3)
Single	219 (25.3)	169 (24.4)	388 (24.8)
Widow	69 (7.9)	25 (3.6)	94 (6.0)
Other	1 (0.1)	1 (0.1)	2 (0.1)
No information	93 (10.7)	45 (6.5)	138 (8.8)
Education level N (%)			
No education	68 (7.8)	108 (15.6)	176 (11.3)
Primary	502 (57.8)	385 (55.6)	887 (56.8)
Secondary	10 (1.2)	50 (7.2)	60 (3.8)
Superior	178 (20.5)	84 (12.1)	262 (16.8)
Other	0 (0)	2 (0.3)	2 (0.1)
No information	111 (12.7)	64 (9.2)	175 (11.2)
Nb of GAAC groups	133 groups	33 groups	166 groups
Nb of patients per GAAC group, median	6 patients/group	4 patients/group	5 patients/group
Time on ART before GAAC, in months, median [IQR]	32.9 [20.0-50.2]	27.8 [15.4- 47.9]	30.9 [18.2-49.6]
CD4 at GAAC enrollment median [IQR]	n=365 467 [327-654]	n=345 437 [304-601]	n=710 446 [310 - 632]
Time in GAAC in months, median [IQR]	14.9 [5.8-22.2]*	11.3 [6.9-15.9]*	12.2 [6.2-19.3]*
Active	14.9 [4.0-22.2]	11.7 [7.3-16.4]	12.6 [6.2-19.7]
Deaths	7.3 [4.4-16.3]	8.2 [0-12.2]	7.3 [1.6-12.5]
Transferred out	7.2 [4.7-12.7]	8.0 [4.4-9.4]	7.2 [4.7-11.0]
Returned to normal HIV care	22.4 [16.8-22.9]	11.8 [9.4-18.1]	18.9 [11.2-22.6]
LFU	9.2 [5.3-17.3]	8.9 [3.4-12.7]	9.1 [3.9-13.3]

\*median test for difference by cohort status : p value < 0.0001

Figure 2: Retention in GAAC over time, Nampula and Zambézia

