Advanced HIV Disease and the Care Cascade: Trends from 2015 - 2021

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BACKGROUND

- The burden of advanced HIV disease (AHD) remains high in much of Africa despite expanded access to ART.
- Designing interventions to effectively prevent and manage AHD requires an understanding of where the care cascade is failing.
- We analysed data from a series of studies in southern and east Africa, describing characteristics of individuals presenting with AHD between 2015 and 2021.

METHODS

- We compared demographics and ART status in the three following cohorts (Figure1):

(i) a cryptococcal antigen (CrAg) screening program in Botswana with CD4 counts ≤100 cells/μL in 2015-16[1];

(ii) a similar cohort recruited in Botswana in 2018-19 after universal ART introduction[2]; and

(iii) the multi-country AMBITION trial of cryptococcal meningitis conducted in 2018-2021[3].

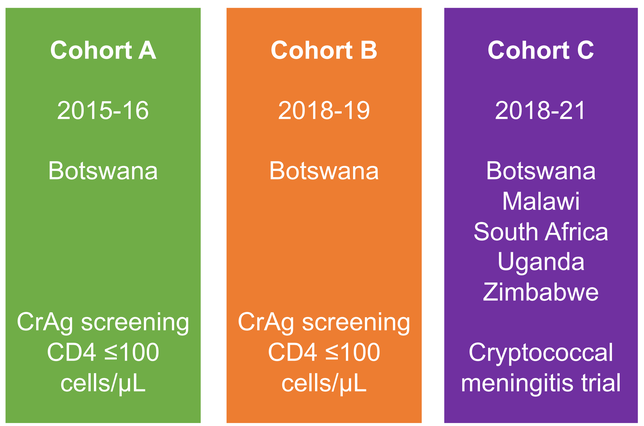


Figure 1: Three cohorts of participants with advanced HIV disease included in this analysis.

The majority of advanced HIV disease now occurs in individuals with a known HIV diagnosis and who have previously initiated ART, reflecting the cyclical nature of the care cascade

RESULTS

- Results are presented in Table 1 (right) and Figure 2 (below).

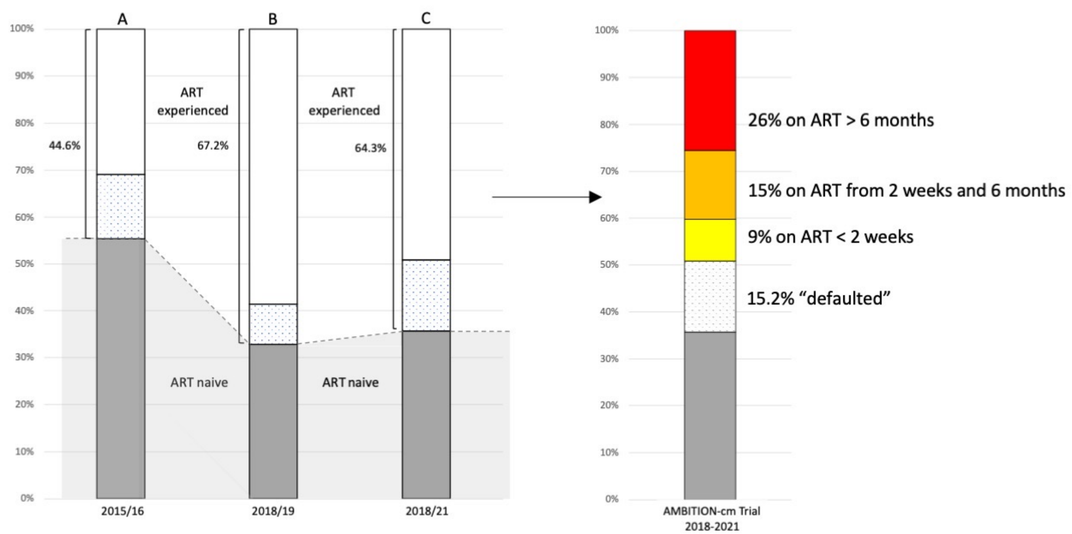


Figure 2: Left) Participant location on care cascade by cohort. The white shading indicates individuals currently on ART. The dotted shading indicates those who have defaulted. The grey shading indicates individuals who were ART naïve. Among those with known viral load results, the proportion with viral load >400cps/mL despite being on ART for >3 months was 170/509 (33%) in Cohort A and 151/435 (35%) in Cohort B. **Right)** Duration on ART among those in Cohort C, the AMBITION trial.

	Cohort A 2015-16 n=1645	Cohort B 2018-19 n=743	Cohort C 2018-2021 n=810	p-value
Age, years (median, IQR)	37 (32-43)	39 (32-45)	37 (32-43)	
Sex, female (%, n)	50% (828)	45% (334)	39% (316)	
CD4 count, cells/μL (median, IQR)	54 (25-78)	59 (31-83)	27 (10-58)	
ART status				p <0.001
ART naïve (%, n)	55% (911)	33% (244)	36% (289)	
Defaulted ART (%, n)	14% (225)	9% (64)	15% (123)	
On ART (%, n)	31% (509)	59% (435)	49% (398)	

Table 1: Participant demographics and location on the HIV care cascade by cohort.

CONCLUSIONS

- The proportion of AHD due to late HIV diagnosis and ART initiation has declined since the introduction of universal treatment in 2016, with most people with AHD now presenting having previously initiated ART.
- In addition to ongoing AHD presentations due to delayed HIV testing and ART initiation or default from care, a substantial proportion of AHD is occurring in individuals in care, who have either recently initiated or re-initiated ART with low CD4 counts, or who are experiencing treatment failure due to adherence or resistance issues, reflecting the cyclical nature of the care cascade.

REFERENCES

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