

Providing Antiretroviral Care to Adolescents in a Decentralized ART Programme in Rural Zimbabwe

Impact of targeted adherence strategies and extended ART supply

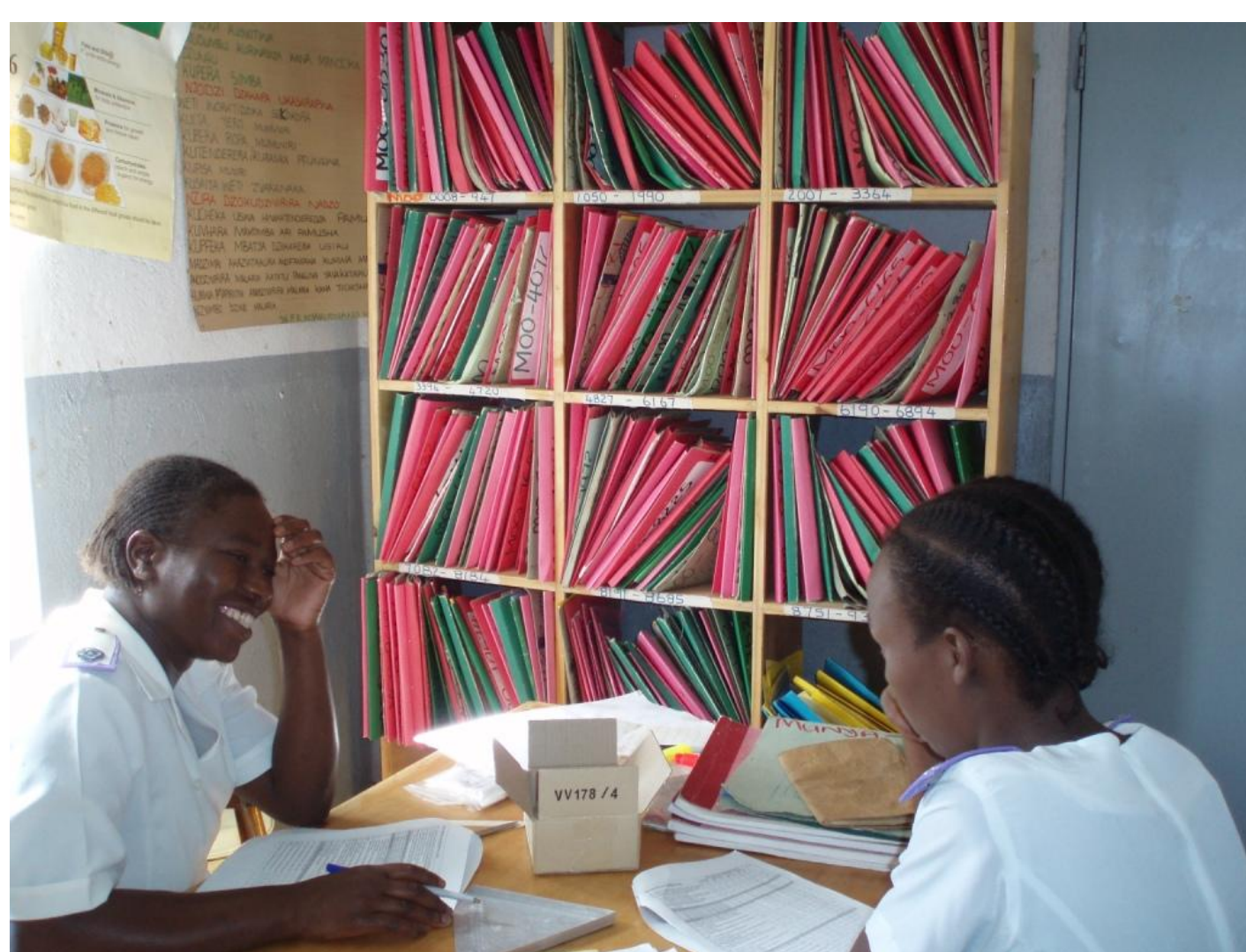
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Introduction

Zimbabwe has an estimated prevalence of HIV amongst young people (15-24 years) of 2.9% in males and 7.7% in females. Providing antiretroviral care to this age group has specific challenges but little has been described regarding effective models of care or the clinical outcomes for this group.

In 2004, Médecins sans Frontières and the MoH launched a decentralised HIV/TB programme in the rural Buhera district of Zimbabwe. To date 16,217 patients have ever been initiated on antiretroviral therapy (ART). Care is provided at two rural hospitals and in 22 primary health care clinics. Follow up of ART is performed by nurses and initiation of ART supervised by an MSF mobile medical team. Patients are followed intensively for three months and thereafter 3 monthly, being seen by a clinician and counsellor at each visit up to 18 months. Beyond 18 months patients are seen only by a clinician and formal counseling is triggered by signs of clinical failure, immunological failure or poor adherence. Patients are routinely given a 3 month drug supply. We describe programme outcomes for adolescents, young adults and adults.



Methods

Data were prospectively entered into an electronic patient register. All patients within the age criteria 10-28 years who were initiated on ART from 2005-2010 were included in the analysis. Kaplan Meier survival method was used to calculate rates of mortality and loss to follow-up, stratified by time on ART for age groups 10-19 years (adolescents); 19.1-24 years (young adults); 24.1-28 years (adults).



Results

This analysis included 1855 patients; 748, 353 and 754 patients were in the age groups 10-19, 19.1-24, 24.1-28 years respectively.

Among adolescents 52.3% were women compared to 87.0% in young adults and 80.8% in adults.

Mortality was 2.6 (95%CI 1.9-3.6), 5.2 (95%CI 3.6-7.6) and 6.5 (95%CI 5.3-8.1) per 100 person years in adolescents, young adults and adults respectively.

Rates of loss to follow up were 9.1 (95%CI 7.7-10.7), 20.7 (95%CI 17.2-25.0), 15.6 (95%CI 13.6-18.0), per 100 person years in adolescents, young adults and adults respectively.

Table 1: Baseline characteristics

	Adolescents	Young adults	Adults	Total
	N (%)	N (%)	N (%)	N (%)
	N=748	N=353	N=754	N=1855
Women	391 (52.3)	307 (87.0)	609 (80.8)	1307 (70.5)
Stage 3/4	465 (62.2)	252 (71.4)	590 (78.3)	1307 (70.5)
Initiated in 2005	37 (5.0)	7 (2.0)	33 (4.4)	77 (4.2)
Initiated in 2006	70 (9.4)	27 (7.7)	54 (7.2)	151 (8.1)
Initiated in 2007	173 (23.1)	80 (22.7)	146 (19.4)	399 (21.5)
Initiated in 2008	230 (30.7)	94 (26.6)	245 (32.5)	569 (30.7)
Initiated in 2009	214 (28.6)	130 (36.8)	238 (31.5)	582 (31.4)
Initiated in 2010	24 (3.2)	15 (4.2)	38 (5.0)	77 (4.1)

Table 2: Comparison of Death and Loss to follow up rates by age group

	Adolescents		Young adults		Adults		Total	
	Rate	95% CI	Rate	95% CI	Rate	95% CI	Rate	95% CI
Death	2.6	1.9-3.6	5.2	3.6-7.6	6.5	5.2-8.1	4.5	3.8-5.3
Loss to follow-up	9.1	7.7-10.7	20.7	17.2-25.0	15.6	13.6-18.0	13.4	12.2-14.8

Fig1: Kaplan Meier estimates proportion remaining alive

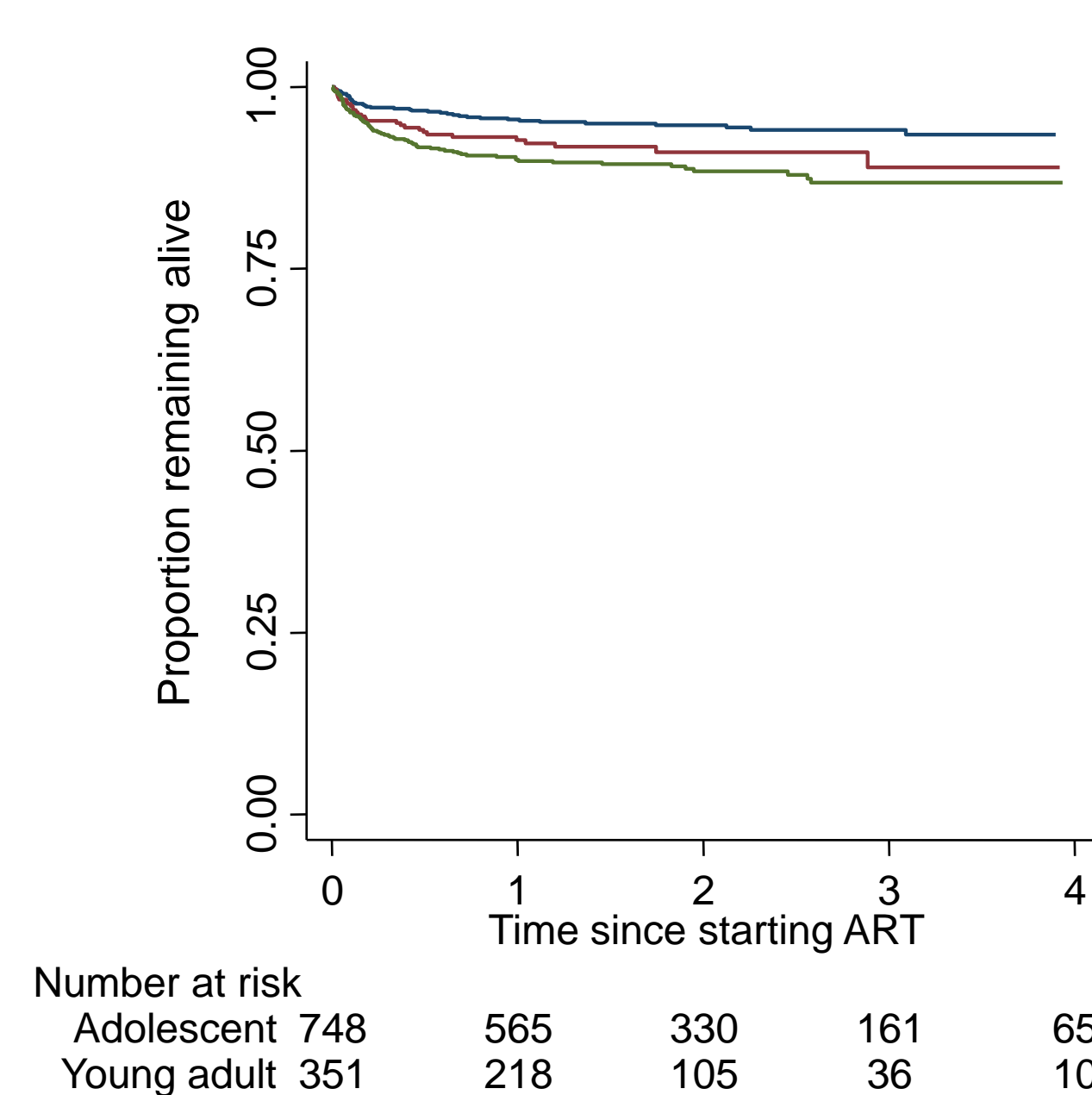
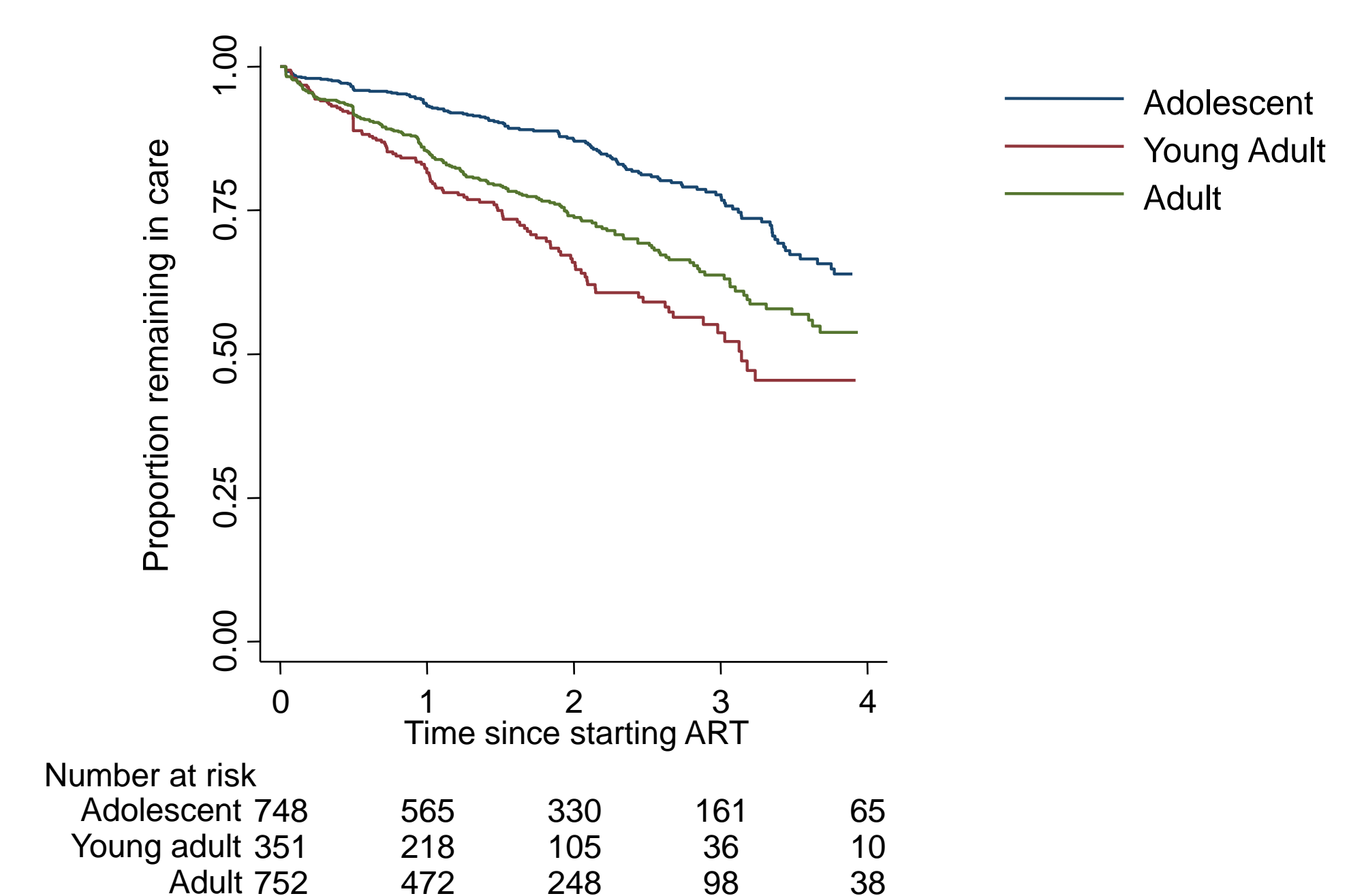


Fig 2: Kaplan Meier estimates proportion remaining in care



Discussion

Among adolescents in our study, the equal proportion of males suggests that a substantial number may have been infected with HIV perinatally. This contrasts with the much higher proportion of women in the young adult group who were likely to have been infected through sexual activity. Outcomes from this adolescent cohort compare favorably with other adolescent cohorts in resource limited settings. This group was able to be cared for successfully in a decentralized model, with less frequent clinical and adherence interventions along with provision of a three month drug supply. The analysis however highlighted the vulnerability of the young adult group. Increased loss to follow up in young adults may be explained by socioeconomic reasons such as completion of education, the need to move away from home to find work or entering into marriage partnerships. Specific adherence strategies targeting both adolescents and young adults should be developed. Greater emphasis should be placed on ensuring the health service provider addresses these life changes and that appropriate interventions, such as planned transfer to another ART facility, are proactively discussed.