



The Impact of Care Transitions on Pregnant Youth Living with HIV in Kisumu, Kenya

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BACKGROUND

- Pregnant adolescents & young adults living with HIV (AYALWH) in low-middle-income countries (LMIC), where transition from HIV clinic to antenatal care (ANC) is required, have poor attendance & retention in HIV care¹⁻⁵. Little is known about the impact of this pregnancy associated transition (PAT)¹.
- This sub-study of the Adapt for Adolescents (A4A) trial evaluates the impact of PAT in AYALWH on HIV care engagement.

Study Aims:

- Aim 1:** Describe socio-demographic characteristics of AYALWH with PAT vs. non-pregnant AYALWH without PAT.
- Aim 2:** Identify % AYALWH with PAT & types of transition (adolescent/adult clinic to/from ANC).
- Aim 3:** Assess impact of perinatal transition on time to HIV care engagement failure.

METHODS

- AYALWH (age 14-24 years) from three public facilities in Kisumu County, Kenya were enrolled from April 2021 to March 2022 (Figure 1).
- Data collected for A4A study via surveys & routine medical record abstraction.
- Primary outcome of AYALWH engagement failure at 2 years defined as the first occurrence of:
 - Missed clinic visit (≥ 14 by days) or
 - Viral failure (≥ 200 copies/ml) or
 - Death due to HIV
- Categorical variables compared with Chi-square test
- Kaplan-Meier survival curve visualized time to failure for AYALWH with PAT.
- Cox Proportional Hazard Model estimated hazard ratios, with & without time-varying covariate to account for different transition times to & from ANC.

Pregnancy associated transition did not impact HIV care engagement of adolescents & young adults living with HIV

RESULTS

- A total of 457 female AYALWH were included, of which 114 had a PAT (Figure 1)
- Participants with PAT were likely to be older, started on ART at an older age & married (Table 1).
- 59.6% of PAT occurred from adolescent/adult clinic to ANC.
- 43.9% of participants with PAT experienced failure of a missed visit, viral failure or both (Figure 1).
- The probability of remaining engaged in care for those with PAT decreased to 53.7% by 2 year (Figure 2).
- Among participants with PAT the time to survival to 80% was 384 days (95% CI: 229-379), compared to 288 days (95% CI: 276-300) for participants without PAT, but the difference was not significant (log rank test, $p=0.131$).
- Participants with PAT may have a lower risk of failure (HR = 0.77, 95% CI: 0.56-1.06) even when adjusted for transition timing (HR = 0.40, 95% CI: 0.05 – 3.27), but these results were not significant (Table 2).
- Longer duration on ART significantly reduced risk of failure (Table 2).

Figure 2. Kaplan-Meier Survival Curve of AYALWH with PAT

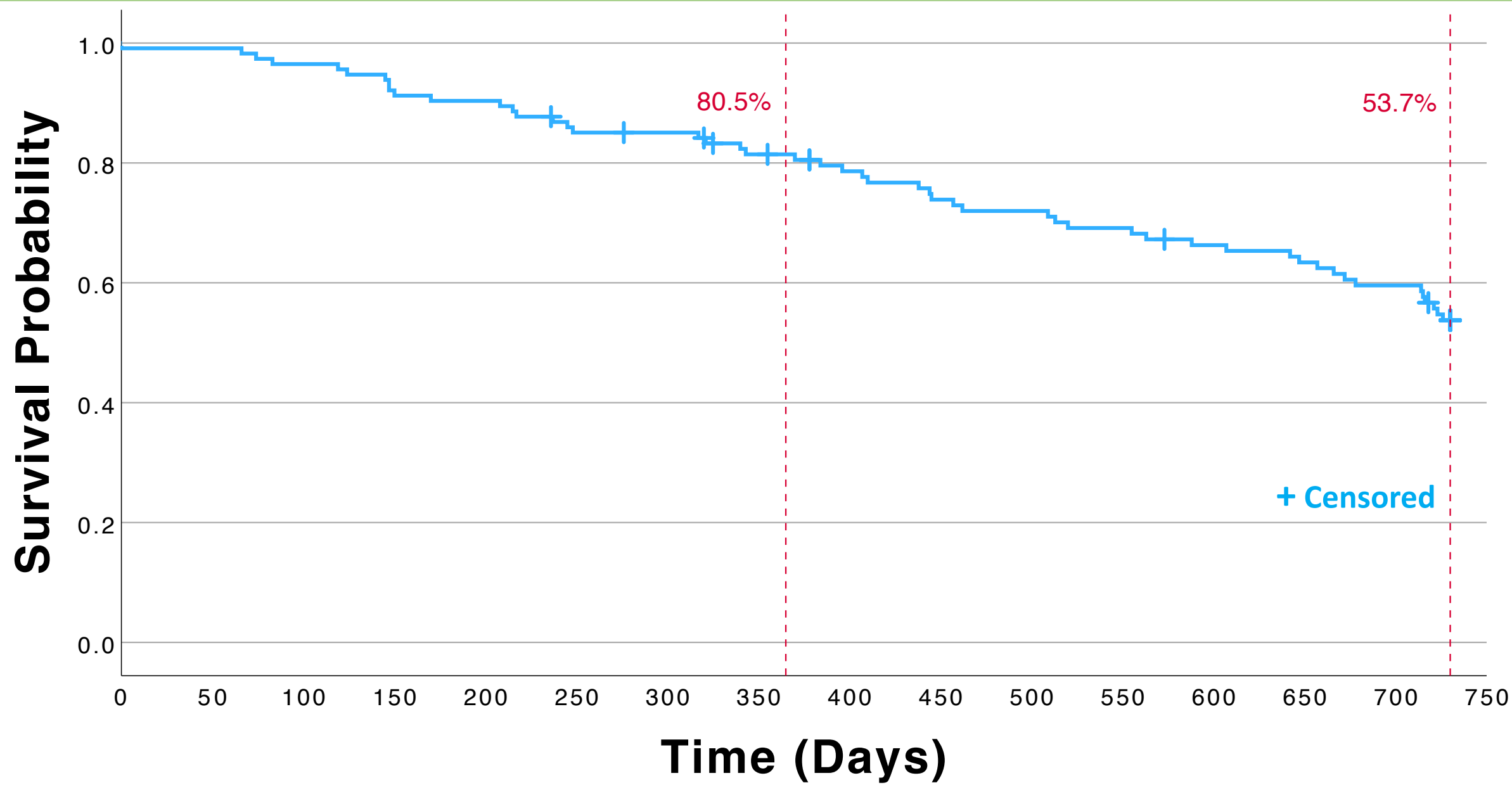


Figure 1. Study population and outcomes

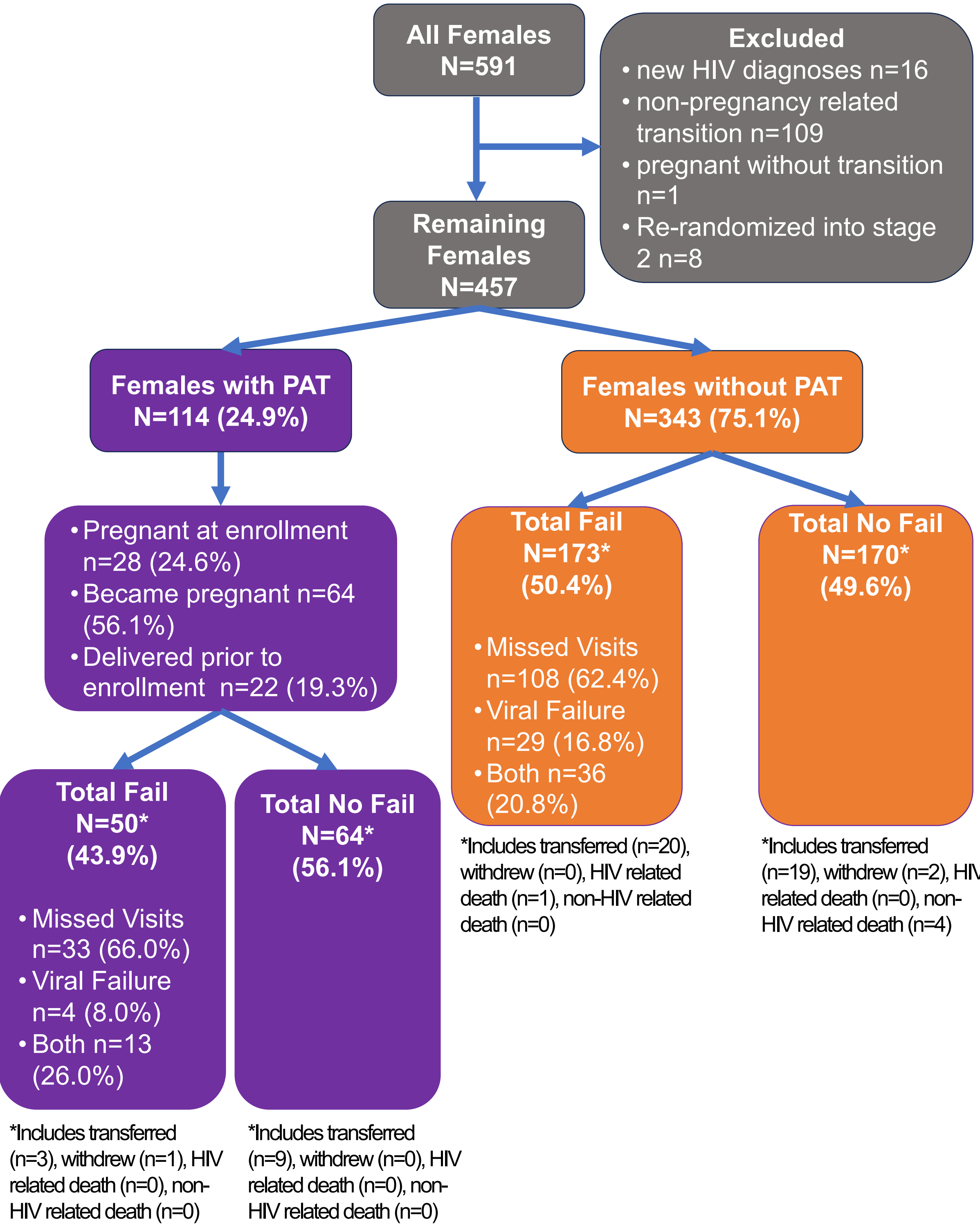


Table 2. Determinants of survival time using the Cox Proportional Hazards Model with transition as a time-varying covariate

Variable	Hazard Ratio	95% CI	p-value
Transition timing	0.40	0.05-3.27	0.389
Age	1.00	0.92-1.09	0.953
Person most responsible for well-being			
Parent	--	--	--
Self	0.94	0.61-1.45	0.786
Relative	1.09	0.75-1.58	0.643
Other	2.71	0.85-8.63	0.092
Partner	0.62	0.39-0.99	0.045
Highest level of formal education			
More than secondary	--	--	--
Primary education	1.15	0.71-1.87	0.573
Secondary education	1.21	0.77-1.89	0.407
Time on ART	0.96	0.93-1.00	0.028
Alcohol Use	1.04	0.96-1.13	0.341

Table 1. Demographics of pregnant AYALWH with a history of PAT vs non-pregnant AYALWH without a history of transition

Characteristic	Females with PAT N=114 (24.9%) N (%)	Females without PAT N=343 (75.1%) N (%)	p-value
Age group (years)			<0.01
14-19	39 (34.2)	167 (48.7)	
20-24	75 (65.8)	176 (51.3)	
Median age (IQR)	21 (19-23)	20 (16-23)	
Age at ART Initiation (years)			<0.01
<5	6 (5.3)	75 (21.9)	
5 to <10	22 (19.3)	64 (18.6)	
10 to 14	14 (12.3)	49 (14.3)	
>= 15	72 (63.1)	154 (44.9)	
Unknown/missing	0 (0)	1 (0.3)	
Median age at ART initiation (IQR)	17 (10-20)	12 (6-19)	
Median time on ART in years (IQR)	4 (1-9)	6 (2-11)	
Study Site			0.195
Lumumba	37 (32.4)	111 (32.4)	
Kisumu county hospital	32 (28.1)	124 (36.1)	
Ahero county hospital	45 (39.5)	108 (31.5)	
Person most responsible for well-being			<0.01
Self	14 (12.3)	55 (16.0)	
Parent	41 (35.9)	167 (48.7)	
Relative	18 (15.8)	73 (21.3)	
Partner	40 (35.1)	45 (13.1)	
Other	1 (0.9)	3 (0.9)	
Relationship Status			<0.01
Single (incl. separated/divorced, widowed)	30 (26.3)	197 (57.4)	
Married or cohabitating	47 (41.2)	58 (16.9)	
Not cohabitating	36 (31.6)	88 (25.7)	
Refused	1 (0.9)	0 (0)	
Highest level of formal education			0.057
Primary education	36 (31.6)	149 (43.4)	
Secondary education	62 (54.4)	145 (42.3)	
More than secondary	16 (14.0)	49 (14.3)	
Adverse Childhood Outcomes			0.114
Lower risk 0-3	64 (56.1)	221 (64.4)	
High risk ≥ 4	50 (43.9)	122 (35.6)	

Abbreviations: IQR = interquartile range; ART = antiretroviral therapy

CONCLUSIONS

- Engagement in care for AYALWH with a PAT declines over time.
- Additional research should explore if care engagement differs for AYALWH with and without PAT.
- Additional efforts are needed to ensure AYALWH with PAT remain engaged in care.

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ADDITIONAL KEY INFORMATION

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Acknowledgements: The authors thank the study and facility staff and participants, Director KEMRI, and HIV implementing partner the Center for International Health, Education and Biosecurity (CIHEB), University of Maryland for their support of this research.

Funding: This research was supported by the U.S. National Institute of Nursing Research, National Institutes of Health under grant number: R01NR018801. The content is solely the responsibility of the authors and do not necessarily represent the official views of the NIH.

Clinical Trial Number: [NCT04432571](https://clinicaltrials.gov/ct2/show/study/NCT04432571)

