

147

Tailored Multilevel Strategies Needed to Improve Retention Among Youth Living With HIV in Western Kenya

Hicks S¹, Jiang W², Kibugi J³, Badia J³, Richardson B^{2,4}, Beima-Sofie K⁴, Agot K³, Kohler P^{2,5}, John-Stewart G^{1,2,6,7}

¹University Of Washington, Department of Epidemiology, Seattle, United States, ²University of Washington, Department of Global Health, Seattle, United States, ³Impact Research & Development Organization, Kisumu, Kenya, ⁴University of Washington, Department of Biostatistics, Seattle, United States, ⁵University of Washington, Department of Child, Family, and Population Health Nursing, Seattle, United States, ⁶University of Washington, Department of Medicine - Allergy and Infectious Disease, Seattle, United States, ⁷University of Washington, Department of Pediatrics, Seattle, United States

Background: Youth living with HIV (YLH; ages 10-24) are less likely to be retained in care compared to children and adults. Age-specific data on non-retention cofactors among YLH are scarce.

Methods: This analysis used data from the Data-Informed Stepped Care study (DiSC; NCT05007717), a cluster randomized clinical trial following participants for one year to assess retention. Non-retention was measured by missed visits (no attendance within 30 days of scheduled visit) and loss-to-follow-up (LTFU; did not return within 12-month period). Cofactors of missed visits and LTFU were assessed using generalized linear mixed effect Poisson regression. Significant cofactors ($\alpha \leq 0.20$) in univariate models were adjusted for age; cofactors remaining significant ($\alpha \leq 0.05$) were included in multivariate models. Sensitivity analyses included stratification by gender, age, and mode of HIV transmission.

Results: Among 1911 YLH enrolled, median age was 17 years (IQR 14-19), and 57.7% were female; females had higher median age than males (17 vs. 16, $p < 0.001$). During 12-month follow-up, the proportion of missed visits was 8.4% (ages 10-14: 6.0%; 15-19: 7.9%; 20-24: 12.5%); cumulative incidence of LTFU was 7.0%. Older age was consistently associated with a higher risk of missed visits and LTFU. Overall, risk of missed visits was lower among YLH with higher resilience (multivariate-adjusted relative risk [aRR] = 0.93; $p = 0.035$) and those reporting the clinic met their

needs (aRR=0.81; $p = 0.037$). Among males, clinic meeting needs remained protective against missed visits (aRR=0.61; $p < 0.001$) while higher stigma increased risk (aRR=1.31; $p = 0.019$). Among females, only higher resilience was protective (aRR=0.91; $p = 0.042$). LTFU was associated with having no living parents (aRR=1.85; $p = 0.005$). Males had a higher risk of LTFU with horizontal HIV transmission (aRR=2.98; $p = 0.040$) and lower risk with higher resilience (aRR=0.76; $p = 0.036$). Females had lower risk of LTFU if they came to clinic alone (aRR=0.27; $p = 0.022$). Stratified analyses by age and mode of transmission did not identify additional cofactors.

Conclusions: In this YLH cohort, non-retention increased with age, demonstrating persistent challenges for older adolescents. Resilience, satisfaction with clinical care, and stigma exerted an influential role in retention for some YLH. Cofactors differed between strata of age, gender, and mode of transmission, suggesting need for tailored approaches.

