

Similar ART outcomes of adolescents, children and adults: a cohort study from 9 African countries

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BACKGROUND

Early reports suggest that adolescents are at greater risk of adverse outcomes on antiretroviral therapy (ART). We investigated ART outcomes of adolescents in HIV/AIDS programmes in sub-Saharan Africa.

METHODS

Using data from 17 programmes in 9 countries collected between 2003 and 2010, we assessed risk of mortality and loss-to-follow-up among ART naive adolescents (10-19 years) compared to other age groups. Outcomes were assessed using multivariate Cox proportional hazards models with Stata 10.1.

RESULTS

623 adolescents initiated ART (3.3% of 19,019 patients; 1,093 (5.8%) children <10y; 17,303 (91.0%) adults >19y). Mean age was 14.4 years, 57.8% were female, and 38.7% had WHO stage IV or CD4<100 cells (severely immunosuppressed); median follow-up on ART was 0.9 years (IQR 0.1-1.6).

Crude mortality rates were 39.8 per 1000 person years (95% CI 29.8-53.1) for children, 62.2 (45.9-84.1) for adolescents and 59.1 (55.8-62.5) for adults. After adjusting for gender, rural/urban setting, severe immunosuppression and pulmonary TB at initiation, children and adults had similar risks of death compared to adolescents (aHR 0.75 (95% CI 0.49-1.14) and aHR 1.04 (95% CI 0.76-1.41) respectively).

Crude loss-to-follow-up rates were 156.2 per 1000 (134.8-180.9) for children, 219.1 (186.2-257.9) for adolescents and 168.6 (163.0-174.5) for adults. After adjusting for other factors, as for mortality, children and adults had similar risks of loss-to-follow-up compared to adolescents (aHR 0.82 (95% CI 0.66-1.01) and aHR 0.89 (95% CI 0.76-1.05) respectively).

Within the group of adolescents, the risk of loss-to-follow-up increased with each additional year of age above 10 years (aHR 1.07, $p=0.03$), while the increased risk of death was not significant (aHR 1.10, $p=0.12$).

CONCLUSIONS

Adolescents represent a small proportion of the treatment cohort and face similar risks for mortality and loss-to-follow-up as adults and children. Targeted adherence and psychosocial support may be beneficial for adolescents as increasing age increased the risk of loss-to-follow-up.