

## **Abstract**

### **BACKGROUND:**

To date, an estimated 10% of children eligible for antiretroviral treatment (ART) receive it, and the frequency of retention in programs is unknown. We evaluated the 2-year risks of death and loss to follow-up (LTFU) of children after ART initiation in a multicenter study in sub-Saharan Africa.

### **METHODS:**

Pooled analysis of routine individual data from 16 participating clinics produced overall Kaplan-Meier estimates of the probabilities of death or LTFU after ART initiation. Risk factors analysis used Weibull regression, accounting for between-cohort heterogeneity.

### **RESULTS:**

The median age of 2405 children at ART initiation was 4.9 years (12%, younger than 12 months), 52% were male, 70% had severe immunodeficiency, and 59% started ART with a nonnucleoside reverse transcriptase inhibitor. The 2-year risk of death after ART initiation was 6.9% (95% confidence interval [CI]: 5.9 to 8.1), independently associated with baseline severe anemia (adjusted hazard ratio [aHR]: 4.10 [CI: 2.36 to 7.13]), immunodeficiency (adjusted aHR: 2.95 [CI: 1.49 to 5.82]), and severe clinical status (adjusted aHR: 3.64 [CI: 1.95 to 6.81]); the 2-year risk of LTFU was 10.3% (CI: 8.9 to 11.9), higher in children with severe clinical status.

### **CONCLUSIONS:**

Once on treatment, the 2-year risk of death is low but the LTFU risk is substantial. ART is still mainly initiated at advanced disease stage in African children, reinforcing the need for early HIV diagnosis, early initiation of ART, and procedures to increase program retention.