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# EARLY CASE FINDING IS STILL NEEDED IN THE HIV TEST-AND-TREAT ERA TO PREVENT MORTALITY

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## BACKGROUND

- Universal test and treat (UTT) for all people living with HIV (PLHIV) was recommended in 2016 by the World Health Organization and adopted by Kenya's national HIV program in 2017.
- We analyzed data from Kenya's HIV case surveillance (CS) system to determine mortality and interruptions in treatment (IIT) among PLHIV who initiated antiretroviral therapy (ART) after scale-up of UTT.

## METHODS

**Inclusion criteria:**

- Individuals newly diagnosed with HIV and initiated on ART in 2020 and 2021

**Follow-up period:**

- 12 months from ART initiation date

**Data source:**

- National Case Surveillance data derived from the national data warehouse which is a repository for client-level electronic medical record data

**Outcomes:**

- Monthly and cumulative retention and attrition rates by cause over the 12 months follow-up period
  - IIT without return to care, i.e., individual did not return for a clinic visit or ART refill for more than 90 days from the last scheduled visit
  - Documented death
  - Transfer out (TO) of a facility without a documented transfer in (TI) at another facility
  - Individuals without recorded death, IIT or who had a recorded TI after TO during the follow-up period were considered as active on care

**Analysis:**

- Descriptive statistics to calculate monthly average and cumulative death, IIT and TO, accounting for censoring at the end of each month

## RESULTS

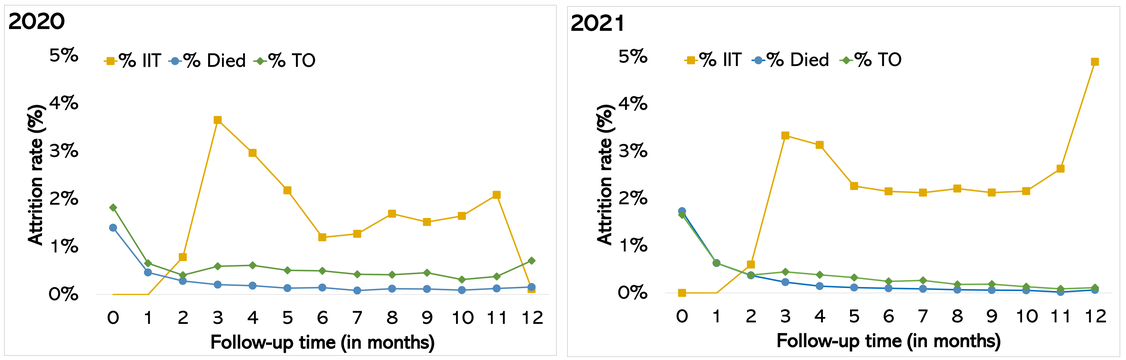
- 97,176 PLHIV initiated treatment in 2020; 84,103 initiated treatment in 2021
- Cumulative attrition was 30% in 2020 and 36% in 2021 at the end of 12 months since treatment initiation

**Among PLHIV newly initiated on treatment, ~3% died within the first three months of treatment initiation**

**Table 1**: Overall retention and attrition by cause in the first year of treatment initiation

| | Interruption in treatment (%) | | Died (%) | | Transfer Out (%) | | Overall retention (%) | |
|---|---|---|---|---|---|---|---|---|
| **2020** | | | | | | | | |
| | Avg./month | Cumulative | Avg./month | Cumulative | Avg./month | Cumulative | Avg./month | Cumulative |
| **All ages** | 1.5% | 19.1% | 0.3% | 3.5% | 0.6% | 7.8% | 97.7% | 70% |
| **< 15 years** | **1.1%** | **13.9%** | **0.3%** | **3.5%** | **0.6%** | **7.6%** | **98.1%** | **75%** |
| **15 – 24 years** | 1.8% | 23.1% | 0.1% | 1.2% | 0.8% | 10.7% | 97.3% | 65% |
| **25+ years** | 1.4% | 18.7% | 0.3% | 4.0% | 0.6% | 7.2% | 97.7% | 70% |
| **2021** | | | | | | | | |
| **All ages** | 2.1% | 27.6% | 0.3% | 3.7% | 0.4% | 5.0% | 97.2% | 64% |
| **< 15 years** | 1.7% | 22.2% | 0.3% | 4.0% | 0.5% | 5.9% | 97.5% | 68% |
| **15 – 24 years** | 2.5% | 32.6% | 0.1% | 1.1% | 0.5% | 6.9% | 96.9% | 59% |
| **25+ years** | 2.1% | 27.0% | 0.3% | 4.1% | 0.4% | 4.6% | 97.2% | 64% |

**Figure 1**: Monthly attrition, by cause, in the first year of treatment initiation




## CONCLUSIONS

- Case surveillance data in Kenya shows high levels of attrition in the first 12 months since treatment initiation among PLHIV
- Areas of programmatic strengthening:
  - Early diagnosis of HIV before onset of advanced disease
  - Intensive clinical management
  - Adherence support to PLHIV newly initiating treatment
  - Improvement in documentation of cause of death and cause of IIT

**Limitations**:

- Deduplication algorithm used on the case surveillance data was based on a score-based matching algorithm (*dtalink*) implemented in Stata/MP ver. 15.1
- Therefore, some PLHIV who may have returned to care may have been missed.
- PLHIV may have transferred out to a non-EMR facility and not captured as TI or returned to care

**Next steps**:

- Incorporate the national unique patient identifier into this analysis for deduplicated data
- Incorporate HIV diagnosis data to determine time from diagnosis to treatment initiation, baseline CD4 and other clinical factors at diagnosis
- Incorporate recent HIV infection status among new diagnoses to determine differential outcomes by recent HIV infection status

## ADDITIONAL KEY INFORMATION

**NDW and CBS dashboards:** https://dwh.nascop.org/; https://surveillance.nascop.org/cbs-dashboards/

**CBS course**: https://surveillance.nascop.org/cbs-course/

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**DISCLAIMER**: The findings and conclusions in this poster are those of the authors and do not necessarily represent the official position of the Government of Kenya or the U.S. Centers for Disease Control and Prevention.