

Causes of mortality among people living with HIV: preliminary results from a multi-center study in Uganda

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Background

- AIDS-related deaths in Uganda declined rapidly between 2010 and 2020 following the rapid scale-up of antiretroviral therapy (ART), but the rate of decline has slowed over time, with no change in the estimated deaths between 2019 and 2020. Globally, tuberculosis (TB) is the leading cause of death among people living with HIV (PLHIV). To gain a better understanding of causes of death among PLHIV in Uganda, we conducted an assessment to investigate factors associated with mortality.

Methods

- A cross-sectional study was conducted in 29 facilities from 13 regions in Uganda, which included regional referral hospitals and those with the highest number of deaths reported in DHIS2.
- We included PLHIV who had at least one documented clinic visit in 2021 and died in either 2021 or 2022. Electronic medical records were used to identify deceased or clients no longer active in care.
- Healthcare workers sought to contact patients that had missed their last scheduled visit by 28 days or longer to determine their current ART status or if they had died.
- Chart reviews were then completed on all known deceased clients, extracting information including cause of death.
- Quantitative data derived from the data collection tools were exported from SurveyCTO and analyzed using MS Excel and StataSE 15.

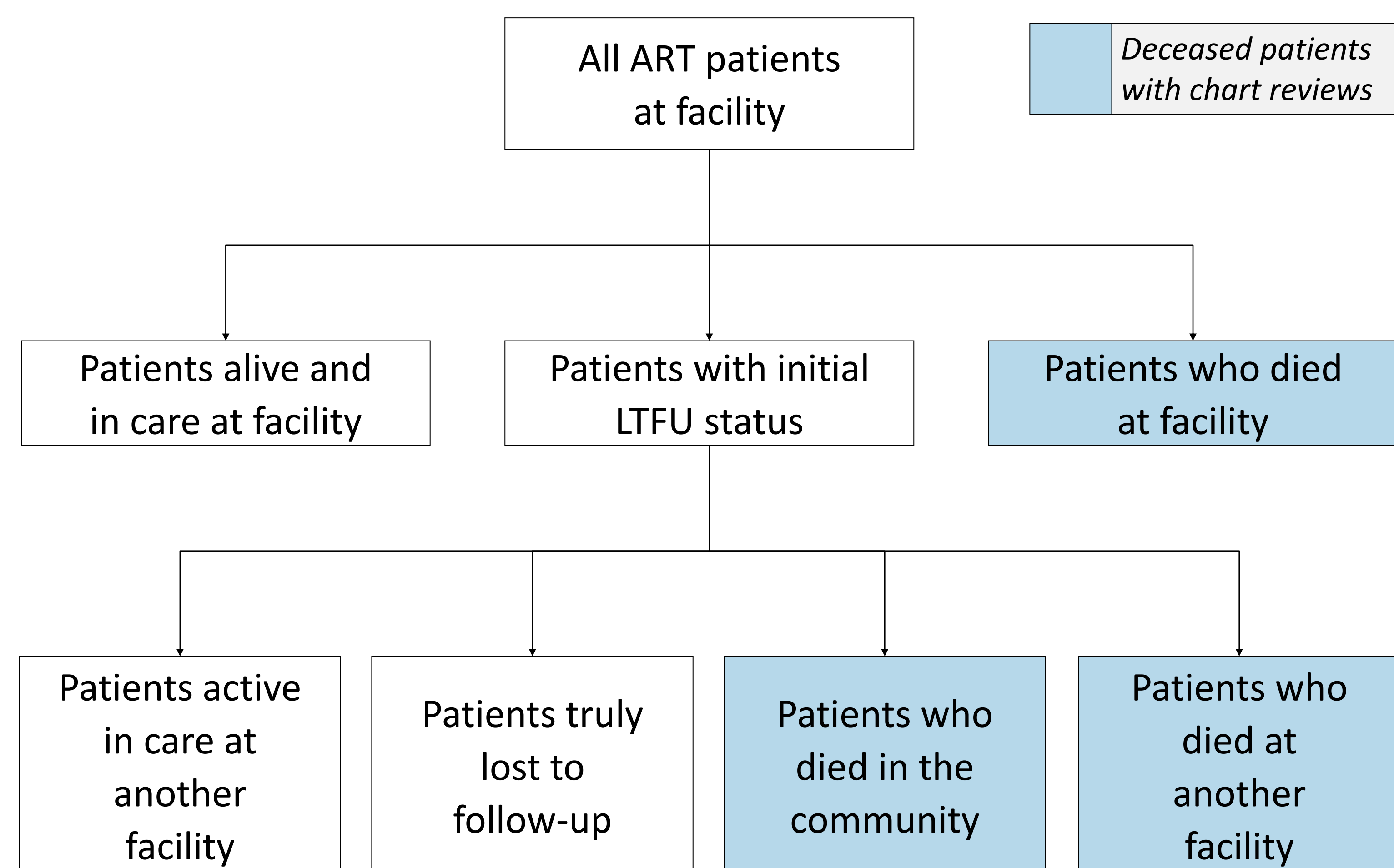


Figure 1. Data collection algorithm for cross-sectional study conducted

Results

- In total, 1,280 chart reviews were collected of patients that met the inclusion criteria, by extracting health records including cause of death.
- Median age at death was 44 years, 53% were male, and mean weight was 55 kgs (SD=15).
- 961 had recorded CD4 tests, of which 41% were less than 200 copies/mL (by definition, Advanced HIV Disease) and 21% were above 500 copies/mL.
- 89% of patients had received cotrimoxazole at some point and 57% of eligible clients received TB preventive therapy (TPT).
- Only 33% of patients had a cause of death recorded according to survey prepopulated categories; 35% listed 'other' cause; and 32% 'unknown'.
- Among the selected causes, TB had the highest proportion at 39%, followed by cancer at 16%, NCDs at 15%, and CM at 9%.

Cause of death recorded according to survey prepopulated categories (n=420) [excluding "other" or "unknown"]

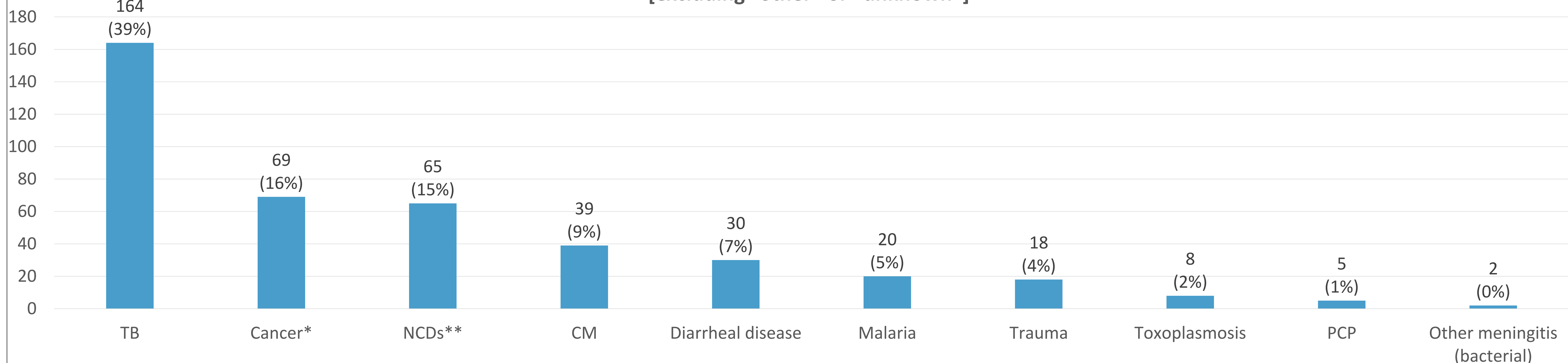


Figure 2. Number of patients by cause of death recorded according to survey prepopulated categories

*Kaposi-Sarcoma, Non-Hodgkin Lymphoma, Cervical Cancer

**DM, HTN, Cerebrovascular accident/stroke

CM = Cryptococcal meningitis; DM=Diabetes mellitus; HTN=Hypertension; NCD=non-communicable disease; PCP=Pneumocystis pneumonia

Conclusion

- As it is globally, TB continues to be a leading cause of death amongst PLHIV in Uganda and increasing efforts to provide TPT along with adherence support may help to reduce this burden.
- These preliminary findings highlight the significant proportion of PLHIV deaths caused by NCDs. Cancer and Other NCDs (DM, HTN, Cerebrovascular accident/stroke) equated to 31% of the deaths reviewed in this study.
- Further investigation of the high proportion of 'other' and 'unknown' causes of death will provide further clarity on drivers of mortality. Improved data records and routine mortality audits could help inform evidence-based programming to further reduce AIDS-related deaths.



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