From Mortality Review to Mortality Reduction: The Importance of Embedding Routine Pediatric HIV Death Audits in Tanzania

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BACKGROUND

- Despite access to antiretroviral therapy (ART), mortality among children living with HIV (CLHIV) remains a challenge in high-burden settings.
- Mortality reviews conducted in Tanzania in 2024 identified children under-five years of age, severe malnutrition, and tuberculosis (TB) as leading contributors to death.
- We assessed the implementation of standardized pediatric mortality audits and associated programmatic responses on mortality trend among CLHIV in Tanzania.

METHODS

- We conducted a longitudinal analysis of routinely collected pediatric mortality audit data from HIV care & treatment services in Tanzania over four years (Oct 2021–Sept 2025), covering 456 facilities. Standardized facility-based mortality audits were conducted for all reported deaths among CLHIV (<15 years) receiving ART.
- Multidisciplinary teams reviewed clinical records using standardized tools to assign causes of death by consensus and identify contributing client-, provider-, and system-level delays and gaps in care.
- Findings informed implementation and scale-up of a child-centered care package, including WHO STOP AIDS (Screen, Test, Optimize, Prevent) interventions and routine nutritional assessment. Mortality trends were analyzed over time by age group and contributing cause.

Main Findings

52% reduction in pediatric death; death rate decreased from 18 to 9 per 1,000 children on ART.
Children under five years accounted for 52% of deaths in 2025.
Severe Malnutrition is the leading underlying cause of death in 2025 (27%).

RESULTS

- Between October 2021 and September 2025, pediatric deaths among CLHIV on ART declined by 52%, from 105 deaths annually in 2022 to 50 deaths in 2025 (**Figure 1**).
- The death rate decreased from 18 to 9 children per 1,000 children on ART.
- Children under five years accounted for 52% of deaths in 2025, compared to 68% in 2022 (**Figure 2**),
- Severe malnutrition was the leading underlying cause of death in 2025 (27%), compared to (42%) in 2022, followed by bacterial infection (19%), severe pneumonia (17%), and TB (14%) (**Figure 3**).

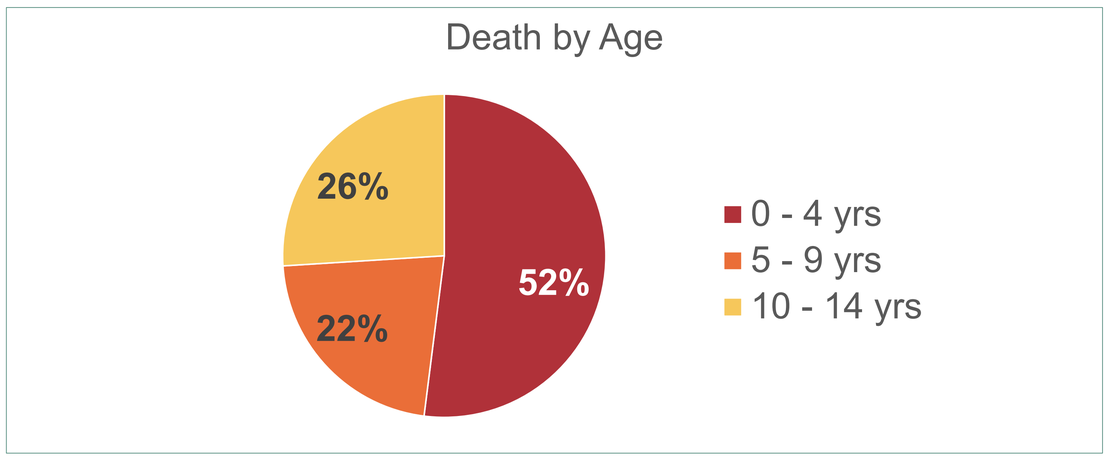

Figure 2: Proportion of Death by Age in 2025

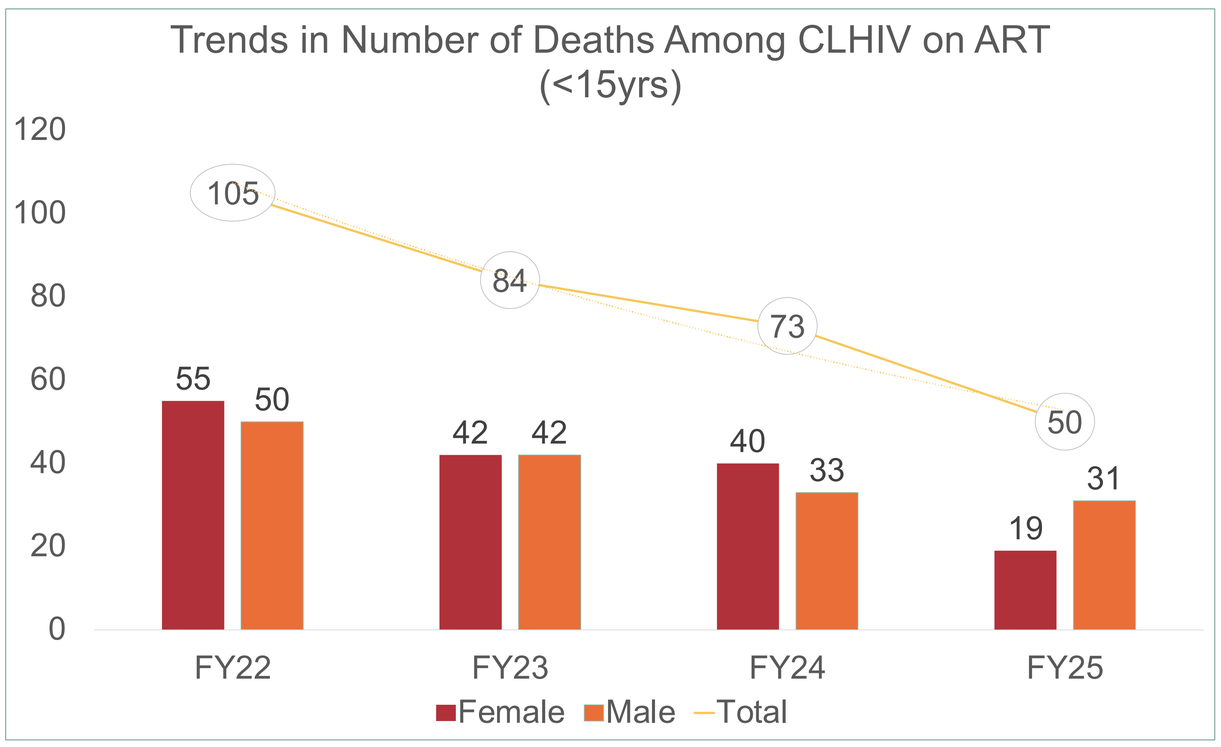

Figure 1: Trend in Number of Deaths Among CLHIV on ART (<15 yrs)

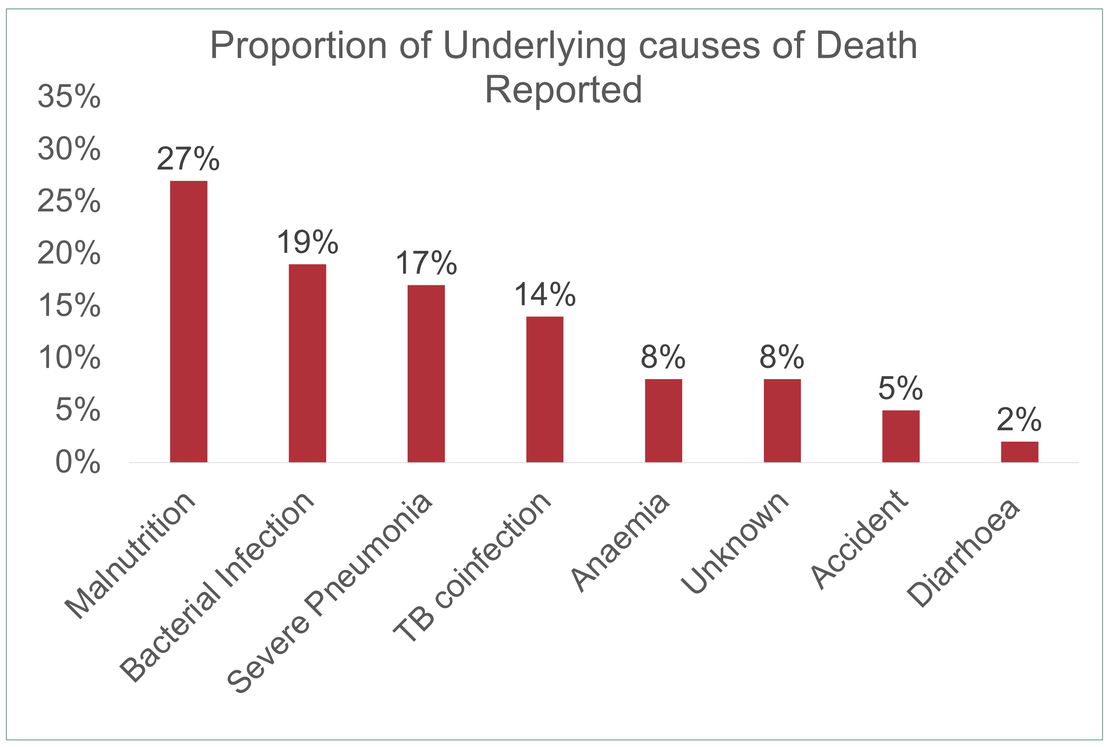

Figure 3: Proportion of underlying causes of death recorded among 50 CLHIV, between October 2024 - September 2025

CONCLUSIONS

- Routine pediatric mortality audits were associated with a decline in reported deaths and provided actionable insights to guide quality improvement in HIV care.
- Under-five mortality in CLHIV on ART remains high and is primarily driven by severe malnutrition and tuberculosis, highlighting that ART access alone is not sufficient.
- Institutionalizing mortality audits alongside integrated nutrition and strengthened TB screening and management is essential to further reduce pediatric HIV mortality.

Photo 1: A mother and child at a project supported health facility in Moshi, Tanzania, attending a Mother Support Group meeting.
Photo credit: Eric Bond, EGPAF

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