Temporal Changes in Cause of Death Among Adolescents and Adults in Six Countries in Eastern And Southern Africa: A Multi-Country Cohort Study using Verbal Autopsy Data

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Abstract:

Background. The absence of high-quality comprehensive civil registration and vital statistics systems across many settings in Africa has led to limited empirical data on causes of death in the region.

Methods. We harmonized verbal autopsy (VA) and residency data from nine health and demographic surveillance system (HDSS) sites across Eastern and Southern Africa, each with variable coverage across the period 1995-2019. InSilicoVA, a probabilistic model, was used to assign cause of death based on the signs and symptoms reported in the VA. Levels and trends in all-cause and cause-specific mortality rates and cause-specific mortality fractions were calculated, stratified by HDSS site, sex, age, and calendar periods.

Findings. All-cause mortality has generally decreased across the HDSS sites, particularly for adults aged 20-59. In many of the HDSS sites, these decreases were driven by reductions in HIV/TB-related deaths. For 2010-2014, the top causes of death were: road traffic accidents, HIV/TB and meningitis/sepsis for adolescents (12-19 years), HIV/TB for adults (20-59 years), and neoplasms and cardiovascular disease for older adults (>59 years). There was greater between-HDSS and between-sex variation in causes of death for adolescents compared to adults.

Interpretation. This study shows that there has been progress in reducing mortality across Eastern and Southern Africa but also points to age, sex and between-HDSS differences in causes of adolescent and adult deaths. This highlights the importance of detailed local-level data to inform health needs to ensure continued improvements in survival.