Addressing causes of mortality in Zambia

August 23 2019

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Despite the fact that people in sub-Saharan Africa are now living longer than they did two decades ago, their average life expectancy remains below that of the rest of the world population. A new study looked into the importance of various causes of death in Zambia and how eliminating the most prominent of these would impact life expectancy in

the country.

In 2018, the average life expectancy in Africa was 61 years for men and 64 years for women, while the average global life expectancy was 70 years for men and 74 years for women. Life expectancy is commonly used as an indicator of a population's general health and wellbeing, where populations with low life expectancies generally have problems maintaining health and longevity, while the opposite is true for populations with higher life expectancies. Improvements in terms of health and welfare are credited as one of the main reasons why life expectancy on the continent has been on the rise over the last two decades. Governments however need information on the most prominent causes of death in their countries for health policy formulation, planning, targeting, allocation of resources, monitoring, and the evaluation of existing population health programs and interventions. Unfortunately, in most African countries, this information is not readily available as death registration is incomplete due to inefficient and rudimentary civil registration systems and the fact that most deaths occur at home and are therefore seldom attended by medical professionals.

In their study published in the journal *Tropical Medicine and International Health*, researchers from IIASA, the University of the Witwatersrand, and the University of Zambia analyzed the World Health Organization's Zambia Sample Vital Registration with Verbal Autopsy (SAVVY) survey data to determine the main causes of death among adults in in the country. What sets this new study apart from previous work on the subject is that the researchers also endeavored to quantify the relative importance of causes of death in terms of the years of life expectancy gained if a specific cause of death were to be eliminated. The study further explored the data to determine whether there were any age-sex cause-specific mortality patterns for the five major causes of death identified within the adult age group and if there was any kind of socioeconomic or regional disparity in the causes of death among the

adult population.

"There is a great demand for analyzing SAVVY data in order to understand cause of death patterns specific to Zambia. An empirical investigation based on real data gives crucial input to prioritize health investments that could help to minimize premature deaths, which could in turn have immense implications on the economic and physiological wellbeing of the country," explains Nandita Saikia, a former postdoctoral researcher at IIASA and one of the authors of the study.

One of the biggest health issues that Africa has been plagued with is the HIV/AIDS epidemic, which is widely cited as the main reason for the continued lower life expectancy on the continent compared to that of the rest of the world's population. The study results show that HIV/AIDS indeed also remains the leading cause of death among Zambian adults in the age group 15 to 59 years, with higher proportions among women than men. For men, injuries and accidental deaths was the second leading cause of death, while for women it was tuberculosis. The researchers however point out that some HIV/AIDS deaths might have been misclassified as tuberculosis deaths as the two are closely associated. Malaria and non-communicable diseases of the circulatory system each also accounted for a significant portion of deaths, although the ranking of these diseases varied by gender.

The study indicates that a notable number of additional years of life expectancy would be gained across the population by eliminating especially HIV/AIDS in the adult age group. For the male population, the number of years gained would be 5.77 years, while for the female population it would be 6.40 years in the 15 to 59 age group. Eliminating tuberculosis and malaria in the country could also increase adult life expectancy by between 1.09 and 1.71 years. In addition to the above, the analysis shows a correlation between level of education and the prevalence of HIV/AIDS, along with a strong regional variation in cause

of death patterns, especially in terms of HIV/AIDS deaths, which varied between 25.5% in the northern province to 45.1% in the western province of Zambia.

"Our findings reiterate the importance of continuous health investment towards eradicating diseases like HIV/AIDS in terms of treatment, awareness, education, and prevention. At the same time, interventions should take into account age-sex or socioeconomic characteristics. For instance, while men might need more interventions to reduce injury-related deaths, women might need access to more treatment for diseases like HIV/AIDS or tuberculosis," concludes study lead author Vesper Chisumpa, a Ph.D. student at the University of the Witwatersrand and a lecturer at the University of Zambia.

More information: Vesper H. Chisumpa et al, Adult mortality in sub-Saharan Africa: Cross-sectional study of causes of death in Zambia, *Tropical Medicine & International Health* (2019). DOI: 10.1111/tmi.13302

Provided by International Institute for Applied Systems Analysis