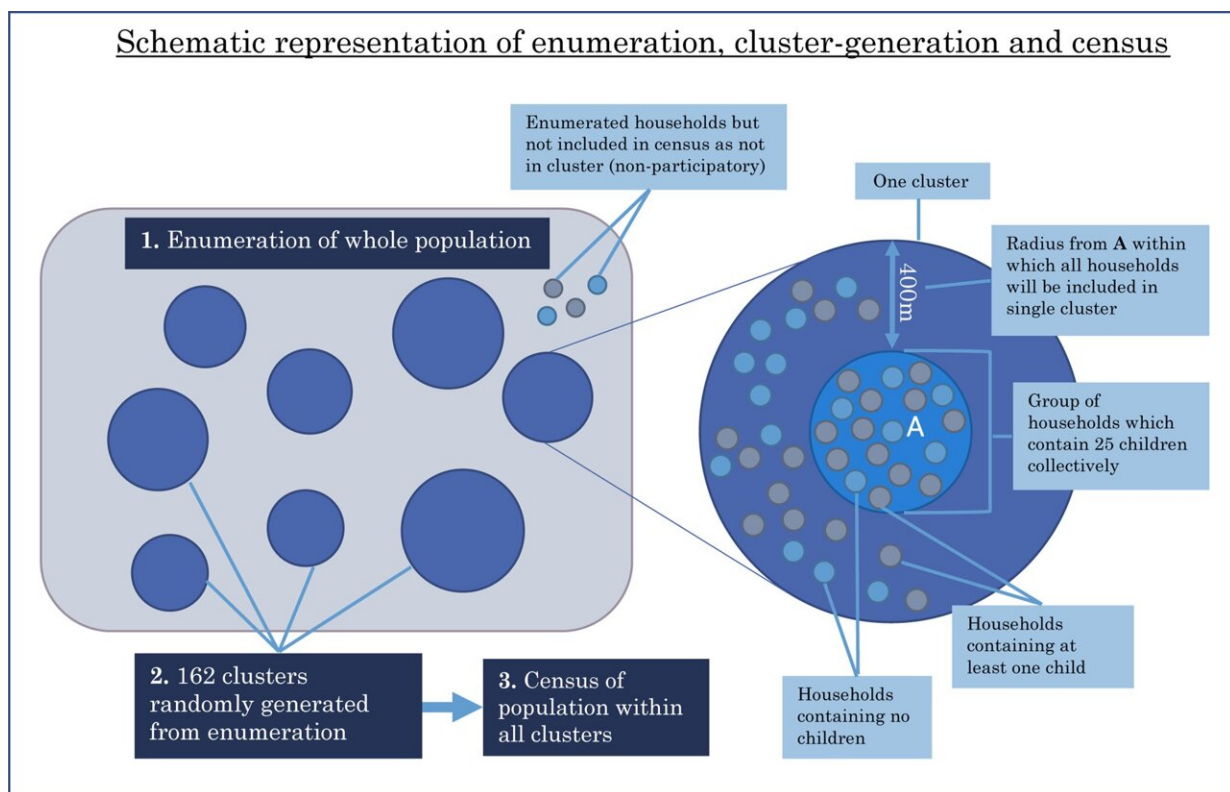


Snakebites in rural Mozambique can cost households five times more than uncomplicated malaria

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Data collection sequence and cluster structure. Credit: *PLOS Neglected Tropical Diseases* (2023). DOI: 10.1371/journal.pntd.0011551

A new study estimates that snakebites resulted in the loss of 3,000 productive days of work and school in the Mopeia district, causing a

median financial setback of 17 USD for each affected household. This is almost five times the cost of contracting uncomplicated malaria.

The study, published in *PLOS Neglected Tropical Diseases*, is one of the largest community-based studies of snakebites to date. Nested within the demographic survey conducted by the Manhica Health Research Center (CISM) as part of the ISGlobal-led BOHEMIA project, the study reported close to 400 snakebites per 100,000 person-years at risk, impacting 2% of households in the preceding year.

The dearth of snakebite data in Mozambique

Snakebite envenoming is a silent global epidemic. Every year, it claims between 81,000 and 138,000 lives and inflicts severe disabilities on another 400,000 people. Despite these staggering numbers, experts emphasize that snakebites go severely underreported in endemic countries.

This was the case in the rural Mopeia district, located within the floodplains of the Zambezi River. Local authorities lacked descriptive data on snakebite burden and incidence and [snakebite](#) researchers lacked the funding to fill the knowledge gaps. Meanwhile, the BOHEMIA project was about to initiate a district-wide census ahead of the mass drug administration trial.

"It was the perfect opportunity to join in and benefit from the malaria trial's infrastructure to fill the data gap on snakebites," says Emma O'Bryan, first author of the study.

The study reported close to 400 snakebites per 100,000 person-years at risk. The incidence of snakebites appeared to be higher in individuals above the age of 64. Activities such as cooking outdoors, collecting firewood, and raising livestock were seen to increase the risk of

snakebites.

"Though no fatalities were recorded, this study highlights the significant disease and economic burden of snakebites in rural Mozambique and opens the doors for further related research. It is also an important call to attention for the health care sector in Mozambique to be prepared to deal with this public health issue," points out Charfudin Sacoor, co-author of the study and demographer at CISM.

A model for other snakebites studies

The authors of the study make a strong case for nesting snakebites studies in other health programs with a component of community-based surveys. "We can typically recognize a snake when we see one. Thus, the potential for recall bias in this case of retrospective data collection is low," explains O'Bryan.

The study was "able to demonstrate a horizontal research approach that delivers substantial added value with minimal disruptions," says Carlos Chaccour, co-author of the study and co-principal investigator of the BOHEMIA project. "It is almost like a [moral responsibility](#) to accommodate such research whenever feasible, and more so in the case of neglected diseases."

More information: Emma O'Bryan et al, Burden and risk factors of snakebite in Mopeia, Mozambique: Leveraging larger malaria trials to generate data of this neglected tropical disease, *PLOS Neglected Tropical Diseases* (2023). [DOI: 10.1371/journal.pntd.0011551](https://doi.org/10.1371/journal.pntd.0011551)

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