

# Snakebite is a neglected threat to global public health

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Snakebites cause considerable death and injury worldwide and pose an important yet neglected threat to public health, says new research published in this week's *PLoS Medicine*. The study used the most comprehensive methods yet to estimate that at least 421,000 envenomings and 20,000 deaths from snakebites occur each year, especially in South and South East Asia and sub-Saharan Africa.

To estimate death and injury from snakebite, Janaka de Silva (University of Kelaniya, Sri Lanka) and colleagues conducted a systematic review of the scientific literature, reviewed county-specific mortality data from databases maintained by United Nations organizations, and identified unpublished information from Ministries of Health, National Poison Centres, and snakebite experts on snakebites in countries that do not have reliable data on snakebite incidence and mortality.

This data retrieval produced information for many of the world's 227 countries, which were grouped into 21 geographical regions. The researchers estimate that 421,000 envenomings and 20,000 deaths occur worldwide from snakebite each year, but warn that these figures may be as high as 1,841,000 envenomings and 94,000 deaths, especially in areas of sub-Saharan Africa and South Asia where antivenoms are hard to obtain. India has the highest estimated annual envenomings and deaths: 81,000, and 11,000 respectively.

In a related Perspective article, Jean-Philippe Chippaux from the the Institut de Recherche pour le Développement in La Paz, Bolivia and

uninvolved in the research, argues that this study is a "preliminary but essential step in improving accessibility of antivenoms and the treatment of snakebite." Dr. Chippaux notes the dire situation of antivenom availability and cost in Africa—a situation that could be worsened by the current global economic crisis—where the price of a vial of antivenom is the equivalent of several months of income for most rural families. Better information on the global burden of snakebite would help understand how much antivenom needs to be produced and in what areas it needs to be distributed, he says. As de Silva and colleagues conclude, despite their careful methodology, more population-based studies of incidence and mortality from snakebite are urgently needed.

Citation: Kasturiratne A, Wickremasinghe AR, de Silva N, Gunawardena NK, Pathmeswaran A, et al. (2008) Estimation of the global burden of snakebite. PLoS Med 5(11): e218.

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