

Researchers investigate factors influencing visceral leishmaniasis death

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In the Americas, more than 96% of cases of visceral leishmaniasis (VL)—the most severe form of leishmaniasis— occur in Brazil, where the fatality rate has risen in recent years. Now, researchers report in *PLOS Neglected Tropical Diseases* that age, HIV status and urban or rural setting affect the timeliness of premature death by VL in Brazil.

VL usually has a systemic and chronic manifestation and, if left untreated, can cause death in most cases. One of the main objectives of the Brazilian Surveillance and Control Program for Visceral Leishmaniasis is the reduction of the [fatality rate](#) through early diagnosis and treatment. Traditionally, factors associated with VL fatality have been the co-existence of other infectious diseases and bleeding.

In the new work, Ana Nilce Maia-Elkhoury of the Pan American Health Organization/ World Health Organization, and colleagues studied the timeline between the onset of symptoms and death in 1,589 deaths from VL that were reported in the Brazilian National Notification System from 2007 through 2014.

Of the deaths, the median time between the [onset of symptoms](#) and the case notification date—when VL is diagnosed and reported— is 25 days. Nevertheless, the reporting is 1.33 times faster in [urban areas](#) compared to rural settings. Regarding the survival time, the median time between the case notification and death is 9 days. However, this time run 1.4 times faster in non-HIV infected individuals than those infected with HIV. Additionally, the rate of notification was 1.73 times faster in

patients under the age of 5 at the onset of clinical symptoms; likewise, patients under 5 had also shorter survival times (studied from the reporting to death).

"Despite the increasing knowledge on prognostic factors, incorporation of new diagnostic tools and increasing access to new treatments, case fatality rate remains high in Brazil," the researchers say.

More information: Maia-Elkhoury ANS, Sierra Romero GA, O. B. Valadas SY, L. Sousa-Gomes M, Lauletta Lindoso JA, et al. (2019) Premature deaths by visceral leishmaniasis in Brazil investigated through a cohort study: A challenging opportunity?. *PLOS Neglected Tropical Diseases* 13(12): e0007841. doi.org/10.1371/journal.pntd.0007841

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