

Study: Animal-to-human diseases could kill 12 times as much by 2050

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Certain diseases transmitted from animals to humans could kill 12 times as many people in 2050 than they did in 2020, researchers have claimed.

Experts from U.S. biotech company Ginkgo Bioworks called for "urgent action" to address the risk to global public health.

Epidemics caused by [zoonotic diseases](#)—also known as spillovers—could be more frequent in the future due to climate change and deforestation, they warned.

The team's analysis looked at historic trends for four particular viral pathogens.

These were filoviruses, which include Ebola virus and Marburg virus, SARS Coronavirus 1, Nipah virus, and Machupo virus, which causes Bolivian hemorrhagic fever.

The study did not include COVID-19, which caused the global pandemic in 2020 and is likely to have originated in bats.

It looked at more than 3,150 outbreaks between 1963 and 2019, identifying 75 spillover events in 24 countries.

The database covered epidemics reported by the World Health Organization, outbreaks occurring since 1963 that killed 50 or more people, and historically significant events including the flu pandemics of 1918 and 1957.

The events caused 17,232 deaths, with 15,771 caused by filoviruses and occurring mostly in Africa.

Researchers said epidemics have been increasing by almost 5% every year between 1963 and 2019, with deaths up by 9%.

"If these annual rates of increase continue, we would expect the analyzed pathogens to cause four times the number of spillover events and 12

times the number of deaths in 2050 than in 2020," they added.

Researchers also suggested the figures are likely to be an underestimate due to the strict inclusion criteria for the pathogens in the analysis and the exclusion of COVID-19.

They said the evaluation of evidence suggests recent epidemics sparked by zoonotic spillovers "are not an aberration or random cluster" but follow "a multi-decade trend in which spillover-driven [epidemics](#) have become both larger and more frequent."

The team added that "[urgent action](#) is needed to address a large and growing risk to global health" based on historical trends.

The findings of the study have been [published](#) in the journal *BMJ Global Health*.

More information: Amanda Jean Meadows et al, Historical trends demonstrate a pattern of increasingly frequent and severe spillover events of high-consequence zoonotic viruses, *BMJ Global Health* (2023). [DOI: 10.1136/bmjgh-2023-012026](https://doi.org/10.1136/bmjgh-2023-012026)

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