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## Targeting the wrong enemies: Monkeys are not responsible for the current outbreak of monkeypox

### ARTICLE INFO

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As global response efforts are increasing around the world in a bid to curtail the alarming cases of monkeypox (MPX)—a viral zoonotic disease caused by monkeypox virus (MPXV)—that keeps circulating in the human population, there are reports of physical attacks (in form of torturing and poisoning) on monkeys in some regions like Rio Preto and others in Brazil—where the first MPX death outside Africa was reported [1]. This is due to fear of the disease and the rising misinformation associated with the name “monkeypox” which heightened the false belief that monkeys are the main reservoir host of MPXV and are responsible for the transmission [1]. Based on the epidemiological investigation so far, monkeys are not responsible for the transmission of MPXV. This disease is being transmitted from humans to other humans and the circulation is more rapid among the MSM (men who have sex with men) community, where a recent case of human-to-dog transmission has been reported [2,3]. Even though investigations are still ongoing and the fact that MPX is of zoonotic origin, epidemiologists are in total agreement that the current outbreak has been due to human-to-human contact rather than animal-to-human contact [2]. Consequently, there is no evidence reporting that monkeys infected humans with MPXV. Hence, physical attack on these primates is a misplaced solution to stop the circulation of MPXV in human settlements which could also do irreparable harm to some species of monkeys (presently threatened with extinction) which pose no risk to human health in their natural habitat, and which in fact may be playing an important role in minimizing reurbanization of MPX. In this article, we provide the current epidemiological reports on MPX and stress that monkeys are neither responsible for the current outbreak nor the transmission. We also present information on some communities in Brazil where monkeys were physically attacked, and the need to avoid this assault is also elucidated.

On July 23, 2022, the World Health Organization (WHO), following the second meeting with the International Health Regulations Emergency Committee on the multi-country outbreak of MPX, declared MPX outbreak a public health emergency of international concern (PHEIC)

notably due to its rapid spread through new modes of transmission and highlighted recommendations to curtail the transmission [2]. The World Health Organization updated situational report on MPX on July 25, 2022 (within the epidemiology week 1–29) revealed that a cumulative of 16,016 laboratory-confirmed cases of MPX and five deaths have been recorded across the six WHO regions of Americas, Africa, Europe, Eastern Mediterranean Western Pacific and South-East Asia (table, appendix) [2]. Despite the fact that MPX is rare in non-endemic countries, the current cases reported in these regions have exceeded the total number reported since 1970, when MPX was first discovered as a zoonotic pathogen of humans—with the European region (74%) accounting for the highest number of the cases, while the Americas (23%), Africa (3%), Eastern Mediterranean (<1%), South-East Asia (<1%) and Western Pacific (<1%) accounted for the remaining (Figure, appendix) [2]. Furthermore, the disease is endemic in Africa with sporadic circulation in the West African clade (3.6% fatality rate) and the Congo Basin clade (10.6% fatality rate). However, there is great concern about the rapid increase in the number of cases in these non-endemic countries and poor understanding of the origin of the outbreak as well as the epidemiological pattern of the disease which has no epidemiological link to countries in West or Central Africa [2]. However, the majority of the cases have been reported in men (especially men who have sex with other men), accounting for about 77% of the cases, who are within the age range 18–50 years [2]. This clearly indicates that monkeys are not the main vector causing the surge in the disease incidence as the transmission is between humans.

On August 8, 2022, the World Health Organization decried the killing of monkeys in Brazil over the fear of contracting MPXV from the primate. This followed the report of a bizarre incident in the Rio Preto natural reserve in Sao Paulo, Brazil, where up to ten monkeys were deliberately poisoned after three MPXV cases were reported in the area, resulting in the deaths of seven of the poisoned primates. Animal rights activists ascertained that the inhumane act of killing the primates was a result of fear of contracting MPXV [1]. Cases of stoning and persecution

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of monkeys have also been reported in many places in the country [1]. Atrocious acts such as this are often secondary to misinformation during disease outbreaks. Studies conducted on Ebola-related misinformation showed common rumors including misinformation about the intentions and motives of health workers treating Ebola patients and rumors about the Ebola epidemic being a ruse. Such rumors limited the public health responders to effectively communicate to communities about effective prevention and control methods. Beyond the (threat of) animal cruelty, similar misinformation has also spread on MPXV [4]. For instance, some anti-vaxxers opined that there is an interplay between COVID-19 vaccination and MPX outbreak due to the wrong notion that the Astra-Zeneca vaccine utilized a chimpanzee viral vector and another claim on Twitter was that MPX was purposively rolled out by the world powers in order for R&D companies producing therapeutics to make money [5]. All of these further emphasize the pertinence of strategic advocacy, communication, and social mobilization during an outbreak to prevent misinformation, because it is often the case during epidemics [5].

In conclusion, a step in the right direction would be for the World Health Organization to fast-track the process of changing the name of the disease. Ultimately, the World Health Organization might need another Infodemiology Conference to dissuade misinformation on MPXV as it did during the heat of the COVID-19 pandemic, where international experts from various backgrounds came together to manage the public health threats posed by misinformation during the COVID-19 outbreak [6].

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**Appendix**

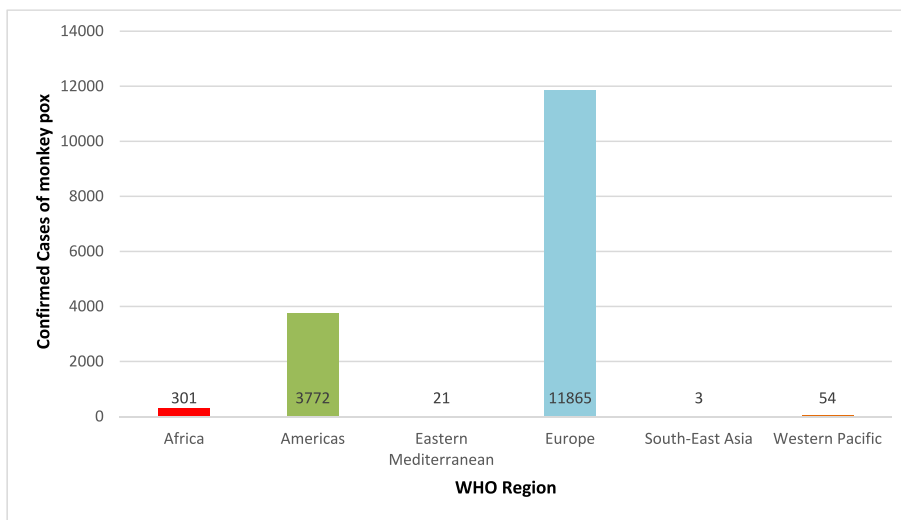


Fig. 1: Total confirmed cases of monkeypox recorded by the WHO region between January 2022 and 25 July 2022.

**Author contribution**

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**Table**

1: Reported cases and death cases of monkeypox recorded by WHO region between January-July 25, 2022.

WHO Region	Confirmed Cases	Death Recorded
Africa	301	5
Americas	3772	0
Eastern Mediterranean	21	0
European	11865	0
Western Pacific	54	0
South East Asia	3	0
Cumulative	16016	5

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