

2022 Monkeypox Outbreak in Non-endemic Nations: Necessity to Strengthen Surveillance and Prevention Activities

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Abstract

Monkeypox is a zoonotic viral infectious disease that has been predominantly reported in the central and west Africa. A recent outbreak of monkeypox has been reported in the month of May 2022 and since then the outbreak has been reported in 28 nations. As the infection has been reported in non-endemic nations, there is an indispensable need to strengthen the surveillance, preparedness, and outbreak response-related actions to monitor the spread of the infection. To conclude, the 2022 outbreak of monkeypox in non-endemic nations is an eye-opener for public health authorities to be vigilant, and strengthen prevention and control activities.

Keywords: Monkeypox, prevention, surveillance, World Health Organization

Monkeypox is a zoonotic viral infectious disease resulting because of the monkeypox virus, which was initially reported in a monkey colony that was being employed for research purposes in 1958.^[1] The disease has been predominantly reported in the tropical rainforest regions of central and west Africa, with occasional exportation to other parts of the world by travelers visiting nations where the disease is endemic in nature.^[1,2] The infection was first reported among humans in 1970, and since then multiple outbreaks of the disease in humans have been reported across 11 nations.^[1,3] The infection is generally mild, but severe cases have also been reported with the case fatality rate varying between 3% and 6%, especially among children and people with other coexisting morbidities or immune deficiency disorders.^[1-3]

A recent outbreak of monkeypox has been reported in May 2022 in the United Kingdom and since then the outbreak has been reported in 28 nations (such as Canada, United States of America, United Arab Emirates, Belgium, France, Netherlands, Switzerland, Hungary, Germany, Italy, Portugal, Spain, Austria, and Australia) spread across four regions.^[3-5] As of 8 June 2022, a total of 1285 confirmed cases have been reported, with the most affected being the

European region accounting for 87% of the overall cases.^[5] The United Kingdom, Spain, and Portugal are the three most affected nations in today's date.^[5] We must realize that detection of even a single case of the disease in a non-endemic nation has to be considered an outbreak of the disease.^[4,5] The infection is transmitted either from infected animals or via human-to-human through close contact with the infected person or the fomite.^[1-5]

The encouraging finding has been that no death has been attributed to the infection in the recent outbreak.^[5] However, the cause of concern has been that most of the reported cases have not given a travel history about a visit to an endemic nation, and this has made the job of epidemiologists complex as they are still finding the potential cause for

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the initiation of infection.^[6,7] The detection of cases in so many non-endemic nations in a short span of time clearly suggests that undetected transmission of the infection has been occurring for quite some time, and there has been even an amplifying event in the recent past.^[4-6] The ongoing epidemiological investigations have also revealed that the initially reported cases are among men who have sex with men, but there is no need to stigmatize any population group, as it will impact the health-seeking behavior.^[5] At the same time, we should be also aware that the outbreak of the disease has also been reported in eight endemic nations (viz. Cameroon, Central African Republic, the Democratic Republic of the Congo, Nigeria, Ghana, Liberia, and the Republic of the Congo) in the last 6 months, with a caseload of 59 confirmed cases, 1536 suspected cases, and 72 deaths attributed to the infection.^[5]

As the infection has been reported in non-endemic nations and the outbreak is evolving with each day, there is an indispensable need to strengthen the surveillance, preparedness, and outbreak response-related actions to monitor the spread of the infection, and implement effective containment measures.^[6,7] The need of the hour is to create awareness among the people who are at high risk of acquisition of the infection and also among the general population. The objectives of the awareness campaign include preventing the acquisition of infection among health workers and the population, limiting the further transmission, ensuring early detection and provision of appropriate care, and eliminating the possibility of stigmatizing specific sections of the community.^[3,4,7]

The infected persons are encouraged to self-isolate themselves, cover their skin lesions with clothes, and wear medical masks in case they are coughing or have mouth lesions).^[1,4] People who are close to the infected people like healthcare workers or family members, should avoid skin-to-skin contact, use disposable gloves if contact cannot be avoided, wear a mask while handling clothes or bedding, and practice regular hand washing with soap and water or an alcohol-based hand rub, especially after coming in contact with an infected person or their fomites.^[1,8] In addition, disposal of contaminated waste or disinfection of contaminated surfaces should be carried out systematically. Further, to avoid zoonotic transmission, infected animals should be isolated, unprotected contact with sick or dead animals to be strictly avoided, and all food items containing animal meat or their products should be thoroughly cooked.^[1,8]

A number of vaccines are available for the prevention of smallpox and these vaccines are also found to offer some form of protection against monkeypox.^[9] Imvamune vaccine has been approved for monkeypox in 2019, but its reach is not universal and there is a need to enhance its manufacturing and even strengthen the supply and distribution system.^[5] As already mentioned, it is a self-limiting disease, but there is a significant need to keep the

rash dry or cover it with a moist dressing. Tecovirimat, an antiviral, has been approved for the treatment of the infection in 2022 itself.^[1,5] Further, vaccinia immune globulin has been recommended for administration in severe cases.^[1] The potential risk of a larger outbreak is low as the communicability from the infected person is less; nevertheless, efforts have to be taken to restrict the further spread of the infection.^[8-10]

To conclude, the 2022 outbreak of monkeypox in non-endemic nations is an eye-opener for public health authorities and Governments to be vigilant, and strengthen prevention and control activities, including surveillance. There is an immense need to create awareness about the disease among health-care workers and the general population to limit the acquisition and further spread of the infection.

Ethical consideration

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Conflicts of interest

There are no conflicts of interest.

Contribution details

SRS contributed in the conception or design of the work, drafting of the work, approval of the final version of the manuscript, and agreed for all aspects of the work.

PSS contributed in the literature review, revision of the manuscript for important intellectual content, approval of the final version of the manuscript, and agreed for all aspects of the work.

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