

Risk Guidance on Reducing Spillover of Monkeypox Virus from Humans to Wildlife, Pet Animals, and Other Animals

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Introduction

The current monkeypox global health emergency is caused by the zoonotic monkeypox virus found in humans, rodents, non-human-primates, and other mammals. Historically found in Africa where the virus is thought to be maintained in rodent populations, the virus is rapidly spreading across the globe to new countries and territories, mainly through human-to-human transmission. Though animal-to-human and human-to-human transmission has been scientifically established, there are recent reports suggesting human-to-animal transmission in these new geographical regions. In such regions, there is concern regarding the spread of this virus from humans to animals, including wildlife and pets, which could lead to the establishment of new reservoir host populations, making the virus endemic to these regions. In such a situation, prevention and control of the global health emergency will be complicated, both for humans (public health) and animals (animal health). Thus, the risk of human-to-animal spillback, which is greatest amongst people who can infect and transmit monkeypox infection to animals such as rodents, non-human primates, dogs, and other mammals, needs to be minimised with these guidelines.

Section 1: General Risk Guidance

- Increase vigilance, while taking precautionary and preventive measures, in surroundings where animals are in proximity to monkeypox virus infected humans or monkeypox virus contaminated environments.
- Increase our understanding of the evolving monkeypox virus ecosystem by increased and targeted monitoring around the world.
- Report positive monkeypox cases in animals to the World Organisation for Animal Health, according to article 1.1.5 of the Terrestrial Animal Health Code. More details regarding clinical signs, recommended clinical samples, and diagnostic tests are available on the [WOAH website](#).
- Vaccination of high-risk humans at the human-animal interface should be prioritized based on their clinical susceptibility, exposure, and availability of the vaccine, and should adhere to the [WHO guidelines](#).

Section 2: Risk Guidance for Domestic and Exotic Pet Owners (with prior exposure, probable, or confirmed monkeypox virus infection)

- Follow all the guidelines found in Section 1.
- If you observe signs of monkeypox, in accordance with [WHO guidelines](#), or have been exposed to a person or animal with monkeypox:
 - Medical Care: should be sought immediately. Subsequently, your medical practitioner might have to inform the appropriate authorities, according to the local guidelines.
 - Testing: should be done as soon as possible to confirm the case and rule out other causes.
 - Contact with animals: Close contact with your pets or other animals should be avoided, especially if you have cutaneous lesions. Infected people should not take care of pets or animals, and when possible, another person should take care of the animal until the infected person has completely recovered.
 - Contaminated linens: Possibly infectious and contaminated material, including linens, towels, and clothing from the probable or infected person, should be kept away from

- your pets or other animals. Such material should be laundered separately from other household laundry, and can be reused after washing with soap and hot water (> 60°C), or if hot water is unavailable, soaked in chlorine.
- Contaminated surfaces: which might come in contact with your pet should be frequently cleaned and disinfected with household disinfectants containing bleach products.
 - Medical Waste: Dispose all the medical waste, such as bandages, dressing material, and swabs, using standardized protocols as advised by your local health authority.
 - Vaccine for animals: There is no safe vaccine that is currently approved for pets or other animals.
- If your pet or other animal develops symptoms, in accordance with [WOAH guidelines](#), within 21 days after coming in contact with you or any person who has probable or confirmed monkeypox:
 - Veterinary Care: Contact your veterinarian immediately
 - Testing: is advised for the animals to confirm the case and rule out alternate diagnoses.
 - Contact with other animals: Do not allow your pet to have contact with other animals, either inside or outside your house.
 - Contact with humans: Do not allow the animal to have contact with other humans, unless the humans are authorised professionals with appropriate PPE (personal protective equipment), until the animal has recovered completely.
 - Infectious Material: Possibly contaminated linens, towels, and other washable material from the probable or infected animal, should be laundered separately and can be reused after washing with soap and hot water (> 60°C), or if hot water is not available, soaked in chlorine. Contaminated surfaces must be cleaned and disinfected with household disinfectants containing bleach products.
 - Veterinary Waste: Dispose all the veterinary waste, including swabs, cotton, and bandages, by taking the advice of your local veterinary authority. Use a dedicated and lined trash can to collect the veterinary waste from the animal.
 - Do not surrender, euthanize, or abandon your pets or animals if you suspect monkeypox.
 - Do not wipe or bathe the animal with chemical disinfectants, alcohol, hydrogen peroxide, as well as industrial or surface cleaners.
 - There is no recommended treatment for monkeypox infection, but supportive veterinary options (such as analgesics) are available to reduce suffering in severe cases

Section 3: Risk Guidance for People Working with Animals (who are a risk for spreading monkeypox infection to animals)

- Follow all the guidelines found in Section 1 and Section 2.
- This section is for people who are either working with, or present in close proximity to domestic animals, exotic animals, wildlife, or other animals; and are present in countries with active monkeypox.
- Professionals with prior exposure, probable, or confirmed monkeypox should neither handle nor be near animals.

- Section 3a: Risk Guidance for people working with domestic animals (such as veterinarians, nurses, keepers, and other technicians):
 - Take appropriate hygiene and biosecurity measures, both before and after handling animals from a household with a probable or confirmed human monkeypox case. These measures would include washing hands before and after handling each animal, as well as using PPE (personal protective equipment) during handling.
 - Ensure that probable and confirmed animal cases are kept isolated from other animals.
 - Clean and disinfect contaminated areas after handling each animal.
 - Vaccination for staff working with domestic animals is not recommended, unless there are other risk factors.
- Section 3b: Risk Guidance for people working with wildlife (free or captive):
 - Professionals with an active infection should not handle free or captive wildlife, especially rodents and non-human primates.
 - Professionals who come from a household with a probable or confirmed case should avoid contact with wildlife. In situations where this is not possible, the professionals who either handle wildlife or work in proximity to wildlife should apply additional biosecurity measures.
 - As a general principle, wash hands before and after handling wild animals.
 - Vaccination of people working with wildlife is not considered necessary, unless there are other risk factors.
- Section 3c: Risk Guidance for people working with human monkeypox cases (such as doctors and laboratory technicians) that are in contact with animals:
 - Standard vigilance should be applied to self-detect suspected clinical signs of monkeypox in people working with human monkeypox cases
 - If clinical signs are detected, avoid close contact with animals, specifically ensuring contact with lesions is avoided.
- Section 3d: Risk Guidance for people involved with veterinary or medical waste that might come into contact with wildlife or other animals
 - Dispose medical waste from suspect/infected humans and veterinary waste from suspect/infected animals using standardized protocols.
 - Do not dispose untreated medical or veterinary waste where it might come in contact with domestic or wild animals, including rodents and other scavengers.
 - Apply appropriate biosecurity when handling medical or veterinary waste which might contain monkeypox virus.
 - Vaccination for staff working with veterinary or medical waste is not recommended unless there are other risk factors;

Conclusion

There is an urgent need for increased research to understand susceptible animal species and reservoir hosts in both endemic and non-endemic countries. Preventing monkeypox virus from establishing in new animal reservoirs from currently non-endemic countries and territories is critical to preventing the global expansion of countries with endemic monkeypox.

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