

# The Re-Emerging Outbreak of Monkeypox: A Viral Disease Effect on Public Health

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## ABOUT THE STUDY

Monkeypox, once confined to concerns about infectious diseases for many years, is now acknowledged as a global threat. This infectious disease, closely related to smallpox, presents a unique challenge due to its zoonotic nature, potential for human-to-human transmission, and an alarming number of reported cases in recent years. In this commentary, we delve into the key aspects of monkeypox, its epidemiology, clinical presentation, prevention, and implications for public health.

Monkeypox manifests in humans with symptoms resembling those of smallpox, even though a less severe variant. Initial symptoms include fever, headache, muscle aches, and fatigue, followed by a distinctive rash that progresses to pustules. This similarity to other illnesses, particularly chickenpox and other viral exanthems, complicates accurate diagnosis.

## Transmission dynamics and human-to-human spread

Although historically less efficient in human-to-human transmission compared to smallpox, recent cases suggest that monkeypox might be adapting. Limited human-to-human transmission has been observed among close contacts, healthcare workers, and within households. While sustained and widespread transmission remains unlikely, the potential for the virus to further evolve into a more transmissible form demands vigilant surveillance and response strategies.

## Prevention methods

**Vaccination:** Vaccination remains one of the most effective methods for preventing monkeypox. The smallpox vaccine, known as vaccinia vaccine, provides cross-protection against monkeypox. In areas where monkeypox is endemic or outbreaks are likely, administering the smallpox vaccine can help reduce the severity and spread of monkeypox. Research is also ongoing to develop a specific monkeypox vaccine to address the limitations of using the smallpox vaccine.

**Isolation and quarantine:** Isolating suspected and confirmed cases of monkeypox is crucial to prevent its spread to others. Quarantine measures for close contacts of infected individuals

can further contain the outbreak. This approach reduces the risk of human-to-human transmission.

**Antiviral medications:** While there is no specific antiviral drug approved for monkeypox, some antiviral medications used for treating other viral infections, like smallpox or herpes, might be considered under certain circumstances. However, their efficacy against monkeypox is not well established.

**Clinical evaluation:** Early diagnosis of monkeypox begins with recognizing its clinical presentation. Fever, headache, muscle pain, and fatigue are followed by a rash that progresses from macules to pustules, which are characteristic of monkeypox. It's important for healthcare professionals to consider monkeypox in the differential diagnosis when encountering patients with these symptoms, particularly in regions where the disease is endemic.

The MVA-BN vaccine, which originally was created for smallpox, has been authorised for use by individuals who are either at high risk of exposure to mpox or have recently been contact with it. The Agency for Disease Control and Prevention (CDC) advises that people investigating mpox outbreaks, those caring for infected people or animals, and those who have had close or personal interactions with infected people or animals get vaccinated. The traditional methods for infection control, the CDC has issued guidelines. These include requiring healthcare professionals to wear a gown, mask, goggles, and a disposable filtering respirator (such as a N95), and isolating a person with an infection in an isolated room to protect others from possible contact.

## CONCLUSION

Monkeypox, once a neglected virus, has resurfaced with renewed vigor, demanding the attention of the global health community. While the virus's capacity for sustained human-to-human transmission remains limited, the potential for adaptation underscores the need for comprehensive strategies. A combination of improved diagnostics, increased vaccination coverage, strengthened surveillance, and international cooperation is paramount. As we confront this evolving challenge, it is a reminder that infectious diseases respect no borders and that collective action is essential in safeguarding public health on a global scale.

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