

May 26, 2022

Health Notice for District of Columbia Health Care Providers
Monkeypox Virus Infection in the United States and Other Non-endemic Countries – 2022

SUMMARY

The Centers for Disease Control and Prevention (CDC) announced on May 18, 2022 that a Massachusetts resident had tested positive for monkeypox virus. There are now 9 confirmed human cases in the United States.

As of May 26th, there are no confirmed monkeypox cases in the District of Columbia. The purpose of this Health Alert Notice is to provide situational updates and to notify healthcare providers of CDC's recommendations for patient investigation, testing, and infection control. Healthcare providers should continue to monitor DC Health Alert Notice webpage for updates: dchealth.dc.gov/page/health-notice.

BACKGROUND

Since early May 2022, a multi-country outbreak of monkeypox has been ongoing in countries non-endemic for monkeypox. Previous cases of monkeypox diagnosed in non-endemic countries have been associated with travel to endemic areas of Africa. Most of the current outbreak cases did not have travel links to endemic areas. The first case in the United States was confirmed on May 18th in a Massachusetts resident who had recently traveled to Canada. As of May 26th, there are 9 confirmed monkeypox cases in the U.S. and more than 200 confirmed cases reported worldwide in non-endemic countries. No deaths have been reported. Available evidence suggests that monkeypox is spreading person-to-person from close contact and more cases are expected.

Monkeypox is a viral zoonotic infection which is endemic to several Central and West African countries. It is a DNA virus of the orthopoxvirus genus of the Poxviridae family. There are two clades of the virus: the West African clade and the Congo Basin (Central African) clade. Genetic sequencing has confirmed that the strain causing the current outbreak in non-endemic countries belongs to the West African clade. The natural animal reservoir for monkeypox remains uncertain. Monkeypox was first discovered in monkeys in 1958. The first human case occurred in the Democratic Republic of the Congo in 1970. Humans who become infected with monkeypox can transmit the infection to other people several ways: from contact with body fluids or monkeypox lesions, from respiratory droplets or aerosols from prolonged face-to-face contact, and from contaminated materials such as bedding or clothing. The incubation period for monkeypox is typically 6-13 days (range 5-21 days). It is usually a self-limiting disease but can be severe or fatal. People at increased risk for severe disease include children, pregnant women, and immunocompromised individuals. The West African clade of the virus generally causes less severe infections in humans (fatality rate 3.6%) compared to the Congo Basin clade (fatality rate 10.6%). Endemic countries currently reporting monkeypox outbreaks are Cameroon and Nigeria.

Monkeypox disease symptoms always involve a characteristic rash. Historically, the rash has been preceded by a prodrome including fever, lymphadenopathy, and often other non-specific symptoms such as malaise, headache, and muscle aches. In the most recent reported cases, prodromal symptoms may not have always occurred; some recent cases have begun with characteristic, monkeypox-like lesions in the genital and perianal region, in the absence of subjective fever and other prodromal symptoms. For this reason, cases may be confused with more commonly seen infections (e.g., syphilis, chancroid, herpes, and varicella zoster).

The typical monkeypox lesions involve the following: deep-seated and well-circumscribed lesions, often with central umbilication; and lesion progression through specific sequential stages – macules, papules, vesicles, pustules, and scabs. Synchronized progression occurs on specific anatomic sites with lesions in

each stage of development for at least 1-2 days. The scabs eventually fall off. Lesions can occur on the palms and soles, and when generalized, the rash is very similar to that of smallpox including a centrifugal distribution. Monkeypox can occur concurrently with other rash illnesses, including varicella-zoster virus and herpes simplex virus infections. Confirmatory laboratory diagnostic testing for monkeypox is performed using real-time polymerase chain reaction (RT-PCR) assay on lesion-derived specimens.

A person is considered infectious from the onset of symptoms and is presumed to remain infectious until lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath. Human-to-human transmission occurs through large respiratory droplets and by direct contact with body fluids or lesion material. Respiratory droplets generally cannot travel more than a few feet, so prolonged face-to-face contact is required. Indirect contact with lesion material through fomites has also been documented. Animal-to-human transmission may occur through a bite or scratch, preparation of wild game, and direct or indirect contact with body fluids or lesion material.

There is no specific treatment for monkeypox virus infection, although antivirals developed for use in patients with smallpox may prove beneficial. Person with direct contact (e.g., exposure to the skin, crusts, bodily fluids, or other materials) or indirect contact (e.g., presence within a six-foot radius in the absence of an N95 or filtering respirator for ≥ 3 hours) with a patient with monkeypox should be monitored by health departments; depending on their level of risk, some persons may be candidates for post-exposure prophylaxis with smallpox vaccine under an Investigational New Drug protocol after consultation with public health authorities.

CLINICAL RECOMMENDATIONS

Clinicians should consider the possibility of monkeypox virus infection in persons presenting with a rash that could be consistent with monkeypox, especially those with a recent travel history to a country where monkeypox has been reported.

- The rash associated with monkeypox involves vesicles or pustules that are deep-seated, firm or hard, and well-circumscribed; the lesions may umbilicate or become confluent and progress over time to scabs.
- This rash can be confused with other diseases that are more commonly encountered in clinical practice (e.g., secondary syphilis, herpes, chancroid, and varicella zoster). However, a high index of suspicion for monkeypox is warranted when evaluating people with the characteristic rash, particularly for the following groups:
 - Men who report sexual contact with other men and who present with lesions in the genital/perianal area,
 - People reporting a significant travel history in the month before illness onset, OR
 - People reporting contact with people who have a similar rash or have received a diagnosis of suspected or confirmed monkeypox.
- Presenting symptoms typically include fever, chills, the distinctive rash, or new lymphadenopathy; however, onset of perianal or genital lesions in the absence of subjective fever has been reported.

Infection control recommendations for healthcare facilities:

- **DO NOT TRANSPORT suspected cases. Suspected cases must remain at original facility until instructed otherwise by DC Health.**
- **Recommended precautions:** Standard, contact and droplet precautions should be used for any patient presenting with symptoms of possible monkeypox. There is also a theoretical risk of airborne transmission, so airborne precautions should also be applied whenever possible.
- Isolate patients suspected of having monkeypox in a negative air pressure room as soon as possible. If a negative air pressure room is not available, place patient in a private room. If neither is available, take steps to minimize the patient's exposure to other people, place a mask on the patient (as long as this is tolerated) and cover any patient lesions with a gown or sheet.

- Recommended personal protective equipment (PPE) for healthcare personnel: Gown, gloves, eye protection (i.e., goggles or a face shield that covers the front and sides of the face), and NIOSH-certified N95 respirator.
 - PPE should be donned before entering the patient’s room. All PPE should be disposed of prior to leaving the patient’s room.
- More information on infection prevention and control in healthcare settings can be found at cdc.gov/poxvirus/monkeypox/clinicians/infection-control-healthcare.html.

Infection control recommendations for home settings:

- Not all patients with monkeypox/suspected monkeypox will require hospital admission. In these cases, patients should be instructed to isolate at home.
- During home isolation patients should:
 - Wear a mask or respirator around others (especially if the patient has respiratory symptoms)
 - If the patient is unable to wear a mask or respirator, household members should wear a mask or respirator when around the patient.
 - cover their lesions with clothing as much as possible (e.g., long sleeves, long pants).
 - If they have extensive lesions that cannot be covered, weeping/draining lesions, or respiratory symptoms, they should isolate in a room or area separate from other household members and pets.
 - not leave home except to get medical care.
 - avoid visitors.
- Household members providing care to isolating patients should wear disposable gloves if they have any direct contact with patient lesions. Dispose of gloves after use and perform hand hygiene.
- More information on infection prevention and control in home settings can be found at cdc.gov/poxvirus/monkeypox/clinicians/infection-control-home.html.

Testing

Clinicians should consult DC Health if they suspect monkeypox. Appropriately collected samples will be tested for monkeypox virus infection at the DC Public Health Laboratory (PHL) in consultation with CDC.

Specimen Collection

- People with suspected monkeypox virus infection should have lesion samples collected for testing as soon as possible.
- Appropriate PPE should be worn during specimen collection (see above).
- Lesion material is required for persons with an active lesion or rash. Lesion material includes lesion fluid, lesion roof, lesion tissue, or crust. Specimen collection encompasses biopsy (non-formalin fixed), scrapings, touch prep or smear slides, or swab(s). Original specimen material is preferred but viral culture can also be tested.
- Collect multiple specimens for preliminary and confirmatory testing as follows:
 1. Vigorously swab or brush lesion with two separate sterile dry polyester or Dacron swabs
 2. Break off end of applicator of each swab into a 1.5- or 2-mL screw-capped tube with O-ring or place each entire swab in a separate sterile container. Do not add or store in viral or universal transport media.
- For more information, see cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html.

Monitoring of close contacts of person with monkeypox virus infection

- Contacts of animals or people confirmed to have monkeypox should be monitored for symptoms for 21 days after their last exposure.
- Symptoms* of concern include:

- Fever $\geq 100.4^{\circ}\text{F}$ (38°C)
- Chills
- New lymphadenopathy (periauricular, axillary, cervical, or inguinal)
- New skin rash
 - *Fever and rash occur in nearly all people infected with monkeypox virus.
- Contacts should be instructed to monitor their temperature twice daily. If symptoms develop, contacts should immediately self-isolate and contact the health department for further guidance.
- For more information, see cdc.gov/poxvirus/monkeypox/clinicians/monitoring.html.

Reporting to DC Health

Please notify DC Health about suspected monkeypox cases by phone **immediately** at 844-493-2652 AND Submit a Notifiable Disease and Condition Case Report Form online using DCRC: dchealth.dc.gov/infectiousdisease. DC Health will provide assistance and work with the DC PHL to coordinate collection of lesion samples and testing and consult with CDC as needed.

Additional resources for clinicians

- **Clinical Recognition of Monkeypox:** cdc.gov/poxvirus/monkeypox/clinicians/clinical-recognition.html.
- **Treatment:** cdc.gov/poxvirus/monkeypox/clinicians/treatment.html

References

- Centers for Disease Control and Prevention Health Alert Network, *Monkeypox Virus Infection in the United States and Other Non-endemic Countries – 2022*, May 20, 2022, at emergency.cdc.gov/han/2022/han00466.asp
- Centers for Disease Control and Prevention, *Monkeypox*, May 20, 2022, at cdc.gov/poxvirus/monkeypox/index.html
- Centers for Disease Control and Prevention, *Preparation and Collection of Specimens*, May 18, 2022, at cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html
- Centers for Disease Control and Prevention, *Test Order Poxvirus Molecular Detection*, April 18, 2022, at cdc.gov/laboratory/specimen-submission/detail.html?CDCTestCode=CDC-10515Eu
- European Centre for Disease Prevention and Control, *Epidemiological update: Monkeypox multi-country outbreak*, May 25, 2022, at ecdc.europa.eu/en/news-events/epidemiological-update-monkeypox-multi-country-outbreak
- World Health Organization, *Multi-country monkeypox outbreak in non-endemic countries*, May 21, 2022, at who.int/emergencies/disease-outbreak-news/item/2022-DON385

For more information, or to report monkeypox cases, please contact the Division of Epidemiology – Disease Surveillance and Investigation:

Phone: (202) 442-8141 (8:15am-4:45pm) | 1-844-493-2652 (after-hours calls) | **Fax:** (202) 442-8060
Email: doh.epi@dc.gov