

Monkeypox FAQ sheet for Healthcare Providers

June 6, 2022

What is monkeypox and where do human infections naturally occur?

Monkeypox is a rash illness caused by the monkeypox virus, an Orthopoxvirus belonging to the same group of viruses as smallpox. Monkeypox is rare in the United States. The disease is most commonly reported in people living in or traveling from certain central and west African countries where the monkeypox virus is endemic. Monkeypox endemic countries include the Democratic Republic of Congo, Benin, Cameroon, the Central African Republic, Gabon, Ghana (identified in animals only), Ivory Coast, Liberia, Nigeria, Sierra Leone, and South Sudan. The natural reservoir of monkeypox remains unknown; however, African rodents and non-human primates may harbor the virus and infect people.

What is the current epidemiology associated with this outbreak and how is it different from what has been detected previously?

As of 6/2/22, there have been 18 monkeypox and orthopoxvirus cases presumed to be monkeypox reported in the United States and 780 confirmed cases worldwide from 27 countries considered non-endemic for monkeypox. Both the [Centers for Disease Control and Prevention](#) (CDC) and the [World Health Organization](#) (WHO) are tracking current cases counts and epidemiologic trends.

The current outbreak is unique for multiple reasons. First, monkeypox cases in non-endemic countries, like the U.S., are rare. Sporadic cases have typically been limited to people who have been exposed to the virus in endemic areas. Second, monkeypox outbreaks in non-endemic countries are even more rare. In the current outbreak, cases have been simultaneously identified in several non-endemic countries and most cases have occurred in people who have not traveled to an endemic area. This suggests the virus is spreading from person to person in non-endemic communities. Third, initial cases reported to the WHO have predominantly occurred in men who have sex with men (MSM), a community where outbreaks of monkeypox have not previously been described. Fourth, the clinical presentation of some cases has been atypical, as described below.

What is the typical incubation period for monkeypox?

The typical incubation is seven to 14 days, with a range of five to 21 days after exposure.

What are the typical symptoms of monkeypox? How is the clinical presentation different with this outbreak?

Monkeypox illness usually begins with a prodrome including fever, headache, fatigue, and lymphadenopathy. This is typically followed by a [distinctive rash](#) on the face one to three days after onset. The skin lesions then spread to the arms and legs in a centrifugal distribution, often affecting the palms and soles. Lesions progress from macules to papules to vesicles to pustules to scabs and are often in one stage of development on the body at any one time with a slow progression from one stage to another over one to two days.

Importantly, some cases associated with this outbreak have had a different clinical presentation. Some have reported little to no prodrome, with a rash being the first symptom. In addition, rash lesions

beginning on or confined to the genital and perianal regions have been reported. In some cases, lesions in the genital and perianal regions have been the initial, or only, symptom of illness.

Do other illnesses result in this kind of rash?

The rash associated with monkeypox can be confused with other diseases that are 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 a [characteristic rash](#), particularly for men who report sexual contact with other men and who present with lesions in the genital/perianal area, persons reporting a [relevant travel history](#) in the month before illness onset, or contact with a suspected or confirmed case of monkeypox. More information, including a slide set with images of rashes caused by potential differentials for monkeypox, can be found on the CDC's [Clinician Outreach and Communication Activity site](#).

If I am concerned that a patient might have monkeypox, what should I do?

The key steps to take are as follows:

- Collect a thorough history of the current illness, including the timing and sequence of any prodromal symptoms and rash.
- Collect a thorough exposure history that includes travel, contact with people who have suspected or confirmed monkeypox, and sexual history. Asking the patient the following history and travel questions may help distinguish whether increased suspicion for monkeypox is warranted:. In the 21 days prior to onset of symptoms did the patient:
 - travel to a [country](#) where monkeypox cases have been reported,
 - report contact with a person with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox,
 - have contact with a dead or live wild animal, an exotic pet whose species is native to Africa, or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.), or
 - have close or intimate in-person contact with individuals in a social network experiencing monkeypox activity.
- Perform a thorough physical examination of the patient's skin. Note that for some people with monkeypox, the rash starts in the genital and perianal areas.
- Contact your [local health department](#) if the patient has symptoms and an exposure history consistent with monkeypox. After hours, call the statewide emergency number at 866-531-3068. The health department will facilitate monkeypox virus testing, if indicated.
- Consider other diseases in the differential list and test accordingly. Depending on the clinical findings, testing for sexually transmitted infections might be considered. Coinfections with monkeypox and other illnesses have been reported, so testing for differential illnesses is an important component of the diagnostic evaluation.

What kind of diagnostic samples are needed for monkeypox testing and what is the expected turnaround time for a result?

Monkeypox testing should only be initiated after consultation with the local health department. Laboratory Response Network laboratories, including Virginia's Division of Consolidated Laboratory Services (DCLS), are able to provide Orthopoxvirus testing on lesion specimens that clinicians obtain from suspected patients; confirmatory monkeypox virus-specific testing at CDC requires a dry lesion

swab specimen. DCLS instructions for specimen collection are summarized below; for the most current instructions, refer to the [DCLS website \(Hot Topics\)](#). Additionally, appropriate precautions should be followed and personal protective equipment worn, according to [CDC infection prevention and control guidance](#).

- Vigorously swab or brush lesions with two separate sterile dry polyester or Dacron swabs. Collect multiple specimens to allow for preliminary and confirmatory testing.
- Break off the end of the 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.

Turn around time to identify an Orthopoxvirus at DCLS is approximately one day after the specimen is received. Further identification of monkeypox through the CDC takes approximately 5–7 days after the specimen is received. Identification of Orthopoxvirus is actionable prior to confirmation.

What kinds of precautions should I tell people to take before entering into a medical office or hospital if they are describing symptoms of monkeypox before their arrival?

Ask the patient to wear a mask upon entering the healthcare facility and cover skin lesions, if possible. Have the patient notify the facility upon arrival and place the patient into a single person room with the door closed (if safe to do so), ideally with a dedicated bathroom. Alert infection prevention and control staff immediately.

Standard Precautions should be applied for all patient care, including for patients with suspected monkeypox. Ensure that staff understand the importance of wearing appropriate personal protective equipment (PPE), including a NIOSH approved N95 filtering facepiece or equivalent, or higher-level respirator, eye protection, long-sleeved gown and gloves, and that they wear recommended PPE each time they are near suspected cases. Additional guidance can be found at [Infection Prevention and Control of Monkeypox in Healthcare Settings](#).

What kind of infection control measures should patients with monkeypox take at home?

Patients who do not require hospitalization for medical indications may be managed at home. Patients with extensive lesions that cannot be easily covered or who have respiratory symptoms (e.g. cough, sore throat, runny nose), should isolate in a room or separate area away from other household members and pets when possible. Patients should refrain from skin to skin contact with other people, including sexual contact. Household members who are not ill should limit contact with the person with monkeypox.

People with monkeypox should avoid contact with animals, including pets. Other household members should care for pets when possible.

Patients should not leave the home unless necessary for medical visits and should not have non-essential visitors during the infectious period. Skin lesions should be covered to the best extent possible when others are around and anyone who needs to have direct contact with the patient's skin should wear disposable gloves. Gloves should be discarded after each use and hand hygiene performed. Persons with monkeypox should wear a surgical mask, especially those who have respiratory symptoms (e.g., cough, shortness of breath, sore throat). If this is not feasible (e.g., a young child with monkeypox), other household members should wear a surgical mask when in the presence of the person with monkeypox.

People with monkeypox should follow precautions until all lesions have resolved, the scabs have fallen off, and a fresh layer of intact skin has formed. For more information about home isolation practices, including hand hygiene and environmental cleaning, visit [Infection Control: Home](#).

Can people infected with monkeypox infect their pets?

We do not know the complete range of animal species that are susceptible to monkeypox. People with monkeypox should avoid contact with animals, including their pets, until they are considered no longer infectious. Other household members should care for pets when possible.

What kind of infection control measures should hospitals and medical offices be taking when examining and/or admitting a patient with suspected monkeypox?

Identify and isolate any patients suspected of having monkeypox. Implement standard and transmission-based precautions, and notify both your infection prevention staff and your local health department. Ensure staff understand the importance of wearing appropriate personal protective equipment (PPE), including a NIOSH approved N95 respirator, eye protection, long sleeve gown and gloves, and that they wear it each time they are near suspected cases. Any procedures likely to spread oral secretions should be performed in an airborne infection isolation room (AIIR).

Additional guidance can be found at [Infection Prevention and Control of Monkeypox in Healthcare Settings](#).

Are there treatments for monkeypox and, if so, where are they available?

Currently there is no specific treatment approved for monkeypox virus infections. However, antivirals developed for use in patients with smallpox may prove beneficial. [Medical countermeasures](#) (MCMs) are currently available from the Strategic National Stockpile (SNS) as options for the treatment of monkeypox and may be distributed in consultation with the CDC.

There is a limited supply of MCMs available for states who have confirmed cases of monkeypox. State health officials work closely with the CDC to determine the appropriate therapeutic product and quantity needed for a given situation, including whether the MCMs are for pre- or post-exposure prophylaxis, or treatment for monkeypox.

What vaccines can be used for monkeypox and when should vaccines be used?

ACAM2000 and JYNNEOS vaccines are available from CDC for postexposure prophylaxis (PEP) for monkeypox. In 2019, JYNNEOS, a replication-deficient live Vaccinia virus vaccine, was licensed in the U.S. to prevent both smallpox and monkeypox. JYNNEOS requires two doses 28 days apart and is administered by subcutaneous injection. ACAM2000 is a live vaccinia virus vaccine that requires one dose and is administered by the percutaneous route (scarification) using 15 jabs of a bifurcated needle. ACAM2000 was approved in 2007 for active immunization against smallpox for persons determined to be at high risk for infection, including occupational exposure. Vaccination for monkeypox is typically only recommended for [high-risk](#) contacts. When deciding who should be vaccinated, Virginia Department of Health will work in consultation with CDC. If vaccine is indicated, the local health department can administer the vaccine. As the ACAM2000 vaccine is a live vaccine product, it is recommended that this vaccine be administered by someone who has been previously vaccinated. For

more information about monkeypox vaccines, visit the CDC's [Monkeypox and Smallpox Vaccination Guidance](#).

What are the recommendations for healthcare personnel (HCP) who have been exposed to a patient with monkeypox?

After an exposure, healthcare staff can continue regular activities, including attending work, **as long as they remain asymptomatic**. If symptoms develop, HCP should immediately self-isolate and contact the local health department for further guidance. Please note the following points regarding monitoring exposed HCP:

- Any HCP who has cared for a patient with monkeypox should carefully monitor themselves for the development of symptoms that could suggest monkeypox infection, especially within the 21 day period after their last exposure to the case. They should notify infection control, occupational health, and the health department to be guided about a medical evaluation.
- HCP who have unprotected exposures (i.e., not wearing PPE) to patients with monkeypox do not need to be excluded from work duty, but should undergo active surveillance for symptoms, which includes measurement of temperature at least twice daily for 21 days following the exposure. Prior to reporting for work each day, the HCP should be interviewed regarding evidence of fever or rash.
- HCP who have cared for, or otherwise been in direct or indirect contact with, patients while adhering to recommended infection control precautions may undergo [self-monitoring or active monitoring](#) as determined by the entity assessing risk.

After risk assessment has been performed, clinical consultation might be required for monkeypox post exposure vaccination and treatment.

What are the recommendations for immunocompromised healthcare personnel (HCP) who have been exposed to a patient with monkeypox?

Immunocompromised individuals are at high risk for severe disease and should avoid any contact with a patient with suspected or confirmed monkeypox. If an exposure does occur, immunocompromised healthcare personnel are assessed, monitored and managed in a manner similar to healthcare personnel who are not immunocompromised. After an exposure, immunocompromised staff can continue regular activities, including attending work, **as long as they remain asymptomatic**. If symptoms develop, HCP should immediately self-isolate and contact the local health department for further guidance. Please note the following points regarding monitoring exposed HCP:

- Any HCP who has cared for a patient with monkeypox should carefully monitor themselves for the development of symptoms that could suggest monkeypox infection, especially within the 21 day period after their last exposure to the case. They should notify infection control, occupational health, and the health department to be guided about a medical evaluation.
- HCP who have unprotected exposures (i.e., not wearing PPE) to patients with monkeypox do not need to be excluded from work duty, but should undergo active surveillance for symptoms, which includes measurement of temperature at least twice daily for 21 days following the exposure. Prior to reporting for work each day, the HCP should be interviewed regarding evidence of fever or rash.

- HCP who have cared for, or otherwise been in direct or indirect contact with, patients while adhering to recommended infection control precautions may undergo [self-monitoring or active monitoring](#) as determined by the entity assessing risk.

After risk assessment has been performed, clinical consultation might be required for monkeypox post-exposure vaccination and treatment.

What are VDH recommendations for waste management in a hospital setting?

Waste management (i.e., handling, storage, treatment, and disposal of soiled PPE, patient dressings, etc.) should be performed in accordance with U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR; 49 CFR, Parts 171-180). Required waste management practices and category designation can differ depending on the monkeypox virus clade (strain). The waste associated with monkeypox virus is considered a Category A waste as identified by the United Nations 2814. However, waste from patients infected with the West African clade of monkeypox is exempt from category A Infectious Substance Regulations.

The information on the strain is necessary to determine which requirements to follow for the shipment and treatment of the waste. It is advised that healthcare facilities attempt to confirm the monkeypox strain and quarantine the waste until strain identification has occurred. If the patient has the Congo strain or if a facility wants to default to managing materials conservatively as Category A, a Department of Transportation special permit would be required. Local and state health authorities should be consulted. More information is available [here](#).

What is the appropriate method to clean a patient room after discharge?

[CDC](#) recommends that standard cleaning and disinfection procedures be performed using an EPA-registered hospital-grade disinfectant with an emerging viral pathogen claim (EPA [List Q](#)). Staff should follow the manufacturer's directions for concentration, contact time, and care and handling.

Post-discharge terminal cleaning should be performed in accordance with your facility's policy for patients on isolation precautions. There is no waiting period required prior to initiating the cleaning process. Environmental services or clinical department staff who are cleaning the patient room should wear full PPE (N95, eye protection, gown, and gloves) while cleaning the patient room. They should also be educated and trained on the use of the appropriate cleaning procedures and use of the disinfecting product.

Management of food service items should be performed in accordance with routine procedures. Cleaning activities such as dry dusting, sweeping, or vacuuming should be avoided. Wet cleaning methods are preferred.

Soiled laundry (e.g., bedding, towels, personal clothing) should be handled in accordance with standard practices, avoiding contact with lesion material that may be present on the laundry. Soiled laundry should be gently and promptly contained in an appropriate laundry bag and never be shaken or handled in a manner that may disperse infectious material. Consult your healthcare facility's linen vendor to determine if there are vendor-specific instructions on how to bag or separate the soiled linen.