

Guidance for Assessment and Monitoring of Suspected Monkeypox Virus Cases and Contacts

Context

Thousands of monkeypox virus cases have been confirmed in the United States. At this time, the majority of infections have occurred in men who report having sex with men (MSM) and some have been identified at sexual health clinics. Monkeypox infection symptoms include a characteristic rash sometimes preceded by a prodrome including fever, swollen lymph nodes, and often other non-specific symptoms such as malaise, headache, and muscle aches. Some recently reported cases presented with characteristic, monkeypox-like lesions in the genital and perianal region or painful lesions in the mouth or rectum in the absence of subjective fever and other prodromal symptoms. Cases may be confused or coincide with more commonly seen infections (e.g., syphilis, chancroid, herpes, and varicella zoster). Because the presentation can be variable, the decision to test should be made between the patient and provider based on known [risk factors](#) as part of a comprehensive work up that makes sense for the patient and [appearance of the rash](#).

Assessment of Suspected Cases

- Patients with symptoms consistent with monkeypox virus infection should be screened for the following epidemiologic risk factors in the 21 days prior to start of symptoms:
 - Contact to a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox.
 - Close (skin-to-skin) or intimate in-person contact with individuals in a social network experiencing monkeypox activity, this includes men who have sex with men (MSM) who meet partners through an online website, dating app, bar or party.
 - Travel history to an outbreak-affected or endemic country or area with known cases.
 - Contact with dead/live animal that is an African endemic species or used a product derived from such animals (however this has not been a primary source of infection for this current outbreak).
- A **Suspect Case** is a patient with either:
 - A new rash with high clinical suspicion for monkeypox virus; OR
 - A new rash and at least one epidemiologic risk factor.
- If a **Suspect Case is identified, clinicians** should:
 - Follow [infection control recommendations](#) (N95 mask and eye protection in addition to gown and gloves) when entering the patient's room. Additionally, any personnel who may be handling linens or materials that came into contact with the patient should wear this same PPE when touching or cleaning areas where the patient has been. Alerting facility infection preventionist may be helpful to guide these actions and determine best methods for testing.
 - Test for orthopox virus as well as other etiologies, as appropriate.

Specimen Collection and Testing for Suspect Cases

There are now two pathways to submit swabs for testing, one to the state DLS lab and one to a commercial lab. Either is permitted and can be determined by the ease of courier services and other factors:

- **State lab:** To submit specimens to the state DLS lab, please contact KDPH to discuss testing by calling 888-9REPORT (888-973-7678) and alert local infection control department that there is concern for monkeypox. Digital photos of the lesions should be acquired, with patient consent, to aid in consultation.
 - All test requests should be ordered in the DLS Outreach system, with test code MVPCR. If Outreach access is unavailable, you may complete the [Special Microbiology Requisition Form 219](#).
 - Obtain 2 or more dry lesion swabs:
 - Swab or brush lesion vigorously (do not unroof; swab the exterior and base/advancing line of the lesion) with two separate dry Dacron or sterile nylon or polyester swabs with a plastic, wood, or thin aluminum shaft. Do not use other types of swabs. Each lesion site tested needs to have swabs collected in duplicate, with 2-3 different lesion sites collected in total.
 - Place swabs in individual sterile containers and DO NOT ADD ANY VIRAL OR UNVIERSAL TRANSPORT MEDIA. Refrigerate immediately (2--8°C) or freeze (-20°C or lower) if after-hours collection. Label specimens with anatomic location of the lesion sampled (e.g. Right Lateral Thigh #1, Right Lateral Thigh #2).
 - **Ship specimens overnight on ice packs to DLS** at the following address:
KY Division of Laboratory Services (DLS)
Attn: Melissa Peterson
100 Sower Blvd, Suite 204
Frankfort, KY 40601

DLS is unable to receive FedEx shipments on Sundays. Where possible, facilities may utilize existing courier services to DLS, such as newborn screening specimens.
- **Commercial labs:** [Quest](#), [Aegis](#), [ARUP](#), [Sonic](#), Mayo Clinic and [Labcorp](#) are able to process swabs for PCR testing for orthopox virus. More commercial laboratories may be available in future months.
 - Visit the website for the commercial lab to get their most up to date guidance on sample procedure, handling and submission information. There is variability among the labs about how to collect samples and use of transport media.
 - Clinicians should complete the EPID 200 form to notify the local or state health department of the samples being sent and alert local infection control department that this is concern for monkeypox.
<https://chfs.ky.gov/agencies/dph/dehp/idb/Documents/EPID200.pdf>
 - Follow results in the clinical setting; only positive results are reported into the state record (NEDSS) at this time.

- If orthopox virus is detected at DLS or a commercial lab, the second specimen from the corresponding site will be shipped to CDC on dry ice to ensure temperature requirements are met upon arrival at CDC; turnaround time at CDC is 5 business days.
- All patients who are determined to need testing for monkeypox virus should be given Isolation Guidelines and advised to isolate until test results are available to prevent possible spread of disease.

Exposure Assessment for Contacts of Confirmed Orthopox or Monkeypox Virus

Transmission of monkeypox typically requires prolonged close interaction with a symptomatic individual. Skin-to-skin contact with lesions is considered highest risk. Brief interactions and those conducted using appropriate PPE in accordance with Standard Precautions are not high risk and generally do not warrant postexposure prophylaxis (PEP).

High Risk Exposures

- Unprotected contact between a person's skin or mucous membranes and the skin, lesions, or bodily fluids from a patient (e.g., any sexual contact, inadvertent splashes of patient saliva to the eyes or oral cavity of a person, ungloved contact with patient), or contaminated materials (e.g., linens, clothing); OR
- Being inside the patient's room or within 6 feet of a patient during any procedures that may create aerosols from oral secretions, skin lesions, or resuspension of dried exudates (e.g., shaking of soiled linens), without wearing an N95 or equivalent respirator (or higher) and eye protection; OR
- Exposure that, at the discretion of public health authorities, was recategorized to this risk level (i.e., exposure that ordinarily would be considered a lower risk exposure, raised to this risk level because of unique circumstances).

Intermediate Risk Exposures

- Being within 6 feet for 3 hours or more of an unmasked person with confirmed monkeypox virus without wearing, at a minimum, a surgical mask; OR
- Activities resulting in contact between sleeves and other parts of an individual's clothing and the patient's skin lesions or bodily fluids, or their soiled linens or dressings (e.g., turning, bathing, or assisting with transfer) while wearing gloves but not wearing a gown; OR
- Exposure that, at the discretion of public health authorities, was recategorized to this risk level because of unique circumstances (e.g., if the potential for an aerosol exposure is uncertain, public health authorities may choose to decrease risk level from high to intermediate).

Low/Uncertain Risk Exposures

- Being in the same room as a person with confirmed monkeypox virus without wearing eye protection on one or more occasions, regardless of duration of exposure; OR
- During all entries in the patient care room (except during any procedures listed above in the high-risk category), wore gown, gloves, eye protection, and at minimum, a surgical mask; OR
- Being within 6 feet of an unmasked person with confirmed monkeypox for less than 3 hours without wearing at minimum a surgical mask; OR
- Exposure that, at the discretion of public health authorities, was recategorized to this risk level based on unique circumstances (e.g., uncertainty about whether Monkeypox virus was present on a surface and/or whether a person touched that surface).

Management of Exposed Contacts

- Contacts with High, Intermediate, or Low risk of exposure to persons with confirmed monkeypox should be monitored for symptoms for 21 days after their last exposure.
 - Active daily monitoring (via phone, text, or email) by health department personnel is recommended for contacts with High risk of exposure, where resources permit. Health departments should take into consideration the person's exposure risk level, the number of persons needing monitoring, time since exposure, and available resources, when determining the type of monitoring to be conducted.
 - Contacts who remain asymptomatic are permitted to continue routine daily activities (e.g., go to work, school), including healthcare workers who have unprotected exposures. Contacts should not donate blood, cells, tissue, breast milk, semen, or organs while they are under symptom surveillance.
 - Symptoms* of concern include:
 - Fever $\geq 100.4^{\circ}\text{F}$ (38°C)
 - Chills
 - New lymphadenopathy (swelling of lymph nodes) (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.
 - Persons who report only chills or lymphadenopathy should remain at their residence, self-isolate for 24 hours, and monitor their temperature for fever; if fever or rash do not develop and chills or lymphadenopathy persist, the person should be evaluated by a clinician for the potential cause.

- Contacts with symptoms should be evaluated for other common illnesses (e.g., COVID-19 and influenza). Monkeypox virus testing must be coordinated through KDPH/DLS at this time.

Postexposure Prophylaxis (PEP) for Exposed Contacts:

- PEP is recommended for contacts who have been determined to have a High risk of exposure to a confirmed case. [Jynneos vaccine](#) is available for PEP if given within 4 days from the date of the first exposure. Vaccine administered between 4–14 days after the date of exposure may reduce the symptoms of disease, but may not prevent the disease. PEP is not offered if the exposure was 21 days or more prior to presentation but vaccination for PrEP could be considered if the patient has epidemiologic risk factors.
- Administration of Jynneos vaccine as expanded postexposure prophylaxis (PEP++) is recommended for individuals who report high-risk exposures (MSM with frequent or anonymous sex partners) in venues or communities where monkeypox virus is actively spreading.
- PEP and PrEP vaccination against monkeypox for patients under the age of 18 years must be discussed with KDPH and CDC.

Expanded postexposure prophylaxis (PEP++):

- For the current outbreak, expanded PEP or “PEP plus-plus” or “PEP++” includes vaccination of individuals with certain risk factors who are more likely to have been recently exposed to monkeypox, even if they have not had documented exposure to someone with confirmed monkeypox.
- When coupled with self-isolation and other prevention measures when symptoms first occur, PEP++ may help slow the spread of the disease in areas with large numbers of monkeypox cases.
- Current criteria for PEP++ eligibility include:
 - 1) Men who have sex with men, including those who identify as gay, OR bisexual, OR transgender, OR gender non-conforming, OR gender non-binary who are 18 yrs or older **AND**
 - Have had multiple or anonymous male, transgender, or gender non-conforming sex partners in the past 14 days; **OR**
 - Had a diagnosis of gonorrhea and/or early syphilis within the past 12 months; **OR**
 - Are on HIV pre-exposure prophylaxis (PrEP)
 - OR**
 - 2) Persons who attended an event/venue where there was a high risk of exposure to an individual(s) with confirmed monkeypox through skin-to-skin or sexual contact in the last 14 days.
 - OR**
 - 3) Individuals who, on a case-by-case basis, are determined to have reasonable suspicion of recent direct skin-to-skin or body fluid contact to a known or suspected case of monkeypox virus.

Monkeypox Vaccine Pre-Exposure Prophylaxis (PrEP):

- This approach refers to administering vaccine to someone at high risk for monkeypox (for example, laboratory workers who perform routine testing for monkeypox virus).
- At this time, most clinicians in the United States and laboratorians not performing the orthopoxvirus testing are not advised to receive monkeypox vaccine PrEP.
- PrEP may be expanded in the future to vulnerable populations as they are identified and vaccine supply is available.

If orthopoxvirus is confirmed:

- A confirmed orthopoxvirus result at DLS is a presumed case of monkeypox; specimens will be sent to CDC for confirmatory monkeypox testing (turnaround time is 5 days).
- Use of [Tecovirimat](#) (TPOXX) antiviral medication for treatment of patient may be considered. Tecovirimat is acquired through KDPH from the Strategic National Stockpile at this time. Public health staff may need to ensure patient is linked to a healthcare provider to be assessed for TPOXX treatment eligibility.
- Healthcare, social, and sexual contact exposures need to be assessed. Collaboration between the public health department, healthcare provider, and facility infection control staff will assist with this process.
- The confirmed orthopoxvirus positive patient should remain in isolation and take precautions to not expose other humans or animals until lesions have healed to the point where there is new, intact skin at every lesion site. Additional guidance documents for explaining isolation expectations is available.