State Health Advisory
Updated Guidance for Identification and Testing of Potential Monkeypox Infection
Wyoming Department of Health
June 16, 2022

Summary
Since May 2022, monkeypox cases have been identified in 18 states and territories among both persons returning from international travel and their close contacts domestically. Globally, more than 1,600 cases have been reported from more than 30 countries; the case count continues to rise daily. In the United States, evidence of person-to-person disease transmission in multiple states and reports of clinical cases with some uncharacteristic features have raised concern that some cases are not being recognized and tested.

This health advisory alerts clinicians to clinical presentations of monkeypox seen so far in the United States and to provide updated and expanded case definitions intended to encourage testing for monkeypox among persons presenting for care with a relevant history, signs, and symptoms. In people with epidemiologic risk factors, rashes initially considered characteristic of more common infections (e.g., varicella zoster, herpes simplex, syphilis) should be carefully evaluated for concurrent characteristic monkeypox rash and considered for testing.

An updated Centers for Disease Control and Prevention (CDC) health advisory released on June 14, 2022 can be found here: https://emergency.cdc.gov/han/2022/han00468.asp

Background
The current identification of West African monkeypox cases in many countries that do not have endemic disease and involving patients with no direct travel history to an area with endemic monkeypox suggests person-to-person community spread. Since May 17, 2022, 65 cases have been identified in 18 U.S. states and territories and more than 1,600 have been identified in 35 countries and territories that do not have endemic disease. The case fatality rate of monkeypox associated with the West African clade of monkeypox virus is 1%, and possibly is higher in immunocompromised individuals; no deaths have been reported globally from the current outbreak. Any person, irrespective of gender identity or sexual orientation, can acquire and spread monkeypox. In this outbreak, however, many of the reported cases in the United States
are among gay, bisexual, or other men who have sex with men (MSM). Close contact, sustained skin-to-skin contact, including sexual contact, with a person with monkeypox, or contact with contaminated fomites (e.g., shared linens) are the most significant risk factors associated with human-to-human transmission of Monkeypox Virus.

**Clinical Presentations of Confirmed Cases to Date**

Descriptions of classic monkeypox disease describe a prodrome including fever, lymphadenopathy, headache, and myalgia followed by development of a characteristic rash culminating in firm, deep-seated, well-circumscribed and sometimes umbilicated lesions. The rash usually starts on the face or in the oral cavity and progresses through several synchronized stages on each affected area and concentrates on the face and extremities, including lesions on the palms and soles.

Thus far in the U.S. outbreak, all patients diagnosed with monkeypox in the United States have experienced a rash or enanthem (see images below). Although the characteristic firm, deep-seated, well-circumscribed and sometimes umbilicated rash has been observed, the rash has often begun in mucosal areas (e.g., genital, perianal, oral mucosa) and, in some patients, the lesions have been scattered or localized to a specific body site rather than diffuse and have not involved the face or extremities. In some instances, patients have presented with symptoms such as anorectal pain, tenesmus, and rectal bleeding, which upon physical examination, have been found to be associated with visible perianal vesicular, pustular, or ulcerative skin lesions and proctitis. The lesions have sometimes been in different stages of progression on a specific anatomic site (e.g., vesicles and pustules existing side-by-side). In addition, prodromal symptoms including fever, malaise, headache, and lymphadenopathy have not always occurred before the rash if they have occurred at all.

*Generalized monkeypox lesions are characteristically deep-seated, well-circumscribed, and often develop umbilication (A,B,C). Image A demonstrates both papulovesicular and pustular lesions in the same region of the body. Photographs of lesions can also be found at the following links:*

[https://academic.oup.com/cid/article/71/8/e210/5734993](https://academic.oup.com/cid/article/71/8/e210/5734993)

The clinical presentation of monkeypox may be similar to some sexually transmitted infections, such as syphilis, herpes, lymphogranuloma venereum, or other etiologies of proctitis. Clinicians should perform a thorough skin and mucosal (e.g., anal, vaginal, oral) examination for the characteristic vesiculo-pustular rash of monkeypox; this allows for detection of lesions of which the patient may not have been previously aware. The search for lesions consistent with monkeypox should be performed even if lesions consistent with those from more common infections (e.g., varicella zoster, herpes simplex, syphilis) are observed; this is particularly important when evaluating patients who have epidemiologic risk factors for monkeypox. Specimens should be obtained from lesions (including those inside the mouth, anus, or vagina) and tested for monkeypox.

Any patient who has a new rash that is characteristic of monkeypox or that meets epidemiologic risk criteria and the provider has high clinical suspicion for monkeypox (which may exist if lesions consistent with those from more common infections co-exist with lesions that may be characteristic of monkeypox) should be considered for testing and should be counseled to implement appropriate transmission precautions while awaiting test results. Patient epidemiologic risk criteria include the following:

- Reports having contact with a person or persons with a similar appearing rash or with a person who has received a diagnosis of confirmed or probable monkeypox OR
- Had close or intimate in-person contact with persons in a social network experiencing monkeypox infections. This includes MSM who meet partners through an online website, digital application (“app”), or social event (e.g., bar or party) OR
- Traveled, within 21 days of illness onset outside the United States to a country with confirmed cases of monkeypox ([https://www.cdc.gov/poxvirus/monkeypox/response/2022/world-map.html](https://www.cdc.gov/poxvirus/monkeypox/response/2022/world-map.html)) or where Monkeypox Virus is endemic ([https://www.cdc.gov/poxvirus/monkeypox/about.html](https://www.cdc.gov/poxvirus/monkeypox/about.html)) OR
- Had contact with a dead or live wild animal or exotic pet that is an African endemic species, or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc…)

Any individual with positive Orthopoxvirus or Monkeypox virus test results should remain in isolation for the duration of their infectious period (i.e., until all lesions have resolved, the scabs have fallen off, and a fresh layer of intact skin has formed). Patients who do not require hospitalization but remain potentially infectious to others should isolate at home. This includes abstaining from contact with other persons and pets, and wearing appropriate personal protective equipment (e.g., clothing to cover lesions, face mask) to prevent further spread.

**Recommendations for Clinicians**

1. Providers should call the Wyoming Department of Health Public Health Emergency Line at 1-888-996-9104 if they suspect a patient may have monkeypox infection.
2. Patients with rashes initially considered characteristic of more common infections (e.g., varicella zoster or sexually transmitted infections) should be carefully evaluated for a characteristic monkeypox rash. Submissions of specimens from lesions for testing should be considered if a rash consistent with monkeypox is present or if there is high clinical suspicion in a patient with epidemiologic risk factors.
3. Evaluate any individual presenting with perianal or genital ulcers, diffuse rash, or proctitis syndrome for sexually transmitted infectious per the 2021 CDC STI Treatment
Guidelines (https://www.cdc.gov/std/treatment-guidelines/default.htm). Testing for sexually transmitted infectious should be performed. The diagnosis of a sexually transmitted infection does not exclude monkeypox as a concurrent infection may be present. The clinical presentation of monkeypox may be similar to some sexually transmitted infections, such as syphilis, herpes simplex, lymphogranuloma venereum, or other etiologies of proctitis.

4. Clinicians should perform a thorough skin and mucosal (e.g., anal, vaginal, oral) examination for the characteristic vesiculo-pustular rash of monkeypox; this allows for detection of lesions of which the patient may not have been previously aware.

5. If the patient does not respond to sexually transmitted infection treatment as expected, the patient should return for follow-up evaluation and monkeypox testing should be considered.

6. Advise patients with prodromal symptoms (e.g., fever, malaise, headache) and one or more epidemiologic risk factors for monkeypox to self-isolate. If a rash does not appear within 5 days, the illness is unlikely to be monkeypox and alternative etiologies should be sought.

7. Individuals with a suspicious rash awaiting test results should be advised to self-isolate until testing is completed.

8. Clinicians should refer to CDC guidance for specimen collection to ensure proper collection of specimens. Multiple lesions in different stages of progression should be tested if possible. Two swabs should be used on each lesion, one for orthopox testing at the Wyoming Public Health Laboratory and one for confirmatory monkeypox testing at the CDC if needed.

https://www.cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html

a. Persons who collect specimens should use personal protective equipment in accordance with recommendations for healthcare settings (https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control-healthcare.html). This includes gown, gloves, eye protection (i.e., goggles or a face shield that covers the front and sides of the face), and NIOSH-approved particulate respirator equipped with N95 filters or higher.

b. Vigorously swab or brush lesion with two separate sterile dry swabs. Use a sterile nylon, polyester, or Dacron swab with a plastic, wood, or thin aluminum shaft. Do not use other types of swabs.

c. 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 media1.

d. Refrigerate (2-8°C) or freeze (-20°C or lower) specimens within an hour after collection. Store refrigerated specimens for up to 7 days and frozen specimens for up to 60 days. Refrigerated specimens should be sent within 7 days of collection; frozen specimens should be shipped within 60 days of collection. Shipping on dry ice is strongly recommended. Specimens received that are >8°C may be rejected.

e. Package, label, and ship specimens as a Category B infectious substance (UN 3373) in accordance with U.S. Department of Transportation’s Hazardous

1 It is possible that CDC may accept specimens in viral transport media and may accept lesion crusts for testing. Please contact WDH if you have questions about specimen collection.
Materials Regulations and the International Air Transport Association Dangerous Goods Regulations:

- Triple pack the specimens in:
  - Leakproof primary receptacle; multiple primary receptacles should be individually wrapped or separated
  - Leakproof secondary receptacle
  - Rigid or strong outer packaging
- Place absorbent material between the primary and secondary receptacle.
- Place a list of contents and paperwork between the secondary receptacle and outer packaging.
- Label outer package with:
  - Proper shipping name and UN 3373 certification mark
  - Shipper and consignee identification (name, address, and telephone)
  - Package orientation arrows if primary receptacle exceeds 50 mL or more

f. One dry swab will be tested at the Wyoming Public Health Laboratory for presumptive results. A presumptive positive from the Wyoming Public Health Laboratory is sufficient to consider the patient infected with monkeypox and to initiate treatment if indicated and public health control measures. CDC will provide Monkeypox Virus-specific testing on the second dry swab if the first dry swab is positive.
9. Further details and guidance can be found on CDC’s website: https://www.cdc.gov/poxvirus/monkeypox/clinicians/index.html

**Recommendations for the Public**
1. CDC is closely monitoring worldwide case counts and working to understand the cause of the current cases. Based on limited information available at this time, overall risk to the U.S. public is currently low.

2. People who may have symptoms of monkeypox, such as unknown rashes or lesions, should contact their healthcare provider for assessment. This includes anyone who:
   a. Reports contact with a person who has a similar rash or received a diagnosis of confirmed or suspected monkeypox.
   b. Had close or intimate in-person contact with individuals in a social network experiencing monkeypox infections. This includes MSM who meet partners through an online website, digital application (“app”), or social event (e.g., a bar or party).
   c. Traveled to countries where monkeypox cases have been reported.

**Case Definitions**
Case definitions are used by public health officials to classify potential monkeypox infections in a standard and nationally comparable manner. Providers may find these current case definitions useful in identifying patients who may be at increased risk for monkeypox. WDH and CDC recommend that testing be considered for any patients who meet the “Suspected” criteria.

<table>
<thead>
<tr>
<th>Clinical and Laboratory Classification</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspected</td>
<td>New characteristic rash OR Meets one of the epidemiologic criteria and has high clinical suspicion for monkeypox</td>
</tr>
<tr>
<td>Probable</td>
<td>No suspicion of other recent Orthopoxivirus exposure (e.g., Vaccinia Virus in ACAM2000 vaccination) AND demonstration of the presence of: Orthopoxivirus DNA by polymerase chain reaction testing of a clinical specimen OR Orthopoxivirus using immunohistochemical or electron microscopy testing methods OR Demonstration of detectable levels of anti-orthopoxivirus IgM antibody during the period of 4-56 days after rash onset</td>
</tr>
<tr>
<td>Confirmed</td>
<td>Demonstration of the presence of Monkeypox Virus DNA by</td>
</tr>
<tr>
<td>Polymerase chain reaction testing or next-generation sequencing of a clinical specimen OR</td>
<td>Isolation of <em>Monkeypox Virus</em> in culture from a clinical specimen</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

### Epidemiologic Classification

**Within 21 days of illness onset:**

- Reports having contact with a person or persons with a similar appearing rash or with a person who has received a diagnosis of confirmed or probable monkeypox OR
- Has close or intimate in-person contact with persons in a social network experiencing monkeypox infections. This includes MSM who meet partners through an online website, digital applications (“app”), or social event (e.g., a bar or party) OR
- Traveled, within 21 days of onset, outside the United States to a country with confirmed cases on monkeypox or where Monkeypox virus is endemic OR
- Had contact with a dead or live wild animal or exotic pet that is an African endemic species, or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc…)

### Exclusions

A case might be excluded as a suspected, probable, or confirmed case if:

- An alternative diagnosis\(^1\) can fully explain the illness OR
- A person with prodromal symptoms consistent with monkeypox does not develop a rash within 5 days of illness onset OR
- A case where high-quality specimens do not demonstrate the presence of *Orthopoxvirus* or *Monkeypox Virus* or antibodies to *Orthopoxvirus*

1. The characteristic rash associated with monkeypox lesions involves 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. The rash can sometimes be confused with other diseases that are more commonly encountered in clinical practice (e.g., syphilis, herpes simplex, and varicella zoster). Historically, sporadic accounts of patients co-infected with Monkeypox virus and other infectious agents (e.g., varicella zoster, syphilis) have been reported, so patients with a characteristic rash should be considered for Monkeypox virus testing, even if tests for other infectious agents are positive.

2. Clinical suspicion may exist if lesions consistent with those from more common infections (e.g., syphilis, herpes simplex, and varicella zoster) co-exist with lesions that may be characteristic of monkeypox.