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Technical Bulletin

Date: June 15, 2022
Topic: Updated Case-finding Guidance: Monkeypox Outbreak- United States, 2022
Contact: Melissa Peek-Bullock, State Epidemiologist, Office of State Epidemiology
To: Health Care Providers, Hospitals, Laboratories and Local Public Health Authorities

Summary

On June 14, 2022, the Centers for Disease Control and Prevention (CDC) issued a Health Alert Network (HAN) Health Advisory to notify clinicians and public health authorities about 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 relevant history, signs and symptoms. This technical bulletin serves to provide the published CDC HAN information to Nevada health care providers, laboratories and public health professionals. This is an update to the CDC HAN published in May and the corresponding technical bulletin that was issued on May 20, 2022 titled [CDC and Health Partners Responding to Monkeypox Case in the U.S.](#)

Since May 2022, monkeypox cases, which have historically been rare in the United States, 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. In people with [epidemiologic risk factors](#), rashes initially considered characteristic of more common infections (e.g., varicella zoster, herpes, syphilis) should be carefully evaluated for concurrent characteristic monkeypox rash (see images and links to below) and considered for testing.

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. The first case of monkeypox in the United States was diagnosed in a traveler who returned to Massachusetts from Canada on May 17, 2022. Since then, 65 cases have been identified in 18 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 and 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.

Updated Case Definitions

- On June 1, 2022, the Centers for Disease Control and Prevention (CDC) updated and expanded its monkeypox case definitions to ensure that anyone who is suspected of having monkeypox can be tested and appropriate steps to protect contacts can be taken.

- Revised categories of suspected, probable and confirmed cases of monkeypox standardize case reporting through the [National Notifiable Diseases Surveillance System](#) (NNDSS). In addition, the “suspected” case definition encourages broader suspicion for monkeypox.

Clinical and laboratory classification	Criteria
Suspected	New characteristic rash* or
	Meets one of the epidemiologic criteria and has high clinical suspicion† for monkeypox
Probable	No suspicion of other recent <i>Orthopoxvirus</i> exposure (e.g., <i>Vaccinia virus</i> in ACAM2000 vaccination) and demonstration of the presence of
	<ul style="list-style-type: none"> <i>Orthopoxvirus</i> DNA by polymerase chain reaction testing of a clinical specimen or
	<ul style="list-style-type: none"> <i>Orthopoxvirus</i> using immunohistochemical or electron microscopy testing methods or
Confirmed	Demonstration of the presence of monkeypox virus DNA by polymerase chain reaction testing or Next-Generation sequencing of a clinical specimen or
	Isolation of monkeypox virus in culture from a clinical specimen
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
	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., a bar or party) or
	Traveled, within 21 days of illness onset outside the United States to a country with confirmed cases of 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* can fully explain the illness or
	A person with 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 <i>Orthopoxvirus</i> or <i>monkeypox virus</i> or antibodies to <i>Orthopoxvirus</i>

* 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, 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.

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

Clinical Presentations of Confirmed Cases to Date

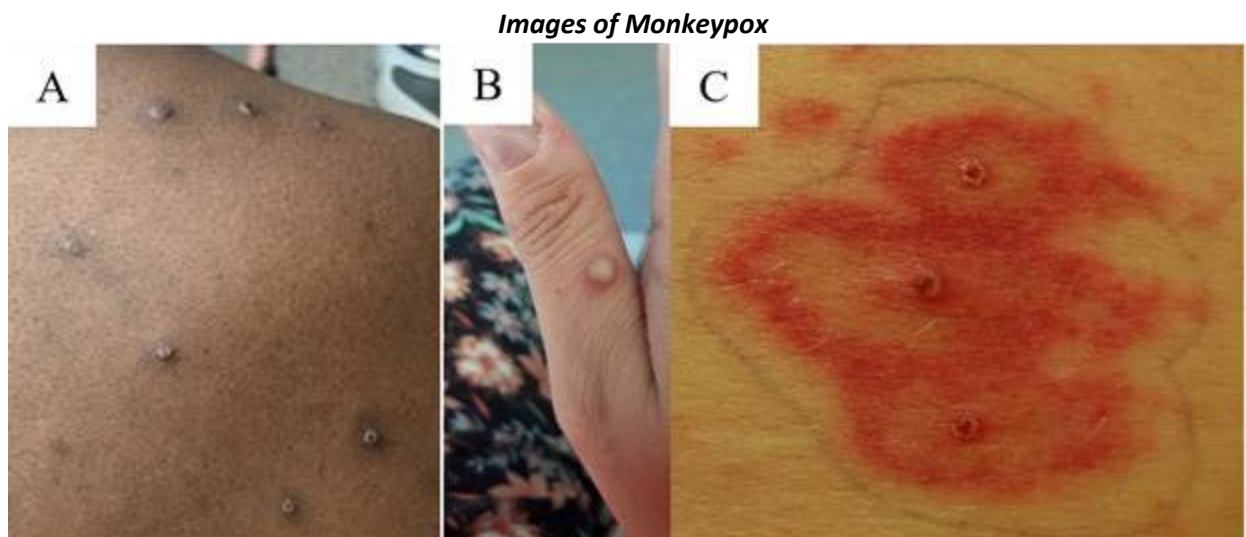
Descriptions of classic monkeypox disease describe a prodrome including fever, lymphadenopathy, headache and muscle aches followed by development of a characteristic rash culminating in firm, deep-seated, well-circumscribed and sometimes umbilicated lesions. The rash usually starts on the face or in 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. 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.

The clinical presentation of monkeypox may be similar to some sexually transmitted infections (STIs), such as syphilis, herpes, lymphogranuloma venereum (LGV) 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 about 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, syphilis, herpes) 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 meets the suspected case definition should be counseled to implement appropriate transmission precautions. Probable and confirmed case-patients 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.



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. Credits: Images A and B from NHS England High Consequence Infectious Diseases Network; image C from Reed KD, Melski JW, Graham MB et al. The detection of monkeypox in humans in the Western Hemisphere. Page 346. Copyright 2004. Massachusetts Medical Society. Reprinted with permission. Please see lesion examples from [Nigeria](#) and [Italy](#).

Recommendations for Clinicians

- Patients with rashes initially considered characteristic of more common infections (e.g., varicella zoster or STIs) should be carefully evaluated for a characteristic monkeypox rash (see images and links), and submission of specimens of lesions should be considered, especially if the person has epidemiologic risk factors for monkeypox infection.
- Evaluate any individual presenting with perianal or genital ulcers, diffuse rash, or proctitis syndrome for STIs per the [2021 CDC STI Treatment Guidelines](#). Testing for STIs should be performed. The diagnosis of an STI does not exclude monkeypox as a concurrent infection may be present. The clinical presentation of monkeypox may be similar to some STIs, such as syphilis, herpes, lymphogranuloma venereum (LGV) 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 about which the patient may not have been previously aware.
- If a patient does not respond to STI treatment as expected, the patient should return for follow-up evaluation and monkeypox testing should be considered.
- Please refer to the most recent [CDC guidance for specimen collection](#) to ensure proper collection of specimens.
 - In addition to dry swabs, CDC can now accept lesion swabs in viral transport media and lesion crusts (currently these two specimens **must be received by CDC within seven days of collection**).
- Clinicians should use appropriate infection prevention measures when collecting specimens for monkeypox evaluation. Information on infection prevention and control in health care settings is provided on the [CDC website](#).
- Advise patients with prodromal symptoms (e.g., fever, malaise, headache) and one or more epidemiologic risk factors for monkeypox to self-quarantine. If a rash does not appear within five days, the illness is unlikely to be monkeypox and alternative etiologies should be sought.
- Clinicians should consult their local public health department (see chart below) if they suspect monkeypox. Report suspected cases of monkeypox to public health as outlined below under “Reporting of Possible Cases.” If the health department cannot be reached, CDC can be contacted through the CDC Emergency Operations Center (770-488-7100) as soon as monkeypox is suspected.
 - All specimens should be sent through the Nevada State Public Health Laboratory (NSPHL) or the Southern Nevada Public Health Laboratory (SNPHL), unless authorized to send them directly to CDC. This effort must be coordinated through public health to ensure appropriate notification and that necessary epidemiological details accompany the specimen.

Recommendations for Health Departments

- Health departments should email the CDC Monkeypox Call Center at poxvirus@cdc.gov to report probable or confirmed cases and receive a case ID and a case report form. This process allows test results from the Laboratory Response Network laboratories to be linked with case report forms.
- Health departments can obtain a PDF version of the [case report form data dictionary](#) to preview. **Do not attempt to fill out this PDF.** Contact the CDC Monkeypox Call Center at 770-488-7100 to receive access to the case report form.
 - Specimens that clinicians obtain from suspected patients should be tested for an *Orthopoxvirus* by the Laboratory Response Network laboratories; refer to the most recent [CDC guidance for specimen collection](#) to ensure proper collection of specimens.
 - All specimens should be sent through the NSPHL or the SNPHL, unless authorized to send them directly to CDC. This effort must be coordinated through public health to ensure appropriate notification and that necessary epidemiological details accompany the specimen.
 - In addition to dry swabs, CDC can now accept lesion swabs in viral transport media and lesion crusts (currently these two specimens **must be received by CDC within seven days of collection**).
- After diagnosing a patient with *Orthopoxvirus*, contact tracing can be initiated for identification of people who had [close contact](#) to the patient while the patient was symptomatic. Contacts should be monitored for 21 days after their last date of contact with the patient.

- Share this technical bulletin with relevant health care provider networks, including STI clinics that may not always receive these messages.

Recommendations for the Public

- 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.
- People who may have symptoms of monkeypox, such as unknown rashes or lesions, should contact their health care provider for assessment. This includes anyone who:
 - Reports contact with a person who has a similar rash or received a diagnosis of confirmed or suspected monkeypox.
 - 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).
 - Traveled to countries where monkeypox cases have been reported.

Reporting of Possible Cases:

Health Department	County	Phone Number to Report
Southern Nevada Health District (SNHD)	Clark	(702) 759-1300 (24 hours)
Washoe County Health District (WCHD)	Washoe	(775) 328-2447 (24 hours)
Carson City Health and Human Services (CCHHS)	Carson City, Douglas, Lyon, and Storey	(775) 887-2190 (24 hours)
Nevada Division of Public and Behavioral Health (DPBH)	All other Counties	(775) 684-5911 (M-F 8 a.m. to 5 p.m.) (775) 400-0333 (after hours)

For more information

- [Case Definitions for Use in the 2022 Monkeypox Response](#)
- [Information for Healthcare Professionals](#)
- [Clinical Recognition of Monkeypox](#)
- [Monitoring Persons Who Have Been Exposed](#)
- [Monkeypox Outbreak — Nine States, May 2022](#)
- [U.S. Monkeypox 2022: Situation Summary](#)
- [Monkeypox facts for people who are sexually active](#)

Questions:

For updated guidance, review the [DPBH Technical Bulletin web page](#) regularly. Email stateepi@health.nv.gov for other questions regarding monkeypox.



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