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Maine Health Alert Network (HAN) System

PUBLIC HEALTH ALERT

To: All HAN Recipients
From: Dr. Isaac Benowitz, State Epidemiologist
Subject: U.S. CDC: Updated Case-finding Guidance: Monkeypox Outbreak
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Please review this important message from U.S. CDC about monkeypox in the United States. Maine's specimen submission information and instructions are included here in attachments.

Monkeypox is reportable under the "Any Case of Unusual Illness of Infectious Cause" criteria of Maine's [Notifiable Diseases and Conditions List](#). All suspected, probable, or confirmed monkeypox cases should be reported immediately to Maine CDC's Disease Reporting and Consultation line at 1-800-821-5821. Monkeypox is immediately reportable by telephone on recognition or strong suspicion of disease. Calling is required before sending specimens.

U.S. CDC: Updated Case-finding Guidance: Monkeypox Outbreak

Summary

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.

This Health Alert Network (HAN) Health Update serves to alert 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 relevant history, signs, and symptoms. In addition, this Health Update provides an update to a HAN Health Advisory that the Centers for Disease Control and Prevention (U.S. CDC) issued May 20, 2022, titled [Monkeypox Virus Infection in the United States and Other Non-endemic Countries—2022](#). 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, 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, U.S. 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 • <i>Orthopoxvirus</i> using immunohistochemical or electron microscopy testing methods OR • Demonstration of detectable levels of anti-orthopoxvirus IgM antibody during the period of 4–56 days after rash onset
	Demonstration of the presence of <i>Monkeypox virus</i> DNA by polymerase chain reaction testing or Next-Generation sequencing of a clinical specimen OR
	Isolation of <i>Monkeypox virus</i> 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 <i>Monkeypox virus</i> 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

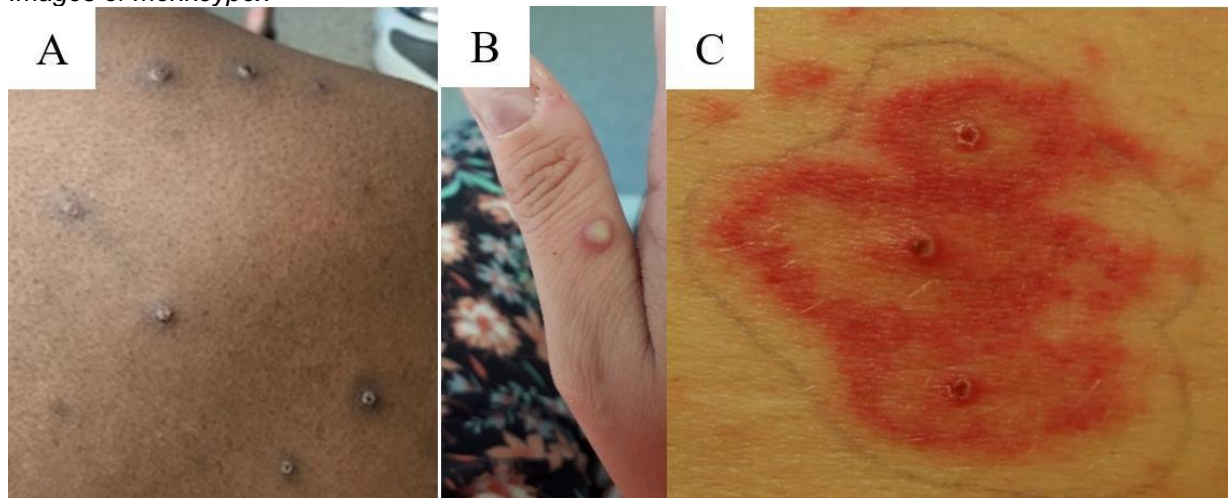
Descriptions of classic monkeypox disease describe a prodrome including fever, lymphadenopathy, headache, and muscle aches followed by development of a characteristic rash culminating in firm, deep-seated, well-circumscribed and sometimes umbilicated lesions. The rash usually starts on the face or in 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 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 the patient may not have been previously aware of. 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.

Images of monkeypox



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/Healthcare Facilities

- Ensure facility has a process to promptly **identify** at presentation, **isolate** (e.g., private room), **implement** appropriate personal protective equipment (i.e., gowns, gloves, eye-protection, and fit-tested N95 or higher-level respirator) and **inform** appropriate parties of suspect cases. Ensure staff are educated on processes. More infection control guidance can be found in links provided below.
- 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 (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 U.S. 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 the patient may not have been previously aware of.
- 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 U.S. CDC guidance for [specimen collection](#) to ensure proper collection of specimens. **Please also see the attached information regarding specimen collection in Maine.**
 - In addition to dry swabs, U.S. CDC can now accept lesion swabs in viral transport media and lesion crusts. These two specimens *must be received by U.S. CDC within 7 days of collection.*
 - **Please contact Maine CDC to discuss specimen collection prior to collecting specimens.**
- Clinicians should use appropriate infection prevention measures when collecting specimens for monkeypox evaluation. Information on infection prevention and control in healthcare settings is provided on the [U.S. 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 5 days, the illness is unlikely to be monkeypox and alternative etiologies should be sought.
- Clinicians should consult Maine CDC at 1-800-821-5821 if they suspect monkeypox.
 - All laboratory specimens should be sent through Maine's Health and Environmental Testing Laboratory (HETL), unless authorized to send them directly to U.S. CDC.

Recommendations for the Public

- U.S. 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, the 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 healthcare 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.

For More Information

- [Case Definitions for Use in the 2022 Monkeypox Response](#)
- [Information for Healthcare Professionals](#)
- [Infection Control Guidance](#)
- [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](#)
- Contact Maine CDC if you have any questions or suspect a patient may have monkeypox.

Janet T. Mills
Governor

Jeanne M. Lambrew, Ph.D.
Commissioner



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Instructions for Collecting Suspected Monkeypox Samples

Providers who suspect monkeypox should:

1. Call Maine CDC at 1-800-821-5821 to report the suspected case and to request approval for testing at Maine's Health and Environmental Testing Laboratory (HETL)
 - Testing for diseases with similar symptoms (such as varicella or STIs) should be conducted at the same time as monkeypox testing, however, these samples do not need to be sent to HETL and may instead go to a commercial lab
2. Collect samples for HETL
 - HETL can accept the following specimen types for monkeypox testing:
 - Vesicle fluid, skin, crust, "roof"
 - Swab of lesion
 - Collect two (2) swabs from five (5) separate specimen sites for a total of ten (10) swabs submitted to HETL
 - Specimen collection
 - Collect swabs of lesions, vesicles, or fluid only
 - Collect specimens from five (5) separate sites (lesions, vesicles, or fluid)
 - Collect two (2) swabs from each specimen site
 - Swabs used for SARS-CoV-2 PCR are acceptable
 - DO NOT use swabs with wooden shafts
 - DO NOT use swabs with calcium alginate or cotton tips
 - Specimen container
 - For each specimen site, place the two (2) swabs into a single sterile specimen container
 - Once you swab a specimen site, the two (2) swabs must be placed into a DRY specimen container that contains NO FLUID. After collecting the specimens, the swabs must stay dry. Do not use transport media.
 - Note: You will have five (5) specimen containers each containing two (2) swabs for a total of ten (10) swabs
 - Each specimen container needs a unique requisition form (there will be a total of five (5) forms)
3. Label samples
 - Each sample tube/sample container must be labeled with:
 - Patient Name
 - Date of Birth

- Sample Source (lesion, skin, crust, etc.)
 - Collection Location of Specimen (Body Site)
 - Date of Collection
 - Label Samples #1-5
4. Storage and Shipping Information
- Refrigerate samples at 2-8°C within one (1) hour of collection
 - Ship samples at 2-8°C
5. Complete the HETL Orthopox Specimen Submission Form:
- <https://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/documents/Orthopox%20Specimen%20Submission%20Form%20June%202022.pdf>
 - For questions about the Orthopox Specimen Submission Form, call 1-800-821-5821
 - A separate form must be filled out for **each specimen collection site.**
 - You will submit five (5) requisition forms; one for each specimen container
 - For more information: <https://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/documents/Detection%20of%20Monkeypox%20via%20Real-Time%20PCR%20using%20LRN-B%20methodology%20LSIS.pdf>

Note: This assay does not differentiate between detected Orthopoxviruses. All positive samples will automatically be sent to U.S. CDC for confirmation and speciation.

Health and Environment Testing Laboratory ORTHOPOX Specimen Submission Form

*This form **must be submitted** with Orthopox test requests. Specimens that are submitted for Orthopox testing without this form or with incomplete information may be delayed or not tested. rev. 6/11/2022*

Facility Information

Facility: _____ Ordering Provider Name: _____
 Contact Person: _____ Telephone: _____
 Address: _____
 Telephone: _____
 Secure Fax: _____ Contact Maine CDC at 1-800-821-5821 for consultation

Patient Information

Patient Name (Last, First, MI) _____ **DOB:** ____ / ____ / ____ (mm/dd/yyyy)

Patient Gender: Male Female Other
Patient Phone Number: _____

Patient Address

Travel History

No
 Yes
 If Yes: Where: _____

Race: White
 American Indian or Alaskan Native
 Black or African American
 Asian
 Native Hawaiian/Pacific Islander
 Other
 Two or more races

Ethnicity: Hispanic or Latinx
 Non-Hispanic

Required Clinical Information (MUST BE COMPLETED)

Major (check all that apply)	Minor (check all that apply)
<input type="checkbox"/> Febrile prodrome: Fever of $\geq 101^{\circ}\text{F}$, 1–4 days prior to rash onset with at least prostration, headache, backache, chills, vomiting or severe abdominal pain	<input type="checkbox"/> Centrifugal distribution of lesions
<input type="checkbox"/> Classic smallpox lesions: Deep-seated, firm/hard, round well-circumscribed vesicles or pustules; lesions may umbilicate or become confluent	<input type="checkbox"/> First lesions on the oral mucosal palate, face, or forearms
<input type="checkbox"/> Lesions in same stage of development: On any one part of the body	<input type="checkbox"/> Patient appears toxic or moribund
Intentionally left blank	<input type="checkbox"/> Slow evolution of lesions from macule, to papule, to vesicle (1-2 days each stage)
Intentionally left blank	<input type="checkbox"/> Lesions on the palms and soles

Date of Symptom Onset ____ / ____ / ____ (mm/dd/yyyy)

Vaccinated against Monkeypox ____ / ____ / ____ (mm/dd/yyyy)

Vaccinated against Smallpox ____ / ____ / ____ (mm/dd/yyyy)

To be filled out by HETL LRN-B staff only
 High Risk Mod Risk Low Risk
 Name and Date: _____

Specimen Information

Date of Specimen Collection ____ / ____ / ____ (mm/dd/yyyy)

Specimen Source: Lesion Vesicle Fluid
 Collection Location of Specimen (Body Site): _____

Specimen Collection

- Specimens from 5 separate lesions in duplicate, vesicles, or fluid
- Preferably collect from lesions that are at different stages of development
- Collect **TWO DRY** swabs from each lesion
- Place the two duplicate **DRY** swabs in an empty sterile specimen container.
- Note: You will have 5 specimen containers each containing 2 swabs for a total of 10 swabs.
- Note: You must have one submission form for each specimen container.
- For further details please see the laboratory submission information sheet titled Detection of Monkeypox via Real-Time PCR Testing at <https://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/submitting-samples.shtml>