PENNSYLVANIA DEPARTMENT OF HEALTH
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Updated Recommendations for Monkeypox Case Identification and Testing

DATE:	6/23/2022
TO:	Health Alert Network
FROM:	Denise A. Johnson, M.D., FACOG, FACHE, Acting Secretary of Health
SUBJECT:	Updated Recommendations for Monkeypox Case Identification and Testing
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This transmission is a "Health Advisory," and provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL**; EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE **LOCAL HEALTH JURISDICTIONS**: PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP; **LONG-TERM CARE FACILITIES:** PLEASE SHARE WITH ALL MEDICAL, INFECTION CONTROL, AND NURSING STAFF IN YOUR FACILITY.

SUMMARY

- Guidance was released by the CDC on June 14, 2022 to alert physicians to clinical presentations of monkeypox seen in the United States and encourage testing for monkeypox among persons presenting for care with relevant history, signs, and symptoms.
- Monkeypox has a classic clinical presentation but there have been variations to that clinical presentation in the current outbreak and therefore epidemiologic risk factors should also be considered when a patient presents with a rash that is more characteristic of other infections (e.g. varicella, herpes, and syphilis)
- Co-infection of monkeypox and other common infections or sexually transmitted infections may occur. Thus, patients with a characteristic rash should be considered for testing, even if tests for other infectious agents are positive, especially if the person has epidemiologic risk factors for monkeypox infection.
- If providers have a clinical suspicion of monkeypox after they have evaluated a patient, they are to contact their local or state health department to discuss the case and to determine testing.
- Once testing has been recommended there are specific guidelines that must be followed for appropriate specimen collection.
- If you have any questions, please call PA DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.
- Please refer to HAN's # 643 and 642 for additional monkeypox information.

Background

Since May 2022, monkeypox cases, which have historically been rare in the United States, have been identified in 23 states and territories among both persons returning from international travel and their close contacts domestically. Globally, more than 3,098 cases have been reported from more than 41 countries; the case count continues to rise daily.

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*.

The purpose of this HAN is to review the current monkeypox clinical presentation, review monkeypox case definitions, outline the clinical information needed to determine monkeypox virus testing, and ~~to~~ update lab guidance for monkeypox specimen collection.

Clinical presentations of confirmed cases to date in the United States

The classical presentation of monkeypox infection is well-described and consists of a prodrome including fever, lymphadenopathy, headache, and muscle aches followed by a characteristic rash culminating in firm, deep-seated, well-circumscribed and sometimes umbilicated lesions (Figure 1). 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, all patients diagnosed with monkeypox have experienced a skin rash or enanthem (lesions inside the mouth). Although the characteristic rash has been observed, several variations of the classical presentation have been described.

- The lesions have been scattered or localized to a specific body site rather than diffuse and have not involved the face or extremities.
- The rash has often begun in mucosal areas (e.g., genital, perianal, oral mucosa). 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 have not always occurred before the rash if they have occurred at all.

Clinicians should be aware that 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. The diagnosis of STI does not exclude monkeypox, particularly when evaluating patients who have epidemiologic risk factors for monkeypox.

Images of Monkeypox

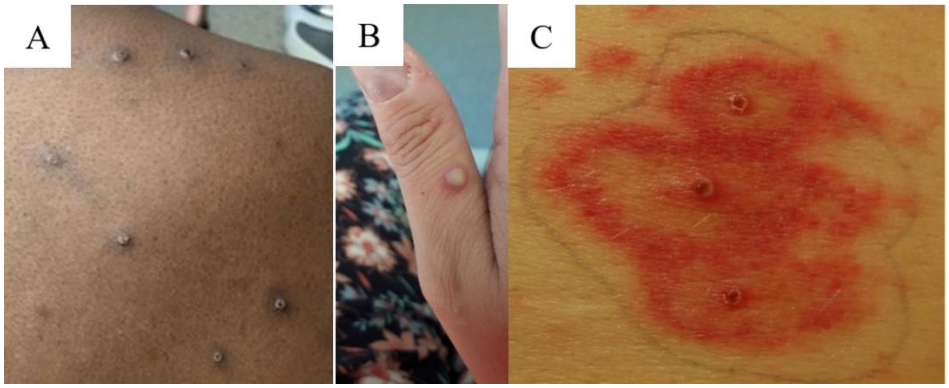

Figure 1. Generalized monkeypox lesions are characteristically deep-seated, well-circumscribed, and often develop umbilication (A, B, C), Image A demonstrates both papulovesicular and pustular lesions in the same region of the body. Credits: Images A and B from NHS England High Consequence Infectious 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, Italy, Israel, UK, and Australia.

Current CDC monkeypox case definitions

On June 1, 2022, the CDC updated 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.

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 *Orthopoxvirus* exposure (e.g., *Vaccinia virus* in ACAM2000 vaccination) AND demonstration of the presence of
	• *Orthopoxvirus* DNA by polymerase chain reaction testing of a clinical specimen **OR**
	• *Orthopoxvirus* 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
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 *Orthopoxvirus* or *Monkeypox virus* or antibodies to *Orthopoxvirus*

* 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.

Recommendations for clinicians:

- Clinicians should perform a thorough skin and mucosal (e.g., anal, vaginal, oral) examination for the characteristic vesiculo-pustular rash of monkeypox.
- Clinician should use appropriate infection prevention measures when collecting specimens for monkeypox evaluation. Information on infection prevention and control in healthcare settings is available on this CDC website.
- Advise patients with prodromal symptoms with epidemiologic risk factors to self-quarantine. If a rash does not appear within 5 days, illness is unlikely to be monkeypox and alternative etiologies should be sought.
- Clinicians should consult their local or state health department if they suspect monkeypox to determine further management and testing.

Determination of Monkeypox Virus Testing:

It is **important** that the following information is available at the time of consultation with the local or state health department:

- History of the current illness
- Description of the physical exam including pictures of the rash
- Past history of the patient including:
    - Travel history, especially international travel
    - Contact with a person who has a similar rash or who has a diagnosis of a known or suspected case of monkeypox
    - Close or intimate 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., bar or party)

Monkeypox testing and collection guidance:

Currently, the only laboratory in the state of Pennsylvania that can perform Monkeypox testing (real time polymerase chain reaction (PCR)), is the PA Department of Health- Bureau of Laboratories (BOL). Consultation and approval for testing is required. Once testing has been approved there are specific guidelines that **must** be followed for appropriate specimen collection. At this time, only a dry swab of lesion fluid or the surface of the lesion are acceptable sources.

If you have any questions, please call PA DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

Categories of Health Alert messages:
Health Alert: conveys the highest level of importance; warrants immediate action or attention.
Health Advisory: provides important information for a specific incident or situation; may not require immediate action.
Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of June 23, 2022 but may be modified in the future.