Michigan Local Health Departments: Investigation of Suspect Cases of Monkeypox-Michigan

Background

Since May 14, 2022, clusters of monkeypox cases, have been reported in several countries that don't normally have monkeypox. Although previous cases outside of Africa have been associated with travel from Nigeria, most of the recent cases do not have direct travel-associated exposure risks. On May 18, the Centers for Disease Control and Prevention (CDC) confirmed a case of monkeypox in the United States in a patient from Massachusetts.

Cases of monkeypox have previously been identified in travelers from, or residents of, West African or Central African countries where monkeypox is considered to be endemic. Clinicians in the United States should be vigilant to the characteristic rash associated with monkeypox. Suspicion for monkeypox should be heightened if the rash occurs in people who:

1) traveled to countries with recently confirmed cases of monkeypox,

2) report having had contact with a person or people who have a similar appearing rash or received a diagnosis of confirmed or suspected monkeypox, or

3) is a man who regularly has close or intimate in-person contact with other men, including those met through an online website, digital application ("app"), or at a bar or party. Lesions may be disseminated or located on the genital or perianal area alone. Some patients may present with proctitis, and their illness could be clinically confused with a sexually transmitted infection (STI) like syphilis or herpes, or with varicella zoster virus infection.

CDC is urging healthcare providers in the U.S. to be alert for patients who have rash illnesses consistent with monkeypox, regardless of whether they have travel or specific risk factors for monkeypox and regardless of gender or sexual orientation.

Recommendations for Clinicians

- If clinicians identify patients with a rash that could be consistent with monkeypox, especially those with a recent travel history to central or west African countries, parts of Europe where monkeypox has been reported, or other areas reporting monkeypox cases, monkeypox should be considered as a possible diagnosis.
- The rash associated with monkeypox involves vesicles or pustules that are deep-seated, firm or hard, and well-circumscribed; the lesions may umbilicate or become confluent and progress over time to scabs.
- Presenting symptoms typically include fever, chills, the distinctive rash, or new lymphadenopathy; however, onset of perianal or genital lesions in the absence of subjective fever has been reported.

- The rash associated with monkeypox can be confused with other diseases that are encountered in clinical practice (e.g., primary syphilis, herpes, chancroid, and varicella zoster). However, a high index of suspicion for monkeypox is warranted when evaluating people with a characteristic rash, particularly for men who report sexual contact with other men and who present with lesions in the genital/perianal area or for individuals reporting a significant travel history in the month before illness onset or contact with a suspected or confirmed case of monkeypox.
- Information on infection prevention and control in healthcare settings is provided on the CDC website Infection Control: Hospital | Monkeypox | Poxvirus | CDC. CDC is currently reviewing this information to consider the need for updates.
- Transmission of monkeypox requires prolonged close interaction with a symptomatic individual. Brief interactions and those conducted using appropriate PPE in accordance with Standard Precautions are not high risk and generally do not warrant PEP. Risk exposure assessments should be conducted as recommended by the CDC.
- Contact the MDHHS Division of Immunizations at 517-335-8900 with questions about vaccines.
- Monkeypox is a reportable condition in Michigan. Clinicians should first consult their local health department or the Michigan Department of Health and Human Services Emerging & Zoonotic Infections Diseases Section at 517-335-8165 (after hours: 517-335-9030) or CDC through the CDC Emergency Operations Center (770-488-7100) as soon as monkeypox is suspected.

All specimens should be sent through the Michigan Department of Health and Human Services Bureau of Laboratories.

Recommendations for Health Departments

- Immediately notify the Emerging & Zoonotic Infectious Disease Section (EZID) for case evaluation and specimen testing coordination at 517-335-8165 or, if afterhours, at 517-335-9030.
- Enter any suspect monkeypox cases into the Michigan Disease Surveillance System (MDSS) under the Reportable Condition: Unusual Outbreak or Occurrence.
- On the case report form, enter **monkeypox2022** in the "Outbreak Name" field under the "Investigation Information Section."
- Appropriately collected samples can be sent to MDHHS Bureau of Laboratories (BOL). Weekend testing may be available with prior approval.
- BOL can provide orthopoxvirus testing on specimens that clinicians obtain from suspected patients. Test request form DCH-1396 labeled Vaccinia/Variola/Pox Virus is the proper form. For questions about specimen collection and submission, contact the BOL at 517-335-8063.
    - Acceptable specimens include the following (See page 5 for instructions):
        1. **Dry swab of lesion -2 dry swabs required for PCR testing at BOL and CDC (Do not place swab into transport media)**

a. 1) Vigorously swab or brush lesion with two separate sterile dry polyester or Dacron swabs;
b. 2) 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. Write collection site on tube**.**

2. Dried vesicular fluid on a slide (touch prep).
3. Fresh biopsy (no formalin)
4. Skin or crust from roof of vesicle

- Store: Refrigerate (2-8°C) or freeze (-20°C or lower) specimens within an hour after collection. If specimens are refrigerated send to BOL on cold packs and if frozen send on dry ice. Refrigerated specimens can be stored for up to 7 days and frozen specimens may be stored for up to a month.
- Ship clinical specimens following category B packaging and shipping guidelines.
- Complete Monkeypox Exposure Questionnaire and attach to the Case Report form in MDSS.
- After diagnosis of monkeypox, begin contact tracing of individuals who may have been exposed 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 HAN Health Advisory with relevant healthcare provider networks, including Sexually-Transmitted Infections (STI) clinics that may not always receive CDC HAN messages.

Case Definition: Monkeypox 2022

Person Under Investigation

- Persons under investigation (PUI) are individuals who are reported as suspicious but have not been tested in an LRN laboratory. This includes cases that health departments have been consulted on because of clinician concern.

Possible Case

- Meets one of the epidemiologic criteria **AND** has fever or new rash **AND** at least one other sign or symptom with onset 21 days after last exposure meeting epidemiologic criteria

Probable Case

- Meets one of the epidemiologic criteria **AND** has new rash *with or without* fever **AND** at least one other sign or symptom with onset 21 days after last exposure meeting epidemiologic criteria **AND**
- Demonstration of detectable levels of anti-orthopoxvirus IgM antibody during the period of 4 to 56 days after rash onset

Confirmed Orthopoxvirus Case

- Meets possible case definition **AND**

- Demonstration of orthopoxvirus DNA by polymerase chain reaction testing of a clinical specimen **OR** demonstration of presence of orthopoxvirus using immunohistochemical or electron microscopy testing methods

Confirmed Monkeypox Case

- Meets possible case definition **AND**
- Demonstration of 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

Clinical Criteria

- **New rash (any of the following)**
  - Macular
  - Papular
  - Vesicular
  - Pustular
  - Generalized or localized
  - Discrete or confluent
- **Fever (either of the following)**
  - Subjective
  - Measured temperature of ≥100.4° F [>38° C]
- **Other signs and symptoms:**
  - Chills and/or sweats
  - New lymphadenopathy (periauricular, axillary, cervical, or inguinal)

Epidemiologic Criteria

Within 21 days of illness onset:

- Report having had contact with a person or people who have a similar appearing rash or received a diagnosis of confirmed or probable monkeypox **OR**
- Is a man who regularly has close or intimate in-person contact with other men, including through an online website, digital application (“app”), or social event (e.g., a bar or party) **OR**
- Traveled to a country with confirmed cases of monkeypox **AND** at least one of the above criteria **OR**
- Traveled to country where MPXV is endemic **OR**
- Contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived such animals (e.g., game meat, creams, lotions, powders, etc.)

Exclusion Criteria

A case may be excluded as a possible, probable, or confirmed monkeypox case if:

- An alternative diagnosis* can fully explain the illness **OR**
- An individual with symptoms consistent with monkeypox but who does not develop a rash within 5 days of illness onset **OR**

- A case where specimens do not demonstrate the presence of orthopoxvirus or monkeypox virus or antibodies to orthopoxvirus as describe in the laboratory criteria

†Categorization may change as the investigation continues (e.g., a patient may go from PUI to probable)

* The rash associated with monkeypox can be confused with other diseases that are more commonly encountered in clinical practice (e.g., secondary syphilis, herpes, chancroid, and varicella zoster). Historically, sporadic reports of patients co-infected with monkeypox virus and other infectious agents (e.g., varicella zoster, syphilis).