Mpox!

What is Mpox?

- Mpox (formerly known as monkeypox) is a disease caused by infection with a virus, known as Monkeypox virus. Mpox is not related to chickenpox.
- This virus is part of the same family virus that causes smallpox.
- The virus that causes mpox has been found in small rodents, monkeys, and other mammals that live in central and West African areas.

History of MPox

- The first human case of mpox was recorded in 1970, in what is now the Democratic Republic of the Congo, Africa.
- Mpox is a zoonotic disease, meaning it can be spread between animals and people. It is found regularly, in parts of Central and West Africa.
- In 2003, first US mpox outbreak was identified in 6 US states, after having contact with pet prairie dogs which were kept near small mammals imported from Ghana, Africa.
- Ever since 2022, mpox started spreading worldwide outside of Africa (Democratic Republic of Congo).
- People with mpox often get a rash, along with other symptoms.
- The rash will go through several stages, including scabs, before healing.
- Learn more about mpox history and symptoms at this link: tinyurl.com/aboutmpox

For any MPox-related questions, please call your local health department.
For residents of Adams, Clay, Nuckolls, and Webster Counties, contact the South Heartland District Health Department at (402) 462-6211 for a free, anonymous consultation.

Mpox!

For Clinicians: Background

In 2023, the DRC reported 14,626 suspected mpox cases with 654 deaths (5% fatality rate). Since January 2024, there have been 7,864 suspected and 1,134 lab-confirmed cases, with 83 deaths. This marks a significant increase from the annual median of 3,767 suspected cases observed between 2016 and 2021.

- MPXV has two distinct genetic clades (subtypes of MPXV), I and II, which are endemic to central and west Africa, respectively.
- A clade is a broad grouping of viruses that has evolved over decades and is a genetic and clinically distinct group.
- Cases of Clade I MPXV have not been reported in the United States so far.
- Clade IIb MPXV has been associated with the 2022-23 global outbreak that has predominately affected gay, bisexual, and other men who have sex with men (MSM).
- However, clinicians should be aware of the possibility of Clade I MPXV in travelers who have been in DRC.
- For patients with mpox-like symptoms, which may include a diffuse rash and lymphadenopathy, and recent travel to DRC (within 21 days), contact your local health department to expedite clade specific testing, treatment options, vaccines etc.
- Clinicians should also submit lesion specimens for clade-specific testing for the patients with travel history to DRC within 21 days of onset.
- Vaccines (e.g., JYNNEOS, ACAM2000) and other medical countermeasures (e.g., tecovirimat, brincidofovir, and vaccinia immune globulin intravenous) are available and expected to be effective for both Clade I and Clade II MPXV infections.
- However, vaccination coverage in the United States remains low, with only one in four people who are eligible to receive the vaccine having received both doses of JYNNEOS. CDC recommends that clinicians encourage vaccination for patients who are eligible.
- Increasing 2-dose vaccination coverage and counseling patients about other prevention strategies are the best ways for clinicians to prevent cases.

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).

Mpox

FOR CLINICIANS: WHAT TO DO IF YOU SUSPECT MPOX

Early detection can help stop the spread of human monkeypox (MPOX). To date, most cases in the current U.S. outbreak have occurred among gay, bisexual, and other men who have sex with men. However, any patient, regardless of sexual or gender identity, with a rash consistent with MPOX should be tested. Know what to look for and what to do if you suspect MPOX.

Signs & Symptoms

- A new, maculo-papular rash that develops into vesicles and then pustules.
- Lesions may be deep-seated, firm, well-circumscribed, or umbilicated.

The rash may:

- Appear anywhere on the body, including palms, soles and anogenital region; Be localized to a specific body site or diffuse.
- Be the only symptom people experience and
- Be painful, painless, or itchy.
- Fever, headache, malaise, chills, and lymphadenopathy may occur.
- Patients may present with anorectal pain, rectal bleeding, or tenesmus in association with visible perianal skin lesions and proctitis. See mpox features page for more details.

Report Cases

- Report confirmed or probable or suspect cases of MPOX to South Heartland District Health Department within one working day using a confidential line via (402) 462 6211, or send a secure email to devi.dwarabandam@shdhd.ne.gov.
- MPOX virus-specific testing is available through commercial laboratories or through the Nebraska Public Health Laboratory.

Epi. Criteria: Risk Factors

Within the last 21 days before symptom onset, have you

- Had contact with a person(s) with a similar-appearing rash or who were diagnosed with confirmed or probable mpox OR
- Had close or intimate in-person contact with individuals in a social network experiencing mpox activity; this includes men who have sex with men (MSM) who meet partners through online websites, digital applications ("apps"), or social events (e.g., a bar or party)
- Traveled to a country with endemic mpox or reported non-endemic mpox
- Had contact with an African-endemic wild animal or exotic pet (dead or live) or derivative products (e.g., game meat, creams, lotions, powders)

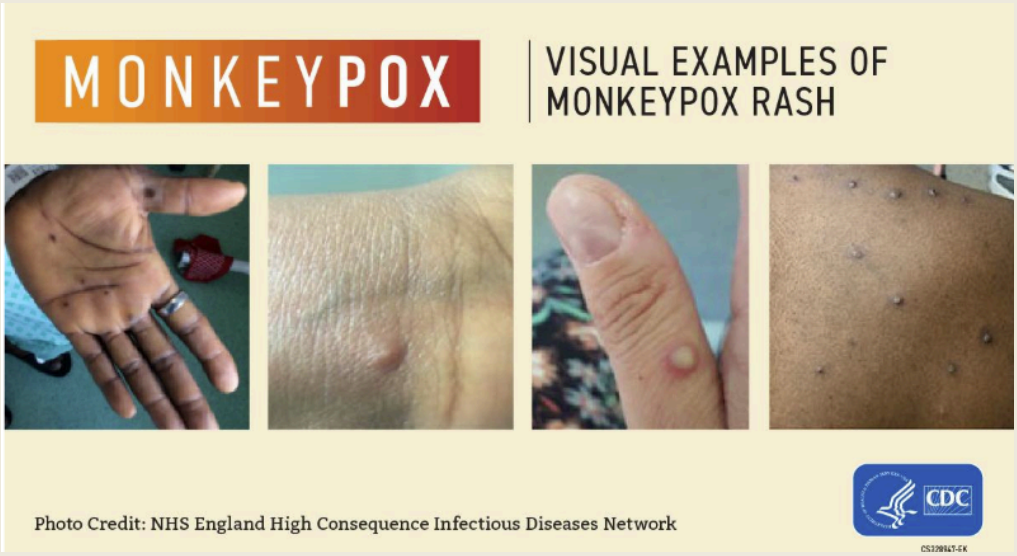
Specimen Collection Guidelines

- Follow CDC's specimen collection guidelines (including collection of two swabs per lesion) to ensure specimen availability for testing. Unroofing or aspiration of lesions or otherwise using sharp instruments for mpox testing is not recommended due to the risk of sharps injury. See testing instructions page for more details.
- If clade-specific testing is not available in a jurisdiction, specimen submission to CDC can be coordinated through your state or local health department.
- Testing through the Public Health Laboratory no longer requires approval but sample collection and refrigeration is acceptable. See testing instructions for more details.

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).

Mpox

FOR CLINICIANS: MPOX Features & Testing Instructions



Please go to the following link for more details: https://tinyurl.com/mpoxrecognition

Stage	Stage Duration	Characteristics
Enanthem		• Sometimes, lesions first form on the tongue and in the mouth.
Macules	1–2 days	• Macular lesions appear.
Papules	1–2 days	• Lesions typically progress from macular (flat) to papular (raised).
Vesicles	1–2 days	• Lesions then typically become vesicular (raised and filled with clear fluid).
Pustules	5–7 days	• Lesions then typically become pustular (filled with opaque fluid) – sharply raised, usually round, and firm to the touch (deep seated). • Finally, lesions typically develop a depression in the center (umbilication). • The pustules will remain for approximately 5 to 7 days before beginning to crust.
Scabs	7–14 days	• By the end of the second week, pustules have crusted and scabbed over. • Scabs will remain for about a week before beginning to fall off.

*This is a typical timeline, but timeline can vary.
https://www.cdc.gov/poxvirus/monkeypox/clinicians/clinical-recognition.html

Testing Instructions

- We encourage clinicians and healthcare facilities to include mpox on the differential diagnosis when evaluating a patient with a new characteristic rash, to have an elevated index of suspicion if that patient has risk factors for monkeypox, and to promptly test either through NPHL (via NUlirt) or a preferred commercial laboratory. Approval is no longer needed. However, please report suspected cases to LHDs.
- Orders can be placed directly into NUlirt, the NPHL test ordering and resulting system.
- Clinicians should create a NUlirt account: go to NPHL.org, from the sidebar under NUlirt select signup.
- To order a test, select outbreaks, select monkeypox, enter patient information, and submit the order.
- The result will be sent back to the email associated with the account and will also be sent to public health. For help, call the NPHL 24/7 emergency pager at 402-888-5588.

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).

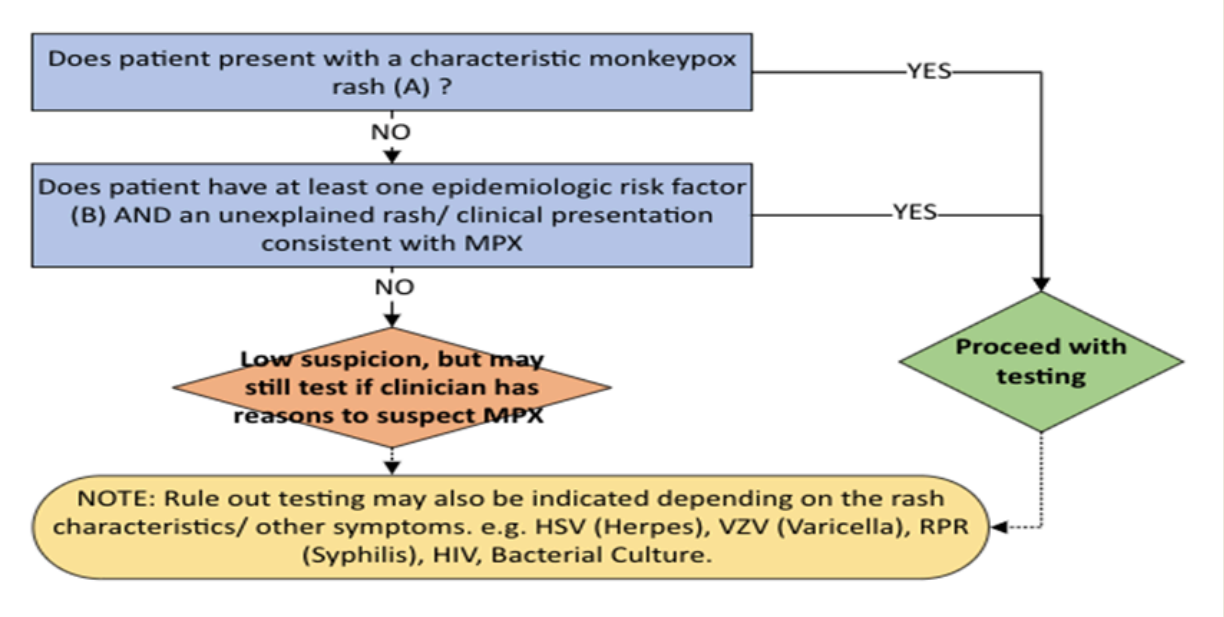
Mpox

FOR CLINICIANS: Diagnostic Testing

Recommendations:

- Providers caring for patients presenting for evaluation of dermatologic lesions or sexually transmitted infections, are advised to be vigilant for signs and symptoms consistent with mpox, including characteristic rash and lymphadenopathy, with or without fever.
- Clinicians should also consider and rule out, if possible, other more common etiologies of rash illness such as herpes simplex, varicella zoster, syphilis, molluscum contagiosum, chancroid, disseminated fungal infections including cryptococcus, disseminated gonococcus etc.

MPOX TESTING DECISION FLOWCHART



Additional Diagnostic Considerations

- Patients with rashes characteristic of more common infections (e.g., varicella zoster or STIs) should be evaluated for mpox
- Diagnosis of an STI does not exclude mpox, as mpox infection may be concurrent
- Consider submitting lesion specimens, especially if epidemiologic risk factors for mpox are present. All regulations should be followed for packaging and transporting specimens from suspect mpox patients as Category B for diagnostic testing. See next page.
- Evaluate any individual presenting with genital, anal, or perianal ulcers; proctitis syndrome; or diffuse rash for STIs as per CDC STI Screening Recommendations https://tinyurl.com/cdcstiscreening

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).

Mpox

FOR CLINICIANS: SPECIMEN COLLECTION & TESTING GUIDELINES

Testing Patients for Mpox

What specimen to collect

- Skin lesion material, including swabs of lesion surface, exudate, or lesion crusts are the recommended specimen types for laboratory testing of mpox virus specimens.
- Laboratories may not be able to perform testing on all specimen types. Contact the testing laboratory for specifics on acceptable specimen types.

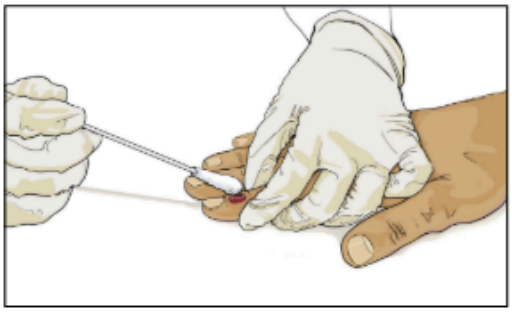
- For further testing of a specimen at CDC, three types of specimens are accepted.
  - Dry swabs of lesion material
  - Swabs of lesion material in viral transport media (VTM)*
  - Lesion crusts

* Not currently accepted for clade I mpox testing.

See Test Directory | Submitting Specimens to CDC | Infectious Diseases Laboratories for more information.

How to collect lesion specimens

1. Wear appropriate personal protective equipment (PPE).
2. Collect two swabs from each lesion, preferably from different locations on the body or from lesions which differ in appearance.
   - Use sterile, dry synthetic swabs (including, but not limited to polyester, nylon, or Dacron swabs) with a plastic, wood, or thin aluminum shaft. (Any type of shaft is acceptable as long as it can be broken or cut).
   - Do not use cotton swabs.



3. Generally, with vigorous swabbing, sufficient monkeypox virus DNA is present on the surface of a lesion, and you don't need to de-roof the lesion before swabbing. Put each swab into a separate container, either:
   - By breaking off or cutting the end of each swab's applicator into a 1.5- or 2-mL screw-capped tube with O-ring or other sterile leak-proof container (e.g. sterile urine cup) or
   - By putting the entire swab in a sterile container that has a gasket seal. Use a plastic container instead of a glass container, when possible.

How to ship specimens

- All mpox specimens except clade I mpox viral cultures (materials containing or contaminated with intentionally laboratory propagated virus) can be shipped as UN 3373 Biological Substance, Category B.
- Specimens should first be tested by a public health or clinical laboratory unless you are authorized to send specimens directly to CDC.
- If you are authorized to send specimens directly to CDC, or if you are sending specimens to CDC for viral characterization: Store refrigerated (2-8°C) or frozen (-20°C or lower) within an hour of collection.
  - Ship specimens on dry ice, when possible.
  - Specimens received outside of acceptable temperature ranges will be rejected.
  - Include an electronic Global File Accessioning Template (GFAT) form and ensure that each specimen is labeled with a unique identifier GFAT.

If fewer than 20 specimens are being submitted to CDC, a CDC 50.34 form for each specimen may be submitted instead of a GFAT.

Please include a printed manifest of your specimens with your shipment. Password protect, then email, the GFAT form to Poxviruslab@cdc.gov

For patients with confirmed mpox, health care providers may send serum to CDC directly for pox serology test. See CDC Poxvirus Serology for details.

For more information, see CDC's Mpox: Information for Healthcare Professionals page.

CS333703-A | 04/18/2024

All regulations should be followed for packaging and transporting specimens from suspect mpox patients as Category B for diagnostic testing. Please refer to the most recent CDC guidance for submitting specimens to CDC.

Note: Underlined texts are clickable with attached hyperlinks for detailed information.

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).

Mpox

FOR CLINICIANS: TREATMENT & PREVENTION

Treatment options

- Medical countermeasures (e.g., tecovirimat, brincidofovir, and vaccinia immune globulin intravenous) that have been used during the ongoing Clade II MPXV outbreak in the United States are expected to be effective for Clade I MPXV infections.
- Public health authorities should be consulted promptly for any mpox cases for which severe manifestations might occur. Tecovirimat is available through the STOMP trial and Investigational New Drug (IND) protocol.

Vaccine Recommendations

- Vaccination with JYNNEOS or ACAM2000 or prior MPXV infection should provide antibodies that will provide cross-protection to other orthopoxviruses, including Clade I MPXV.

Vaccine Guidelines

- The Advisory Committee on Immunization Practices (ACIP) recommends that people 18 years of age and older with risk factors for mpox be vaccinated, before an exposure, with two doses of the JYNNEOS vaccine 28 days apart unless they were previously infected with mpox or already received two doses.
- There is no recommendation regarding vaccination for travelers who do not otherwise meet the eligibility criteria. Eligible patients who have only received one dose of the JYNNEOS vaccine should receive the second dose as soon as possible, regardless of the amount of time that has elapsed since the first dose.

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).

Mpox

FOR CLINICIANS: CLINICAL FEATURES & MANAGEMENT

Mpox spreads between people primarily through direct contact with infectious sores, scabs, or body fluids. It also can be spread by respiratory secretions during prolonged, face-to-face contact.

Clinical Presentation

- The incubation period is usually 7-14 days but can range from 3-21 days.
- The development of initial symptoms (e.g., fever, malaise, headache, weakness) marks the beginning of the prodromal period.
- Within 1-3 days after a fever develops, the patient develops a rash, often beginning on one part of the body (e.g., anogenital area or face) and then spreading to other parts of the body that can last 2-4 weeks.
- The rash develops and progresses from macules, to papules, to vesicles, and then to pustules, followed by umbilication, scabbing, desquamation.
- A patient is considered infectious starting with the initial prodromal symptoms and until all skin lesions have crusted, scabs have fallen off, and a fresh layer of skin has formed.
- Some recent cases are presenting atypically, including no prodrome and localized lesions in the genital and perianal area.
- For a more detailed CDC clinical recognition guide, please go to this link: https://tinyurl.com/mpoxrecognition

How to Protect yourself, staff and others: Patient Management & IPC Resources

- Have the patient wear a mask and place them in a single-person room.
- Gown, gloves, eye protection, N-95 fitted masks; in addition to standard precautions, suspected mpox infections have additional IPC measures. Follow CDC's infection prevention and control guidelines for healthcare facilities, including using appropriate personal protective equipment (PPE) around the patient. Go to this link: https://tinyurl.com/mpoxinfectioncontrol

Let patients know about the resources below:

Please go to this link for the resources below: tinyurl.com/mpoxaftersick

- What to do if they are sick.
- How to manage symptoms and rash relief.
- How to identify close contacts and tips on what to say.
- How to prevent spreading MPOX to others.
- People with MPOX are advised to stay at home (isolate) if they have MPOX symptoms.
- How to disinfect their home, including what type of disinfectant to use and how to clean hard and soft surfaces.
- If treatment may be right for them.

For any Mpox-related questions, please call the SHDHD Health Surveillance Coordinator at 402-462-6211 during office hours or at 402-469-6480 (24/7 line).