Clinician Fact Sheet: Mpox

Updated February 2025

What is Mpox?

Mpox is a contagious disease caused by the mpox virus (MPXV), which belongs to the Orthopoxvirus genus and causes flu-like symptoms and a rash that takes weeks to clear. Historically, mpox has mostly been reported within Africa but many countries around the world have reported cases during the outbreak that started in 2022 of Clade IIb and is ongoing. Gay, bisexual, and other men who have sex with men have thus far made up a large proportion of cases, however, anyone who has been in close contact with someone who has mpox is at risk, regardless of gender or sexual activity. The epidemiology for clade Ib in with the epicenter being Democratic Republic of the Congo includes increased cases reported among children under the age of 15.

There are two types of mpox virus: **Clade I (subclades Ia and Ib) and Clade II (subclades IIa and IIb).**

- Both types spread the same way and can be prevented using the same methods (See below)
- **Clade I** is considered more transmissible and deadly compared to Clade II, with a current estimated case fatality rate of 3-4%. Outbreaks of Clade Ia and Ib have recently occurred in several Central and Eastern African countries, including Democratic Republic of the Congo, the Republic of Congo, the Central African Republic, Cameroon, Rwanda, Burundi, Uganda, and Kenya. There have also been several travel-associated clade I mpox cases reported in countries in other parts of Africa, Europe, Asia, and North America. In the U.S., there have been 4 travel-associated cases of mpox Clade Ib.
- **Clade II** has a case fatality rate of <1%, with highest risk among people who are severely immunocompromised, including uncontrolled HIV
- Infections in the 2022 outbreak in the United States have been from **Clade II** mpox.
- Vaccines (e.g., JYNNEOS) and other medical countermeasures (e.g., tecovirimat,* brincidofovir, and vaccinia immune globulin intravenous) are available)
- CDC assessed the risk to the U.S. overall population and specific populations within the United States posed by the clade I mpox outbreak as low. Clade II mpox is still circulating at low levels
- The WHO maintains an updated report of the African and Global situation here and CDC here.

Disease Summary

Transmission:

- **Direct contact** with mpox rash, scabs, or body fluids (including mucous membranes) from a person with mpox
- **Touching objects, fabrics, and surfaces** that have been used by someone with mpox and not disinfected (clothing, bedding, towels, fetish gear, or sex toys).
- **Prolonged face-to-face contact or intimate physical** contact (e.g. kissing, cuddling, and sex) with infected person.
- Close contact with **wild animals**, specifically small mammals like squirrels, rats, and mice that live in areas where mpox is endemic (found naturally, such as in West and Central Africa).
- Mpox virus can be spread to the fetus during **pregnancy** or to the newborn by close contact during and after birth.

Incubation Period:

- 3-17 days
- Illness lasting 2-4 weeks.
- Patient is infectious from time of symptom onset until all lesions have crusted over, fallen off, and new intact skin has formed underneath.

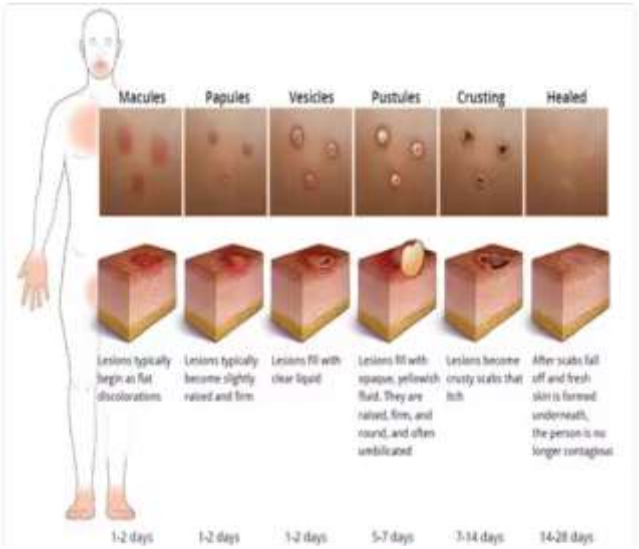
Clinical Presentation:

- Fever/chills, headache, muscle aches backache, exhaustion, and swollen lymph nodes.
- Rash or lesions may appear anywhere on the body 1-4 days after initial symptoms, or appear without any preceding symptoms.
- The rash typically evolves from a macule (flat), to a papule (raised), to a vesicle or pustule (fluid filled), then scabs. The rash is often well circumscribed, deep seated, and has central depression (umbilication).
- Lesions are often described as painful until the healing phase when they become itchy (crusts).
- Rash presentation can be similar to varicella or some sexually transmitted infections (STI), such as syphilis, herpes, or lymphogranuloma venereum (LGV)
- People with mpox often get a rash that may be located on hands, feet, chest, face, or mouth or near the genitals, including penis, testicles, labia, vagina, and anus.

- Other manifestations of mpox include painful proctitis or pharyngitis, and ocular involvement (conjunctivitis, blepharaitis, keratitis)
- Rarely, severe complications can occur including encephalomyelitis, myocarditis, necrotizing skin lesions, secondary bacterial infection, and sepsis
- Although cases of mpox are not life-threatening, some people may be more likely to get severely ill, including: People with severely weakened immune systems; Children younger than 1; People with a history of eczema; Pregnant women

Note: mpox reinfection or infection after mpox vaccination can occur. Clinical presentation tends to be milder in these cases.

Progression of Mpox Rash



- Areas of erythema and/or skin hyperpigmentation are often seen around discrete lesions.
- Lesions of different appearances and stages may be seen at the same point in time.
- The rash associated with mpox 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.

For both clade I and clade II monkeypox virus infection:

- Lesions often occur in the genital and anorectal areas or in the mouth.
- Rash is not always disseminated across many sites on the body.
- Rash may be confined to only a few lesions or only a single lesion.
- Rash does not always appear on palms and soles.
- Rectal symptoms (e.g., purulent or bloody stools, rectal pain, or rectal bleeding) have been frequently reported in the current outbreak.

Case Definition

Suspect Case

- New characteristic rash* OR
- Meets one of the epidemiological criteria and has a high clinical suspicion for mpox

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 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 an online website, digital application ("app"), or social event (e.g., a bar or party) **OR**
- Traveled outside the US to a country with confirmed cases of mpox or where mpox is endemic
- 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.)

For Clade 1, within 21 days of illness onset:

- Traveled to an area with evidence of sustained human to human transmission of clade I mpox or where clade I MPXV is endemic, **OR**
- Reports having contact with person with confirmed, probable or suspect clade I mpox, **OR**
- Had close or intimate in-person contact with individuals in a social network currently experiencing clade I mpox activity, **OR**
- Had contact with a dead or live wild animal or exotic pet that is a central African endemic species or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.)

Case Definition of Mpox Reinfection here.

Exclusion Criteria

A case may be excluded as a probable mpox case if:

- An alternative diagnosis can fully explain the illness **OR**
- An individual with symptoms consistent with mpox but who 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 MPXV or antibodies to orthopoxvirus

Note: Diagnosis of an STI does not exclude mpox; concurrent infection may be present. If suspicion for mpox is not high, clinicians may consider instructing the patient to isolate at home for 5 days after the start of fever/prodromal symptoms. During this period, the patient should watch for the development of a rash. If no rash develops after 5 days, the patient may resume normal activity. However, if a rash develops, the patient should contact their PCP (or Virtual ExpressCare if no PCP: 1-844-920-1227) for further instructions.

Key Steps for Frontline Clinical Staff

Identify	• Assess the patient for signs and symptoms, travel history, and other relevant recent exposures.
Isolate	• For patients with clinical presentation and exposures consistent with mpox, initiate prompt isolation. Instruct the patient to don a medical mask, and to cover any exposed lesions.
Inform	• If mpox **Clade I** is suspected, notify your facility's infection control department and facility leadership immediately. Call **NYC DOHMH** Provider Access Line (866-692-3641) to report the case and discuss Clade-specific testing. If **mpox Clade I** is ruled in, notify Central Office System Special Pathogens Program: 646-864-5442

Infection Prevention and Control for Mpox

Hand Hygiene

- Perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and after removal of PPE, including gloves. Use soap and water for at least 20 seconds or use alcohol-based hand rubs. If hands are visibly soiled, use soap and water.

Patient Placement

- Place patient in a private examination room. If **Clade I** is suspected, prioritize patient placement into an **Airborne infection isolation room (AIIR).** Keep door closed and minimize entry and exit. Transport and movement of the patient outside the isolation room should be limited to medically essential purposes. The patient should don a medical mask and have all exposed lesions covered whenever outside of the isolation room. If conducting aerosol generating procedures, airborne infection isolation room (AIIR) is required for both Clade I and II.
- Patients requiring intubation and/or extubation and any procedures likely to spread oral secretions should be performed in an AIIR and should be placed on Airborne + Contact + Eye Protection precautions.
- If the patient has suspected varicella continue Airborne + Contact + Eye Protection precautions until varicella is ruled out.

Transmission-Based Precautions & Personal Protective Equipment

- Adhere to **Enhanced Droplet + Contact + Eye Protection Precautions**. Use gown, N95 respirator, goggles or face shield, and gloves. Follow the **SP Level I PPE Donning and Doffing Checklist.** Do not reuse or extend the use of PPE.
- For aerosol-generating procedures (i.e., intubation, extubation, and any procedures likely to spread oral secretions), use **Airborne + Contact + Eye Protection Precautions** and place patient in an **airborne infection isolation room.**
- Intubation, extubation, and any procedures likely to spread oral secretions should be performed in an airborne infection isolation room.
- If **Clade I** mpox is suspected or confirmed, prioritize placing patient in an **airborne infection isolation room,** and if not available, a single patient room with door closed. The patient should have a dedicated bathroom.

Environmental Infection Control

- **For Clade I & II,** handle and dispose of waste as routine hospital regulated medical waste.
- Handle soiled laundry according to standard practices, avoiding contact with lesion material or bodily fluids that maybe present on the laundry. Soiled laundry should be gently placed and contained in appropriate laundry bags. Do not shake the linens as this could spread infectious materials.
- Activities such as dry dusting, sweeping, or vacuuming should be avoided. Wet cleaning methods are preferred.

Diagnostic Testing and Specimen Collection

- If Clade II is suspected, testing must be ordered in Epic and will be performed at LabCorp.
    - Vigorously brush the lesion using a polyester, rayon or dacron swab, and insert the swab in a tube with Universal Transport Media (UTM) or Viral Transport Media (VTM).

- If Clade I is suspected, call the NYC DOHMH Provider Access Line and only collect specimens for Mpox after consultation with NYC DOHMH.

Note: Test all sexually active people being evaluated for suspected mpox for HIV if their status is unknown.

Treatment and Immunization

Vaccines (e.g., JYNNEOS) and other medical countermeasures (e.g., tecovirimat, brincidofovir, and vaccinia immune globulin intravenous) are available for both Clade I and Clade II mpox. Eligibility criteria for mpox vaccination can be found here. The vaccine consists of two doses separated by at least 28 days.

Note: *The CDC announced the conclusion of enrollment for the STOMP trial, confirming tecovirimat's safety but finding it does not shorten mpox lesion resolution. Tecovirimat remains accessible under the CDC's Expanded Access protocol for eligible patients, and its use is recommended alongside other antiviral treatments in consultation with the CDC. Providers should continue to emphasize mpox vaccination for high-risk individuals and direct patients to vaccinefinder.nyc.gov for vaccination sites.

Additional Information: CDC Mpox website; NYC DOHMH