MPOX CLINICAL RECOGNITION AND TESTING OVERVIEW

Purpose

Mpox presentations can vary and be confused with other common exanthems (e.g., syphilis, herpes, varicella, molluscum contagiosum, and aphthous ulcers). This guideline summarizes clinical presentations and testing recommendations to enhance mpox recognition and identification.

Mpox testing should be considered for any rash including, but not limited to, rashes affecting the genital and perianal areas—especially for patients being considered for sexually transmitted infection (STI) testing and/or who may have had recent sexual exposure that puts them at risk. While the current mpox outbreak has disproportionately impacted gay, bisexual, and other men who have sex with men, any person (regardless of gender identity or sexual orientation) can become infected with mpox if exposed.

Identification of Mpox Rashes

Typical mpox lesions are known to be deep-seated, well-circumscribed, umbilicated with a classic progression (macules, papules, vesicles, pustules, and then scabs), though atypical presentations have been common**.** Although some cases may present with a diffuse rash, it is more common for patients to have localized lesions. Lesions can be more painful than their appearance suggests. Mpox rashes may present with or without a recognizable flu-like prodromal syndrome. Here is a printable resource focused on clinical recognition of mpox rashes.

When evaluating rashes, take the following steps:

- **Perform a complete physical exam (mucosa and skin), as not all mpox lesions are painful or obvious.** Patients may be unaware of lesions, including in locations such as the throat, vaginal, or anal canals.
- **In patients presenting with genital lesions or proctitis, consider testing concurrently for HIV, herpes simplex virus, gonorrhea, chlamydia, syphilis, as well as mpox.** STI co-infections are common; approximately 40% of mpox cases are co-infected with HIV or have had another STI in the past year.
- **Testing is still warranted among persons who were previously vaccinated or had previous mpox infection** if they present with clinically compatible symptoms as post-vaccination infections and re-infections can occur.

Consider mpox testing in patients vulnerable to mpox exposures and/or if any of the following are on your differential diagnosis:

	Infectious Mpox Mimickers	Non-infectious Mpox Mimickers
Genital Lesions	• Herpes simplex virus (HSV; genital herpes) • Primary or secondary syphilis • Molluscum contagiosum • Lymphogranuloma venereum (LGV) • Chancroid • Granuloma inguinale	• Recurrent aphthous ulcers • Behçet's disease • Hidradenitis suppurativa • Squamous cell carcinoma • Drug-induced • Trauma
Diffuse Rash	• Secondary syphilis • Primary varicella (chickenpox) • Disseminated varicella zoster (VZV) • Disseminated HSV • Molluscum contagiosum • Disseminated fungal or gonococcal infection • Scabies • Hand, foot, and mouth disease (coxsackievirus)	• Atopic dermatitis (eczema) • Contact dermatitis • Psoriasis • Pityriasis rosea • Autoimmune • Drug-induced
Proctitis	• Gonorrhea (GC) • Chlamydia (CT), including LGV • HSV • Syphilis	• Inflammatory bowel disease (Ulcerative colitis or Crohn's disease) • Anal fissure • Hemorrhoids

Source: CDC Mpox 101 – What Clinicians Need to Know (https://www.cdc.gov/poxvirus/mpox/pdf/Mpox-101-What-Clinicians-Need-to-Know.pdf)

Mpox Specimen Collection and Lab Procedures

Mpox lesion-based polymerase chain reaction (PCR) testing is widely available at commercial laboratories and certain public health laboratories. Test collection materials are not specialized, and labs may have different submission requirements (i.e., testing media and swabs) and rejection criteria. Providers are encouraged to confirm submission requirements by contacting their lab directly or reviewing online test directories such as: Quest Diagnostics | LabCorp | ARUP | Mayo Clinic | Stanford | Aegis Science | Sonic Reference Lab *see footnote

Contact your local health department if you have questions, are experiencing barriers to mpox testing, and/or if your patient reports travel or close contact (including sexual contact) with someone who traveled to the Democratic Republic of Congo (DRC) within 21 days of illness onset (given reports of Clade I mpox in the DRC).

Mpox Testing Tips

- When searching for mpox testing orders within electronic health systems, consider searching: "*mpox*," "*monkeypox*," or "*orthopoxvirus*."
- Gather your materials (e.g., personal protective equipment [PPE], swabs, and collection tubes). Appropriate PPE includes gloves, gown, eyewear, and a fit-tested N95.
- Vigorously swab a lesion with 1-2 sterile, synthetic swab(s) and place into appropriate sterile container as specified in lab submission criteria. Do not unroof or aspirate lesion(s).
- Given variation in rash presentations, collection of multiple specimens may be clinically indicated. Ideally, 2-3 lesions in different locations or at different stages are tested using separate swab(s) and tube(s) for each lesion.
- Swab specimens for mpox testing cannot be combined with other swabs (e.g., HSV, VZV, Chlamydia and Gonorrhea, etc.) and must be collected separately.
- See U.S. Centers for Disease Control and Prevention (CDC) Tips for Adequate Collection of a Lesion Specimen from a Suspect Monkeypox Virus Case.

Mpox Vaccination

Providers should routinely encourage vaccination. The two-dose mpox vaccine (JYNNEOS) series is recommended for anyone who requests it, persons who may be vulnerable to mpox exposures, and as post-exposure prophylaxis. See CDPH Mpox Vaccines to find vaccinating providers and vaccine ordering information.

Mpox Treatment: Supportive Care and Antivirals

Supportive care and/or pain management are appropriate for all patients with mpox symptoms. While many cases will be relatively mild and resolve without the need for additional treatment, antiviral treatment, such as Tecovirimat (TPOXX), is available through the National Institute of Allergy and Infectious Diseases (NIAID)-funded clinical trial STOMP (Study of Tecovirimat for Mpox) and the CDC-held expanded access investigational new drug (EA-IND) protocol for the treatment of non-variola orthopoxvirus infections.

Providers are encouraged to inform all patients with mpox about STOMP, as any patient with presumed or confirmed mpox can self-enroll or be referred to the study. Indications for the EA-IND protocol include severe illness or those at risk of severe illness, such as comorbid conditions (e.g., immunocompromise, pregnancy, or eczema) and/or lesion location (e.g., involving eyes, anus, genitals, or throat). See CDPH Tecovirimat Treatment Information for Health Care Providers for more information on clinical indications and how to obtain TPOXX.

Patient Education: Home Isolation

See CDC Guidance: Mpox Isolation and Infection Control at Home and CDC Guidance: What To Do If You are Sick.

Resource Links

Clinical Recognition

- CDPH Mpox Guidance for Health Care Providers: Up-to-date links on clinical recommendations, provider reporting, treatment, and infection control.
- Clade I Mpox Virus with Geographic Spread in the Democratic Republic of the Congo: Recommendations for California Health Care Providers (12/11/2023)

Mpox Testing and Labs

- Mpox specimen collection training video – from National Emerging Special Pathogens Training and Education Center (NETEC)
- CDC Tips for Adequate Collection of a Lesion Specimen from a Suspect Monkeypox Virus Case
- Sample List of Commercial Laboratories with Specimen Collection Guidance: *see footnote
    - Quest Diagnostics - Specimen collection guidance from Quest Diagnostics
    - LabCorp – Specimen collection guidance from LabCorp
    - ARUP Laboratories - Mpox Ordering FAQs for ARUP
    - Mayo Clinic Laboratories
    - Stanford – Specimen collection guidance from Stanford
    - Aegis Science Labs
    - Sonic Reference Laboratory

Mpox Vaccination

- CDPH Mpox Vaccine Resources and Guidance – Information on vaccine ordering, administration support, and FAQ for patients and providers.
- CDC Mpox Vaccine Recommendations – Vaccine recommendations overview; includes mpox vaccine locator tool to find vaccinating providers near you (searchable by zip code).
- Myturn.ca.gov – Book appointment for JYNNEOS vaccines with select providers (searchable by zip code).

Mpox Treatment

- STOMP (Study of Tecovirimat for Mpox): Guides for patients and providers
- Mpox Treatment with Tecovirimat (TPOXX): Information for Health Care Providers
- CDPH Supportive Care Suggestions for Patients with Mpox
- CDC Clinical Considerations for Pain Management of Mpox

Patient Self-Monitoring, Isolation and Infection Control at Home

- CDC Guidance: Mpox Isolation and Infection Control at Home
- CDC Guidance: What To Do If You are Sick

**This list is not intended to be comprehensive; example links with laboratory names are provided for informational purposes only and do not constitute an endorsement of any company or its products.*