This is a rapidly evolving situation. Updates and modification to the below guidance will be provided by Riverside University Health System – Public Health as they become available.

**Situation Update**

As of August 17, 2022, 13,517 Monkeypox (MPX) cases have been reported in the United States with 2,356 confirmed/probable cases reported in California. To-date, 109 confirmed/probable cases have been identified in Riverside County.

**Background**

After an average incubation period of 6 to 13 days (range, 5 to 21 days), flu-like symptoms may appear, and may include fever, headache, lymphadenopathy, myalgia, and fatigue. This is followed approximately 1 to 3 days later by a rash that may affect the face and extremities (including palms and soles). In this outbreak:

- Fever and other prodromal symptoms (e.g., chills, lymphadenopathy, malaise, myalgia, or headache) can occur before rash but may occur after rash or not be present at all
- Respiratory symptoms (e.g. sore throat, nasal congestion, or cough) can occur
- 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
- Lesions are often described as painful until the healing phase when they become itchy (crusts)
- Respiratory symptoms (e.g. sore throat, nasal congestion, or cough) can occur

The appearance and progression of the rash is very characteristic, evolving sequentially from macules (lesions with a flat base) to papules (slightly raised firm lesions), to vesicles (lesions filled with clear fluid), to pustules (lesions filled with yellowish fluid), and crusts which dry up and fall off.
A person is considered infectious from the onset of symptoms and is presumed to remain infectious until lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath; the illness typically lasts 2-4 weeks.

Human-to-human transmission occurs through direct contact with body fluids or lesion material, as well as through fomites (such as clothing or bedding) contaminated by the virus, or less commonly through large respiratory droplets during prolonged, face-to-face contact, or during intimate physical contact, such as kissing, cuddling, or sex. It is important to counsel patients on harm-reduction strategies, including:

- Avoid close, skin-to-skin contact with people who have a rash that looks like MPX
- Avoid contact with objects and materials that a person with MPX has used
- Wash your hands often

Additional information on MPX is located at:

CDC: https://www.cdc.gov/poxvirus/monkeypox/
CDPH: https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Monkeypox.aspx
Riverside County: https://rivcoph.org/monkeypox

Additional considerations may also be important for:

People with HIV: https://www.cdc.gov/poxvirus/monkeypox/clinicians/people-with-HIV.html
People who are pregnant: https://www.cdc.gov/poxvirus/monkeypox/clinicians/pregnancy.html
Children and adolescents: https://www.cdc.gov/poxvirus/monkeypox/clinicians/pediatric.html

Testing Recommendations

Healthcare providers should test any patients with suspected MPX. Confirmatory laboratory diagnostic testing for MPX is performed using real-time polymerase chain reaction assay on lesion-derived specimens. This includes any patient with a new characteristic rash or patients with risk factors for MPX and a new rash. The rash associated with MPX can be confused with other rashes encountered in clinical practice including herpes, syphilis, and varicella and co-infections have been reported. Providers should wear appropriate personal protective equipment (PPE) to collect specimens (see Infection Control guidance below).

Patients presenting with perianal or genital ulcers, diffuse rash, or proctitis should also be evaluated for STIs. However, the diagnosis of an STI does not exclude MPX as a concurrent infection may be present. The clinical presentation of MPX may be similar to some STIs, such as syphilis, herpes, lymphogranuloma venereum (LGV), or other etiologies of proctitis.
Commercial Laboratory Testing

Commercial testing for MPX continues to expand. Testing is now available through Quest Diagnostics, LabCorp, Aegis Sciences and Mayo Clinic Laboratories. LabCorp, Mayo Clinic Laboratories, and Aegis Sciences are using the CDC’s orthopoxvirus test (which detects all non-smallpox related orthopoxviruses, including MPX). The Quest assay is real time PCR test developed by Quest that detects DNA of non-variola orthopoxviruses and MPX virus (West African clade)—see Quest FAQs.

Providers should submit specimens through commercial labs if possible. Follow specimen collection instructions provided by the laboratory. Public health approval is not required to submit specimens to a commercial lab; however, providers should notify public health about patients suspected to have MPX without waiting for results to return to allow for contact tracing efforts to begin expeditiously.

Providers using commercial labs must report all Riverside County residents with orthopoxvirus positive and/or presumptive positive test results as well those confirmed through positive Monkeypox DNA (see Reporting).

Public Health Laboratory Testing

Providers that do not have access to commercial orthopoxvirus testing, may request testing for suspected cases by submitting a MPX Investigation and Intake form located at: https://rivcoph.org/Portals/0/Documents/Monkeypox/Monkeypox%20Intake%20Form.pdf?ver=2022-06-30-124330-540&tamp=1656618676131 and photos of the rash/lesions via secure email to bcole@ruhealth.org.

Specimen Collection and Transport to the Public Health Laboratory

If a patient is evaluated and MPX is high on the differential diagnosis, collect two swabs from two different lesions for preliminary and confirmatory testing as follows:

1. Vigorously swab or brush lesion with two separate sterile dry polyester or Dacron swabs. (two from each lesion)
2. Break off end of applicator of each swab into a sterile 1.5- or 2-mL screw-capped tube with O-ring or place 2 entire swabs in 2 separate sterile containers. Do not add or store in viral or universal transport media.
3. The two separate sterile containers should be placed in 2 separate biohazard bags and refrigerated at 4C.

Specimens being tested through Public Health will be picked by a RUHS-PH courier, within 24 hours - Monday through Friday. Store specimens at -80C if it is greater than 72 hours between specimen collection and pickup.

Swabs can be collected and stored at the proper temperature without waiting to discuss the case with Public Health. This will avoid outpatients needing to be recalled should they meet criteria for testing through Public Health.
**Infection Control**

Patients presenting with suspected MPX should be placed, as soon as possible, into a single-person exam room with door closed, or an airborne infection isolation room, if available, although an airborne infection isolation room is not required. The patient should remain masked, as tolerated (as currently required for all persons in healthcare settings) and any exposed skin lesions should be covered with a sheet or gown.

Healthcare personnel (HCP) evaluating patients with suspected MPX should wear the following personal protective equipment (PPE): gloves, gown, eye protection (goggles or face shield) and a N95 or equivalent or higher-level respirator. HCP should don PPE before entering the patient’s room and use for all patient contact. HCP should remove and discard gloves, gown, and eye protection, and perform hand hygiene prior to leaving the patient’s room; the N95 respirator should be removed, discarded, and replaced with a mask for source control after leaving the patient’s room and closing the door.

Any EPA-registered hospital-grade disinfectant should be used for cleaning and disinfecting environmental surfaces. All disposable equipment used for obtaining swabs (e.g., scalpel) must be properly discarded according to the facility’s established procedures.

For more information on infection control in a healthcare setting:  
https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control-healthcare.html

**Monitoring of Exposed Health Care Personnel**

At present, those who have been exposed are not required to quarantine themselves but should look for symptoms daily, as well as check their body temperature twice a day. Exceptions may be indicated based on the HCP’s level of exposure risk and MPX vaccination status.

Only those who are symptom-free should report for work. This may help limit missed diagnoses and prevent further inadvertent spread.

Additional information on monitoring is located at:  
https://www.cdc.gov/poxvirus/monkeypox/clinicians/monitoring.html

**Exclusion from Work of HealthCare Personnel (HCP)**

HCP who test positive for orthopoxvirus or Monkeypox virus DNA should be excluded from work until all symptoms have resolved, and all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath. This process can take two to four weeks.

**Home Isolation Instructions for Patients:**

Current data suggest people can spread MPX from the time symptoms start until all symptoms have resolved and all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath. This process can take from two to four weeks. However, if a person with MPX is unable to remain fully isolated throughout the illness, they should be instructed to follow the home isolation instructions outlined in the attached Home Isolation Instruction sheet.

For more information on home isolation:  
https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control-home.html
Treatment and Management Considerations

Management and treatment of MPX disease includes nonspecific supportive care and treatment of symptoms. For individuals at risk for severe disease, antiviral treatments are available, with investigational new drug (IND) paperwork submitted by the monitoring healthcare provider and/or institution.

Individuals at high risk of severe disease include:

- People with immunocompromising conditions (e.g., HIV/AIDS, leukemia, lymphoma, generalized malignancy, solid organ transplantation, therapy with alkylating agents, antimetabolites, radiation, tumor necrosis factor inhibitors, high-dose corticosteroids, being a recipient with hematopoietic stem cell transplant <24 months post-transplant or ≥24 months but with graft-versus-host disease or disease relapse, or having autoimmune disease with immunodeficiency as a clinical component

- Pediatric populations, particularly patients younger than 8 years of age

- Pregnant or breastfeeding women

- People with a history or presence of atopic dermatitis, people with other active exfoliative skin conditions (e.g., eczema, burns, impetigo, varicella zoster virus infection, herpes simplex virus infection, severe acne, severe diaper dermatitis with extensive areas of denuded skin, psoriasis, or Darier disease [keratosis follicularis])

- People with one or more complications (e.g., secondary bacterial skin infection; gastroenteritis with severe nausea/vomiting, diarrhea, or dehydration; bronchopneumonia; concurrent disease or other comorbidities)

Additional information is available at:
https://www.cdc.gov/poxvirus/monkeypox/clinicians/Tecovirimat.html

If a patient meets criteria and is a good candidate for antiviral therapy, RUHS-Public Health can be contacted at 951-358-5107 for assistance with connecting the patient with the closest Tecovirimat (TPOXX) center. At this time, most patients have not required TPOXX and symptoms have resolved on their own with symptom management strategies.

Bacterial superinfections should be appropriately treated but may be difficult to distinguish from viral inflammation.

Clinicians are encouraged to offer meningitis vaccination (MenACWY) to MSM and transgender persons who have sex with men. Vaccination may be particularly beneficial for these individuals when planning to attend gatherings (especially in crowded venues) with other MSM from around the country, including upcoming PRIDE events. For more information, please see the health alert, available at this link: CAHAN-Meningococcal Vaccine for MSM.

For more information about symptomatic treatment and TPOXX:

- https://rivcoph.org/Monkeypox/Treatment
- https://www.cdc.gov/poxvirus/monkeypox/clinicians/Tecovirimat.html
Post-exposure prophylaxis (PEP)

RUHS-PH is currently offering PEP to individuals who have been identified as having skin-to-skin or prolonged face to face contact with someone with or suspected to have MPX. Health care providers (HCP) can call Disease Control at 951-358-5107 during business hours to discuss PEP for their patient.

The above number can be called to discuss PEP for personnel in the health care settings who have had a potential exposure to MPX.

Pre-exposure prophylaxis (PrEP) and Post-exposure prophylaxis ++ (PEP++)

Strategies for PrEP and PEP++ will include clinical or laboratory staff who regularly and directly perform MPX specimen collection for testing (i.e. regularly swabbing lesions, or processing laboratory specimens). Additional prioritization will include gay, bisexual, and other cisgender men who have sex with men (MSM), transgender men, and transgender women, along with other groups at elevated risk, who meet the specific risk criteria, which will be posted and updated on our Riverside County MPX website: https://rivcoph.org/Monkeypox/Vaccine-Locations

Patients can also express their interest in a vaccine by filling out the vaccine interest form: https://rivcoph.org/Monkeypox/Vaccine-Interest-Form

Disease Reporting

A patient being tested as a suspect MPX case should be reported immediately, to Disease Control at 951-358-5107 during business hours or 951-782-2974 after hours.

This is important to facilitate Public Health intervention such as obtaining information for contact tracing. The patient should be instructed in home isolation, pending test results.

Case information can be entered in CalREDIE (for healthcare facilities who are enrolled), select “Monkeypox disease” in the drop-down menu. Please enter CMR-level data on the Patient and Case Investigation tabs and add any additional information into the Notes field or upload into the Electronic Filing Cabinet. Please Do Not include any information about the patient’s HIV status in CalREDIE.

Case Definition

Confirmed case: Patient with MPX virus detected from a clinical sample.

Probable case: Patient with orthopoxvirus detected from clinical sample.

Suspect case: Patient with an unexplained rash (unlikely to be secondary syphilis, herpes, varicella, moluscum contagiosum, or other diagnosis) that is consistent with MPX (firm, well circumscribed, deep-seated, and umbilicated lesions; progresses from macules to papules to vesicles to pustules to scabs) especially in patients who (1) report close contact with a person or people with confirmed or suspected MPX and/or with a similar rash; and/or (2) report travel in the past month to an area where confirmed cases have been reported; and/or (3) is a man or transgender person who has sex with men.

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