UCSF Health

UCSF Monkeypox Control Plan

I. Purpose

The purpose of this control plan is to establish safety and infection prevention guidance for the management of suspected and/or confirmed monkeypox patients.

II. Situation summary

- On May 20, 2022, The California Department of Public Health (CDPH) issued a Health Advisory notifying California providers about a confirmed case of monkeypox, an orthopox virus, in the United States in an individual without known infected contacts or travel to endemic areas. Many additional suspected cases in the US are currently being investigated by the Centers for Disease Control (CDC). Additionally, since April, clusters of monkeypox cases have occurred in Europe in patients without travel to endemic areas, with some epidemiologically linked through households and among men who have sex with men.
- California providers, especially those caring for patients presenting for evaluation of dermatologic lesions or sexually transmitted infections, are advised to be vigilant for signs and symptoms consistent with monkeypox, including characteristic rash and lymphadenopathy, with or without fever.
- There are two different clades of Monkeypox: the West African clade and the Central African clade. To date, the recently reported cases are caused by the West African clade. The West African clade has previously been associated with milder disease and fewer deaths when compared to the Central African clade.

III. Notification

- Immediately report any suspected or confirmed monkeypox case 24/7 to:
    i. UCSF Hospital Epidemiology and Infection Prevention (HEIP), and
    ii. If submitting clinical specimens/swabs for monkeypox testing, print out and complete a Confidential Morbidity Report (CMR) and send the completed form with the specimens to the UCSF clinical microbiology lab. The CMR form will serve as notification to SFDPH.
    iii. Do not wait to notify until the diagnosis is confirmed by testing, to report the patient to HEIP or SFDPH.

IV. Case definition

- **Confirmed case:** Patient with monkeypox virus detected from a clinical sample
- **Probable case:** Patient with orthopox virus detected from clinical sample.

- **Suspect case:** Patient with an unexplained rash that is consistent with monkeypox (firm, well circumscribed, deep-seated, and umbilicated lesions; progresses from macules to papules to vesicles to pustules to scabs) and risk factors for Monkeypox exposure.
    i. 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.

V. Transmission and Clinical presentation

- Transmission
    i. Monkeypox spreads between people primarily through direct contact with infectious sores, scabs, or body fluids.
        1. Monkeypox can spread during intimate contact between people, including during sex, as well as activities like kissing, cuddling, or touching parts of the body with monkeypox sores. At this time, it is not known if monkeypox can spread through semen or vaginal fluids.
    ii. It also can be spread by respiratory secretions during prolonged, face-to-face contact.
    iii. For more information refer to this algorithm and this guidance.
- Clinical Presentation
    i. The incubation period is usually 7-14 days but can range from 5-21 days.
    ii. The development of initial symptoms (e.g., fever, malaise, headache, weakness) marks the beginning of the prodromal period.
    iii. 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.
    iv. Some recent cases are presenting atypically, including no prodrome and localized lesions in the genital and perianal area.
    v. For a more detailed list of signs and symptoms of monkeypox, refer to this algorithm and guidance.
    vi. With the patient's consent, take pictures of the lesions/rash and provide to SFDPH if requested.

VI. Patient transport

- Mask the patient (unless there are medical contraindications or patient is <2 years of age) and cover lesions with a clean sheet.

- Healthcare personnel transporting the patient that will have direct contact with the patient must wear all required PPE (fit-tested N95, eye protection (or PAPR), gloves, gown).

VII. Bed placement

- Inpatient
    i. Admit the patient into a single patient room with a dedicated bathroom.
    ii. No special air handling is needed unless the patient is getting or anticipated to get an aerosol generating procedure (AGP). If a patient is getting or is anticipated to get an AGP, admit them to an Airborne Isolation Infection Room (AIIR).
- Ambulatory
    i. Isolate the patient in a single exam room with the door closed and dedicate a bathroom.
    ii. No special air handling is needed unless the patient is getting or anticipated to get an AGP. If a patient is getting or anticipated to get an AGP, if available, preferentially place them in an AIIR.
- Ensure that the patient remains masked (unless medically contraindicated or patient is <2 years of age) and cover any exposed skin lesions with a gown or sheet.

VIII. Isolation Precautions and Personal Protective Equipment (PPE)

- Isolation
    i. Inpatient: Place an order for Novel Respiratory Isolation.
    ii. Ambulatory: Observe Novel Respiratory Isolation.
    iii. Avoid the use of portable fans.
    iv. Duration of isolation
        1. Isolation Precautions should be maintained until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath.
        2. Maintain isolation until cleared by Infectious Diseases, UCSF Hospital Epidemiology and Infection Prevention (HEIP), and SFDPH.
        3. Patients who do not require hospitalization, but remain potentially infectious to others, should be isolated at home.
- PPE – For Inpatient & Ambulatory
    i. Required PPE:
        1. Fit-tested N95 respirator (or PAPR)
        2. Eye protection
        3. Gown
        4. Gloves
    ii. Donning PPE

1. Healthcare personnel should don all the personal protective equipment (PPE) before entering the patient's room and use PPE during all contact with the patient including during transport.

iii. Doffing PPE

1. Healthcare personnel must remove and discard gloves and gown and perform hand hygiene prior to leaving the patient's room.
2. Fit-tested N95 respirator (or PAPR) and eye protection should be removed and discarded outside of the patient's room after every room exit (not in anteroom if one is present). Do not re-use or follow extended use of the N95s. Place a trashcan outside of the patient's room to discard the N95s and if disposable, the eye protection. If a PAPR, or re-usable eye protection is worn, clean it with hospital-approved disinfectant after every room exit.
3. Refer to 'Transport Patient' for PPE guidance for this scenario.

- The patient should always remain in the room with the doors closed unless diagnostic or therapeutic procedures (e.g., CAT scan, surgery, etc.) are required and cannot be performed in the patient's room.
- When leaving the room, the patient must disinfect hands, put on a clean hospital gown, put on a medical mask (if safe and patient is >2 years of age), and a clean sheet placed over the patient (See "Transport of Patient"). If the patient is a younger child, cover the crib with a clean sheet during transport if safe. Inform the receiving area that the patient has suspected/confirmed monkeypox.
- At discharge, hospitality should clean the room using the appropriate PPE and isolation. If an AGP was performed, leave the room empty, with the door closed, for one hour prior to cleaning.

IX. Hand hygiene

- Hand hygiene is essential, as monkeypox is primarily spread through contact with sores, scabs, or body fluids as well as fomites.
- Hospital-approved hand hygiene products including alcohol-based hand rubs and soap and water are effective.

X. Specimen collection and testing guidance

- Order the Monkeypox test:
  - i. Enter the Apex order 'Microbiology-Test Not Listed (Special sendout) P319,' specify monkeypox as test.
    1. **Place 1 order per lesion that is sampled.**
  - ii. Any other microbiology tests sent for this patient should include in the comment that this patient is a monkeypox suspect.
  - iii. Refer to the lab manual for more information.

iv. Print and complete a Confidential Morbidity Report (CMR) Form and send the completed form with the specimens to the microbiology lab. Tests cannot be processed without this report

- Collect the specimens following SFDPH guidance
  i. **Collect 2 swabs per lesion** – choose up to two lesions for sampling. No need to swab every region. Sterile nylon, polyester, or Dacron swabs should be used. If initial test is positive, the second is sent to CDC for confirmatory testing/ sequencing
  ii. Lesions do not need to be unroofed, but should be vigorously brushed with Dacron, nylon, or polyester swabs with plastic or aluminum shafts, placed individually in separate sterile tubes with viral transport media (VTM).
  iii. Label with name, DOB, collection date, and unique name of the lesion -- e.g. L thigh, R thigh with "A" and "B" to differentiate between the two swabs for each site. Trim end of swab to fit into container, do not force/ bend the swab
  iv. Samples from the same lesion should be placed in the same specimen bag, for a total of 2 specimen bags (2 samples per bag)
  v. All specimens should be stored in the microbiology lab at 4°C if shipping within 24-72 hours, and at -80°C if shipping will be delayed.
  vi. There should be one order in Apex per lesion sampled, for a total of 2 orders.
- Provider or designee must complete the Confidential Morbidity Report Form and send it to the UCSF Clinical Microbiology lab along with the specimens.
- Take necessary steps to prevent leaking and ensure that the primary specimen container if closed tightly.
- Use an appropriate, sealed secondary bag or container with absorbent material included.

XI. Clinical Lab Control and Microbiology

- Refer to the recommendations in this guidance for appropriate lab procedures.
- Microbiology will notify HEIP when monkeypox testing is sent on any patient.
- Expected turnaround time for results is 72-96 hours.

XII. Treatment

- Guidance regarding treatment with antiviral agents should be obtained from the clinical infectious disease services.
  i. For patients admitted to UCSF: Consult the clinical infectious disease team for treatment guidance: Adult patients via Voalte/415-443-8996, Pediatrics 415-443-2384.
  ii. For patients being evaluated in a UCSF Ambulatory/Outpatient Clinic: Call Monkeypox Adult ID Pager 415-443-3319
- Vaccine and antiviral treatment and prophylaxis will be available at UCSF in coordination with SFDPH, CDPH, and the CDC after a case-by-case evaluation.

i. For more detailed information, review this guidance.

XIII. Environmental and Equipment Cleaning and Linen handling

- Environmental cleaning
    i. Hospital-approved disinfectant wipes such as Clorox hydrogen peroxide wipes are effective against Monkeypox. Follow appropriate wet times.
    ii. Monkeypox is a Tier 1 (enveloped virus). See this list for a comprehensive list of cleaning agents effective against this virus.
    iii. Standard cleaning and disinfection procedures with hospital-approved disinfectants are effective.
    iv. Wet cleaning methods are preferable. Activities that could resuspend dried material from lesions, e.g., dry dusting, sweeping, or vacuuming, should be avoided.
    v. Curtain Changes:
        1. Ambulatory: Curtains will be changed when visibly soiled or after 6 months of initial placement
        2. Inpatient: Curtains will be changed per standard inpatient procedure for patients on Novel respiratory isolation
- Equipment Cleaning
    i. All equipment entering the patient room will be appropriately cleaned and disinfected using an approved hospital-approved disinfectant and appropriate wet time.
- Linen
    i. Soiled linen (e.g., bedding, towels, personal clothing) is considered potentially infectious and should be handled using the PPE described above and in accordance with Novel Respiratory Isolation. Avoid contact with lesion material (e.g., scabs) that may be present on linen while putting the linen in the bag.
    ii. Soiled laundry should be gently and promptly contained in an appropriate laundry bag and should never be shaken or handled in a manner that may disperse infectious material.

XIV. Food service

- Management of food service items should be performed in accordance with routine procedures.

XV. Waste handling

- Standard waste handling is appropriate for the West African Clade (currently circulating clade).

- NOTE: At present, routine waste handling is indicated because the West African Clade is circulating. If an additional clade, such as the Central African/Congo Basin Clade, is identified, HEIP will provide notification and update this document as needed.

XVI. Autopsy

- Adhere to the recommendations provided in this guidance for autopsies.

XVII. Discharge planning

- Patients being discharged home should remain isolated at home until all skin lesions have crusted over, crusts have fallen off, and lesions have been replaced by a new layer of skin.
- Transfers to another healthcare facility:
    i. Notify the appropriate transfer coordinator of the patient's monkeypox status prior to transfer.
        1. The accepting facility should be notified of the patient's Monkeypox status

XVIII. Ambulatory visits for confirmed, probable, or suspect cases

- For patients with concern for monkeypox prior to arrival to an ambulatory location:
    i. Schedule an initial video visit if possible.
    ii. Obtain and upload pictures into Apex.
    iii. Coordinate in-person visits with clinic leadership, ID, and HEIP ahead of time.
    iv. If an in-person assessment is needed, schedule the patient for the last appointment of the day.
- For all ambulatory visits
    i. Expedite placement of the patient into a single exam room with the door closed.
    ii. Ensure that the patient is masked and has covered lesions as much as possible prior to arrival.
    iii. Dedicate a bathroom for the patient to use if needed.
- Healthcare personnel who will be involved in the encounter should wear PPE as described above.
- If specimens are collected, the provider or designee must complete a CMR form for each patient (see "Specimen collection and testing guidance" for more details). Ensure that the form is completed before walking the specimen to the clinical laboratory.
- Clinic staff must stabilize and package the swabs appropriately and ensure that the CMR form is complete and placed with the specimen.
- Hospitality staff should be informed that the patient in that room, and if indicated, the bathroom, had suspected or confirmed monkeypox. Hospitality staff should use the appropriate PPE for cleaning including linen handling as outlined above.
    i. For offsite or leased buildings using a 3rd party cleaning service:

1. If 3rd party cleaning service – ensure that the cleaning service is notified of the patient's suspected or confirmed monkeypox diagnosis and adheres to PPE and safe linen handling practice requirements
2. If clinic staff are responsible for cleaning – ensure staff wear appropriate PPE and safely handle linens as described above.

- If an AGP was performed, leave the room empty with the door closed for one hour.
- For infection prevention guidance for the home setting, refer to these recommendations.

XIX. Occupational Exposure

- Contact Occupational Health Services (OHS) with questions and/or concerns for exposure (415) 885-7580.
  - **i.** A patient may be infectious during the prodrome period and is infectious once they have the onset of the rash and until the lesions have crusted and a fresh layer of skin has formed.
  - **ii.** Exposure risk levels are defined here.
- Any healthcare personnel who has cared for a monkeypox patient should monitor themselves during the 21 days following the last day of care for the development of symptoms that could be consistent with monkeypox infection including fever >=100.4 F (38 C), chills, new lymphadenopathy (periauricular, axillary, cervical, or inguinal), or new skin rash and should immediately notify OHS for guidance regarding medical evaluation and possible treatment.
  - **i.** Healthcare personnel who have unprotected exposures (i.e., not wearing PPE) to patients with monkeypox do not need to be excluded from work duty but should undergo active surveillance for symptoms which includes measurement of temperature at least twice daily for 21 days following the exposure. Depending on the exposure, the healthcare personnel may be a candidate for post-exposure prophylaxis with monkeypox vaccine. Prior to reporting for work each day, the healthcare personnel should be interviewed regarding evidence of fever or rash.
  - ii. Healthcare personnel who have cared for or otherwise been in direct or indirect contact with monkeypox patients while adhering to recommended infection control precautions may undergo self-monitoring or active monitoring as determined by the health department.
- For more information on occupational exposures refer to this guidance.

XX. Additional Response Guidance

- Any response guidance not outlined in this document will be developed as needed based on risk assessment. Guidance modifications will be reviewed and approved by the UCSF HEIP leadership prior to implementation.