Step 1: Preparing for Possible Cases of Monkeypox

☐ Make sure you have testing supplies on hand.
  • Sterile, dry polyester, nylon, or Dacron swabs with a plastic, wood, or thin aluminum shaft (do not use other types of swabs and do not use cotton swabs)
  • Individual, sterile, screw cap tube containers to place swabs (do not use tubes with Viral Transport Media)
  • Category B shippers with ice packs
    o In the less likely scenario that the patient travelled to central Africa in the 21 days prior to symptom onset, specimens would need to be shipped using Category A shippers with ice packs.
    o Information on Packaging and Shipping.
  • Universal Specimen Submission Forms to submit specimens to the Kansas Health and Environmental Laboratories
    o See the Universal Submission Form Guide on how to fill out the form.
    o See the Requisition for Laboratory Specimen Kits to order Universal Submission Forms.
  • Refrigerator that can keep samples between 2 and 8 degrees Celsius or freezer that can keep samples at –20 degrees Celsius or lower
  • Disinfecting supplies from EPA list of Disinfectants for Emerging Viral Pathogens (EVPs): List Q
  • Personal protective equipment:
    o Gown
    o Gloves
    o Eye protection (for example: goggles or a face shield that covers the front and sides of the face)
    o Fit tested particulate respirator equipped with N95 filters or higher, as approved by NIOSH

☐ Pre-identify a single person room that will be used for evaluation and sampling (consider a room with a phone available).

☐ Be ready to call the Kansas Department of Health and Environment 24/7 Epidemiology Hotline.
  • Monkeypox must be reported to KDHE within 4 hours of suspicion by calling 877-427-7317, option 5. K.A.R. 28-1-2 requires exotic diseases such as monkeypox to be reported to KDHE within four hours of suspicion.
  • The ideal scenario is to call KDHE while the patient is still in the office so the most accurate information can be collected and KDHE can help arrange for testing and therapeutics as needed.
    o KDHE Epidemiology approval is needed to test samples through the state laboratory. Approval is not needed to test through a commercial laboratory.

Updated 08/22/2022
Step 2: Recognizing Monkeypox

Prodrome Recognition
• People with monkeypox typically report flu-like symptoms – such as a fever, body aches, and swollen lymph nodes before a characteristic rash appears.
  ○ Lymphadenopathy may occur in the neck, armpits, or groin and occur on both sides or just one. Lymphadenopathy typically occurs with fever onset, 1-2 days before rash onset or, in rare cases, with rash onset.
• During the current outbreak, some patients have developed a rash or lesions around the genitals or anus before any other symptoms.
• Some patients have not developed/not reported any prodrome symptoms.

Rash Recognition
• Lesions are well circumscribed, deep seated, and often develop umbilication (resembles dot on top of the lesion).
• Often starts in a mucosal area, including the mouth, anogenital or rectal areas, and may remain in a limited area or become more widespread to the face, torso, or extremities (including palms or soles).
• In typical presentation, synchronized progression occurs on specific anatomic sites with lesions in each stage of development; however, in atypical presentations, lesions in varying stages of development may appear on the same anatomical site (for example, a papular rash next to a vesicular lesion).
  ○ Macules (flat lesions that are less than 1cm in size)
  ○ Papules (small, well-defined bump in the skin)
  ○ Vesicles (thin-walled sac filled with a fluid, usually clear and small)
  ○ Pustules (pus/yellowish fluid-filled bump)
  ○ Scabs (crusted over or healing lesion)

Epidemiological Criteria (within 21 days of symptom onset):
• Reports having contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox OR
• Member of a cohort (as defined by public health) experiencing MPX transmission
  ○ Current cohorts:
    • Close or intimate contact with individual(s) in a social network experiencing MPX transmission who meet partner(s) through a website, app, or social event (e.g., bar, party)
    • Persons experiencing homelessness
    • Persons who inject drugs
• Residence in or travel to a country outside the US with confirmed cases of Monkeypox or where Monkeypox is endemic, OR
  ○ MPX endemic countries are in Central and West African counties (full list available at: https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON390)
• Contact with a dead or live wild or exotic pet animal of an African species, or used or consumed a product derived from such animals (e.g., game meat, powders), OR
• Contact with items that could serve as fomites such as bedding and clothing that have been in contact with a person with suspect or known MPX infection, OR
• Work in a non-clinical laboratory that handles MPXV
**Step 3: Reporting Suspect Cases to the Kansas Department of Health & Environment**

**Be ready to provide the following information to the on-call epidemiologist:**

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
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| 1) Did the patient experience fever (measured or subjective)? |   |    | Fever onset date: _____/_____/_____
| 2) Did the patient experience any of the following? |   |    | Symptom onset date: _____/_____/_____
| Headache |   |    | |
| Muscle ache |   |    | |
| Exhaustion |   |    | |
| Lymphadenopathy |   |    | |
| 3) Patients presenting with typical MPX (lesions starting on the face then spreading to other parts of the body) |   |    | Rash onset date: _____/_____/_____ Lesions involve deep-seated and well-circumscribed lesions, often with central umbilication and synchronized progression with each stage around 1-2 days. |
| Was the rash preceded by any of the following symptoms listed above by 1-3 days? |   |    | |
| Did the lesions progress from: macules → papules → vesicles → pustules → scabs |   |    | |
| Are lesions of the same anatomical site progressing at the same time? |   |    | |
| 4) Patients presenting with atypical MPX (lesion(s) exclusive to the genital or perianal region) |   |    | Rash onset date: _____/_____/_____ Encourage providers to perform STI/HIV testing in concurrence with MPXV testing. Recommend the clinician perform a skin/mucosal check to identify other lesion locations or perianal lesions. |
| Did the patient experience vaginal or rectal (proctitis) pain? |   |    | |
| Did the lesions progress from: macules → papules → vesicles → pustules → scabs (progression may be asynchronous) |   |    | |
| Does the clinician or epidemiologist/medical investigator have suspicion of MPX? |   |    | |
| 5) Meet epidemiological criteria in the past 21 days from symptom onset? |   |    | Travel dates or exposure dates: _____/_____/_____ to _____/_____/_____ |
| Exposed to confirmed or suspected human or animal MPX case (including contact with materials such as bedding or clothing)? |   |    | |
| Resides in or traveled to a country where MPX is endemic? |   |    | |
| Work in a non-clinical lab that handles MPXV? |   |    | |
| 6) Patient part of cohort/social network experiencing MPX? |   |    | This criterion is not restricted to MSM with intimate contact. |
| Close or intimate in-person contact with individuals in a social network experiencing monkeypox transmission who meet partners through social media/apps |   |    | |
| Persons experiencing homelessness |   |    | |
| Persons who inject drugs |   |    | |
Patients with **TYPICAL** MPX presentation must have the following to be approved for testing:

- Fever (1) or other prodrome symptoms (2), and
- Typical monkeypox rash (3)

Patients with **ATYPICAL** MPX presentation must have the following to be approved for testing:

- Pain or itching in the genital/perianal region and rash/lesion(s) consistent with MPX rash (4), and
- Meets epidemiological criteria (5) or cohort/social network experiencing MPX (6), or clinician/epi has any suspicion of MPX (4)

- **Don't forget to screen for STI/HIV in sexually active patients under suspicion for MPX (particularly Syphilis and HSV)**

- **Be ready to discuss the following information with the on-call epidemiologist:**
  - Patient’s regular primary care provider (name and contact information) for the purposes of discussing therapies
  - Is the patient at high suspicion for MPX?  
    - Rash AND  
    - Intimate or close contact with confirmed or suspected MPX case OR resides in or travel to country where MPX is endemic OR close or intimate contact with individuals in a social network experiencing monkeypox activity.
  - If the patient is at high suspicion for MPX, provide names and contact information for any close household contacts.
  - If the patient is at high suspicion for MPX, provide the name and contact information for the primary care provider of the close household contacts for the purposes of discussing post-exposure prophylaxis.
  - If you have ordered STI/HIV testing, provide any results or let the on-call epidemiologist know results are pending.

- **IMMEDIATELY contact the 24/7 KDHE Epidemiology Hotline at 877-427-7317, option 5 to report the suspect case to the on-call epidemiologist as required by K.A.R. 28-1-2.**
  - Monkeypox must be reported to KDHE within 4 hours of suspicion.
  - The ideal scenario is to call KDHE while the patient is still in the office so the most accurate information can be collected and KDHE can help arrange for testing and therapeutics as needed.
Step 4: Collecting & Shipping Samples for Analysis at the Kansas Health & Environment Laboratories

☐ First Lesion Specimen Instructions:
  • Using a synthetic fiber swab (swabs with synthetic or metal shaft), lift the edge (do not need to de-roof) of a lesion and **vigorously** swab or brush lesion.
  • Using a new synthetic swab, vigorously swab/brush the SAME lesion. Place each swab into a **separate empty, dry tube** (do not place in transport media, one swab per tube).
  • Label each tube and complete one Universal Submission form for both swabs of this lesion and identify on the form and tubes lesion swabbed (e.g. oral cavity).

☐ Second Lesion Specimen Instructions:
  • Using a new synthetic fiber swab (swabs with synthetic or metal shaft), lift the edge (do not need to de-roof) of a lesion and **vigorously** brush lesion.
  • Using a new synthetic swab, vigorously swab/brush the SAME lesion. Place each swab into a **separate empty, dry tube** (do not place in transport media, one swab per tube).
  • Label each tube and complete one Universal Submission form for both swabs and identity on the form and tubes lesion swabbed (e.g. left hand swab).

☐ Specimens should be **kept refrigerated and shipped with ice packs** to keep at refrigerated temperatures (2-8 °C). With the hot summer months, make sure to fill the shipping container with enough ice packs to ensure specimens arrive at refrigerated temps.

☐ Each tube must be properly labeled and sent with two KHEL universal submission forms per patient (one form per lesion swab).

☐ Ship specimens as **Category B** to: Kansas Health and Environmental Laboratories, 6810 SE Dwight Street, Topeka KS 66620. If the patient being tested travelled to central Africa in the 21 days prior to symptom onset, the specimen should be shipped **Category A**.
  • Information on Packaging and Shipping.

☐ Include the form(s) with the specimens and ship to KHEL. If specimens will arrive at the lab after business hours, please notify KDHE Epidemiology at 877-427-7317 or kdhe.epihotline@ks.gov.
  • See the **Universal Submission Form Guide** on how to fill out the form.
  • See the **Requisition for Laboratory Specimen Kits** to order Universal Submission Forms.
Isolation

- People with extensive lesions that cannot be easily covered, draining/weeping lesions, or respiratory symptoms (e.g., cough, sore throat, runny nose) should be isolated at home or in area separate from other family members and pets when possible.
- Avoid contaminating furniture and other non-launderable items by covering them with blankets or other washable or disposable layers.
- People with a test pending for monkeypox should not leave the home except as required for follow-up medical care. If it is necessary to leave the home, cover lesions with clothing or bandages as much as possible.
- People with a test pending for monkeypox should avoid contact with animals, including pets. Other household members should care for pets when possible.
- People with a test pending for monkeypox, especially those who have respiratory symptoms, should wear a surgical mask. If this is not feasible (e.g., a child with a pending test for monkeypox), other household members should consider wearing a surgical mask when in the presence of that infected person.
- Unexposed people who do not have an essential need to be in the home should not visit.
- Household members who are not ill should limit contact with the person who has a pending test for monkeypox.
- Home isolation should be maintained until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath. Infected persons should be careful to isolate away from other people, as well as isolate away from animals. Cases cannot travel using public transportation during their isolation period.
- Avoid touching the rash. Touching the rash can spread it to other parts of the body and may delay healing.
- It’s important to notify your close contacts that they may have been exposed to monkeypox as soon as possible, so they can watch for signs and symptoms, get tested and isolate if they have symptoms, and consider getting vaccinated.

Supportive Care

Supportive care includes maintenance of adequate fluid balance, pain management, treatment of bacterial superinfections of skin lesions and treatment of co-occurring sexually transmitted or superimposed bacterial skin infections. Providers should address these symptoms adequately and early to prevent hospitalizations.

- Skin lesions should be kept clean and dry when not showering or bathing to prevent bacterial superinfection. Pruritus can be managed with oral antihistamines and inert, anti-irritant topical agents such as calamine lotion or petroleum jelly.
- For oral lesions, compounds such as *magic* or *miracle* mouthwashes (prescription solutions used to treat mucositis) can be used to manage pain. Oral antiseptics can be used to keep lesions clean (e.g., chlorhexidine mouthwash). Topical benzocaine/lidocaine gels can be used for temporary relief, especially to facilitate eating and drinking, but should be limited to recommended doses.
- For painful genital and anorectal lesions, warm *sitz baths* lasting at least 10 minutes several times per day may be helpful. Topical benzocaine/lidocaine gels or creams at the recommended doses may also provide temporary relief.
- Proctitis can occur with or without internal lesions and, though often manageable with appropriate supportive care, can progress to become severe and debilitating. Stool softeners such as docosate should be initiated early. Sitz baths, as described above, are also useful for proctitis, and may calm inflammation. Similarly, over the counter pain medications such as acetaminophen can be used.
- Pain from monkeypox proctitis may require prescription medications, use of which should be balanced with the possibility of side effects, like constipation. Proctitis may additionally be accompanied by rectal bleeding. Though rectal bleeding has been observed to be self-limited, patients with rectal bleeding should be evaluated by a healthcare provider.
- Nausea and vomiting may be controlled with anti-emetics as appropriate. Diarrhea should be managed with appropriate hydration and electrolyte replacement. The use of anti-motility agents is not generally recommended given the potential for ileus.
- People may have extremely itchy or painful rash. Pain may be severe enough to interfere with basic functions such as eating, urination, and defecation and can cause significant patient distress.
Monkeypox disease is generally mild and self-limiting. Most individuals with monkeypox infection will recover within 2-4 weeks without the need for medical treatment. Some people, like those with weakened immune systems, those younger than eight years old, or individuals with genital/rectal rashes may need treatment. Individuals should talk with their doctor to discuss the available treatment options.

Anti-viral for infected patients: The anti-viral medication tecovirimat (also known as TPOXX) is available in limited quantities for patients with severe monkeypox disease or those who are infected and at risk for severe disease. TPOXX is available through the Strategic National Stockpile and has been pre-positioned in many jurisdictions. All clinicians and health care facility pharmacists requesting TPOXX should contact their state/territorial health department. For urgent clinical consultations after hours related to TPOXX, providers may contact CDC’s Emergency Operations Center (770-488-7100) to discuss the case with a clinician, but locally pre-positioned TPOXX is likely the quickest means to obtaining treatment.

KDHE currently has a very limited supply of TPOXX oral tablets. When KDHE is notified of a positive lab result, the State Health Officer may reach out to the ordering provider to discuss indications for deployment of the TPOXX doses held at KDHE.

Vaccine for people who have been exposed or are likely to be exposed: The JYNNEOS vaccine is currently available in limited quantities through KDHE for use as post exposure prophylaxis (PEP). If a provider is evaluating a patient that they feel meets any of the following criteria, they should discuss administration of JYNNEOS with their patient. If the patient/provider decide on administration of JYNNEOS, the provider can call the KDHE Epidemiology Hotline at 1-877-427-7317 option 5 for help locating the closest JYNNEOS doses.

• PEP strategy (JYNNEOS is recommended for):
  o Known contacts who are identified by public health via case investigation, contact tracing, and risk exposure assessments
  o People who have had skin-to-skin or sexual contact with a person who was diagnosed with Monkeypox in the past 14 days.
  o CDC recommends that the vaccine be given within 4 days from the date of exposure for the best chance to prevent onset of the disease. If given between 4 and 14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease.

• PEP++ strategy (JYNNEOS is recommended for):
  o Men who have sex with men, or transgender, gender non-conforming, or gender non-binary individuals who report any of the following in the last 21 days:
    • Having multiple or anonymous sex partners
    • Having met recent sex partners through online applications or social media platforms (e.g., Grindr, Tinder, Scruff) or at clubs, raves, sex parties, saunas, or other large gatherings
    • Being diagnosed with a sexually transmitted infection

• PEP+++ strategy (JYNNEOS is recommended for):
  o Men who have sex with men, or transgender, gender non-conforming, or gender non-binary individuals, or men or women who engage in commercial sex work, who, in the next 6 months:
    • May have multiple or anonymous sex partners, or
    • May meet sex partners through online applications or social media platforms (e.g., Grindr, Tinder, Scruff) or at clubs, raves, sex parties, saunas, or other large gatherings, or
    • May be diagnosed with a sexually transmitted infection