Emergency Preparedness and Response

First Case of Clade I Mpox Diagnosed in the United States

HAN

HEALTH ALERT NETWORK

This is an official CDC HEALTH ADVISORY

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Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Advisory to provide information about the first case of clade I mpox diagnosed in the United States and recommendations to clinicians about preventing, diagnosing, treating, and reporting mpox cases. On November 15, 2024, the California Department of Public Health (CDPH) confirmed the first reported case of clade I mpox in the United States. This individual had recently traveled to areas experiencing clade I monkeypox virus (MPXV) transmission and sought medical care for mpox symptoms in the United States. Consistent with other recent clade I mpox cases, the patient has relatively mild illness and is recovering. CDC and the local and state health departments are investigating potential contacts; no additional cases in the United States have been detected as of November 18, 2024. The risk of clade I mpox to the public in the United States remains low.

Since March 2024, CDC has been working with local, tribal, state, and territorial public health authorities to prepare for potential cases of clade I mpox in the United States by enhancing surveillance, detection, and reporting capacities of existing domestic public health systems and structures. This reported case demonstrates that these systems are working as intended. There is no change to CDC clinical or travel guidance on clade I mpox since HAN Health Update 516. Clinicians should be aware of mpox symptoms, ask patients with comparable signs and symptoms about recent travel history and other risk factors for mpox, and consider MPXV testing. Given the widespread outbreaks in Central and Eastern Africa, additional travel-associated cases may be reported in the future in the United States. Suspected and confirmed cases of clade I mpox should be reported to local, territorial, and state public health authorities as soon as possible. State, local, and territorial public health authorities should report cases to CDC promptly. This includes *orthopoxvirus* generic (i.e., non-variola *orthopoxvirus*) **positive** and clade II **negative** test results from a patient with travel history to country affected by clade I mpox. CDC recommends vaccination to people who are eligible for mpox vaccine, including those who may have a recent MPXV exposure.

Background

MPXV has two distinct genetic clades: clade I (with subclades Ia and Ib) is endemic to some countries in Central Africa, and clade II (with subclades IIa and IIb) is historically endemic to some countries in West Africa. MPXV transmission in countries where the virus is endemic typically occurs via exposure to infected wildlife with subsequent person-to-person spread via close contact (including intimate, sexual, or household contact) with a person with mpox, or direct contact with infectious respiratory secretions (e.g., snot, mucus) or contaminated objects (e.g., bedding). Clade I and clade II mpox present similarly, and, as with clade II mpox, clinical management of clade I mpox is based on the severity of illness at diagnosis and the potential for severe or prolonged mpox.

From January 1 through November 15, 2024, about 12,000 confirmed cases of clade I mpox and at least 47 deaths have been reported in Central and Eastern African countries. These countries include Burundi, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Rwanda, and Uganda. Data from affected countries indicate that a large proportion of clade I mpox cases among adults were associated with heterosexual contact. Transmission to close contacts within households, including to children, also has been reported.

Travel-associated clade I mpox cases have been reported in Germany (1), India (1), Kenya (17), Sweden (1), Thailand (1), the United Kingdom (UK) (4), Zambia (1), and Zimbabwe (2) so far in 2024, and no onward spread has been reported except to close household contacts in Kenya and the UK. Current data suggest that subclade Ib may be less severe. Clade Ib mpox has a lower death rate (less than 1%) than clade Ia both in and outside of Africa. No deaths have occurred in travel-associated clade Ib mpox cases in countries outside of Africa; for a subset of these cases for which clinical data are available, relatively mild disease courses were described.

On November 15, 2024, CDPH confirmed through laboratory testing the first reported case of clade I mpox in the United States. The case was diagnosed in a person who recently visited an area with a clade I mpox outbreak. Based on the patient's travel history and symptoms, clinical specimens were tested; PCR was positive for non-variola *orthopoxvirus* and negative by PCR for clade II. Subsequent PCR resting for clade I mpox was positive. Specimens have been sent to CDC for additional virus characterization.

The individual received care in the United States and is isolating from others. The patient, who has no underlying health conditions, has not had any severe manifestations of disease, and symptoms are improving. CDC is working closely with the local and state health authorities to rapidly investigate the circumstances surrounding this case and to prevent spread of the virus. As of November 18, no additional clade I mpox cases have been reported in the United States.

Since March 2024, CDC has been working with local, tribal, state, and territorial public health partners and other U.S. Government agencies, to prepare for potential cases of clade I mpox in the United States by enhancing surveillance, detection, and reporting capacities of existing public health systems and structures. This reported case demonstrates that these systems are working as intended. CDC guidance for clinical care, prevention, vaccination, infection prevention and control, and exposure risks in community, healthcare, and travel settings have not changed. Guidance for travelers is unchanged from that described in HAN Health Update 516; see also HAN Health Update 513 and HAN Health Advisory 501. The overall risk of clade I mpox to the public in the United States remains low.

Recommendations for Clinicians and Public Health Practitioners

Evaluation and Diagnosis

- **Consider mpox as a possible diagnosis in patients with epidemiologic characteristics and lesions or other clinical signs and symptoms consistent with mpox.**
  - This includes symptomatic people who have been in Central or Eastern Africa (including, but not limited to, Burundi, Central African Republic, Democratic Republic of the Congo, Kenya, Republic of the Congo, Rwanda, Uganda, Zambia, or Zimbabwe) in the previous 21 days.
  - This also includes people who had close or intimate contact with symptomatic people who have been in these countries.
  - An up-to-date list of countries affected by clade I mpox outbreaks is available on the CDC website.
- Follow CDC guidance on mpox infection prevention and control to minimize transmission risk when evaluating and providing care to patients with suspected mpox.

- Ask patients with signs and symptoms of mpox but no recent travel whether they have had contact with people who had recently been in Central or Eastern Africa and who were symptomatic for mpox.
- Consider mpox as a possible diagnosis if a clinically consistent presentation occurs, even in people vaccinated for or previously diagnosed with mpox.
- Advise all patients suspected of having mpox to stay at home and isolate themselves from others until mpox has been ruled out by laboratory testing. In the event of a positive mpox diagnosis, advise patients to isolate until their mpox lesions have cleared up and fresh skin has formed, which could take several weeks.
- Test all suspected cases for MPXV. If a symptomatic patient reports travel to Central or Eastern Africa in the 21 days prior to relevant symptom onset, work with your state or local public health agency to facilitate testing for MPXV that includes clade I MPXV testing. In most situations, specimens should be sent to the appropriate state public health laboratory or a commercial laboratory for initial testing. If you are authorized by your health department to send specimens directly to CDC for testing, contact CDC at poxviruslab@cdc.gov for information about specimen types accepted, labeling, specimen storage, and shipping timeframes.
- Follow specimen collection guidelines (including collecting two swabs per 2-3 lesions) to ensure specimen availability for clade-specific testing. This testing will help distinguish cases that are part of the ongoing clade II mpox global outbreak from those that are part of this clade I outbreak.
    - Avoid unroofing or aspirating lesions (or otherwise using sharp instruments for mpox testing) to minimize the risk of a sharps injury.
- Send clinical specimens to a laboratory that can perform clade-specific MPXV testing **as quickly as possible.** If you need assistance locating relevant laboratories in your area, email poxvirus@cdc.gov.
- Promptly report suspected cases of clade I mpox to state, local, or territorial public health authorities and collaborate with health departments to submit case information as per CDC case reporting recommendations for health departments. CSTE maintains availability 24/7 for reporting cases.
- CDC encourages the state health department and diagnosing clinician to contact the CDC Emergency Operations Center (EOC) at 770-488-7100 and request a clinical mpox consult after clade I mpox is diagnosed, regardless of the severity of illness.

Treatment

- Promptly consult your health department or CDC (poxvirus@cdc.gov) about any mpox cases for which severe manifestations might occur (e.g., in people with advanced HIV infection or severe immunocompromise).
- Inform all patients, including those with mild disease, about the STOMP Trial and encourage to consider enrollment. To enroll in STOMP, call 1-855-876-9997.
- For patients who are not eligible for inclusion in the STOMP trial and who meet CDC's expanded use Investigational New Drug (EA-IND) eligibility for tecovirimat treatment, contact your state, tribal, local, or territorial health department to see if oral tecovirimat remains available from prior prepositioned supplies; they will facilitate consultation with CDC (poxvirus@cdc.gov).

Prevention

- Recommend vaccination to people who are eligible for mpox vaccine, including those who may have a recent MPXV exposure.
- Continue to follow CDC's current vaccine guidance to prevent mpox.
    - Two doses of JYNNEOS vaccine offer substantial protection against mpox, and are expected to offer protection regardless of clade.
    - If people at risk for mpox have only received one dose, remind them to get a second dose as soon as possible.
    - More than two JYNNEOS vaccine doses ("boosters") are not currently recommended.
- Discuss mpox prevention and risk reduction strategies with all travelers to countries with ongoing human-to-human transmission of clade I MPXV. An updated list of the countries with ongoing spread of clade I MPXV is available on the CDC website.

- Discuss patients' sexual history and travel plans, including if patients anticipate sexual or intimate activity during travel.
- Advise patients that mpox exposure risk is often associated with sexual or intimate contact.
- Remind patients that mpox is not spread through casual contact, such as someone might have in public spaces like markets, offices, classrooms, public transit, or air travel.
- Counsel patients on activities that may increase risk for MPXV exposure and risk reduction strategies if they have plans to travel to a country where ongoing human-to-human transmission of clade I MPXV is occurring. Travelers to affected countries should:
  - Avoid close contact with people who are sick with signs and symptoms of mpox, including skin or genital lesions.
  - Avoid contact with contaminated materials used by people who are sick, such as clothing, bedding, toothbrushes, sex toys, or materials used in healthcare settings.
  - Avoid contact with animals that can carry the virus that causes mpox or their products (e.g., bushmeat, lotions, hides) in areas where mpox is endemic, particularly in Central or West Africa.
- Clinicians should counsel patients about what to do to prevent household transmission if they have mpox symptoms, including staying away from other people, not sharing things they have touched with others, and cleaning and disinfecting the spaces they occupy regularly to limit household contamination.

Recommendations for Health Departments

- Provide education about mpox signs, symptoms, testing, and treatment to providers within your jurisdiction.
- Promote mpox vaccination to eligible people in your community to protect as many as possible from mpox.
- Report mpox cases to CDC within 24 hours. Initial reports may be submitted with only the minimum required data elements of a local record ID and case jurisdiction of residence.
- Collect the data listed in the 2023/2024 U.S. Mpox Outbreak Short Case Report Form (sCRF) for patients who meet the probable or confirmed mpox case definition. Local health departments should check with state or territorial health authorities to verify their jurisdiction's preferred case reporting process.
- Be aware that samples identified as containing a select agent, including clade unidentified or clade I MPXV, must be handled and reported in accordance with select agent regulations.

Recommendations for Laboratories

- According to Advisory Committee on Immunization Practices (ACIP) recommendations, employers should offer pre-exposure *orthopoxvirus* vaccination to workers at risk of occupational exposure. Two vaccines may be used to prevent mpox disease, JYNNEOS and ACAM2000.
- Clinical laboratories that perform clade-specific testing, (e.g., molecular testing or genetic sequencing) should alert their state health department and CDC (poxvirus@cdc.gov) if results from such tests indicate detection of clade I MPXV.
  - Laboratories should be aware of potential genetic mutation impacts on the molecular test(s) that they are using. For instance, the subclade Ib is not detected with the previously developed "clade I PCR test ". This test is now considered a clade Ia test. Visit Lab Advisory: Recommendations for Mpox Specimen Testing for additional information.
- As with all procedures, laboratories should perform a site-specific and activity-specific risk assessment to identify and mitigate risks.
  - Follow CDC guidance on infection prevention and control for mpox to minimize risk when working with suspected mpox specimens.
- Contact CDC or your local health department for help with specimen submission to a public health laboratory if clade-specific testing is warranted based on epidemiologic criteria but is not available in a jurisdiction.
- Specimens that cannot be accepted at CDC for clinical testing under Clinical Laboratory Improvement Amendments (CLIA) will be redirected for surveillance purposes and tested, providing critical data on MPXV clade(s) circulating in the United States.

- Laboratory Response Network laboratories and commercial laboratories using CDC's non-variola *orthopoxvirus* (NVO) polymerase chain reaction (PCR) test should continue submitting duplicate specimens to CDC results for routine MPXV clade-specific testing from all patients with positive NVO PCR tests.
- Be aware that specimens identified as containing a select agent, including clade unidentified or clade I MPXV, must be handled and reported in accordance with select agent regulations.

Recommendations for the General Public, Including Travelers

- Learn more about which activities may increase your risk of exposure when you travel to a country where clade I MPXV is spreading. Mpox is not spread through casual contact, such as someone might have in public spaces like markets, offices, classrooms, public transit, or air travel.
- Protect yourself and others from mpox, including by:
  - Avoiding close contact with people who are sick with signs and symptoms of mpox, including skin or genital lesions.
  - Avoiding contact with contaminated materials, such as materials used by people who are sick (e.g., clothing, bedding, toothbrushes, or sex toys), materials used in healthcare settings, or materials that came into contact with wild animals.
  - Avoid contact with animals that can carry the virus that causes mpox or their products (e.g., bushmeat, lotions, hides) in areas where mpox is endemic, particularly in Central or West Africa.
- If you may be at risk for mpox, talk to your healthcare provider about mpox prevention, including getting vaccinated with two doses of JYNNEOS if you are eligible to get mpox vaccine.
- Learn more about Preventing Mpox While Traveling.
- Learn more about the current situation about Mpox in the United States and Around the World.

For More Information

For Clinicians and Public Health Partners

- Clade I Mpox Outbreak Originating in Central Africa | Mpox | CDC
- Ongoing Clade II Mpox Global Outbreak | Mpox | CDC
- Clinical Overview of Mpox | Mpox | CDC
- Public Health Strategies for Mpox | Mpox | CDC
- Guide to Taking a Sexual History | CDC
- Mpox Considerations for People Who Are Pregnant or Breastfeeding | Mpox | CDC
- Provider Briefing on Mpox Clade I | Mpox Briefing for Providers Who Care for Pediatric Populations | HHS
- Select Agent Regulations | Biosafety Laboratory Guidance for Handling and Processing Mpox Specimens | CDC
- Information for Clinical/Diagnostic Laboratories, Healthcare Facilities, and Other Entities Not Registered with the Federal Select Agent Program | FSAP
- CDC Poxvirus and Rabies Branch: poxvirus@cdc.gov or, for emergencies, CDC's 24/7 Emergency Operations Center (EOC): 770-488-7100
- Health Department Contacts: After Hours/Epi-on-Call Contact Lists | Council of State and Territorial Epidemiologists

For the Public

- Mpox in the United States and Around the World: Current Situation | Mpox | CDC
- About Mpox | Mpox | CDC
- Mpox Vaccination | Mpox | CDC
- Preventing Mpox | Mpox | CDC
- Preventing Mpox While Traveling | Mpox | CDC

- Clade I Mpox in Central and Eastern Africa | September 2024 Travel Health Notice | CDC
- General inquiries: CDC-INFO (1-800-232-4636)

References

1. World Health Organization. 2022-24 Mpox (Monkeypox) Outbreak: Global Trends. https://worldhealthorg.shinyapps.io/mpx_global Accessed November 17, 2024.
2. Rao AK. "Use of JYNNEOS During Mpox Outbreaks: Clinical Guidance." Advisory Committee on Immunization Practices (ACIP) presentation. Atlanta, GA, June 23, 2023. https://www.cdc.gov/acip/downloads/slides-2023-06-21-23/03-mpox-Rao-508.pdf
3. Rao AK. "Evidence to Recommendations Framework: Vaccination with JYNNEOS During Mpox Outbreaks." Advisory Committee on Immunization Practices (ACIP) presentation. Atlanta, GA, February 22, 2023. https://www.cdc.gov/acip/downloads/slides-2023-02-22-24/Mpox-07-Rao-508.pdf
4. Kibungu, E. M., Vakaniaki, E. H., Kinganda-Lusamaki, E., Kalonji-Mukendi, T., Pukuta, E., Hoff, N. A, Lushima, R. S. (2024). Clade I–Associated Mpox Cases Associated with Sexual Contact, the Democratic Republic of the Congo. *Emerging Infectious Diseases*, *30*(1), 172-176. https://doi.org/10.3201/eid3001.231164 .
5. Yinda CK, Koukouikila-Koussounda F, Mayengue PI, et al. Genetic sequencing analysis of monkeypox virus clade I in Republic of the Congo: a cross-sectional, descriptive study. *Lancet*. 2024; 404:1815-1822. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)02188-3/fulltext

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The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national and international organizations.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

HAN Message Types

- **Health Alert:** Conveys the highest level of importance about a public health incident.
- **Health Advisory:** Provides important information about a public health incident.
- **Health Update:** Provides updated information about a public health incident.

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This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations.

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Additional Resources

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