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EPI-NEWS

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CDC Health Alert Network (HAN)

Mpox with geographic spread in the Democratic Republic of the Congo

Distributed via the CDC Health Alert Network
December 7, 2023
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Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Advisory to notify clinicians and health departments about the occurrence, geographic spread, and sexually associated human-to-human transmission of Clade I Monkeypox virus (MPXV) in the Democratic Republic of the Congo (DRC). MPXV has two distinct genetic clades (subtypes), and cases of Clade I MPXV have not been reported in the United States at this time (a clade is a broad grouping of viruses that has evolved over decades and is a genetic and clinically distinct group). However, clinicians should be aware of the possibility of Clade I MPXV in travelers who have been in DRC. Clinicians should notify Northern Nevada Public Health https://www.nnph.org/programs-and-services/ephp/index.php#contact if they have a patient with mpox-like symptoms https://www.cdc.gov/poxvirus/mpox/symptoms/index.html, which may include a diffuse rash and lymphadenopathy, and recent travel to DRC. Clinicians should also submit lesion specimens for clade-specific testing for these patients.

Vaccines (e.g., JYNNEOS, ACAM2000) and other medical countermeasures https://www.cdc.gov/poxvirus/mpox/clinicians/treatment.html#anchor_1655488233196 (e.g., tecovirimat, brincidofovir, and vaccinia immune globulin intravenous) are available and expected to be effective for both Clade I and Clade II MPXV infections. However, vaccination coverage in the United States remains low, with only one in four people who are eligible to receive the vaccine https://www.cdc.gov/poxvirus/mpox/clinicians/vaccines/vaccine-basics-healthcare.html#eligibility-criteria having received both doses of JYNNEOS. CDC recommends that clinicians encourage vaccination for patients who are eligible.

Background

MPXV has two distinct genetic clades (subtypes of MPXV), I and II, which are endemic to central and west Africa, respectively. Clade IIb MPXV has been associated with the 2022-23 global outbreak that has predominately affected gay, bisexual, and other men who have sex with men (MSM). Clade I MPXV is capable of human-to-human spread but has previously been associated with non-sexual routes of transmission; and Clade I has previously been observed to be more transmissible and to cause more severe infections than Clade II. Since January 1, 2023, DRC has reported 12,569 suspected mpox cases (i.e., clinically diagnosed but not laboratory-confirmed) and 581 deaths (5% of suspected mpox cases). This is a substantial increase from the median 3,767 suspected mpox cases reported annually in DRC https://www.cdc.gov/mmwr/volumes/72/wr/mm7203a4.htm?s_cid=mm7203a4_w during the years 2016-2021. Clade I MPXV has been confirmed among cases for which testing was conducted. A recent World Health Organization (WHO) report https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON493 noted that mpox cases in 2023 have been reported in more DRC provinces than in previous years (i.e., 22 of 26 provinces). This includes cases in urban settings where mpox does not normally occur (Kinshasa and South Kivu Province). In two provinces, outbreaks of Clade I MPXV associated with sexual contact, including among MSM, have been reported for the first time in DRC. Mpox vaccination is not generally available in DRC.

As part of surveillance for viral variants in the United States, CDC has tested a subset of positive MPXV or orthopoxvirus cases from commercial and state laboratories and performed clade-specific testing for 150 cases in 2023 (~12% of U.S. cases); no Clade I MPXV infections have been detected thus far. There are no direct commercial passenger flights from DRC to the United States, and the current threat for Clade I MPXV in travelers remains low. Clade II MPXV infections continue to occur in the United States https://www.cdc.gov/poxvirus/mpox/response/2022/mpx-trends.html. CDC encourages U.S. clinicians to continue to be alert for patients presenting with lesions consistent with mpox https://www.cdc.gov/poxvirus/mpox/clinicians/clinical-recognition.html#:~:text=Key%20Characteristics%20for%20Identifying%20Mpox%201%20Lesions%20are,few%20lesions%20or%20only%20a%20single%20lesion.%20. Suspicion for Clade I MPXV should be high for people with travel to DRC within 21 days of illness onset, and clade-specific testing of MPXV should be performed in specimens from suspect mpox case-patients who report recent travel to DRC.

Most patients who have recovered from mpox (including infection with Clade II MPXV) or have been vaccinated with JYNNEOS or ACAM2000 are expected to have cross-protection to Clade I MPXV. However, clinicians are recommended to consider mpox as a possible diagnosis if a consistent clinical presentation occurs, even in those who are vaccinated or were previously diagnosed with mpox https://www.cdc.gov/poxvirus/mpox/clinicians/case-definition.html#2022.

Recommendations for Clinicians and Health Departments

Diagnosis

Clinicians should continue to consider mpox when evaluating the cause of rashes. Mpox lesions https://www.cdc.gov/poxvirus/mpox/clinicians/clinical-recognition.html may be small, firm and rubbery, deep-seated, and well-circumscribed, or they may be large, with diffuse, centrifugal lesion distribution. Lymphadenopathy may also be present. During the Clade II outbreak, among people with severe immunocompromise (e.g., due to advanced HIV with CD4 <200 or solid organ transplantation), rash lesions have generally been diffusely distributed, appearing large, necrotic, and fungating (i.e., appearing or progressing like a fungal infection). Consideration of mpox should be heightened in patients who have epidemiologic characteristics https://www.cdc.gov/poxvirus/mpox/clinicians/case-definition.html#epi supportive of mpox (including travel from mpox-endemic regions such as DRC within 21 days of illness onset).

For patients with travel to DRC within 21 days of illness onset, CDC recommends that clinicians pursue MPXV clade-specific testing starting with a consultation with Northern Nevada Public Health https://www.nnph.org/programs-and-services/ephp/index.php#contact for testing options (e.g., molecular testing or genetic sequencing). CDC recommends clinicians follow specimen collection guidelines https://www.cdc.gov/poxvirus/mpox/clinicians/prep-collection-specimens.html (including collection of two swabs per lesion) to ensure specimen availability for testing. Unroofing or aspiration of lesions or otherwise using sharp instruments for mpox testing is not recommended due to the risk of sharps injury. If clade-specific testing is not available in a jurisdiction, specimen submission https://www.cdc.gov/laboratory/specimen-submission/detail.html?CDCTestCode=CDC-10515 to CDC is strongly encouraged; specimen submission to CDC can be coordinated through your local health department.

Treatment and Prevention

Medical countermeasures (e.g., tecovirimat, brincidofovir, and vaccinia immune globulin intravenous) https://www.cdc.gov/poxvirus/mpox/clinicians/treatment.html#anchor_1655488233196 that have been used during the ongoing Clade II MPXV outbreak in the United States are expected to be effective for Clade I MPXV infections. Public health authorities should be consulted promptly for any mpox cases for which severe manifestations might occur. Tecovirimat is available through the STOMP trial and Investigational New Drug (IND) protocol https://www.cdc.gov/poxvirus/mpox/clinicians/obtaining-tecovirimat.html.

Vaccination with JYNNEOS or ACAM2000 or prior MPXV infection should provide antibodies that will provide cross-protection to other orthopoxviruses, including Clade I MPXV. The Advisory Committee on Immunization Practices (ACIP) https://www.cdc.gov/vaccines/acip/recommendations.html recommends that people ≥18 years of age with risk factors for mpox https://www.cdc.gov/poxvirus/mpox/clinicians/vaccines/vaccine-basics-healthcare.html#eligibility-criteria be vaccinated, before an exposure, with two doses of the JYNNEOS vaccine 28 days apart unless they were previously infected with mpox or already received two doses. There is no recommendation regarding vaccination for travelers who do not otherwise meet the eligibility criteria. Eligible patients who have only received one dose of the JYNNEOS vaccine should receive the second dose as soon as possible, regardless of the amount of time that has elapsed since the first dose.

Infection Prevention and Control

Healthcare personnel https://www.cdc.gov/poxvirus/mpox/clinicians/infection-control-healthcare.html who evaluate and provide care to patients with mpox and laboratory personnel https://www.cdc.gov/poxvirus/mpox/lab-personnel/lab-procedures.html should continue to follow existing CDC guidance on infection prevention and control for mpox. These are effective in minimizing transmission.

Recommendations for Diagnostic Testing

Public health authorities are being encouraged to enhance surveillance efforts to aid detection of Clade I MPXV should it occur in the United States. All Laboratory Response Network https://emergency.cdc.gov/lrn/index.asp laboratories and commercial laboratories using CDC's non-variola orthopoxvirus (NVO) polymerase chain reaction (PCR) test are requested to continue submitting duplicate specimens to CDC from all patients with positive NVO PCR test results for routine MPXV clade-specific testing. This will assist with national surveillance efforts. Specimens collected from patients who traveled to DRC should be sent to CDC as expeditiously as possible.

Some non-CDC laboratories may also have options (e.g., molecular testing or genetic sequencing) available for clade-specific testing. Laboratories should alert Northern Nevada Public Health https://www.nnph.org/programs-and-services/ephp/index.php#contact and CDC (poxvirus@cdc.gov) if they detect Clade I MPXV. If clade-specific testing is not available in a jurisdiction, specimen submission https://www.cdc.gov/laboratory/specimen-submission/detail.html?CDCTestCode=CDC-10515 to CDC is encouraged; specimen submission to CDC can be coordinated through your state or local health department.

All regulations should be followed for packaging and transporting specimens https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-04/Transporting%20Infectious%20Substances%20Safely.pdf from suspect mpox patients as Category B https://www.cdc.gov/poxvirus/mpox/lab-personnel/lab-procedures.html#anchor_1663782328551 for diagnostic testing. Please refer to the most recent CDC guidance for submitting specimens to CDC https://www.cdc.gov/laboratory/specimen-submission/detail.html?CDCTestCode=CDC-10515. Specimens that cannot be accepted for clinical testing under Clinical Laboratory Improvement Amendments (CLIA) will be redirected for surveillance purposes and tested, helping to provide critical data on the mpox clade(s) circulating in the United States. Specimens tested under surveillance will not have patient reports sent back to the submitter.

Recommendations for the Public

There is no known risk for Clade I MPVX in the United States at this time. CDC continues to recommend people with risk factors for mpox https://www.cdc.gov/poxvirus/mpox/vaccines/vaccine-recommendations.html be vaccinated with two doses of the JYNNEOS vaccine. If someone with risk factors for mpox has only received one dose, they should receive a second dose as soon as possible because two doses provide greater protection.

CDC has issued a Travel Health Notice https://wwwnc.cdc.gov/travel/notices/level2/monkeypox-democratic-republic-of-congo for people traveling to DRC. People who have traveled to DRC should seek medical care **at once** if they develop a new, unexplained skin rash (lesions on any part of the body), with or without fever and chills https://www.cdc.gov/poxvirus/mpox/symptoms/index.html, and **avoid contact with others**.

For More Information

- CDC Poxvirus and Rabies Branch: poxvirus@cdc.gov or for emergencies, CDC's 24/7 Emergency Operations Center (EOC): 770-488-7100. General inquiries: CDC-INFO (1-800-232-4636).
- Northern Nevada Public Health: https://www.nnph.org/programs-and-services/ephp/index.php#contact
- Mpox Clinical Recognition and Vaccine Information for Healthcare Providers: https://www.cdc.gov/poxvirus/mpox/clinicians/index.html
- Mpox Information for the Public: https://www.cdc.gov/poxvirus/mpox/your-health/index.html
- Biosafety and Select Agent Considerations: https://www.cdc.gov/poxvirus/mpox/lab-personnel/lab-procedures.html#anchor_1663782328551
- Diagnostic Specimen Packaging and Shipping: https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2020-04/Transporting%20Infectious%20Substances%20Safely.pdf

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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