

mpox—What Do We Know? What Do We Do? (Updated in December 2022.)

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AIDS Action Baltimore Bulletin

What is mpox?

My first reaction to mpox, formerly known as Monkeypox was, “you’ve got to be kidding me! Not yet another epidemic!” I bet you felt exactly the same way! So, where do we go from here?

What Do We Know?

The Baltimore City Health Department has created a document full of very important information. <https://health.baltimorecity.gov/mpox>

Terminology

The terms "Mpox", "MPX" and "mpox" all refer to the virus causing mpox disease. The World Health Organization adopting "mpox" as the preferred term for the disease, addressing concerns of stigmatizing language on November 28, 2022.

Background

mpox is a rare but serious illness caused by infection with the mpox virus. mpox can infect humans and other animals, such as monkeys and rodents. In the past, people in the United States who developed mpox had usually traveled internationally or were infected by animals imported to the U.S. Prior to this outbreak, Texas and Maryland each reported a case of mpox in 2021 in people with recent travel to countries where mpox is endemic in animals.

Since May 2022 many countries worldwide have detected cases, including in Europe and North America. Many of these cases had no travel to endemic areas in the central and western regions of Africa. It’s not clear how these people were exposed to mpox, but early data suggest that gay, bisexual, and other men who have sex with men make up a high number of cases. However, anyone who has been in close contact with someone who has mpox is at risk, regardless of gender or sexual orientation.

How Is the mpox Virus Spread?

The virus spreads through close, personal, or skin-to-skin contact with someone who has mpox. For example:

Contact with rashes, sores, body fluids, or scabs by hugging, kissing, touching, intimate or sexual contact

Contact with objects, fabrics, and surfaces that have been contaminated by fluids or sores (clothing, bedding, linens, towels)

Through respiratory droplets or saliva entering the eyes or mouth following prolonged face-to-face contact, like talking closely with someone

In parts of central and west Africa where mpox occurs, people can be exposed through bites or scratches from rodents and small mammals, preparing wild game, or having contact with an infected animal or possibly animal products.

Signs and Symptoms

Symptoms of mpox usually begin 7-14 days after exposure, but can range from 5-21 days.

The initial symptoms of mpox are usually: Fever, chills, body/muscle/headaches, swollen lymph nodes and fatigue.

One to 3 days exposure a fever and a rash may appear, on or near the genitals or anus. But a rash may appear on other areas like the hands, feet, chest, or face. Sores and rash may be inside the body, including the mouth, vagina, or anus. If a person was infected during sexual contact, the rash might only be on the genitals. If a person was infected through anal sex, they may develop anal or rectal lesions and irritation. The rash goes through several stages. The sores often begin as small, red bumps, which become fluid-filled pustules that eventually scab over and fall off. Pictures of pustules are provided below.

Some people experience a rash or sores first, followed by other symptoms. Some only experience a rash or sores without other symptoms.

Symptoms usually last 2-4 weeks. People with symptoms should stay isolated the entire time they have symptoms. The illness is not over until all pustules have

scabbed over, fallen off, and new skin is present. People are contagious the entire time they have symptoms.



Prevention

Because mpox can be spread via skin-to-skin contact with an infected person, it is important to avoid close, intimate, or sexual contact with anyone who has flu-like symptoms or a rash.

Condoms will not prevent mpox.

Avoid contact with people that have symptoms or are confirmed to have the virus, as well as materials they may have touched

Wear a facemask around others

Wash your hands often with soap and water, or use hand sanitizer

More information on safer sex and mpox can be found here:

<https://stacks.cdc.gov/view/cdc/122996>

What If I Have Symptoms

If you start experiencing symptoms, the most important step you can take is to stay home and isolate yourself from other people, including people in your household. Be alert for the appearance of new rashes characterized by sores, bumps, or fluid-filled bumps, and seek medical evaluation if you develop such a rash. Before your visit, notify your healthcare provider that you think you may have mpox, and let your provider know if you recently had close contact with a person who had a similar rash or a person who has been diagnosed with mpox. If you have upcoming international travel, make an appointment with a travel clinic to see if you need any vaccinations.

The Maryland Department of Health has also created a useful mpox video and Fact Sheet provided in the links below.

<https://health.maryland.gov/phpa/OIDEOR/Pages/mpox.aspx#mokeypoxResource>

<https://health.maryland.gov/phpa/OIDPCS/CSTIP/Pages/LHDs.aspx>

https://health.maryland.gov/phpa/OIDEOR/Shared%20Documents/MDH_Mpox_Fact-Sheet_English.pdf#search=Mpox%20fact%20sheet

Vaccines

The Jynneos vaccine is a smallpox vaccine. mpox is in the smallpox family. The Jynneos vaccine requires two doses per person spaced four weeks apart, before or after exposure. After much confusion and many complications, the vaccine is finally widely available for the following people:

People who have had multiple or unknown sexual partners within two weeks

People who are aware that one or more of their sexual partners from the past two weeks has been exposed to the virus

People who are considered to be at a higher risk for being exposed to the virus, including gay, bisexual and other men who have sex with men, and people who are immunocompromised.

Intradermal Vaccine Dosing

The FDA Authorizes Emergency Use (EUA) of Jynneos Vaccine via intradermal dosing to Increase Vaccine Supply on August 9, 2022, to allow healthcare providers to use the vaccine by intradermal injection. This increased the total number of doses available for use by up to five-fold. The EUA also allows for use of the vaccine in individuals younger than 18 years of age determined to be at high risk of mpox infection.

The Jynneos vaccine was previously administered beneath the skin subcutaneously as two doses, four weeks apart. For individuals 18 years of age and older determined to be at high risk of mpox infection, the new EUA now allows for a fraction of the Jynneos dose to be administered between the layers of the skin intradermally. Two doses of the vaccine given four weeks apart will still be needed, but the new decreased dosing will allow our vaccine supply to be increased exponentially.

Testing Sites

Testing sites and information in Baltimore City, and other Maryland Counties as well as a Maryland State preregistration link are provided below. Please note that the Maryland State mpox vaccination pre-registration site will no longer be available after January 20, 2022 since the mpox vaccine is now much more widely available at Health Departments.

<https://health.baltimorecity.gov/mpox/mpox-vaccination-baltimore-city-0>

<https://health.maryland.gov/phpa/OIDPCS/CSTIP/Pages/LHDs.aspx>

<https://health.maryland.gov/phpa/OIDEOR/Pages/mpx-vax-preregistration.aspx>

Treatment

The only currently accepted mpox treatment is called Tecovirimat, also known as TPOXX. Like the Jynneos vaccine, TPOXX is indicated for smallpox, and was initially not approved for mpox. TPOXX now has FDA Emergency Use Authorization and is

therefore available for mpox treatment. Contact your healthcare provider first to access Tecovirimat. If it is not available from your provider, you can access it through any Emergency Room.

TPOXX is still being studied by the NIH for mpox treatment. But the CDC states that it is recommended by the CDC “for people with severe mpox disease or who are at high risk of severe disease, like people with weakened immune systems or skin conditions, such HIV that is not virally suppressed and eczema”. The CDC advises that it may “prevent or minimize severe mpox disease involving the eyes, mouth, throat, genitals, and anus ...”. It may also “provide relief for short-term symptoms such as pain, swelling, and abscesses and long-term effects such as scarring.”

Cases of Severe mpox in People with HIV (PWHIV)

This Alert was distributed via the CDC Health Alert Network
September 29, 2022. <https://emergency.cdc.gov/han/2022/han00475.asp>

Summary

The purpose of this Centers for Disease Control and Prevention (CDC) Health Alert Network (HAN) Health Advisory is to inform healthcare providers that

1. Severe manifestations of mpox have been observed in the United States in the current outbreak.
2. People who are immunocompromised due to HIV or other conditions are at higher risk for severe manifestations of mpox than people who are immunocompetent.
3. Because people with HIV-associated immunocompromise are at risk for severe manifestations of mpox, the HIV status of all sexually active adults and adolescents with suspected or confirmed mpox should be determined.
4. There are diagnostic and clinical management strategies that may help address severe manifestations of mpox.

Background

Since May 2022, more than 25,000 mpox cases have been identified in the

United States. During the current outbreak in the United States, 38 percent of people diagnosed with mpox were coinfecting with HIV and most reported cases of mpox with severe manifestations have been among people living with untreated HIV.

Some patients with mpox in the United States have experienced prolonged hospitalizations or substantial morbidity; deaths have occurred. As the mpox outbreak has progressed, an increasing proportion of cases have been identified among Black and Hispanic/Latino people. Black and Hispanic/Latino people are disproportionately affected by HIV.

Severe manifestations of mpox can occur in both immunocompetent and immunocompromised people; however, most people diagnosed with mpox have had mild-to-moderate clinical courses. **Of the people with severe manifestations of mpox for whom CDC has been consulted, the majority have had HIV with CD4 counts <200 cells/ml**, indicating substantial immunosuppression. Healthcare providers should recognize underlying risk factors for severe disease, optimize immune function, and when appropriate, initiate medical countermeasures (such as tecovirimat and vaccinia immunoglobulin) early to prevent or mitigate severe disease.

During the current outbreak, CDC has received reports of people with mpox who have severe manifestations of disease, including but not limited to:

- Persistent rash or lesions, or both, some which have required extensive surgical debridement or amputation of an affected extremity.
- Lesions on a significant proportion of the total body surface area, which may be associated with swelling and secondary bacterial or fungal infections among other complications.
- Lesions in sensitive areas, including throat, urethra, rectum, vagina, resulting in severe pain that interferes with activities of daily living.
- Bowel lesions that cause significant tissue swelling, leading to obstruction.
- Severe lymph node swelling that can obstruct airways.
- Lesions leading to scar formation resulting in significant illness, such as urethral and bowel strictures, opening of the foreskin and facial scarring.

- Involvement of multiple organ systems and associated comorbidities, including:
 - Throat lesions inhibiting oral intake
 - Lung involvement with nodular lesions
 - Neurologic conditions including encephalitis and transverse myelitis
 - Cardiac complications including myocarditis and pericardial disease
 - Eye conditions including severe conjunctivitis and sight-threatening corneal ulcerations
 - Penis involvement including urethra swelling and penile gangrene.

Healthcare providers should be aware of risk factors for severe manifestations of mpox and should conduct HIV testing for people with confirmed or suspected mpox. In prior mpox outbreaks in Nigeria, co-infection with HIV was associated with worse clinical outcomes, including severe manifestations of mpox, hospitalization, and death. Providers should also be aware of other immunocompromising conditions and medications that may increase risk of severe manifestation of mpox.

Where Do We Go from Here

The Department of Health and Human Services (HHS) decided to end the mpox Public Health Emergency Declaration on December 2, 2022. According to the CDC, after over 30,000 cases of mpox and 19 deaths in 2022, mpox cases are waning. US cases peaked at more than 400 per day during the summer of 2022, but are now less than 10 per day according to the CDC tracker. Although there is no guarantee case numbers won't increase again, we do now have available vaccines and treatments. I'd like to think that Health Departments won't get caught with their pants down, but I think that is wishful thinking until they receive the funding necessary to combat these outbreaks by rebuilding Public Health capacity across the board.

Please see the accompanying article on mpox—New US Epidemic mpox—Same Old Discriminatory Politics and Bureaucracy for the LGBTQ+ Community (Updated December 2022.) <https://www.aidsactionbaltimore.org/wordpress/wp-content/uploads/2023/01/New-US-Epidemic-mpox.pdf>