

## Monkeypox Testing, Vaccine, and Monitoring of Healthcare Workers After Exposure Updates

<b>DATE:</b>	August 22, 2022
<b>TO:</b>	Health Alert Network
<b>FROM:</b>	Denise A. Johnson, M.D., FACOG, FACHE, Acting Secretary of Health
<b>SUBJECT:</b>	Monkeypox Testing, Vaccine, and Monitoring of Healthcare Workers after Exposure Updates
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This transmission is a “Health Update”: provides updated information regarding an incident or situation; unlikely to require immediate action.

**HOSPITALS:** PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL; **EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE **LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP; **LONG-TERM CARE FACILITIES:** PLEASE SHARE WITH ALL MEDICAL, INFECTION CONTROL, AND NURSING STAFF IN YOUR FACILITY

### SUMMARY

- Providers should consider testing any patient who presents with a rash or lesions that are consistent with monkeypox.
- Several commercial laboratories offer Monkeypox testing, and healthcare providers should primarily use these laboratories for monkeypox testing. To ensure timely access to testing, providers do not have to call the Pennsylvania Department of Health (PADOH) or their local health department prior to sending specimens to commercial labs.
- Testing will also continue to be available through the PADOH Bureau of Laboratories (BOL) with approval from the Pennsylvania Department of Health or a local health department.
- On August 9, 2022, the [FDA has issued an EUA](#) that allows for an intradermal or subcutaneous vaccination with JYNNEOS for people 18 years old and older and allows for subcutaneous vaccination with JYNNEOS for patients under 18 years old.
- JYNNEOS is available in Pennsylvania to those who have been exposed to monkeypox and those who may be more likely to get monkeypox. Call 1-877-PA-HEATH or your local health department to discuss vaccine and find a local vaccine provider.
- CDC has issued [guidance](#) on assessing the risk of health care workers after they have cared for an identified monkeypox case and recommendations for post exposure prophylaxis.
- If you have any questions, please call PA DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

## **Background:**

Since early May 2022, the CDC has been [tracking](#) increasing cases of Monkeypox across the United States. As of August 19, 2022 there have been over 14,100 confirmed or probable cases of monkeypox in 49 U.S. States, the District of Columbia, and Puerto Rico. This includes 371 cases in the Pennsylvania.

This HAN reviews recent updates on monkeypox testing, [guidance](#) regarding vaccination with JYNNEOS vaccine for those who have been exposed or who are more likely to get exposed to monkeypox, and the information regarding monitoring for the community and healthcare workers who have been exposed to monkeypox.

## **Monkeypox Clinical Identification and Testing:**

As is outlined in PA [HAN 643](#), PA [HAN 647](#), and PA [HAN 649](#) providers should consider testing any patient who presents with [a rash or lesions that are consistent with monkeypox](#) and/or presents with a rash or lesions and has an [epidemiologic risk factor](#) for monkeypox.

Epidemiologic risk factors (within 21 days of illness onset) include:

- Reports having contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox **OR**
- Had close or intimate in-person contact with individuals in a social network experiencing monkeypox activity; this includes men who have sex with men (MSM) who meet partners through an online website, digital application (“app”), or social event (e.g., a bar or party) **OR**
- Traveled outside the US to a country with confirmed cases of monkeypox or where *Monkeypox virus* is endemic **OR**
- Had contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.).

Multiple commercial labs can test for monkeypox. The labs include but are not limited to Quest, Labcorp, Aegis Sciences, Mayo Clinic, and Sonic Healthcare. The ability of commercial labs to test for monkeypox is a key pillar in the comprehensive strategy to combat the spread of monkeypox virus. Adding commercial labs increased testing capacity and makes it more convenient for providers and patients to access tests by using existing provider-to-lab relationships. To ensure timely access to testing, providers do not have to call the Pennsylvania Department of Health (PADOH) or their local health department prior to sending specimens to commercial labs.

Testing will also continue to be available through the PADOH Bureau of Laboratories (BOL) with approval from the Pennsylvania Department of Health or a local health department. Providers do have to call and discuss their case with their local or state health department prior to using the PA DOH lab. Providers might consider using BOL in situations where patients have or are risk of severe disease, are under/uninsured, or have confidentiality concerns.

## Specimen collection:

Healthcare workers should use appropriate personal protective equipment (PPE) when collecting monkeypox specimens. This includes:

- Gown
- Gloves
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face)
- NIOSH-approved particulate respirator equipped with N95 filters or higher

Specimen collection [guidance](#) is available from the CDC but providers should consult with their laboratory to determine the appropriate materials and methods for collecting monkeypox specimens as laboratory directions are laboratory specific.

## Public Health Reporting:

Consultations are available from PA DOH, Division of Infectious Disease Epidemiology, at 717-787-3350 or the local health department, should clinicians have specific questions about the evaluation and treatment of monkeypox cases or if clinicians want to obtain testing through BOL. Clinicians do not need to notify PA DOH of suspected or confirmed cases as results from diagnostic labs are sent to PA-NEDSS, Pennsylvania's reportable disease database.

## Special Note Regarding STD and HIV Co-infections:

Co-infections with monkeypox and sexually transmitted infections (STI), and some cases co-infections with acute HIV have been widely reported; therefore, it is strongly recommended that in addition to monkeypox testing, individuals should be offered a STD/HIV clinical evaluation to include STD/HIV testing (including syphilis, chlamydia, gonorrhea, and HIV). It may also be a good opportunity to discuss HIV PrEP strategies with the client.

## **Monkeypox Treatment**

The PA DOH released PA [HAN 653](#) on July 28, 2022 which addresses recent updates in Monkeypox treatment with Tecovirimat (TPOXX).

## **Monkeypox Case Contacts**

Anyone with an exposure to people with monkeypox should monitor their health or be monitored for signs or symptoms consistent with monkeypox for 21 days after their last exposure.

Monitoring should include assessing the person for [signs and symptoms](#) of monkeypox, including a thorough skin and mouth (oral) exam in good lighting.

During the 21-day monitoring period:

- If a rash occurs, an individual should follow [isolation and prevention](#) practices until (1) the rash can be evaluated by a healthcare provider, (2) testing is performed, if recommended by their healthcare provider, and (3) results of testing are available and are negative.

If other signs or symptoms are present (e.g., fever), but there is no rash:

- An individual should follow isolation and prevention practices for 5 days after the development of any new sign or symptom, even if this 5-day period extends beyond the original 21-day monitoring period. If 5 days have passed without the development of any new sign or symptom and a thorough skin and oral examination reveals no new skin changes such as rashes or lesions, isolation and prevention practices for monkeypox can be stopped.
- If a new sign or symptom develops at any point during the 21-day monitoring period (including during a 5-day isolation if applicable), then a new 5-day period should begin where the individual follows isolation and prevention practices.
- Isolation and prevention practices can be ended prior to 5 days if a healthcare provider or public health authority believes the rash, signs, or symptoms are not due to monkeypox and there is a clear alternative diagnosis made that doesn't require isolation. Individuals exposed to monkeypox virus can continue their routine daily activities (e.g., go to work or school) as long as they do not have signs or symptoms consistent with monkeypox.

### **Healthcare Worker Guidance**

[Guidance](#) is available for CDC on infection prevention and control in the health care setting. Any healthcare personnel caring for a monkeypox patient should self-monitor and look for symptoms consistent with monkeypox infection. Monitoring should continue for 21 days from the last date of care.

Healthcare personnel who have unprotected exposures (i.e., not wearing PPE and a known breach) to patients with monkeypox do not need to be excluded from work; however they should undergo active surveillance for symptoms, which includes temperature measurement at least twice daily for 21 days following the exposure. Prior to reporting for work, exposed healthcare personnel should be surveyed for symptoms including fever and rash. Healthcare facilities should monitor staff via their organization's employee health.

### **Monkeypox Vaccine**

On June 28, 2022, the federal government announced a strategy to vaccinate and protect people at risk for monkeypox and prioritize vaccines for areas with the highest numbers of cases. There are two [smallpox vaccines](#) licensed by the FDA to prevent monkeypox: [JYNNEOS](#) and [ACAM2000](#). ACAM2000 carries a greater risk of serious side effects and cannot be given to some people including those who have weakened immune systems, skin conditions or who are pregnant or lactating. Because of this, the CDC is encouraging the use of the JYNNEOS vaccine for post-exposure prophylaxis (PEP) against monkeypox.

#### **The JYNNEOS vaccine:**

- Contains a live *Vaccinia virus* that does not replicate efficiently in human cells
- Jynneos is licensed as a series of two doses administered 28 days (4 weeks) apart.
  - The standard regimen for Jynneos involves a subcutaneous route of administration with an injection volume of 0.5mL. The standard regimen is the FDA-approved dosing regimen for individuals over the age of 18. Since August 9, 2022, the standard regimen has been authorized for people under the age of 18

- In the context of the current national Public Health Emergency, and to stretch the limited resources, an alternative regimen may be used for people age ≥18 years under an Emergency Use Authorization beginning August 9, 2022. The authorized alternative regimen involves an intradermal (ID) route of administration with an injection volume of 0.1mL. CDC has noted that intradermal is the preferred route of administration at this time, noting that some individuals should not receive the vaccine intradermally, such as those who have a history of developing keloid scars.
- The second dose of Jynneos vaccine should be given 28 days after the first dose; however, based on available clinical study data and ACIP general best practices, the second dose may be administered up to four days before the minimum interval of 28 days and up to seven days later than the minimum interval or as soon as possible. When necessary, a person aged 18 years or older who received one Jynneos vaccine dose with the standard subcutaneous regimen may receive a second dose with the alternative intradermal regimen at the recommended interval (i.e., 28 days) to complete the vaccination series. For example, a person who received only one dose of the standard regimen before the date of initial Emergency Use Authorization for the alternative regimen (August 9, 2022), may receive one dose with the alternative regimen to complete the series. Also, a person whose 18th birthday occurs between their first and second dose may complete the series with the alternative regimen
- More information for providers is available and should be referenced in the CDC's [Interim Clinical Considerations for Use of JYNNEOS and ACAM2000 Vaccines during the 2022 U.S. Monkeypox Outbreak | Monkeypox | Poxvirus | CDC](#) for more information regarding vaccine considerations and many related resources
- Common [side effects](#) include: injection site reactions, fatigue, headache, and muscle pain. Vaccine providers should report all adverse events following JYNNEOS vaccination to [Vaccine Adverse Event Recording System \(VAERS\)](#).
- It is safe to administer to people with HIV and with skin conditions.
- For post-exposure prophylaxis (PEP) JYNNEOS should be given within 4 days of exposure for the best chance to prevent the onset of disease.
  - JYNNEOS can be given between 4 and 14 days after exposure as PEP to reduce the symptoms of disease but may not prevent the disease.
  - JYNNEOS given after the onset of symptoms of monkeypox is not recommended.

**Post-exposure Prophylaxis (PEP) and Expanded Post-exposure Prophylaxis (PEP++):**

- The CDC is recommending vaccination with JYNNEOS for the following groups:
  - Monkeypox Post-Exposure Prophylaxis (PEP)
    - People who have had a known, confirmed exposure to monkeypox
  - Monkeypox Expanded Post-Exposure Prophylaxis (PEP++)
    - People with certain risk factors and experiences that might make them more likely to have been recently exposed to monkeypox.

***[Note: The Pennsylvania Department of Health (Department) has developed screening criteria for administration of PEP++. If providers have patients who they believe are eligible under these criteria***

***(but are not a current vaccination site), they are encouraged to call (or have their patients call) 877-PA-HEALTH for evaluation and referral to a site for PEP++ administration]***

**Special Note Regarding STD and HIV Co-infections:**

Co-infections with monkeypox and sexually transmitted infections (STI), and in some cases co-infection with acute HIV, have been widely reported; therefore, when someone presents as meeting eligibility criteria for vaccination, it is strongly recommended they be offered a STD/HIV clinical evaluation to include STD/HIV testing (including syphilis, chlamydia, gonorrhea, and HIV). It may also be a good opportunity to discuss HIV PrEP strategies with the client. It should be noted however that clients are not required to agree to an examination, or STD or HIV testing in order to receive a vaccination.

**Resources**

[PADOH Monkeypox](#)  
[CDC Monkeypox](#)

If you have any questions, please call PA DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

Categories of Health Alert messages:

**Health Alert:** conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory:** provides important information for a specific incident or situation; may not require immediate action.

**Health Update:** provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of August 22, 2022 but may be modified in the future.
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