

# Monkeypox Outbreak Response Plan

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## Background

Monkeypox is a contagious disease caused by infection with the monkeypox virus. There is currently an outbreak of monkeypox in the U.S. and other countries where the virus does not usually spread. Prior to the current outbreak, nearly all monkeypox cases in people outside of Africa were linked to international travel to countries where the disease commonly occurs, or through imported animals. The case fatality rate of the type of monkeypox virus causing the current outbreak has historically been 1% in Africa, although it appears to be substantially lower in the current outbreak. People with immunosuppression, children under 8 years of age, people with a history of eczema, and people who are pregnant or breastfeeding may be more likely to get seriously ill or die. One death has been recorded in the current U.S. outbreak. Anyone can get monkeypox, but the current outbreak has largely been affecting gay and bisexual men and transgender people who have sex with men.

### **Monkeypox spreads from person to person through:**

- Direct contact with an infectious rash, scabs or body fluids
- Respiratory droplets during prolonged face to face contact or during intimate physical contact
- Touching items (such as clothing or bedding) used by a person with monkeypox
- Pregnant people can spread the virus to their fetus through the placenta

Infection is occurring in persons with no direct travel history to areas with endemic monkeypox, suggesting that person-to-person community transmission is occurring.

## **Philadelphia Outbreak**

PDPH identified the first confirmed case of monkeypox on June 2, 2022. As of August 31, 342 people in Philadelphia have tested positive for orthopoxvirus/monkeypox. Cases in Philadelphia are increasing, and there are likely cases that have not been diagnosed yet. As testing continues to expand, more cases are likely to be identified. Case trends in Philadelphia mirror those seen nationally.

## **AFFECTED POPULATIONS**

Anyone can get and spread monkeypox; however, the current outbreak has largely been affecting gay and bisexual men and transgender people who have sex with men. According to the Centers for Disease Control and Prevention (CDC), direct contact with rashes, sores, or scabs on a person with monkeypox, including during intimate contact such as sex, is believed to be the most common way that monkeypox is currently spreading in the U.S.

## Guiding Principles

**The City's Monkeypox Outbreak Response Strategies are guided by the following principles:**

1. Use a data-driven, equity lens for the development, implementation, and evaluation of all response activities.
2. Incorporate community voices in the development of response strategies and communication plans.
3. Focus resources on Philadelphia residents who are at highest risk of acquiring monkeypox while resources remain limited.
4. Expand access to testing and vaccination services as additional resources become available.
5. Conduct community engagement and outreach activities in a culturally sensitive manner while providing the most up-to-date information about transmission, vaccination, harm reduction, and other topics to help people protect themselves.
6. Ensure transparency and timeliness of information sharing.

## Health Equity Approach

The COVID-19 pandemic both highlighted and exacerbated the long-standing health inequities in Philadelphia. Much like the COVID-19 response, achieving equity in the response to monkeypox requires intentional strategies to reach Philadelphians who may face a higher risk of acquiring the disease and who are likely to face barriers to testing, treatment, vaccination, and other services. One proven method for addressing inequities is to collaborate with partner organizations that are both trusted by the community and located in key geographic areas to ensure equitable access to information and services, such as testing and vaccination. PDPH is working to establish a network of testing and vaccination partners that are best positioned to serve persons at high-risk of acquiring monkeypox.

PDPH closely monitors testing and vaccination data and will course correct when inequities are observed. In our initial vaccination efforts, we have made focused efforts to ensure equity, with particular focus on Black Philadelphians at high risk because of early data showing lower vaccination rates among this population. Those efforts have included providing evening and weekend vaccination opportunities, providing vaccine to community providers who care for diverse populations, use of PDPH records to reach out to people identified as at high risk, and partnering with trusted organizations to facilitate access to vaccination opportunities for eligible persons. However, to this point, we are seeing far lower response rates to our vaccine clinic invitations among Black residents than other groups.

Although we are still waiting for federal funding to support community partners in holding vaccine clinics, we believe this work is too urgent to wait for federal assistance, so we have identified internal funding to support community partners willing to assist further with this work. A [funding announcement](#) that provides specific details was issued on August 31, 2022. Applications will be reviewed rapidly in order to expedite contracting. We will continue to assess the data and implement changes in the plan as needed to achieve equity in the protection of all at risk groups.

## Monkeypox Outbreak Response Strategies

The Health Department's key response strategies are outlined below. These strategies will be reviewed frequently to ensure that they continue to align with community needs as the outbreak evolves over time.

### **Conduct case investigation and contact tracing to reduce transmission.**

PDPH is conducting case investigation for persons who test positive for monkeypox and contact tracing to identify persons who have been exposed to cases. Cases are assigned to PDPH case investigators to gather information about transmission, provide isolation recommendations, and to identify contacts who may have been exposed. PDPH then follows up with contacts to offer post-exposure prophylaxis vaccination and provide guidance on monitoring for symptoms following the exposure. CDC recommends that the vaccine be given within 4 days from the date of exposure to prevent onset of the disease. If given between 4–14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease. Timely vaccination of contacts is a high priority as it is an effective intervention for limiting disease transmission.

### **Expand testing capabilities to quickly identify monkeypox cases.**

Widespread testing of persons with possible monkeypox symptoms is essential to comprehensive case identification, and thus outbreak control. On June 22, CDC announced they would begin shipping orthopoxvirus tests to 5 commercial laboratory companies to make testing more convenient and accessible for patients, which has greatly expanded testing capacity. The Health Department is strongly encouraging healthcare providers to expand testing capabilities so that access can be broadened throughout the city. Given the recently expanded laboratory capacity, PDPH is working to mobilize healthcare providers to test patients with monkeypox symptoms by issuing testing guidance as the commercial laboratories all have different requirements for processing specimens. Expansion of testing capabilities in healthcare settings is critical so that patients can receive comprehensive care for any co-infections or illnesses other than monkeypox from their healthcare provider.

PDPH is also supporting low-threshold sexual health sites, as well as Federally Qualified Health Centers (FQHCs), to expand testing capacity by providing testing supplies, personal protective equipment (PPE), training on specimen collection, and/or transport of specimens to the Pennsylvania Department of Public Health's Bureau of Laboratories for testing.

### **Communicate guidance, including testing and reporting requirements, to healthcare providers through the Health Alert Network (HAN), Health Information Portal (HIP), and other networks to ensure ongoing coordination.**

The Health Alert Network (HAN) is PDPH's primary method of sharing timely information about urgent public health incidents with local clinicians and public health practitioners. Information about the current outbreak has included clinical presentation and how to manage suspect cases, conduct testing, and acquire treatment for eligible patients. PDPH has issued the below advisories regarding the current monkeypox outbreak, all of which can be found on the [Health Information Portal \(HIP\) website](#) for reference. Healthcare providers can sign up to receive these alerts via email by completing a form on the HIP.

Table 1. Health Alerts Issued by PDPH regarding the Monkeypox Outbreak as of 8/22/22

Topic	Issue Date
Monkeypox Virus Infection in the United States and Other Non-Endemic Countries	8/18/22
Exposure Risk Assessment and Clinical Manifestation of Monkeypox	6/8/22
Update on Clinical Presentation and Epidemiology on Monkeypox in Philadelphia	7/8/22
Tecovirimat Treatment for Monkeypox	7/27/22
Pain Management Recommendations for Monkeypox	8/2/22
Monkeypox Vaccination Strategy and Prioritization of First Doses	8/4/22
Intradermal Injection for Monkeypox Vaccine	8/18/22
Update: Tecovirimat Treatment for Monkeypox	8/22/22

In early June, PDPH delivered resource packets to Philadelphia urgent care and health centers to educate staff on proper management of suspect cases and patients presenting with possible monkeypox symptoms. Resource packets included Frequently Asked Questions for Clinicians, Monkeypox Case Definitions, Information on HAN Enrollment, and Monkeypox Factsheets for the Public. This outreach may be replicated if significant changes in guidance occur.

PDPH has met with groups of providers, including FQHCs and Infectious Disease providers, to answer questions about testing, vaccination, treatment options, case management, and other topics.

**Vaccinate contacts of cases and persons at high risk of exposure using an equitable strategy in partnership with other healthcare providers, including sexual wellness centers.**

As of July 31, 2022, PDPH had received a small allocation of JYNNEOS vaccine (2,625 doses) from the federal government to provide post-exposure prophylaxis (PEP), outbreak response monkeypox vaccine post-exposure prophylaxis (PEP)++, and pre-exposure prophylaxis (PrEP). All of those doses have either been committed to providers or allocated to PDPH-operated clinics, with a small number held in reserve to ensure ongoing provision of PEP to contacts of cases.

**ALLOCATION**

Table 2 describes the number of JYNNEOS vaccine vials that PDPH has ordered from the Strategic National Stockpile (SNS) as of August 22, 2022. In addition to vials already ordered, PDPH will be able to order 2,185 vials between August 22 and September 30 in two additional portions. After these vials arrive, we are not expecting any more monkeypox vaccine to be made available until a later time. Philadelphia has also received 3,070 doses of JYNNEOS from the Pennsylvania Department of Health’s (PADOH) supply.

Table 2. Philadelphia Vaccine Allocations as of 8/31/22

	Number of Vials	Date Ordered/Received
<b>Strategic National Stockpile</b>	2,625	Received prior to August
	2,420	Ordered August 1
	720	Ordered August 15
	1,120	Ordered August 22
<b>PADOH supply</b>	400	Received August 4
	1,000	Received August 12
	600	Received August 19
	1,070	Received August 26
<b>Total vials</b>	9,955	

### INTRADERMAL STRATEGY

Because vaccine supply is extremely limited, PDPH, like several other jurisdictions, initially adopted a one-dose outbreak response approach to vaccinate as many contacts of cases and high-risk persons as possible with a plan to address the need for second doses for conveying long-term immunity after the vaccine supply increases. With the announcement from the FDA recommending a change to an intradermal strategy using 20% of the usual dose, Philadelphia has the opportunity to expand the number of people who can be protected with our existing allocation of vaccine. After review of the scientific evidence, discussions with experts, and input from vaccine providers and members from impacted communities, PDPH is moving forward with adopting this recommendation as follows:

- The intradermal vaccine strategy is recommended going forward as the preferred method of vaccination in Philadelphia for all providers due to the opportunity it offers to prevent further spread of Monkeypox by vaccinating far more Philadelphia residents
- The intradermal strategy should be offered as the preferred vaccination method to those eligible for JYNNEOS vaccination who are:
  - 18 years or older
  - Do not have a history of keloids (hypertrophic scarring)
- Subcutaneous dosing should be continued for those under age 18 and those with a history of keloids.
- Two doses 28 days apart are recommended for the intradermal strategy.
  - Those who received a subcutaneous dose can receive an intradermal dose for their second dose.
- Patients who decline intradermal vaccination but will accept subcutaneous vaccination should not be denied vaccination via the subcutaneous approach but should be educated about the reasons to prefer the intradermal approach.
- If an intradermal injection is attempted but the dose is inadvertently given subcutaneously, the dose should be readministered through the correct route (intradermally) immediately. No waiting period is needed.
- PDPH is not currently recommending the use of ACAM2000, the older smallpox vaccine, due to substantially higher risks of serious side effects than are seen with the JYNNEOS vaccine

## TARGET POPULATION

Given the limited vaccine supply, doses must be prioritized for those considered to be at high risk of exposure, including persons who meet the following criteria:

- Gay, bisexual, transgender, non-binary, and other men who have sex with men, transgender, or non-binary persons, AND
- Meet one of the following criteria:
  - Have had multiple or anonymous sex partners in the last 14 days and/or believe they may have been exposed to an STI or monkeypox in the past 14 days.
  - Have had any newly diagnosed STI in the past 12 months, including gonorrhea, chlamydia, early syphilis, or HIV.
  - Have recently attended or plan to attend any venue where anonymous sex or sex with multiple partners will occur (e.g. saunas, bathhouses, sex clubs, sex parties) in the next 30 days.
  - Have met recent partners or plan to meet new partners in the next 30 days through social media platforms (such as Grindr, Tinder or Scruff), or at clubs, raves, sex parties, or saunas.

Additionally, the following people are eligible:

- Sex workers (of any sex or gender), and/or
- Anyone with known close contact (skin-to-skin) with someone with monkeypox in the past 14 days.

Criteria may be expanded as the vaccine supply increases or as data show different trends in populations being affected.

## PROVIDERS

Vaccination has been rolled out using a phased approach, utilizing both PDPH-operated clinics and healthcare providers. While the vaccine supply is limited, providers that serve large populations of potentially eligible persons, including low-threshold sexual health sites, are being invited to participate as monkeypox vaccine providers. The below organizations have been provided vaccine and are distributing doses to patients as of August 31.

- Bebashi
- Children's Hospital of Philadelphia (CHOP) Adolescent Initiative
- Courage Medicine
- Dr. Ala Stanford Center for Health Equity (ASHE)
- Drexel Partnership

- Einstein Community Practice Center
- Jefferson Health
  - Family Medicine Associates
  - Infectious Disease Clinic at Jefferson Hospital Ambulatory Practice (JHAP)
- Mazzoni Center
- PDPH Ambulatory Health Services
- Penn Medicine
  - Hospital of the University of Pennsylvania
  - Penn Presbyterian Medical Center
  - Pennsylvania Hospital Wood Clinic
- Philadelphia FIGHT
  - John Bell Health Center
  - Lax Treatment Center
- Temple Health
  - Temple University Hospital - Episcopal
  - Temple University Hospital - Main

PDPH is currently working to enroll more providers as monkeypox vaccine providers and has been in communications with the below organizations:

- Congreso Health Center
- Delaware Valley Community Health (DVCH)
- Family Practice and Counseling Network (FPCN)
- Public Health Management Corporation (PHMC)
- St. Christopher's Hospital for Children
- Urban Health Solutions

Participating providers will only receive a limited amount of vaccine, must adhere to the eligibility criteria established by PDPH, and must commit to completing vaccinations within 10 days of vaccine delivery to avoid impacting the city's ability to obtain more vaccine and to ensure that all the vaccine we receive is utilized for those who need it.

## **PDPH-OPERATED CLINICS**

PDPH is currently offering monkeypox vaccine at Health Center Annexes and operating clinics at Health Center 1 located at Constitution Health Plaza, William Way LGBT Community Center, the Shoppes at LaSalle, and Action Wellness West-Filbert Street. Daytime, evening, and weekend options are available for eligible persons. Clinics are currently limited to advance appointments only. Methods to identify eligible persons to schedule vaccination appointments include:

1. Health Department staff are calling identified contacts of cases to schedule appointments after they are identified through case investigation.
2. Health Department staff are calling social network contacts of exposed persons (contacts) to schedule appointments.
3. The Health Department is issuing invitations to people who have been identified in existing databases as an individual who could be exposed to monkeypox without knowing it and to those who have signed up via the Monkeypox Vaccine Interest Form.
4. Persons who self-refer to the PDPH call center will be accommodated on a case-by-case basis.

## **Coordinate provision of antiviral medications (TPOXX) to reduce disease severity.**

Tecovirimat (TPOXX) is an antiviral therapy that has been approved by the FDA and procured by CDC for the treatment of smallpox. Its uses have been expanded for the treatment of monkeypox under the expanded access investigational new drug (EA-IND) to decrease symptom severity and viral load for people infected with monkeypox virus who meet one of the following:

- Have severe disease
- Are at high risk of severe disease:
  - People with immunocompromising conditions
  - Pediatric populations, particularly those under 8 years of age
  - Pregnant or breastfeeding people
  - People with a history or presence of atopic dermatitis or other active exfoliative skin conditions
  - People with one or more complication
- Have aberrant infections involving accidental implantation in eyes, mouth, or other areas where infection might constitute a special hazard

PDPH is coordinating with healthcare providers to provide TPOXX to patients with symptoms of monkeypox that are determined to be of significant severity as soon as possible after diagnosis and after obtaining signed informed consent from the patient. PDPH has acquired TPOXX regimens from the Strategic National Stockpile (SNS) to preposition and deliver to providers in the case of an emergent need. PDPH has worked with some providers who commit to seeing and treating uninsured patients to preposition TPOXX courses on site at the facility. As of August 31, 76 patients have received TPOXX in Philadelphia, representing 22% of cases.



### **Provide guidance and resources for infection control precautions to congregate settings.**

PDPH will provide [guidance to prevent monkeypox spread](#) to congregate settings, including correctional and detention facilities, shelters, group homes, residential substance use treatment facilities, and dormitories at institutes of higher education. Any cases identified in persons residing or working in congregate settings will be assigned to outbreak coordinators who can provide specific guidance on isolation, cleaning and disinfection, and PPE to prevent spread within the facility. Information about monkeypox prevention, including the potential for transmission through close physical contact and sharing of items (e.g., linens, clothing, utensils, cups, etc.) have been shared with partners to provide to staff, volunteers, and residents. PDPH has pre-positioned PPE with partners that can also be used for COVID-19 mitigation.

### **Issue timely, accurate, culturally competent, and non-stigmatizing public information about monkeypox.**

PDPH is working with partners like the Mayor's Office of LGBT Affairs to develop messaging and informational materials that address communities where monkeypox is currently spreading without stigma. The PDPH Call Center is available to answer questions directly by phone (interpretation services available), 215-685-5488, or email, [PublicHealthInfo@phila.gov](mailto:PublicHealthInfo@phila.gov), Monday through Friday, 8am – 6pm. Residents can also digitally access the most up to date information about the outbreak via City social media channels, @PHLPublicHealth, or at this website: <https://www.phila.gov/2022-07-19-the-latest-on-monkeypox-in-philadelphia/>.

### **Partner with community-based and other organizations that serve affected populations to share information, facilitate access to PEP and PrEP, and address other needs without stigma.**

The below strategies summarize current efforts to partner with affected communities to ensure equitable and effective engagement. In addition, PDPH is meeting with local leaders representative of affected communities to obtain feedback and input on emergency response strategies and is establishing a Community Advisory Group for formalized and routine integration of community expertise into the planning process. The first meeting of the Community Advisory Group is scheduled to occur on September 7, and the group will meet every other week.

### **CANVASSING**

PDPH staff is visiting organizations such as bars, restaurants, dance/music venues, and intimate retail stores to talk with staff about displaying monkeypox information and resources for clientele and community members. Other venues and neighborhoods will be considered for canvassing following completion of these high-priority organizations.

### **INFORMATION SHARING AND SESSIONS**

PDPH has created a toolkit to share with community-based organizations that consists of digital assets (e.g. social media posts), harm reduction strategies, and other resources that leaders can share with networks and residents. We will also issue a weekly newsletter summarizing the latest data, news, vaccination opportunities, and educational materials to identified partners.

PDPH staff will organize virtual, citywide information sessions to talk about clinical information, vaccine rollout and availability updates, testing resources, and to answer questions from the public. Staff and clinicians are also available to participate as panelists in community-led virtual or in-person information sessions or at community events by hosting an information table with educational resources.

**Continuously monitor surveillance and vaccination data to ensure the City's response strategies are effective and equitable.**

PDPH collects detailed information as part of the case investigation and vaccination processes to assess impact of response efforts. Data are reviewed regularly to determine if outbreak control strategies are reaching impacted populations.

PDPH has published case counts and vaccination data at <https://www.phila.gov/programs/acute-communicable-disease-program/monkeypox/> to establish transparency in outbreak response progress. A data dashboard containing demographic information on monkeypox cases in Philadelphia and Philadelphia residents who have been vaccinated against monkeypox is also hosted on this website. Data will be updated weekly on Mondays.

## Conclusions

This is an evolving outbreak that is characterized by limited resources, similar to the resource shortages that have occurred through the COVID-19 response. Responding to multiple concurrent emergencies remains a challenge for healthcare providers, community-based organizations, community members, and government agencies at all levels. However, we have better tools to respond to monkeypox now than we had during the early months of the COVID-19 pandemic, including an already available diagnostic test, an effective vaccine, antivirals, and information about transmission that can help people to protect themselves. The limited availability of JYNNEOS vaccine is a critical issue, and the Health Department will continue to advocate for Philadelphia to receive more doses. The Health Department intends to rapidly scale up response efforts, particularly focusing on the expansion of providers who can test, vaccinate and treat, as well as the incorporation of trusted messengers and organizations that can both inform the city's response strategies and share critical information to persons who are at highest risk of acquiring monkeypox.