

Mpox and HIV: Compounding Risks to the Immunocompromised

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▶ Disclaimer

Information presented in these slides and on today's call is based on the most current guidance and is subject to change.

Overview

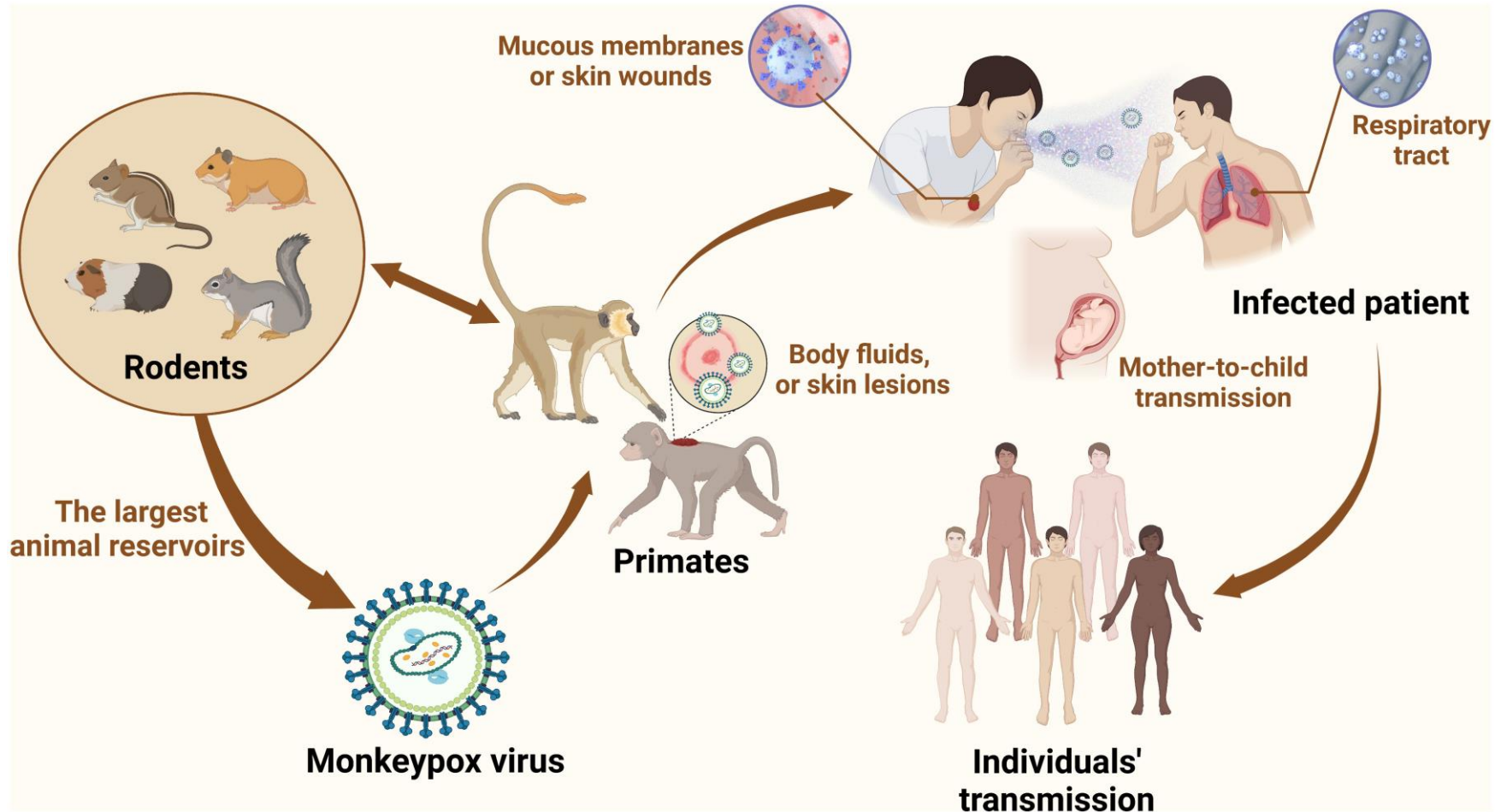
1. What is Mpox?

a) Transmission, Symptoms, Presentation, Testing

2. Mpox Epi & HIV

3. Vaccination

What is Mpox?



Source: Niu L, Liang D, Ling Q, Zhang J, Li Z, Zhang D, Xia P, Zhu Z, Lin J, Shi A, Ma J, Yu P and Liu X (2023) Insights into monkeypox pathophysiology, global prevalence, clinical manifestation and treatments. *Front. Immunol.* 14:1132250. doi: 10.3389/fimmu.2023.1132250

▶ Mpox Clades

- There are two distinct clades of the MPXV:
 - ▣ Clade I: Central Africa
 - ▣ Clade II: West Africa
- 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
- Cases of Clade I MPXV have not been reported in the US at this time.



➤ Mpox in the DRC

Mpox Caused by Human-to-Human Transmission of Monkeypox Virus with Geographic Spread in the Democratic Republic of the Congo

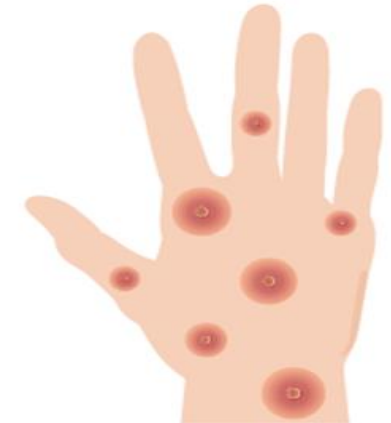
- [CDC notified clinicians and health departments about the occurrence, geographic spread, and sexually associated human-to-human transmission of Clade I MPXV in the Democratic Republic of the Congo \(DRC\).](#)
- [Person-to-person transmission has occurred during this outbreak, including through sexual contact, household contact, and within the healthcare setting.](#)
- [The outbreak of mpox was reported 22 out of 26 provinces, including urban areas, in the DRC.](#)
- [U.S. Preparedness and Response to Increasing Clade I Mpox Cases in the Democratic Republic of the Congo — United States, 2024 \(CDC MMWR, 05.16.2024\)](#)



Pink shading indicates provinces with confirmed and suspect cases of mpox. ([View larger](#))



▶ What are the symptoms of Mpox?



- **Fever**
- **Headache**
- **Muscle aches and backache**
- **Swollen lymph nodes**
- **Chills**
- **Exhaustion**
- **Respiratory symptoms (e.g. sore throat, nasal congestion, or cough)**

A Rash that may be located on or near the genitals (penis, testicles, labia, and vagina) or anus but could also be on other areas like the hands, feet, chest, face, or mouth.

- The rash will go through several stages, including scabs, before healing.
- The rash can look like pimples or blisters and may be painful or itchy.

➤ What does Mpox rash look like?

Examples of Mpox Rashes

Photo credit: UK Health Security Agency



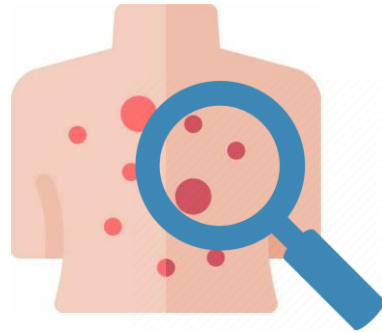
More Mpox Rash Photos

Photo Credit: NHS England High Consequence Infectious Diseases Network



▶ Diagnosing Mpox

FEVER?
SORE THROAT?
RUNNY NOSE?
COUGH?



Feel Sick?

Look for Rash



Exhaustion
Cold symptoms
Swollen lymph nodes
Muscle aches
Headache
Fever
Chills

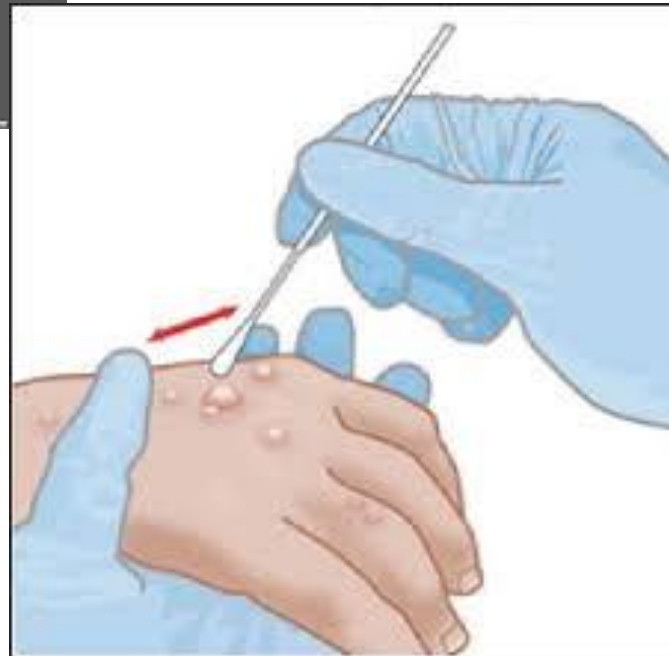
Check Symptoms



Get Tested

If your test result is positive, stay home, away from other people until your rash has healed, all scabs have fallen off, and a fresh layer of intact skin has formed.

▶ Mpox testing in PA



HOW TO GET TESTED?



Contact your
medical provider or
the health
department at
877-PA-HEALTH

▶ What to do if you are sick with Mpox

FEVER? SORE THROAT?
RUNNY NOSE? COUGH?



STAY HOME, away from others unless it is necessary to see a healthcare provider or for an emergency.

Avoid all contact with other people and animals.



If you have an emergency or need to leave your home to see a medical provider:



Cover all parts of the rash with clothing, gloves, and/or bandages.



Wear a well-fitting mask to prevent the spread of respiratory droplets.



Wash all items and surfaces that have been touched by a lesion.



Wash hands well and often.



PHYSICAL CONTACT



SHARING ITEMS



CROWDS

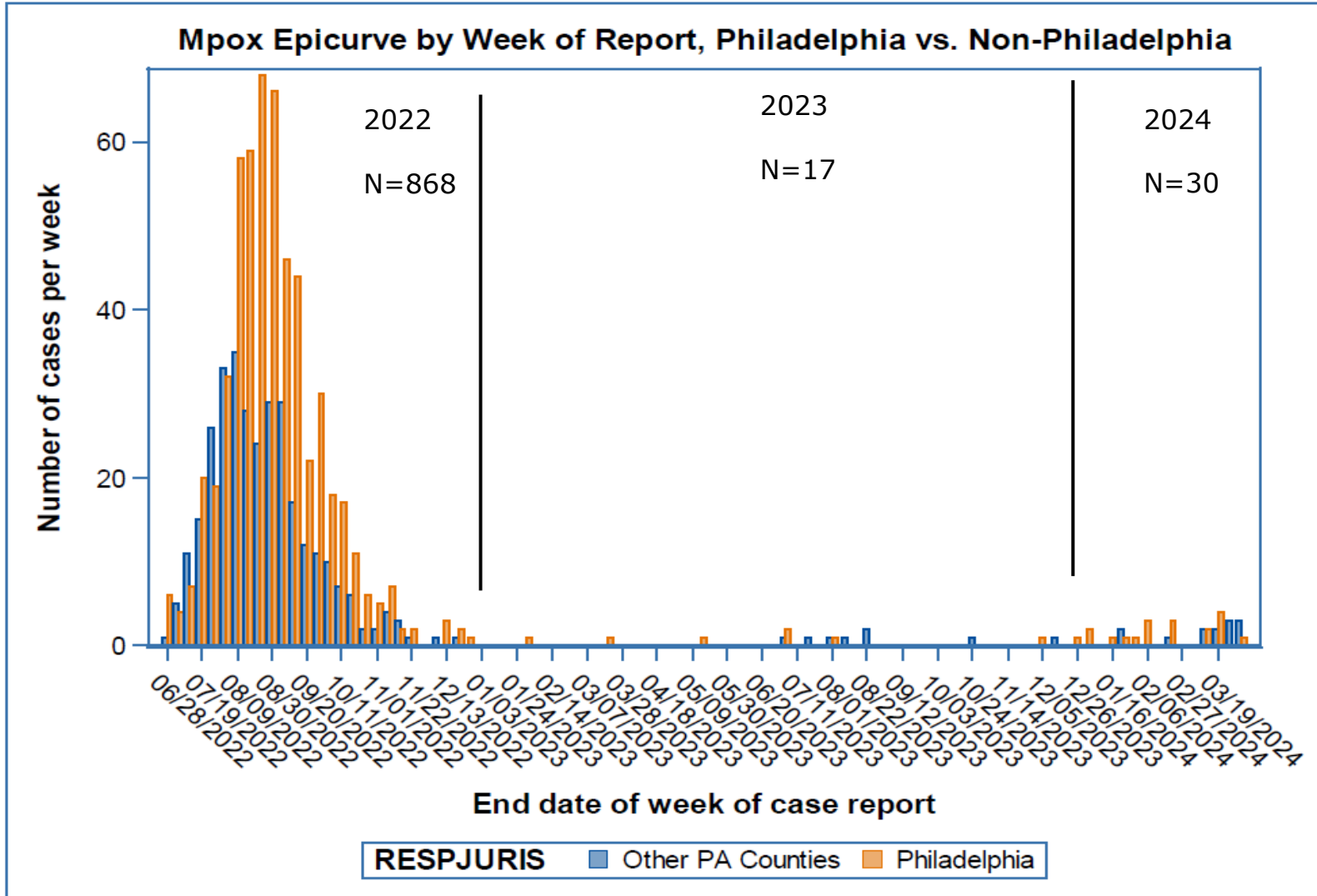


PUBLIC TRANSPORTATION



pennsylvania
DEPARTMENT OF HEALTH

PA Mpox Epicurve



Case Totals *(as of 5/7/24)*

Pennsylvania	942
Philadelphia	583
Rest of State	358

Source: PA-NEDSS

Mpox Virus Among Persons Living with HIV (PLWHIV)

Current data suggest that about **40%** of people diagnosed with mpox in the United States also have HIV. During the recent outbreak, reported cases of mpox with severe manifestations, including death, have been among PLWHIV with low CD4 counts (<350 cells/ml) or who are not virally suppressed¹.

Mpox treatments are safe and may be used to treat people who are more likely to become severely ill with mpox. Based on current knowledge, mpox treatments have very few possible interactions with HIV medications.

HIV pre-exposure prophylaxis (PrEP) and HIV post-exposure prophylaxis (PEP) are still effective for preventing HIV even in persons who have mpox or are taking mpox treatment. If a patient has been prescribed HIV PrEP or HIV PEP, they should continue taking their medicine as prescribed.

▶ Mpox Vaccination

- **Vaccines** (e.g., JYNNEOS, ACAM2000) **and other medical countermeasures** (e.g., tecovirimat (TPOXX), brincidofovir, and vaccinia immune globulin intravenous) **are available and expected to be effective for both Clade I and Clade II MPXV infections.**
- Vaccination coverage in the United States remains low, with only one in four people who are eligible to receive the vaccine having received both doses of JYNNEOS.

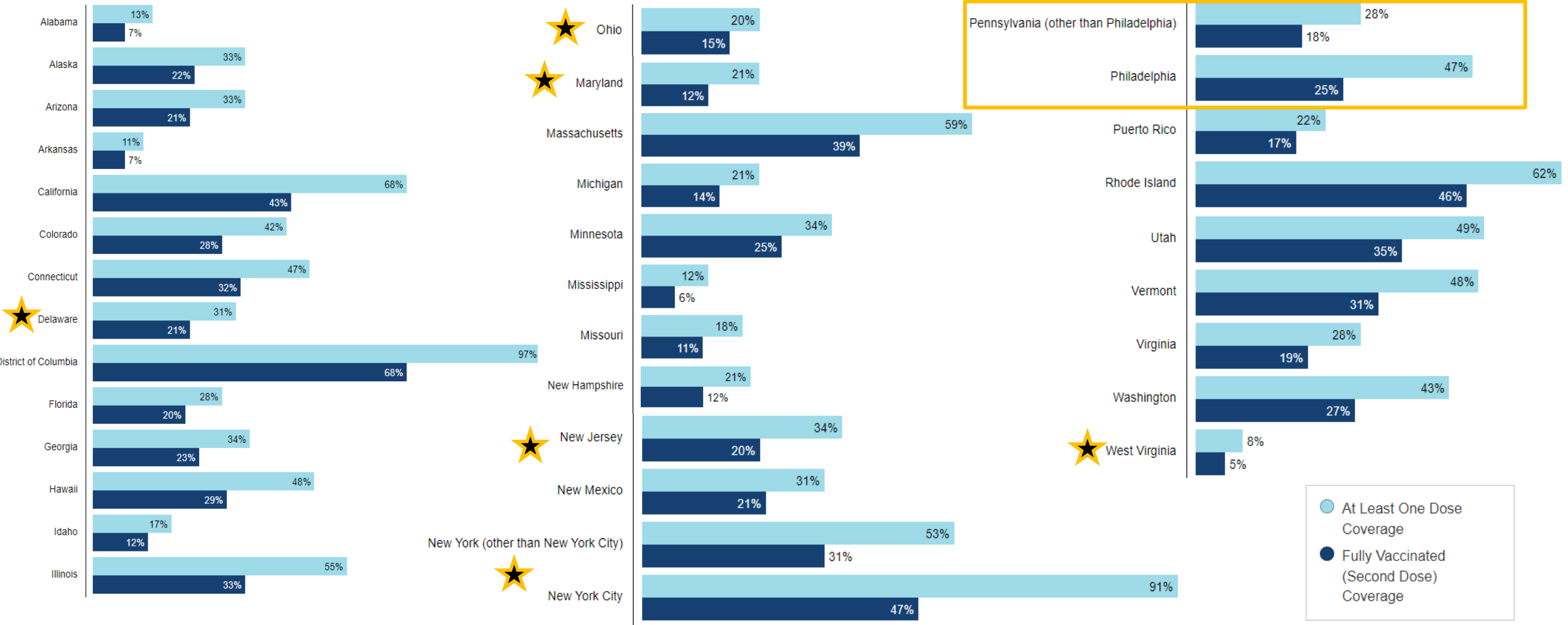


➤ Vaccination Progress

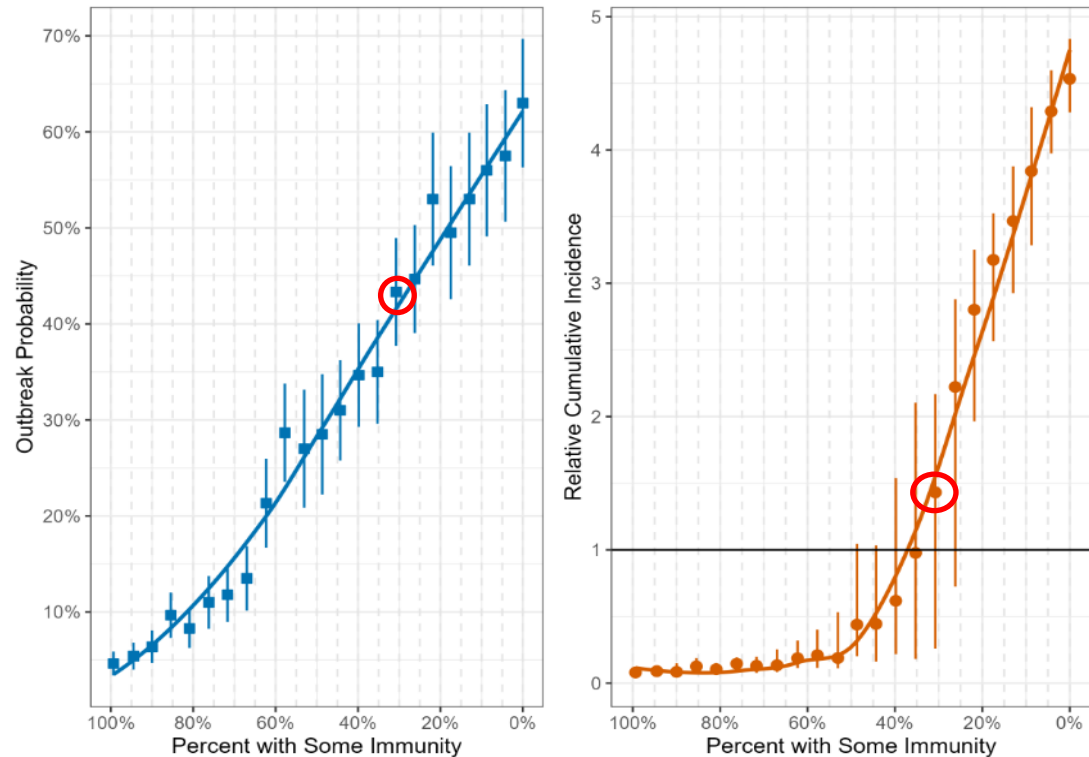
Mpox Vax Providers	HIV/STD Clinics	Public Health (CMHDs + SHCs)	FQHC + CHC	Hospital	Pharmacy	Other
89	36	18	8	3	18	6

Over 15,400 doses administered

Mpox Vaccine Coverage by Jurisdiction for Population at Risk for Mpox



Mpox Resurgence & Vaccine Considerations



[Download Data](#) [XLS - 2 KB]

Figure 1: Probability and predicted size of mpox outbreaks by population immunity levels. Percent with some immunity refers to the percent of the population at most risk of monkeypox virus exposure ([JYNNEOS Vaccine Coverage by Jurisdiction | Mpox | Poxvirus | CDC](#)) who have some level of immunity through past infection or at least one dose of vaccine. Predicted outbreak size, or cumulative median incidence, indicates the size of an outbreak relative to the size of the 2022 mpox outbreak. Outbreaks with relative size greater than 1, or those above the horizontal black line, are larger than the 2022 mpox outbreak. Data points indicate specific simulated scenarios; error bars indicate either the 95% confidence interval (outbreak probability) or simulated interquartile range (relative cumulative incidence).

- Mpox reintroduction along with no additional vaccination or sexual behavior adaptations would risk a resurgent mpox outbreak greater than 35% in most jurisdictions across the US, including Pennsylvania
- Jurisdictions with low levels of vaccination coverage (<35%) with at least one dose, which includes most U.S. jurisdictions, resurgent outbreaks are more likely (>35% risk of occurring given reintroduction). Outbreaks could be as large or larger than the 2022 outbreak if no additional vaccination or sexual behavior adaptations take place (Figure 1).
 - ▀ Largely because immunity is relatively low in populations highly affected, including sexually active men who have sex with men (MSM) in these jurisdictions.

Vaccine Efficacy

- There are limitations in our knowledge about the effectiveness of these vaccines in the current outbreak. People who are vaccinated should ***continue*** to [take steps to protect themselves](#) from infection by avoiding close, skin-to-skin contact, including intimate contact, with someone who has mpox.
- Peak immunity is expected to be reached 14 days **after the second dose** of JYNNEOS vaccine.
- Because mpox infection likely confers immune protection, at this time the following are exceptions to the recommended two-dose series:
 - A person who would be eligible for vaccination but has been diagnosed with mpox during this outbreak, which started in the United States on May 17, 2022, is not recommended to be vaccinated
 - A person diagnosed with mpox after their first dose of JYNNEOS is not recommended to receive the second dose
 - **There is an exception for immunocompromised people diagnosed with mpox after their first dose of JYNNEOS; these people may be eligible to receive the second dose of JYNNEOS based on the clinical judgment of the healthcare provider.**

Vaccine Eligibility (PrEP & PEP)

For people† aged 18 years and older with the following risks:

- GBMSM, transgender or nonbinary people who in the past 6 months have had 1+ of the following:
 - A new diagnosis of ≥ 1 sexually transmitted disease
 - More than one sex partner
 - Sex at a commercial sex venue
 - Sex in association with a large public event in a geographic area where mpox transmission is occurring
 - Sex in exchange for money or other items
- People who are sexual partners of people with the above risks.
- People who anticipate experiencing any of the above scenarios.
- People with HIV infection or other causes of immunosuppression who have had recent or anticipate potential mpox exposure.
- People who work in settings where they may be exposed to mpox:
 - People who work with orthopoxviruses in a laboratory
- People may be vaccinated after exposure to mpox virus to help prevent mpox disease (i.e., post-exposure prophylaxis).
 - As PEP, vaccine should be given as soon as possible, ideally within four days of exposure; administration 4 to 14 days after exposure may still provide some protection against mpox.

▶ Key takeaways

- PLWHIV are at increased risk of severe mpox infection, especially those who are not virally suppressed. ²
- JYNNEOS vaccine and other medical countermeasures are available. HIV PrEP and PEP are still effective for preventing HIV even in persons who have mpox, are taking mpox treatment, or have been vaccinated against mpox.
- Mpox vaccination should be included as part of broader prevention activities and sexual health care, including HIV and other sexually transmitted infection (STI) testing and linkage to services, such as HIV PrEP or HIV treatment. ¹
- Vaccination coverage in the United States remains low, including in PA, which could result in a greater resurgence of mpox cases, with a disproportionate impact falling to GBMSM, especially those who are immunocompromised (e.g. PLWHIV).

Provider Resources

- [Mpox Virus Infections After 2 Preexposure Doses of JYNNEOS Vaccine — United States, May 2022–May 2024](#)
- [Clade II Mpox Surveillance Update — United States, October 2023–April 2024](#)
- [U.S. Preparedness and Response to Increasing Clade I Mpox Cases in the Democratic Republic of the Congo — United States, 2024](#)
- [Mpox Surveillance Based on Rash Characteristics — 13 Emergency Departments, United States, June–December 2023](#)
- 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
- [Mpox Vaccination Basics for Healthcare Professionals](#) including CDC’s patient eligibility criteria, vaccination administration guidance, and health equity considerations
- [Mpox Vaccine Provider Locator Widget](#)
- [STOMP: Study of Tecovirimat for Human Monkeypox Virus](#)
- More information regarding the [Risk of Mpox Resurgence](#)
- Information regarding LGBT+ Health: [Get Healthy and Ready for the Year Ahead](#)
- [With Cases declining, why should we care about Mpox in 2023? \(VIDEO\)](#)
- [How is the vaccine performing in the real world against the Mpox virus? \(VIDEO\)](#)

Contact Us

For general questions related to the JYNNEOS® vaccine, how to become a PADOH approved mpox vaccine provider, or inquiries related to the CoAg Mpox Crisis Response Program

email: RA-DHmpox_VAX@pa.gov

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The background of the slide is a composite image. On the left, there is a view of a highway interchange with green signs for 'Central Expressway' and 'Schuylkill Expressway'. On the right, there is a view of a city skyline with various high-rise buildings, including the Comcast Center, and a river with a bridge in the foreground. A large blue semi-transparent rectangle is overlaid on the left side of the image, containing the text.

Thank You!

Special thank you to Charles Adkins, Dr. Gina Pang, Dr. Eva Gordian-Rivera, and Dr. Kirstin Waller!