



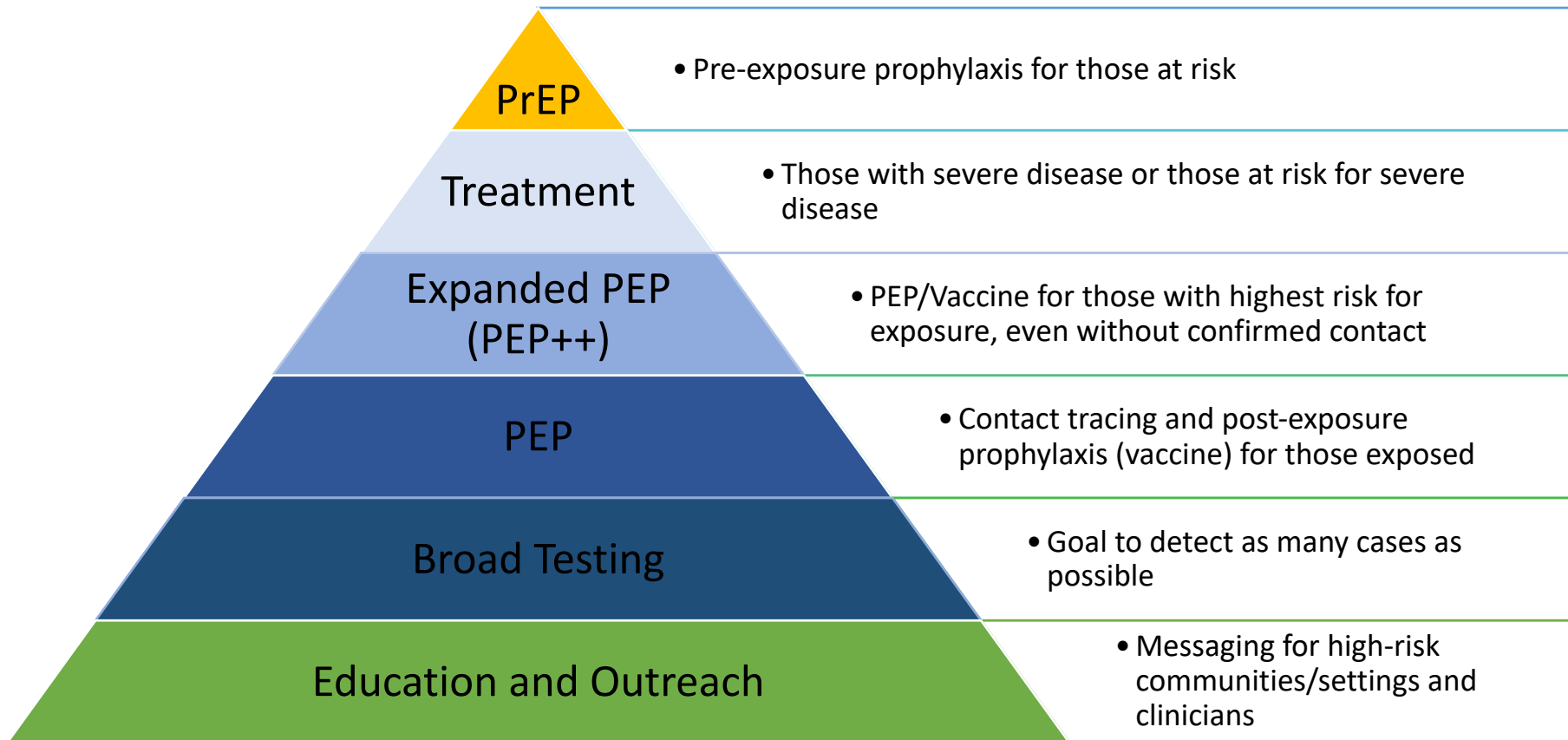
Monkeypox Virus (MPV) Update

September 2022

Background on MPV

- Two strains of *Monkeypox virus*, West African, and Congo Basin
 - West African clade is less severe and has caused all cases identified in the current outbreak (<1% case fatality)
- Most transmission is occurring via **direct contact** with an infectious person's skin and rash, respiratory secretions (i.e., saliva), and with exposure to an infected person's towels or linens
 - Incubation period, time from exposure to symptoms is 1-2 weeks
 - Infectious period consists of possible flu-like illness followed by a rash
 - Individual can be infectious for as long as 3-4 weeks
- Serious health outcomes associated with infection appear rare
 - Some patients have been hospitalized but usually due to pain management

MDHHS Strategic Framework for MPV Containment



Vaccine Formulations

- There are two vaccines that are approved and effective against MP
- Preferred vaccine is JYNNEOS
 - Two-dose vaccine administered 28 days apart.
 - Available in limited supply.
- ACAM2000 has significant side effects and has not been requested
 - The risk of monkeypox may be lower than the risk of the side effects from ACAM2000
 - Can't be given to immunocompromised individuals, those with skin conditions

ACAM2000 and JYNNEOS

	ACAM2000	JYNNEOS
Vaccine virus	Replication-competent vaccinia virus	Replication-deficient Modified vaccinia Ankara
"Take"	"Take" occurs	No "take" after vaccination
Inadvertent inoculation and autoinoculation	Risk exists	No risk
Serious adverse event	Risk exists	Fewer expected
Cardiac adverse events	Myopericarditis in 5.7 per 1,000 primary vaccinees	Risk believed to be lower than that for ACAM2000
Effectiveness	FDA assessed by comparing immunologic response and "take" rates to Dryvax*	FDA assessed by comparing immunologic response to ACAM2000 & animal studies
Administration	Percutaneously by multiple puncture technique in single dose	Subcutaneously in 2 doses, 28 days apart

*Both ACAM2000 and Dryvax are derived from the NYC Board of Health strain of vaccinia; ACAM2000 is a "second generation" smallpox vaccine derived from a clone of Dryvax, purified, and produced using modern cell culture technology.

Strategy for Vaccine (Starting August 12, 2022)

Guiding Principles

To distribute vaccine rapidly and in an equitable way to those at highest risk for MPV, prioritizing those at highest risk of severe illness

Make vaccine
widely available

- Utilize ID vaccine for PEP and PEP++
- Get doses in arms as quickly as possible

Maximize
available doses

- ID administration will increase availability 5X
- Wastage is expected

How to administer a JYNNEOS vaccine intradermally

STEP 3

Slowly inject 0.1mL intradermally.

This should produce a noticeable pale elevation of the skin (wheal).

Initially, Michigan decided to do a one-dose delayed response to increase the number of doses in the community.

Then, FDA's Emergency Use Authorization (EUA) allowed for providers to offer the vaccine via intradermal (between layers of the skin) injection, which increases the number of doses up to five-fold.

Intradermal Technique

- Previously, JYNNEOS was only able to be administered subcutaneously.
- JYNNEOS is administered as two doses 28 days apart.
- The intradermal route of administration has been shown to have the same immune response as the subcutaneous route.
- People are considered fully vaccinated approximately two weeks after their second dose of JYNNEOS.
- Note: Intradermal administration is contraindicated for people with a history of keloid scarring.

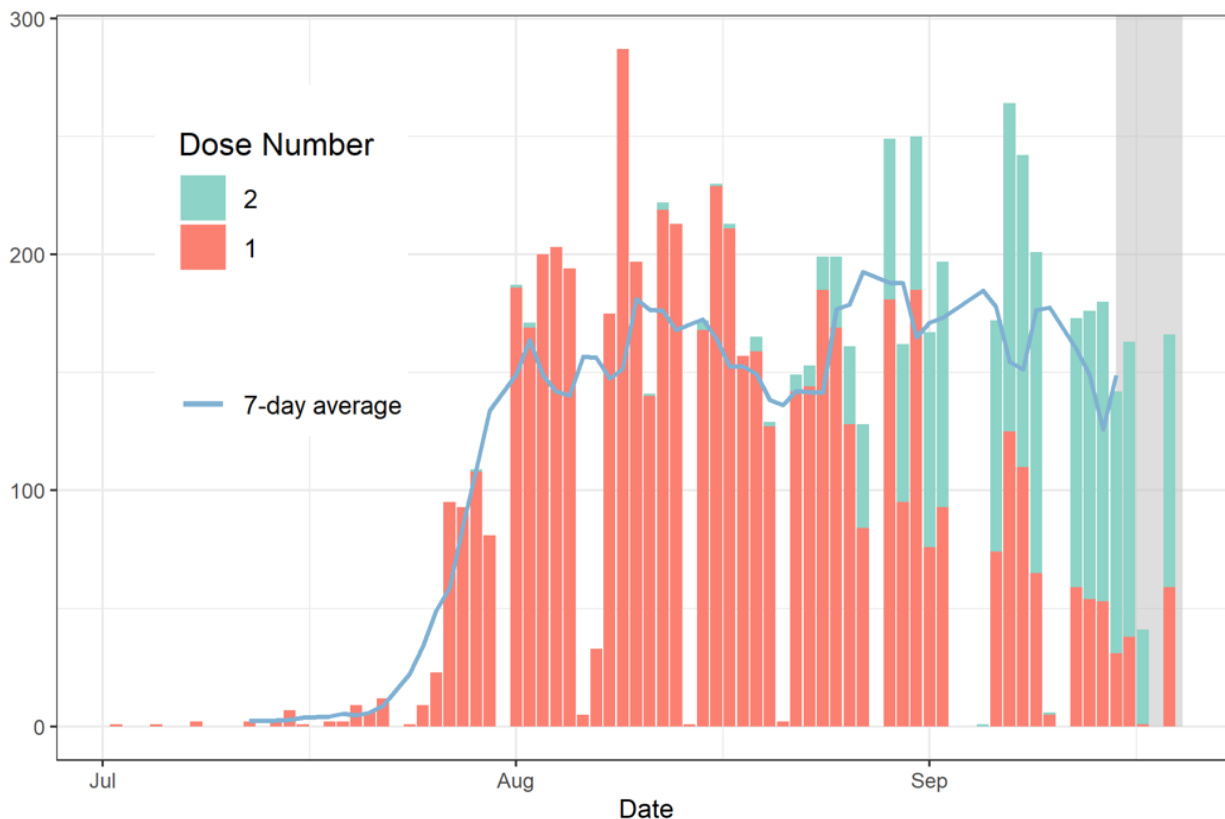
Vaccine Eligibility

- **PEP : vaccination following exposure to MPV to prevent illness.**
 - Named or household contacts.
- **PEP++ : persons at high-risk for exposure, without confirmed exposure to MPV.**
 - Individuals engaged in any type of sex work.
 - Partners of individuals who engage in higher-risk sexual activities.
 - Close/household contacts of individuals who have been exposed to MPV or engaged in higher-risk activities.
 - Men who have sex with men and have a history of STI in the last year.
 - Individuals who plan to have multiple sex partners.
 - Individuals who plan to have close contact at a high-risk event or high-risk venue.
 - Individuals taking HIV PreP or those living with HIV.
 - Consider ring vaccination strategies associated with events or venues.

Vaccine in Michigan

MPV Administrations by dose number

Number of doses: 7698

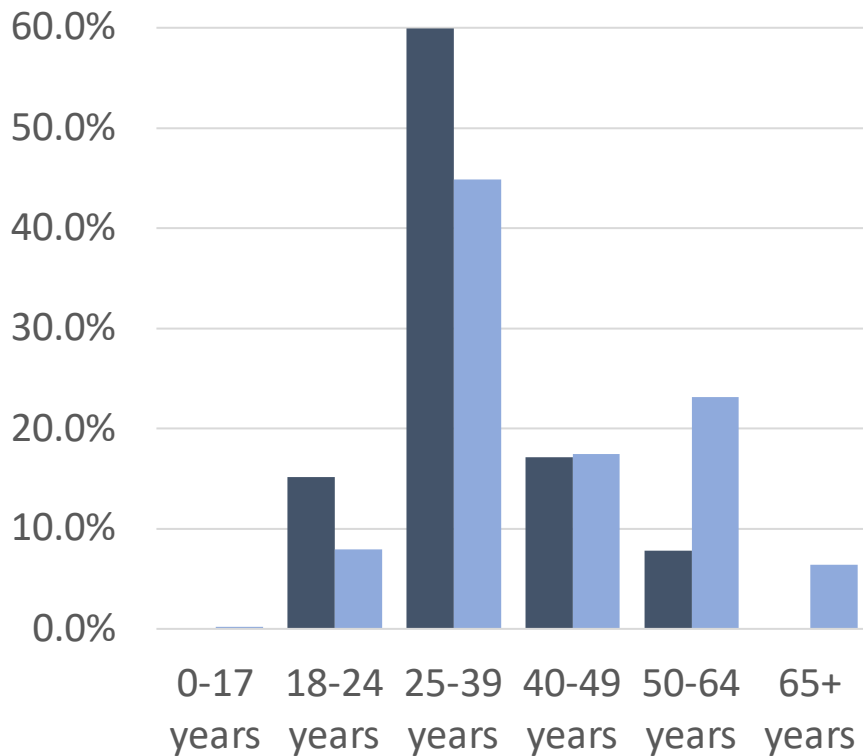


*Data in the last 5 days is subject to change due to reporting delays

Age Group	n	%
0-17 years	14	0.2%
18-24 years	613	8.0%
25-39 years	3453	44.9%
40-49 years	1342	17.4%
50-64 years	1783	23.2%
65+ years	493	6.4%

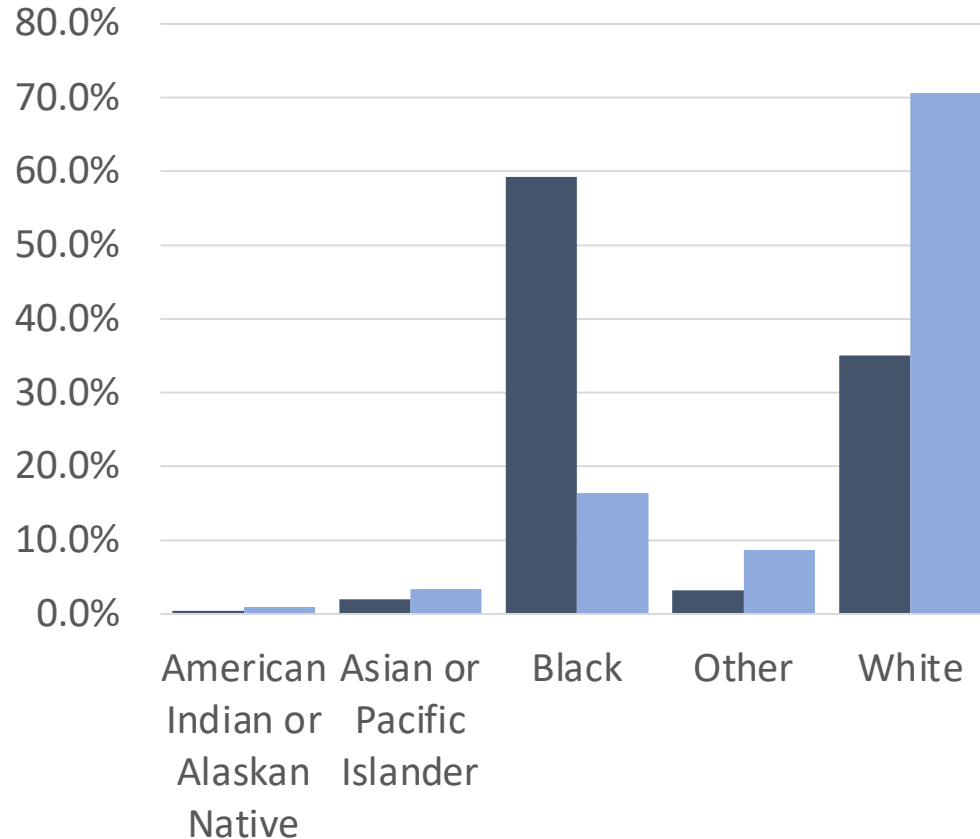
Vaccine Administrations vs. Case demographics by Age and Race

Vaccine Administrations vs Cases by Age Category



■ % of Cases ■ % of Vaccine Administrations

Vaccine Administrations vs Cases by Race



■ % of Cases ■ % of Vaccine Administrations

Treatment: TPOXX

- Severe disease (e.g., hemorrhagic disease, confluent lesions, sepsis, encephalitis or other conditions requiring hospitalization).
- **Those at high risk of severe disease:**
 - Immunocompromising conditions/medications.
 - Pediatric populations, especially those <8 years old.
 - Pregnant or breastfeeding women.
 - Atopic dermatitis or other active exfoliative skin conditions.
 - One or more complications (e.g., secondary bacterial skin infections; gastroenteritis with severe nausea/vomiting, diarrhea or dehydration; broncho pneumonia, concurrent disease or other comorbidities).
 - MPV infections that include mucosa (genitals, anus) or accidental implantation in the eyes or mouth.
- MDHHS received approximately 500 courses from CDC SNS on August 4.
- All 45 local health departments and health systems have limited supplies of pre-positioned TPOXX.
- Michigan providers who want to prescribe Tecovirimat and can adhere to the IND protocol should contact their local health department to determine if pre-positioned courses are available.
- If no pre-positioned courses are available through the local health department, providers should request from MDHHS through the [TPOXX Request Form](#).



[Treatment Information for Healthcare Professionals | Monkeypox | Poxvirus | CDC](#)

Communications, Outreach and Support

1. Reach disproportionately affected communities with non-alarmist, non-stigmatizing, fact-based messaging, about MPV.
2. Emphasize that *anyone* can get monkeypox and promote it as a public health concern for all.

- Social media campaign
- Digital media campaign (dating apps)
- Focus group feedback
- LGBTQIA+ town hall: Ask Me Anything with Dr. Benson, Dr. Bagdasarian and Affirmations
- Outreach to colleges, jails, schools and childcare
- Posters and brochures
- Earned media, including press releases and op-eds
- Division of HIV/STI Programs Toolkit (using best practices from other states)
- Grants for social supports administered by local health departments for housing, transportation, food support
- Website for information and resources

Monkeypox Safety and Prevention

Informed decisions can reduce the spread of MPV.



Monkeypox virus (MPV) is a disease that causes fever, aching, headache, swollen glands and a rash that look like pimples or blisters. MPV is contagious from the time symptoms start until the rash has fully healed and a fresh layer of skin has formed - this can take several weeks.

Who can get MPV?

Anyone can get MPV regardless of age, sexual orientation or gender identity.

How does MPV spread?

MPV can be spread to anyone through:

- Close personal contact with a person who has MPV, including household contacts.
- Contact with respiratory secretions from a person who has MPV.
- Touching items that have had contact with a person who has MPV.

MPV has **not** been shown to spread by talking casually or walking by a person who has the virus.

How can I stay healthy?

Limit close personal contact to people you know and avoid close personal contact with individuals who have symptoms - including fever and rash.

Close personal contact is not limited to sexual contact.

Other examples include:

- Skin-to-skin contact including kissing and cuddling.
- Sharing drinks and utensils.
- Touching contaminated clothing, towels and bed linens.

Talk about MPV risk with close contacts and partners.

Ask questions like "are you experiencing any MPV symptoms?"

Wash hands frequently or use an alcohol-based sanitizer, especially before eating or touching your face and after using the bathroom.

What do I do if I have symptoms?

If you have symptoms of MPV, call your health care provider or the local health department and isolate from others. There are vaccines and treatments available for people who are at greater risk for MPV.

For more information, visit Michigan.gov/MPV.

Examples of MPV rash



Images courtesy of NHS England High Consequence Infectious Diseases Network.

