Mpox

Vaccination Basics for Healthcare Professionals

Updated May 5, 2023

Eligibility criteria

Mpox vaccine can be given as post-exposure prophylaxis (PEP) both to people with known or presumed exposure to mpox virus. Vaccine can also be given to people with certain risk factors and recent experiences that might make them more likely to have been exposed to mpox. 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.

When combined with other prevention measures, vaccination prior to exposure and PEP strategies might help control outbreaks by reducing transmission of mpox virus, preventing disease, or reducing disease severity.

Currently, CDC does not recommend routine immunization against mpox for the general public. Recommendations by the Advisory Committee on Immunization Practices (ACIP) are available for laboratory personnel and health care worker response teams who may be at risk for exposure to orthopoxviruses. Based on available data from the current outbreak, CDC also recommends vaccinating additional populations with risk factors for exposure to mpox virus. Disproportionately affected populations should remain the focus of the current vaccination efforts.

Mpox vaccination should be offered to:

- People who had known or suspected exposure to someone with mpox
- People who had a sex partner in the past 2 weeks who was diagnosed with mpox
- Gay, bisexual, and other men who have sex with men, and transgender or nonbinary people (including adolescents who fall into any of the these categories) who, in the past 6 months, have had:
    - A new diagnosis of one or more sexually transmitted diseases (e.g., chlamydia, gonorrhea, syphilis); or
    - More than one sex partner.
- People who have had any of the following in the past 6 months:
    - Sex at a commercial sex venue; or,
    - 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 who are part of an orthopoxvirus and health care worker response team

To be most effective, mpox vaccination should be included as part of broader prevention activities and sexual health care. Such efforts should have health equity principles as a foundation and include strategies such as allowing individuals to self-attest vaccine eligibility (e.g., providing mpox vaccination without requiring individuals to specify which criterion they meet), community outreach, holding vaccination events on-site in locations where groups of people disproportionately impacted by mpox may convene, education efforts, and communication about behavioral strategies to minimize risk. Mpox vaccination

strategies are likely to be most effective when designed and implemented in partnership with communities and groups that are disproportionately affected. As the epidemiology of the outbreak evolves and new data become available, interim guidance on mpox vaccination will be updated.

More Information

Strategies to address disparities and increase vaccine access for priority populations

Interim Clinical Considerations for Mpox Vaccination

Evaluating and Counseling patients

Evaluating and counseling patients who could benefit from mpox vaccination is critical. To do so, healthcare professionals should perform a comprehensive social and sexual history.

Special attention should be paid to sexual orientation and gender identity, partners (their sexual orientation and gender identity, quantity, & quality), and practices (sex venues and events), due to the populations that have been disproportionately affected by the current mpox outbreak.

More Information

Strategies for Talking with Patients about Vaccinations for Mpox

A Guide to Taking a Sexual History

Clinical Quick Reference

National Coalition for Sexual Health (NCSH) Tools for Educating Patients

Vaccine Administration

JYNNEOS vaccine is licensed in the U.S. for subcutaneous administration in individuals 18 years of age and older. The U.S. Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) in August 2022 to also allow for use of JYNNEOS vaccine:

- By subcutaneous injection for prevention of mpox disease in individuals younger than 18 years of age
- By intradermal injection for prevention of mpox disease in individuals 18 years of age and older

Two doses of JYNNEOS vaccine are recommended with either dosing regimen. The recommended dosing interval between the first and second dose of JYNNEOS vaccine for both the standard (subcutaneous administration) and the alternative (intradermal administration) dosing regimens is the same, 4 weeks (28 days +/- 3 days).

The JYNNEOS vaccine is safe and effective, and should be prioritized for people who are at high risk for severe disease caused by infection with the mpox virus [including, but not limited to, people with human immunodeficiency virus (HIV) infection or other immunocompromising conditions]. At this time, the safety of JYNNEOS in pregnant people and children has not been studied. Therefore, the risks and benefits should be weighed in the decision to vaccinate people in these categories.

More Information

JYNNEOS Vaccine

ACAM2000 Vaccine

The standard regimen for JYNNEOS involves a subcutaneous (Subcut) route of administration with an injection volume of 0.5mL, although an alternative regimen involving intradermal (ID) administration with an injection volume of 0.1mL may be used under an Emergency Use Authorization (EUA).

Location of the intradermal administration should be determined in consultation with the patient based on the patient's vaccination location preference. Individuals with a history of keloid scars may consider vaccination by the Subcut route.

Download or Print: JYNNEOS Smallpox and Monkeypox Vaccine STANDARD REGIMEN Preparation and Administration Summary (Subcutaneous Administration) [134 KB, 3 pages]

JYNNEOS Smallpox and Monkeypox Vaccine ALTERNATE REGIMEN Preparation and Administration Summary (Intradermal Administration) [139 KB, 3 pages]

Interim recommendations for JYNNEOS vaccine administration errors and deviations can be found here.

JYNNEOS generally may be administered without regard to timing of other vaccines. This includes coadministration of JYNNEOS and other vaccines, such as influenza vaccine, on the same day. However, there are additional considerations if administering a COVID-19 vaccine and JYNNEOS simultaneously. People who previously received COVID-19 vaccination (i.e., Moderna, Novavax, or Pfizer-BioNTech) may be given JYNNEOS without a minimum interval between vaccinations. Those who previously received orthopoxvirus vaccination (either JYNNEOS or ACAM2000), particularly adolescent or young adult males, might consider waiting 4 weeks before receiving a COVID-19 vaccine.

Vaccination providers should observe patients after vaccination to monitor for the occurrence of immediate adverse reactions, including syncope. Most patients should be observed for 15 minutes, but those with a history of anaphylaxis to gentamicin, ciprofloxacin, and chicken or egg protein should be observed for 30 minutes following vaccination.

More Information

JYNNEOS Smallpox and Monkeypox Vaccine

Vaccine Storage and Handling Toolkit

JYNNEOS Smallpox and Monkeypox Vaccine Standing Orders for Administering Vaccine Subcutaneously: STANDARD REGIMEN

JYNNEOS Smallpox and Monkeypox Vaccine Standing Orders for Administering Vaccine Intradermally: ALTERNATIVE DOSING REGIMEN

JYNNEOS Smallpox and Monkeypox Vaccine Patient Screening Form

JYNNEOS Smallpox and Monkeypox Vaccine ALTERNATE REGIMEN Preparation and Administration Summary (Intradermal Administration)

Coadministration of JYNNEOS vaccine with other vaccines

Coadministration of ACAM2000 vaccine with other vaccines

Coadministration of JYNNEOS vaccine with the tuberculin skin test

How to administer a JYNNEOS vaccine intradermally – YouTube

Mpox Vaccine Strategies

The U.S. national mpox vaccine strategy was announced on June 28, 2022. Multiple federal agencies, including Centers for Disease Control and Prevention (CDC), the Administration for Strategic Preparedness and Response (ASPR), U.S. Food and Drug Administration (FDA), and National Institutes of Health (NIH) coordinated to implement this national vaccination strategy.

More Information

Components of the U.S. National Mpox Vaccination Strategy

Clinical Guidance | Mpox | Poxvirus | CDC

Vaccine Access Considerations

The JYNNEOS and ACAM2000 vaccines are available from the Strategic National Stockpile (SNS) by jurisdictional request. Any clinician who wants to become a mpox vaccine provider should contact their public health jurisdiction (jurisdiction immunization program contact information). Provider agreement can be found at https://www.cdc.gov/poxvirus/mpox/clinicians/provider-agreement.html

Vaccine Handling and Management

Vaccine reporting

Clinicians should follow local and/or state regulations for reporting JYNNEOS vaccine administration to the state immunization information system.

Expiration date

Once vaccine has reached its expiration date, contact your state health department for guidance on whether it can still be used.

Vaccine wastage

Contact your jurisdiction's immunization program for guidance on vaccine disposal regulations. Jurisdiction immunization program contact information can be found at www.cdc.gov/vaccines/imz-managers/awardee-imz-websites.html.

Predrawn vaccine

Predrawing vaccines can result in waste if more are drawn up than are needed. In addition, once vaccines are drawn into syringes, it is difficult to tell them apart, which can lead to administration errors. However, there may be rare instances when the only option is to predraw JYNNEOS vaccine. If vaccines must be predrawn:

- Predrawn vaccine must be labeled with vaccine name, lot number, date and time prepared, and preparer's initials, and MUST BE refrigerated.
- Predrawn syringes must be stored at the manufacturer-recommended refrigerated temperatures throughout the clinic day.
- A separate clean administration station for each vaccine type should be set up to prevent medication errors.
- Vaccines should be drawn up into syringes only after arriving at the clinic site, or mass vaccination event. Drawing up doses days or even hours before administering them is not a best practice because general-use syringes are not designed for storage.
- Each person administering vaccines should draw up no more than 10 doses at one time.
- Patient flow should be monitored to avoid drawing up unnecessary doses.
- If a predrawn vaccine is not used within 8 hours of being drawn, the dose should be discarded.
- Predrawn vaccine should never be transferred back into a vial for storage.

More Information

ASPR/CDC Mpox Vaccination Operational Planning Guide – HHS Mpox Vaccination Program

Mpox Vaccine – Storage and Handling Summary

Health Equity Considerations

Vaccine Equity

Strategies to address disparities and increase vaccine access for priority populations

People from racial and ethnic minority groups, including those who are also gay, bisexual, other men who have sex with men (MSM), and people from gender minority groups have been disproportionately impacted by mpox. Many social, geographic, political, economic, and environmental factors create challenges to health equity and vaccination access.

Vaccine Effectiveness and Safety

JYNNEOS vaccine is safe and effective at reducing the risk of mpox disease, with two doses administered either subcutaneously or intradermally providing protection. When combined with other prevention measures, vaccination prior to exposure and PEP strategies might help control outbreaks by reducing transmission of mpox virus, preventing disease, or reducing disease severity.

Providers administering JYNNEOS under the Emergency Use Authorization (EUA) are required to report serious adverse events after immunization and vaccine administration errors whether or not associated with an adverse event to the Vaccine Adverse Event Reporting System (VAERS): VAERS – Report an Adverse Event (hhs.gov) .

More Information

Preliminary JYNNEOS Vaccine Effectiveness Estimates Against Medically Attended Mpox Disease in the U.S., August 15, 2022 – October 29, 2022

Safety Monitoring of JYNNEOS Vaccine During the 2022 Mpox Outbreak — United States, May 22–October 21, 2022

Mpox Vaccine Administration and Effectiveness

JYNNEOS Vaccine

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