Clinical questions

1. What should prompt clinical suspicion for monkeypox infection?

Clinicians should be alert to patients presenting with a new characteristic rash or if the patient meets one of the epidemiologic criteria and there is a high clinical suspicion for monkeypox. The cases of monkeypox described in the current outbreak have some atypical features. The rash may start in the genital and perianal areas, the rash may not always disseminate to other parts of the body and typical prodromal symptoms may be mild or absent. These features of the newest monkeypox cases can easily be confused with sexually transmitted infections, including herpes, syphilis and varicella.

2. What should I do if I suspect a patient has monkeypox?

Clinicians should first isolate their patient in a single person room if available and immediately consult their public health department or the Centers for Disease Control and Prevention (CDC) through the Emergency Operations Center (770-488-7100) as soon as monkeypox is suspected. Prompt notification is important to facilitate testing, exposure risk assessments for close contacts as well as consideration of available medications and vaccination.

3. How do I access testing for monkeypox?

While testing was initially only available through public health labs, CDC has shipped tests to the five major commercial laboratories. LabCorp, Quest Diagnostics, Aegis Science, Mayo Clinic Labs and Sonic Healthcare will begin offering testing soon, which should make testing easier to order and less burdensome for physicians and patients. Testing is currently available through the following labs:

- Laboratory Response Network (LRN) laboratories. To initiate testing through LRN laboratories, please contact your public health department.
- Labcorp is now offering monkeypox testing at its largest facility in the United States and expects to be able to perform up to 10,000 tests per week. Health care providers can order the orthopoxvirus test from Labcorp just as they normally would order other tests.
Mayo Clinic Laboratories can now test for monkeypox. Mayo Clinic Laboratories will offer testing at its Mayo Clinic's Division of Clinical Microbiology laboratories in Rochester, Minn., and can accept specimens from anywhere in the country. Mayo Clinic Laboratories expects to be able to perform up to 10,000 tests per week.

For initial laboratory testing of monkeypox virus specimens the recommended specimen type is skin lesion material. Specifics on the acceptable specimen type accepted within these laboratories may vary. Please contact the appropriate public health department or commercial laboratory to determine acceptable specimens.

CDC has asked commercial labs to send positive samples to CDC for viral characterization testing, but health care professionals can act on positive results from commercial labs before CDC performs testing.

4. Which vaccines are available for monkeypox?

JYNNEOS (also known as Imvamune or Imvanex) and ACAM2000 are the two currently licensed vaccines in the United States to prevent smallpox. JYNNEOS is also licensed specifically to prevent monkeypox. Both JYNNEOS and ACAM2000 can be used before and after exposure to monkeypox in an outbreak setting.

However, ACAM2000 carries greater risk of certain serious side effects and should not be given to some people, including people with weakened immune systems, certain skin conditions such as eczema, heart disease or who are pregnant or lactating.

5. Who is eligible for vaccination in the U.S.?

The Advisory Committee on Immunization Practices recommends vaccination for those at high risk following a confirmed monkeypox exposure.

The two-dose JYNNEOS vaccine is being allocated to jurisdictions for use for the following individuals:

- Known contacts who are identified by public health via case investigation, contact tracing and risk exposure assessments
- Presumed contacts who may meet the following criteria:
  - Know that a sexual partner in the past 14 days was diagnosed with monkeypox
  - Had multiple sexual partners in the past 14 days in a jurisdiction with known monkeypox
- JYNNEOS doses should be prioritized for those people who are at risk for severe adverse events with ACAM2000 or severe disease from monkeypox (such as people with HIV or
other immunocompromising conditions).

- To supplement the supply of JYNNEOS, states, tribal nations and territories may also request ACAM2000.

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.

6. How can patients get access to vaccines for monkeypox?

On June 28, 2022, United States Department of Health and Human Services (HHS) announced an enhanced vaccination strategy to protect at-risk individuals from monkeypox. The federal government is partnering with state, tribal, local and territorial governments in deploying the vaccines. JYNNEOS vaccine will be allocated using a distribution strategy that prioritizes jurisdictions with the highest case rates of monkeypox.

Doses of JYNNEOS will be allocated to health departments based on the number of individuals at risk for monkeypox who also have pre-existing conditions, like HIV. For more information on accessing vaccine in their jurisdiction, physicians should contact their public health department.

7. What treatments are available for monkeypox?

There is no treatment specifically for monkeypox, but because the monkeypox and smallpox viruses are closely related, drugs and vaccines developed to protect against smallpox may be used to prevent and treat monkeypox virus infections.

Treatment will depend on how sick someone gets or whether they are likely to get severely ill. Most people with monkeypox recover fully within 2 to 4 weeks without the need for treatment. The antiviral drug tecovirimat (also known as TPOXX) was developed to fight smallpox, but the U.S. Food and Drug Administration allows CDC to use it to treat monkeypox during an outbreak. In addition, other drugs may be useful against monkeypox, but have not yet been tested:

- Vaccinia Immune Globulin Intravenous (VIGIV) is licensed by FDA for treating complications from smallpox vaccination. CDC has permission to use of VIGIV for the treatment of orthopoxviruses, including monkeypox, during an outbreak.
- Cidofovir (also known as Vistide) is an antiviral medication approved by the FDA for the treatment of cytomegalovirus (CMV) retinitis in patients with Acquired Immunodeficiency Syndrome (AIDS).
- Brincidofovir (also known as Tembexa) is an antiviral medication that was approved by the FDA in 2021 for the treatment of human smallpox disease.
8. How do I get access to antivirals to treat patients with monkeypox??????

Antiviral drugs used to treat smallpox and monkeypox require a prescription and must be released from the U.S. Strategic National Stockpile at the request of a patient’s local or state health department. If antivirals are needed, or additional information is required, physicians should contact their public health department or the CDC Emergency Operations Center at 770-488-7100, Monday through Friday, 8 a.m. to 4:30 p.m. EST; at other times call 404-639-2888 and request a clinical consult.

Infection prevention and control questions

1. What infection control precautions should be taken when evaluating a patient with suspected monkeypox?

Clinicians should use standard and recommended isolation precautions and notify infection prevention and control personnel immediately when caring for patients with suspected or confirmed monkeypox infection. The patient should be placed in a single-person room; special air handling is not required. PPE used by health care professionals who enter the patient’s room should include gown, gloves, eye protection and NIOSH-approved particulate respirator equipped with N95 filters or higher.

Clinicians and patients in health care facilities who have had an exposure to monkeypox should be monitored and receive post-exposure management according to current recommendations.