



DEFENSE HEALTH AGENCY
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August 29, 2022

MEMORANDUM FOR: ALL DEFENSE HEALTH AGENCY (DHA) MARKETS AND MILITARY MEDICAL TREATMENT FACILITIES (MTFs)

SUBJECT: Clinical Guidance for MTFs in Response to 2022 Monkeypox Public Health Emergency

On August 4, 2022, the Health and Human Services Secretary declared monkeypox a public health emergency. DHA supports the delivery of globally integrated healthcare to DoD eligible and designated patients in order to sustain the Joint Force and deliver healthcare to Military Health System (MHS) beneficiaries. MTFs should be prepared to support external requirements and consultation in relation to your installation public health and emergency management offices. This memorandum updates the Clinical Guidance for Monkeypox Infections issued 22 July 2022 specific to MTF testing options, DoD specific access to antiviral tecovirimat (TPOXX[®]), and public health response activities (case reporting, contact tracing, isolation, infection prevention and control, public health guidance to Markets, MTFs, and the public).

The DoD MHS' main effort, the key, to stopping the monkeypox public health emergency is putting shots in arms of those at greatest risk, as soon as vaccine is available. Clinicians should initiate treatment and preventive care based on clinical presentation for any case meeting the suspected case criteria. Clinicians do not have to, and should not await Non-Variola Orthopox Test (NVOT) results to initiate treatment, contact tracing, infection control precautions, and care.

Upon receipt of this memorandum, please disseminate to all MTFs. [REDACTED]

[REDACTED] For questions on diagnostic testing, please contact your local Chief of Pathology/Laboratory Manager or the Center for Laboratory Medicine Services (CLMS) at dha.ncr.clinic-support.mbx.clms@mail.mil. For questions on ACAM2000, JYNNEOS, or VIGIV, please contact the DHA Immunization Healthcare Division 24/7 Support Center at 877-438-8222 (DSN: 761-4245). For questions about accessing tecovirimat, please contact the U.S. Army Medical Materiel Development Activity's Force Health Protection Directorate (FHP) at (301) 401-2768, and for questions about brincidofovir or cidofovir, please contact CDC 24/7 Operations Center at 770-488-7100. This memo along with updates to additional DoD LRN-participating laboratories processing NVOT will be posted on: <https://info.health.mil/sites/DADMA/Pages/Home.aspx>.

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Attachments:

1. Guidance for Obtaining Suspected Monkeypox Polymerase Chain Reaction (PCR) Assay
2. Monkeypox Testing Procedures
3. Clinical Evaluation and Management of Patients Under Investigation (PUI)
4. Defense Health Agency Immunization Health Division (DHA IHD) Clinical Guidance for Applying an Alternative Regimen for Route-Dosing of JYNNEOS Vaccine for Monkeypox Protection
5. Resources

Cc:

Lead, Direct Support Organization, Army
Lead, Direct Support Organization, Navy
Lead, Direct Support Organization, Air Force

Defense Health Agency (DHA)



Clinical Guidance Update

Monkeypox

Date: 29 AUG 2022

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Clinical Recognition

Clinicians should be on alert for signals related to patients presenting with monkeypox concerns. It is important to note that patients may present to various health care settings including, but not limited to, primary care, sexual health services, infectious disease clinics, obstetrics and gynecology, emergency departments, and dermatology clinics. Guidance for clinical management, infection prevention and control, and the safe collection of samples for confirmatory testing should therefore be disseminated widely.

Asymptomatic persons presenting to the health care system or identified by public health actions are eligible for preventive treatment if they meet the following criteria:

- Contacts of suspected or confirmed symptomatic persons who are identified by public health via case investigation, contact tracing, and risk exposure assessments as at high risk,
 - Asymptomatic persons that report the following:
 - a sexual partner of theirs in the past 14 days was diagnosed with monkeypox,
- OR**
- gay, bisexual, or other men who have sex with men or transgender people, with any of the following activities in the past 14 days: sex with multiple partners or group sex; sex at a commercial sex venue; sex associated with an event, venue, or defined geographic area where monkeypox transmission is occurring.

The above eligibility criteria are those set by CDC, and have been revised several times. The above is current as of 23 August 2022. Refer to <https://www.cdc.gov/poxvirus/monkeypox/clinicians/faq.html> for the most recent eligibility criteria.

Clinicians should code these encounters under ICD 10 Code: Z20.828 Contact with and (suspected) exposure to other viral communicable diseases.

Symptomatic persons

Historically, monkeypox has presented with a diffuse rash, classically progressing from fever to lymphadenopathy to centrifugal rash, 1-3 weeks after contact with a zoonotic source or a prior case. In this 2022 outbreak outside the endemic African nations, patients are predominantly presenting with localized rash mostly in the anogenital region and with less prominent prodromal symptoms. At this time, almost all cases (99% as of 4 Aug 2022) outside of Africa have occurred within social networks of men who have sex with men (MSM), especially those with multiple and/or anonymous sexual partners. The presenting sign for many patients has been proctitis complicated by rectal tenesmus and bleeding, and in some the primary presenting symptom has been urethritis. Pain and pruritus may be more significant than the rash.

Common atypical presenting features for this outbreak include: a few to only one lesion, including tonsillar or other mucosal lesions without other skin lesions, anal pain and bleeding with absence of external skin lesions, localized genital/perianal lesions without further spread, lesions at varying stages of development/asynchronous progression, skin lesions or mucosal lesions presenting prior to swollen lymph nodes and constitutional symptoms. Coinfection with other sexually transmitted infection (STIs) such as gonorrhea, chlamydia, syphilis, and human immunodeficiency virus (HIV) have been reported with need to individualize treatment for potential multiple infections. A positive test for a STI does not rule out monkeypox from the differential diagnosis, and conversely, suspicion for monkeypox should prompt the clinician to test for STIs in general.

Centers for Disease Control and Prevention (CDC) published guidance for special considerations in people with HIV, children and adolescents less than 18 years old, and people who are pregnant or breastfeeding who may be at risk for increased disease severity and adverse health outcomes associated with monkeypox infection. Clinicians should be familiar with unique clinical considerations for monkeypox in these patient populations. CDC guidance can be found at: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/clinical-guidance.html>.

Clinicians should suspect monkeypox if:

- Presence of a new characteristic rash

OR

- High clinical suspicion

AND

- Contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox

OR

- Close or intimate in-person contact with individuals in a social network experiencing monkeypox activity

OR

- The patient has a history of anonymous sexual partners or multiple sexual partners in the 21 days prior to symptom onset, and interactions occurred in a geographic area or social network where monkeypox is known to have occurred

OR

- Patient has a history of travel to a location with confirmed current cases of monkeypox

OR

- The patient reports close contact with a known monkeypox case or a person with signs and symptoms consistent with monkeypox, either socially or occupationally (health care worker without proper personal protective equipment, for example).

AND

- Any of the following signs or symptoms:
 - One or more acute skin or mucosal lesions, proctitis, urethritis, anal pain and bleeding, classic prodromal symptoms (fever, lymphadenopathy; constitutional symptoms such as asthenia, myalgia, headache).

OR

- Travel to a location where monkeypox is classically endemic **AND/OR** had contact with a dead or live wild animal or exotic pet that is an African endemic species

Clinicians should code the encounter for patients meeting the criteria above for a suspected case of Monkeypox as ICD-10-CM Diagnosis Code B04 [convert to ICD-9-CM] Monkeypox Human monkeypox; Monkeypox infection.

Testing

A broad diagnostic approach is encouraged to distinguish monkeypox virus infection from other causes of fever and rash illness. Testing should be performed on persons for whom monkeypox is suspected based on clinical presentation or epidemiologic criteria.

Tests for monkeypox are currently only available from Laboratory Response Network (LRN) participating labs. Testing procedures are delineated in **Attachment 2**, Monkeypox Testing Procedures.

A positive NVOT meets the definition of confirmed monkeypox virus infection and there is no requirement for the results from tests that provide specific non-variola orthopoxvirus detected results (e.g., vaccinia, monkeypox, cowpox) before initiating treatment and prevention actions, in absence of a history of recent exposure to other orthopox viruses (such as vaccinia virus contained in ACAM2000). USAMRIID offers a MPX specific PCR test that is CLIA certified, as an alternative to the NVOT.

Testing options including serologic tests (blood tests) are rapidly being developed, with other options for testing symptomatic persons likely becoming available.

New Current Procedural Terminology (CPT®) Codes Approved; use CPT 87593 to report the laboratory diagnostic testing for the orthopoxvirus.

Case Reporting

The overall goal of surveillance, case investigation and contact tracing for monkeypox is to stop human-to-human transmission and control the outbreak. The key objectives of surveillance and case investigation are rapid identification of cases and clusters in order to provide optimal clinical care; to isolate cases to prevent further transmission; to identify, manage, vaccinate and follow up contacts; to recognize early signs of infection; to protect frontline health workers; to identify risk groups and vaccinate those eligible for enhanced post-prophylaxis (PEP++); and tailor effective control and prevention measures. Monkeypox CDC case definitions are updated here: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/case-definition.html>.

MTF laboratories follow CDC guidance for reporting laboratory results. Any laboratory that performs diagnostics testing for monkeypox should report test results to state, local, territorial or tribal (STLT) health departments in the patient's state or territory of residence. This includes real-time PCR testing for orthopoxvirus, non-variola orthopoxvirus, or monkeypox virus. All results (positive, negative, equivocal) should be reported unless otherwise specified by the applicable health department. Positive results should be reported to MTF PM/PH within 24 hours of testing, or immediately by telephone to the appropriate STLT health department per the regulations in the appropriate jurisdiction.

One case of monkeypox is considered an outbreak. Because of the public health risks associated with a single case of monkeypox, clinicians should immediately report any suspected (meaning patients that meet the clinical criteria, before test results have returned) or tested cases to MTF public health/preventive medicine (PH/PM). As a reminder, MTF PH/PM are required to report confirmed cases of monkeypox to local civilian public health and all suspected cases in Disease Reporting System internet (DRSi) within 24 hours of identification. Where available, utilize the local jurisdiction monkeypox case reporting form to comply with reporting guidelines. If a local jurisdiction monkeypox case reporting form is not available, CDC's case reporting short form should be used. This form is available at <https://www.cdc.gov/poxvirus/monkeypox/pdf/sCRF-Short-Form.pdf>.

In addition, DHA requires monkeypox case reporting using DRSi. All suspected, probable and confirmed cases must be reported within 24 hours of identification. Suspected cases that are confirmed by laboratory testing should be updated on the same timescale. Use the "Monkeypox" medical event report to report cases. The following demographic data must be collected to facilitate DRSi reporting: sponsor SSN, patient SSN, patient DOD ID, date of birth, sex, race, beneficiary category, service branch, duty status, rank, duty station, and contact information.

Contact Tracing

As soon as a suspected case is identified, contact identification and forward contact tracing should be initiated by PM/PH personnel. Contacts of cases should be monitored, or should self-monitor, daily for any sign or symptom for a period of 21 days from last contact.

Quarantine or exclusion from work for close contact is not necessary as long as no symptoms develop.

Case-patients can be prompted to identify contacts across a number of contexts, including household, workplace, school/nursery, sexual contacts, healthcare (including laboratory exposure), houses of worship, transportation passenger manifests, etc. can be further used to identify contacts. Where available, utilize the local jurisdiction monkeypox case reporting form to guide data gathering to ensure compliance with reporting guidelines. If a local jurisdiction monkeypox case reporting form is not available, CDC's case reporting short form should be used. This form is available at <https://www.cdc.gov/poxvirus/monkeypox/pdf/sCRF-Short-Form.pdf>. As some patients may be reluctant to provide the names of all contacts, MTF PH/PM should also encourage patients to directly notify their contacts. In the context of monkeypox, patients should be offered adequate counseling on how to notify their contact, the recommendations for the contact's movement and activities, and referral information about health providers who can support the contact with information, or in case of symptoms, with health services. All information should also be provided in written form to avoid misinterpretation. Updates about monkeypox in special populations may be found here: <https://emergency.cdc.gov/han/2022/han00472.asp>.

Patients and contacts should be screened for presence of mammals in the home and informed of the risk that pets and other animals in close contact could become infected and transmit monkeypox to others.

Monkeypox is a zoonotic disease that can be transmitted between humans and some household pets (e.g., rodents, hamsters, gerbils, rabbits, dogs, cats, ferrets). Symptomatic people should be advised to avoid contact with all animals until they are no longer infectious. Pets exposed to suspected or confirmed cases should be quarantined at home for 21 days after the positive person(s) is no longer infectious. Optimally, infected people should not take care of exposed pets. If the pet caregiver is positive, they should utilize all of the personal protective equipment (PPE) and sanitation procedures currently recommended by the CDC: <https://www.cdc.gov/poxvirus/monkeypox/specific-settings/pets-in-homes.html>.

Isolation

The CDC recommends isolation of monkeypox patients until symptoms resolve, the scabs have fallen off, and a fresh layer of intact skin has formed. Patients should isolate away from other people in a separate room with a separate bathroom if possible, and should avoid contact with animals (specifically mammals). If patients need to go out, such as for medical care, they should cover all lesions, wear a well-fitting mask, avoid physical contact with others, and avoid public transportation and crowded spaces. A patient with fever and/or respiratory symptoms should not go out.

The most recent CDC guidance on isolation and prevention practices can be found here: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/isolation-procedures.html>.

Patient should disinfect and do laundry according to CDC guidelines found here:

<https://www.cdc.gov/poxvirus/monkeypox/specific-settings/home-disinfection.html>.

Operational or geographically isolated units should isolate suspect cases and seek assistance from nearest MTF. MTFs should be prepared to support in regards to isolation guidance, as well as in person evaluation, testing, prophylaxis, and treatment of cases.

Treatment

Asymptomatic persons identified as monkeypox exposed or at high risk:

All persons meeting the eligibility criteria should be offered JYNNEOS if supplies allow. JYNNEOS is ideally administered within 4 days of exposure, but may be offered at any point prior to development of symptoms. Clinicians can utilize the DHA Immunization Healthcare Support Center at 1-877-438-8222 (24/7) to assist with decision making about eligibility and sourcing of JYNNEOS.

- Caveat: JYNNEOS doses should be prioritized (if local supplies are inadequate to aggregate demand) for post-exposure prophylaxis (PEP) or PEP++ in those people who are at risk for serious adverse events with ACAM2000 or severe disease from monkeypox, such as people with HIV/AIDS or other immunocompromising conditions.

Persons at high risk for severe disease should be offered antiviral treatment as prophylaxis, utilizing the same regimen and procedures as for treatment of symptomatic monkeypox disease.

People at high risk for severe disease are:

- People with immunocompromise (HIV/AIDS, leukemia, lymphoma, generalized malignancy, solid organ transplantation, therapy with alkylating agents, antimetabolites, radiation, tumor necrosis factor inhibitors, high-dose corticosteroids, being a recipient with hematopoietic stem cell transplant <24 months post-transplant or ≥24 months but with graft-versus-host disease or disease relapse, or having autoimmune disease with immunodeficiency as a clinical component)
- Pediatric patients, especially those less than age 8
- Pregnant or breastfeeding women
- History of or presence of active atopic dermatitis, or other active exfoliative skin condition

Patient selection is at the discretion of the treating clinician under the EA-IND and shared decision making between the patient and clinician is recommended. A complete list of tecovirimat treatment considerations can be found at:

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/Tecovirimat.html>.

ADVISOR Line: For a tele-consultation with an Infectious Disease Consultant, MHS offers the Advanced Virtual Support for Operational Forces program, or ADVISOR. Field

medical personnel anywhere in the world can call 1-833-ADVSRLN (1-833-238-7756 or DSN 312-429-9089) for additional questions regarding monkeypox clinical guidance.

Symptomatic persons

Clinicians should initiate treatment and preventive care based on clinical presentation for any case meeting the suspected case criteria. Clinicians do not have to, and should not await NVOT results to initiate contact tracing, infection control precautions, and care. Antiviral medications are available for both suspected and confirmed monkeypox cases with severe findings, and those at high risk of severe disease (including but not exclusive to pediatric cases, pregnant or breastfeeding women, immunocompromising conditions) or with aberrant infections (e.g., ophthalmic infections). Details are below and at: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/clinical-guidance.html>.

A positive NVOT meets the definition of confirmed Monkeypox virus infection and there is no requirement for confirmation testing for specific non-variola orthopoxvirus detected (e.g., vaccinia, monkeypox, cowpox) before treatment and prevention precautions begin, in the absence of a history of recent exposure to other orthopox viruses (such as vaccinia virus contained in ACAM2000).

MTF providers should be reviewing the latest CDC information on monkeypox, which is available at: www.cdc.gov/monkeypox.

Most patients with monkeypox infection have mild disease and do not require specific medical therapies. Supportive care with symptomatic management is the mainstay treatment. Standard management with fluid hydration, pain management, and treatment of secondary bacterial infection is critical to decrease risk for complications. Complications may include severe and painful proctitis, urethritis, phimosis, and balanitis due to severe perianal and genital lesions; pharyngitis, tonsillitis, and epiglottitis associated with poor oral intake; secondary bacterial skin infection; gastroenteritis with severe nausea, vomiting, diarrhea, or dehydration; bronchopneumonia; eye involvement; myocarditis, and encephalitis. Initial symptomatic management for genital and anorectal lesions may include use of warm sitz baths and topical anesthetics. For oral lesions, salt water and/or antiseptic mouthwashes with local anesthetic may be helpful. For pain or fever, acetaminophen is preferred with limitations in the use of non-steroidal anti-inflammatory drugs (NSAIDs) to decrease potential development of hemorrhagic lesions. Vigilance with skin care is critical to decrease risk for secondary bacterial infection and transmission. Keeping the skin clean and dry is recommended.

There are no specific treatments that are FDA-approved for monkeypox infection. Antivirals used to treat smallpox such as tecovirimat (TPOXX[®]), cidofovir (Vistide[®]), and brincidofovir (Tembexa[®]) may be considered for use in high risk populations and those with severe disease under the expanded access Investigational New Drug (EA-IND) protocol. Vaccinia Immune Globulin Intravenous (Human) (VIGIV) which is approved for treatment of complications due to vaccinia vaccination may be used to treat monkeypox during an outbreak through a single-patient EA-IND protocol. VIGIV may be of potential benefit in newborns and women who are pregnant, recently pregnant or breastfeeding.

Tecovirimat (also known as TPOXX[®] or ST-246) is FDA-approved for the treatment of human smallpox disease caused by Variola virus in both adults and children. However, its use for other orthopoxvirus infections, including monkeypox, is not approved by the FDA and is currently being administered under the EA-IND protocol that allows for the use of tecovirimat for primary or early empiric treatment of non-variola orthopoxvirus infections, including monkeypox, in adults and children of all ages. Data from animal studies showed mortality benefit in fatal monkeypox infections in non-human primates, and some anecdotal data suggest more rapid resolution of symptoms in humans treated during the current monkeypox outbreak. However, evidence to inform decisions on risks and benefits of treatment of monkeypox infection due to the West African type currently circulating is scant. Tecovirimat is an investigational new drug which requires informed consent and prescribing providers must be identified as co-investigators and sub-investigators. United States Army Medical Materiel Development Activity's (USAMMDA) Force Health Protection (FHP) Directorate has secured a tecovirimat supply for the Department of Defense (DoD) and is supporting the tecovirimat access protocol throughout DoD. For both CONUS and OCONUS orders, contact USAMMDA FHP at (301) 401-2768 or email usarmy.detrick.medcom-usammda.mbx.force-health-protection@mail.mil for specific guidance.

In consultation with CDC and/or infectious disease consultant, antiviral and VIGIV therapy can be considered for patients with diagnosed or suspected monkeypox with any of the following:

- Severe disease (e.g., sepsis, hemorrhagic disease, encephalitis, or other conditions requiring hospitalization)
- People at high risk for severe disease
- People with immunocompromise (HIV/AIDS, leukemia, lymphoma, generalized malignancy, solid organ transplantation, therapy with alkylating agents, antimetabolites, radiation, tumor necrosis factor inhibitors, high-dose corticosteroids, being a recipient with hematopoietic stem cell transplant <24 months post-transplant or ≥24 months but with graft-versus-host disease or disease relapse, or having autoimmune disease with immunodeficiency as a clinical component)
- Pediatric patients, especially those less than age 8
- Pregnant or breastfeeding women
- History of or presence of active atopic dermatitis, or other active exfoliative skin condition
- Lesions in anatomic areas where it may cause severe harm such as strictures and scarring (e.g., eyes, mouth, genitals, anus).

Patient selection is at the discretion of the treating clinician under the EA-IND and shared decision making between the patient and clinician is recommended. A complete list of tecovirimat treatment considerations can be found at:

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/Tecovirimat.html>.

Algorithm using the adapted Identify-Isolate-Inform (3I) tool from Koenig et al is attached on Figure 1 and provides actionable guidance for clinicians to assess patients for

monkeypox infection. The algorithm summarizes known exposure risk factors and clinical presentation to accurately “Identify” and “Isolate” patients based on clinical suspicion, and to “Inform” appropriate public health authorities.

Vaccination

In addition, there are two available smallpox vaccines (ACAM2000 and JYNNEOS) which may be considered for monkeypox pre-exposure (PrEP) and post-exposure prophylaxis (PEP). JYNNEOS is the only vaccine that is FDA-approved for monkeypox prevention. Guidelines for use of PrEP and PEP vaccination are updated here: <https://www.cdc.gov/poxvirus/monkeypox/considerations-for-monkeypox-vaccination.html>.

CDC recommends that vaccination with JYNNEOS can be considered for people determined to be at high risk for infection to prevent monkeypox disease. Currently, there is a limited supply of JYNNEOS vaccine and those at highest risk for monkeypox infection are being prioritized. MTFs may request vaccine based on the following:

- PEP for known contacts who are identified by public health via case investigation, contact tracing, and risk exposure assessments
- PEP++ for presumed contacts who meet the following criteria:
 - Individuals with a sexual partner in the past 14 days who was diagnosed with monkeypox,

OR

- Gay, bisexual, or other men who have sex with men or transgender people, with any of the following activities in the past 14 days: sex with multiple partners or group sex; sex at a commercial sex venue; sex associated with an event, venue, or defined geographic area where monkeypox transmission is occurring.

JYNNEOS doses should be prioritized for PEP or PEP++ in those people who are at risk for serious adverse events with ACAM2000 or severe disease from monkeypox (such as people with HIV/AIDS or other immunocompromising conditions).

On 9 August 2022, the FDA issued an EUA for the JYNNEOS vaccine to allow healthcare providers to use the vaccine by intradermal injection for individuals 18 years of age and older who are determined to be at high risk for monkeypox infection. This will increase the total number of doses available for use by up to five-fold.

ACAM as PEP/PEP++

Within DoD, ACAM2000 may be considered only for those who:

- Previously received smallpox vaccine more than 3 years ago,
- Had no adverse events following previous smallpox vaccine, and

- Have no contraindications to ACAM2000 receipt now. (MMQC 22-1387)

Important note Intradermal JYNNEOS administration will not meet any Individual Medical Readiness requirement or Force Health Protection requirement for Service Members for protection against Smallpox.

Orthopoxvirus and Monkeypox Vaccination Coding

Use CPT[®] 90611 to report use of smallpox and monkeypox combined vaccine JYNNEOS. Use CPT[®] 90622 to report use of traditional smallpox vaccine ACAM 2000

See the Immunization Healthcare Division Clinical Guidance (**Attachment 4**) for further information.

Precautions/Infection Control

The CDC guidance will be used as a minimum to prevent the spread of monkeypox. (CDC IPC of Monkeypox in Healthcare Settings available at: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control-healthcare.html>)

Below are key highlights from the CDC guidance as of 09 August 2022. It is important that standard precautions are applied to all patient care activities. If a patient seeking care is suspected to have monkeypox, notify Infection Prevention and Control as soon as feasible. The CDC has not clearly defined an isolation category for monkeypox.

- PPE requirements:
 - Gown, gloves, eye protection (i.e., goggles or a face shield that covers the front and sides of the face), N 95 respirator or higher
- Air handling:
 - No special air handling requirements for routine care
 - Procedures (e.g., intubation) that generate aerosols present an elevated transmission risk to persons in the room
- Patient placement and transport:
 - Single-person room with a dedicated bathroom
 - Patient will wear surgical mask for transportation
 - Skin lesions are covered with a sheet or gown when transporting
- Cleaning of patient care environment and equipment:
 - Standard cleaning and disinfection procedures
 - Use an EPA-registered hospital-grade disinfectant with an emerging viral pathogen claim.
 - Products may be found on EPA's List Q at: [https:// www.epa.gov/pesticide-registration/disinfectants-emerging-viral-pathogens-evps-list-q](https://www.epa.gov/pesticide-registration/disinfectants-emerging-viral-pathogens-evps-list-q).
- Laundry:
 - Soiled laundry is handled using standard precautions

- Soiled laundry is to be promptly contained in an appropriate laundry bag and never shaken or handled in manner that may disperse infectious material
- Food Service:
 - Items do not require special handling
- Waste management:
 - Waste contaminated with the West African Clade (i.e., current U.S. strain) of monkeypox virus should be managed as Regulated Medical Waste (RMW) in the same manner as other potentially infectious medical waste (e.g., soiled dressings, contaminated sharps). Follow State guidance for Waste Management at: <https://www.hercenter.org/rmw/rmwlocator.php>.
- Autopsy and Handling of Human Remains:
 - The guidance was updated 24 June 2022 and includes comprehensive recommendations: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/autopsy.html>.

Direction to MTFs

MTFs will ensure that Clinical Staff are aware of the clinical presentation of monkeypox, the infection prevention control measures required for patients with suspected monkeypox, and will establish patient workflow processes necessary to prevent transmission of monkeypox from patients to others within the facility. Specifically, MTF processes, from appointing through clinic visit, pharmacy, and exit from the facility, should minimize the risk of fabric contamination and surface contamination generally, and time spent by suspected monkeypox patients in communal waiting areas.

Public Affairs Guidance

DHA released Public Affairs guidance with a posture of RESPOND TO Query. No information on DoD cases should be released. MTF PAOs should maximize opportunities to promote top line messages to their populations to encourage community engagement. Messaging should be kept general and fact based focused on educating patients about what monkeypox is, how it spreads, how to identify potential infection, and the importance of seeking medical care early in the course of illness. Frequently Asked Questions may be found here: <https://www.health.mil/Reference-Center/Frequently-Asked-Questions/Monkeypox-FAQ>. Other tips may be found at: <https://www.cdc.gov/poxvirus/monkeypox/reducing-stigma.html>.

Points of Contact

Upon receipt of this memorandum, please disseminate to all MTFs. [REDACTED] For questions on diagnostic testing, please contact your local Chief of Pathology/Laboratory Manager or the Center for Laboratory Medicine Services (CLMS) at dha.ncr.clinic-support.mbx.clms@mail.mil. For questions on ACAM2000, JYNNEOS, or VIGIV, please

contact the DHA Immunization Healthcare Division 24/7 Support Center at 877-438-8222 (DSN: 761-4245). For questions about accessing tecovirimat, please contact the U.S. Army Medical Materiel Development Activity's Force Health Protection Directorate (FHP) at (301) 401-2768, and for questions about brincidofovir or cidofovir, please contact CDC 24/7 Operations Center at 770-488-7100. This memo along with updates to additional DoD LRN-participating laboratories processing non-variola orthopoxvirus testing will be posted at: <https://info.health.mil/sites/DADMA/Pages/Home.aspx>.

Orthopox and Monkeypox Coding

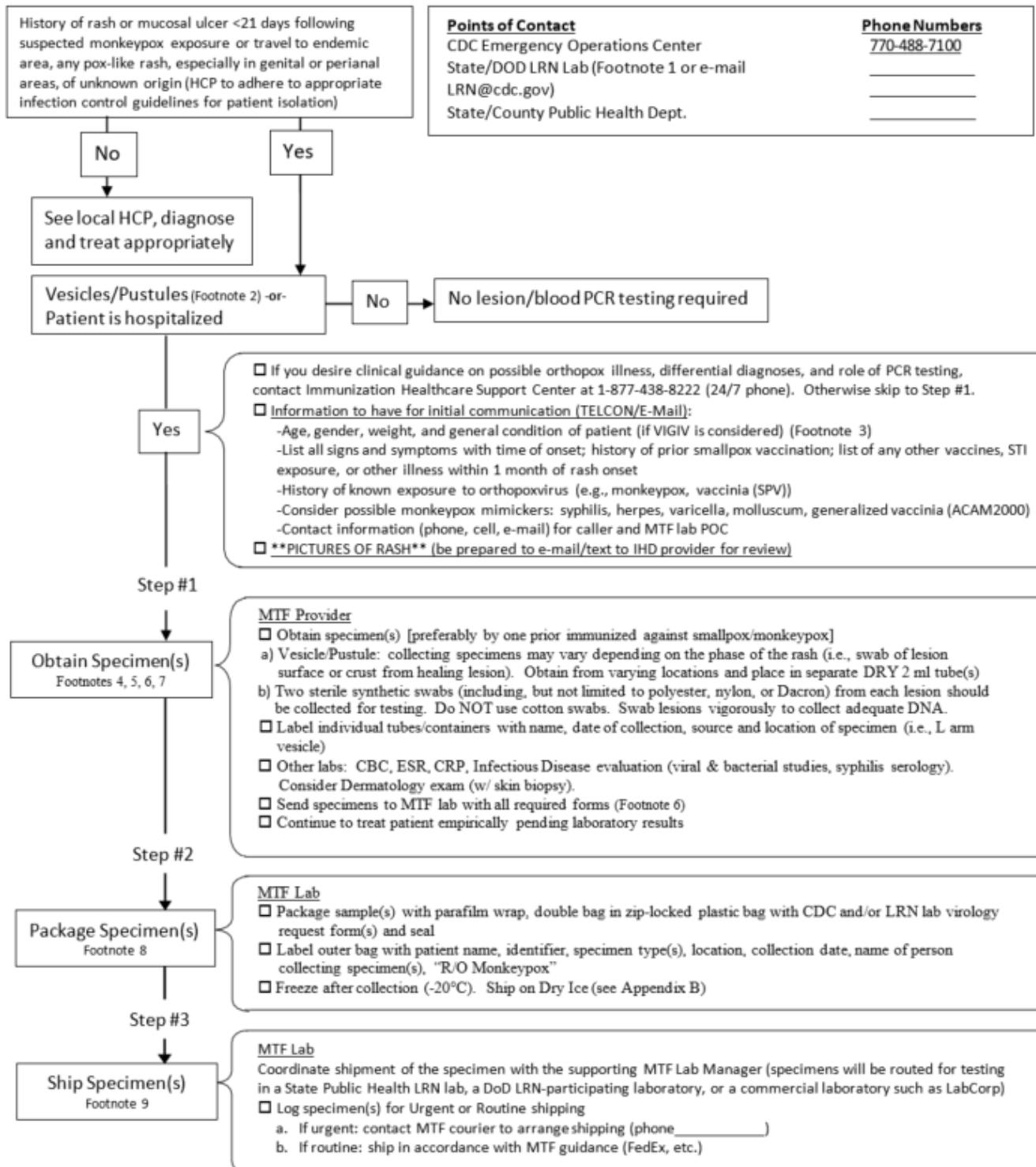
As of 26 July 2022, the Current Procedural Terminology (CPT®) Codes Approved are as follows:

- CPT® 87593 to report the laboratory diagnostic testing for orthopoxvirus
- CPT® 90611 to report use of smallpox and monkeypox combined vaccine JYNNEOS
- CPT® 90622 to report use of traditional smallpox vaccine ACAM 2000

International Classification of Diseases (ICD) Codes are as follows:

- Z20.82: Contact with and (suspected) exposure to other viral communicable diseases
- Z20.820: Contact with and (suspected) exposure to varicella
- Z20.821: Contact with and (suspected) exposure to Zika virus
- Z20.822: Contact with and (suspected) exposure to COVID-19
- Z20.828: Contact with and (suspected) exposure to other viral communicable diseases
- ICD-10-CM Diagnosis Code B04 [convert to ICD-9-CM] Monkeypox Human monkeypox; Monkeypox infection

Attachment 1: Guideline for Obtaining Suspected Monkeypox Polymerase Chain Reaction (PCR) Assay



Footnotes

1. a) State Public Health LRN lab contact info:
<https://www.aphl.org/programs/preparedness/Crisis-Management/Pages/Emergency-Lab-Contacts.aspx>.
b) DoD LRN lab contact info: <https://info.health.mil/sites/DADMA/Pages/Home.aspx> (see clinical guidance for monkeypox Infections).
c) A commercial laboratory such as LabCorp: contact your MTF Laboratory Manager.
2. Rash description: in addition to possible monkeypox, consider in the differential diagnoses other infectious, allergic, non-allergic, and immunologic/autoimmune causes.
 - a) Fine flat red itchy rash (differential dx. includes, but is not limited to: folliculitis, erythema multiforme, heat rash, contact dermatitis)
 - b) Maculopapular, vesicular, or pustular rash (differential dx. includes, but is not limited to: contact dermatitis, erythema multiforme, herpes simplex, syphilis, chancroid, recurrent aphthous stomatitis, Behcet's disease, molluscum contagiosum, other pox viruses, chicken pox)
 - 1) Consider possibility of syphilis
 - 2) Be prepared to activate this diagnostic testing algorithm
3. If Vaccinia Immune Globulin (VIGIV) is a possible therapeutic option, provide the patient's weight, the total dose required (@ 6,000 U/kg), a mailing address, and a physician or pharmacist POC at the hospital. (See IHD Vaccinia Immune Globulin Intravenous (Human) (VIGIV) Information paper at www.health.mil/vaccines).
4. Collection (see <https://www.cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html> and <https://www.cdc.gov/poxvirus/monkeypox/lab-personnel/index.html>):
 - a) Materials
 - 1) Sterile synthetic swabs (Dacron, polyester, nylon, or rayon) – not cotton swabs
 - 2) 1.5- or 2-mL screw-capped tubes with O-ring or a sterile container that has a gasket seal and is able to be shipped under the required conditions.
 - b) Technique for macular, papular, vesicular, or pustular lesions
 - 1) The following specimen types are acceptable for testing with the LRN's Orthopoxvirus Real-time PCR assay:
 - i. swab of lesion (dry or wet, but dry is preferred)
 - ii. fluid, skin, crust, or roof of vesicle
 - iii. "touch prep" slide of dried vesicular fluid
 - iv. fresh (i.e., no formalin) biopsy of pustule or vesicle
 - v. cellular material from tissue culture demonstrating cytopathic effect
 - 2) Sanitize skin with an alcohol wipe, allow to dry.
 - 3) Vigorously swab the lesions. Two swabs from multiple lesions should be collected for testing; dry or wet, but dry is preferred. Do not use cotton swabs. For specimens to be submitted to the CDC, Viral Transport Media (VTM) tubes can be used, but dry swabs are preferred. It is not necessary to de-roof the lesion before swabbing. Swab the oropharynx only if there are visible lesions.

- 4) Break off the end of each swab's applicator into a 1.5- or 2-mL screw-capped tube with O-ring or place the entire swab in a sterile container that has a gasket seal and is able to be shipped under the required conditions.
 - 5) Two swabs from each lesion should be collected, preferably from different locations on the body or from lesions which differ in appearance. Swabs and other specimens should each be placed in different containers. If using transport media for a specimen(s) to be submitted to the CDC, only VTM is accepted.
5. Personnel involved in specimen collection of lesions in suspected monkeypox or, if following ACAM2000 smallpox vaccination, generalized vaccinia, eczema vaccinatum or progressive vaccinia must wear appropriate barrier protection (gloves, gown), eye protection, and an N95 respirator. If the potential for splashing of bodily fluids or secretions is anticipated, a face shield should also be worn. Individuals collecting specimens should have been vaccinated preferably within the preceding 3-5 years, but at least within the past 10 years. If unvaccinated personnel must be utilized to collect specimens, only those without contraindication to smallpox vaccination should be considered.
6. Specimen form(s) and collection
- a) Whether IHD assistance was obtained regarding specimen collection or not, MTF provider should contact their local State Department of Health, DOD LRN lab, or MTF Laboratory Manager if using a commercial laboratory such as Labcorp, prior to specimen collection/shipping for guidance as LRN labs' processes and forms may vary from State to State. Additional guidance may be obtained from the Poxvirus Inquiry Line via e-mail at poxvirus@cdc.gov.
 - b) MTF-specific mail-out (specimen processing) form(s) (if any)
 - c) CDC specimen submission form: See Appendix A (pg. 16). This form is required if the State Public Health or DOD LRN lab's non-variola orthopoxvirus test was 'Positive'. MHS providers should be familiar with the information requested on this on-line form. If suspicion is high for MPX, record the information requested on this on-line form off-line to provide to the State Public Health or DOD LRN lab to facilitate rapid specimen submission to the CDC for confirmation.
 - d) If using a State Public Health LRN lab or DOD LRN lab, contact lab for their specific submission form (if different from CDC form).
(<https://www.aphl.org/programs/preparedness/Crisis-Management/Pages/Emergency-Lab-Contacts.aspx>)
 - e) For specimen transport guidelines: See Appendix B (p. 17)
7. Pathogen (viral, bacterial, other) studies should be chosen based upon Infectious Disease and/or Dermatology consultation. Pathogens may include, but are not limited to:
- a) Viral: herpes 1/2, EBV, coxsackievirus, parvovirus, rubella, rubeola, varicella (including zoster), and HIV
 - b) Bacterial: streptococcus, staphylococcus, pseudomonas, rickettsiae, meningococcus
 - c) Other: syphilis, candida, tinea, and scabies
8. Packaging guidance
See Appendix B

9. Shipping guidance

See Appendix B

- a) Separate any serum IAW GLP standards. Freeze (-20°C or lower) specimens within an hour after collection. Store frozen samples for up to 60 days. Freezing is strongly recommended. However, if there is no freezer available, refrigerate samples (2-8°C) and store for up to 7 days. Samples must be received within 60 days if frozen or 7 days if refrigerated. If shipping a State Public Health LRN lab, confirm packaging and shipping information.
- b) Specimens that are greater than 8°C upon receipt will be rejected. Ship on dry ice as category B.
- c) Pack all items (swabs) in the facility's standard mail out/specimen shipping container(s) IAW established standards.
- d) Ship container(s) to address provided by DOD LRN Lab by most expedient method available. See footnote #1 for State Public Health LRN lab contact information.
- e) Coordinate shipment of the specimen with the supporting MTF Lab Manager (specimens may be routed for testing to a State Public Health LRN lab, a DoD LRN-participating laboratory, or a commercial laboratory such as LabCorp). If shipping container(s) directly to CDC, do so via FEDEX account to:

Centers for Disease Control and Prevention
ATTN: RDSB/STATT Unit 47
1600 Clifton Road NE
Atlanta, GA 30333
<Insert CDC Point of Contact's Telephone Number>

APPENDIX A

The process for submission of specimens taken from the patient for PCR analysis for potential orthopoxvirus disease no longer involves paper forms, but rather is all performed on line.

In order to access the CDC Specimen Submission Form, the program must be downloaded onto one's computer.

To access the form, go to <https://www.cdc.gov/laboratory/specimen-submission/form.html>

- Click on item #2 “CDC 50.34 Specimen Submission Form”
- This will take you to the William Glasscock at Centers for Disease Control.
- Select (check box) the CDC-Form-50.34-setup
- Select (check box) that you agree to the Terms and Conditions
- Click download
- Select Agree to pop-up License Agreement
- Choose “Only for me” as the Installation option and click ‘Next’
- Click ‘Install’
- When installation is complete, click ‘Finish’
- This will open the form and place a CDC Form 50.34 icon on your desktop

The screenshot shows the 'CDC SPECIMEN SUBMISSION FORM: SPECIMENS OF HUMAN ORIGIN'. The form is divided into several sections:

- LABORATORY EXAMINATION REQUESTED:** Fields for Test order name, Test order code, Suspected Agent, Date sent to CDC (mm/dd/yyyy), and At CDC bring to the attention of.
- PATIENT INFORMATION:** Fields for Patient Name, Birth date (mm/dd/yyyy), Sex, Age, Age Units, Case ID, Race (White, Black or African American, Asian, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander), Clinical Diagnosis, Date of onset (mm/dd/yyyy), Pregnancy Status, Date of Death (mm/dd/yyyy), and Fatal.
- SPECIMEN INFORMATION:** Fields for Specimen collected date (mm/dd/yyyy), Time, Material Submitted, Specimen source (type), Specimen source modifier, Specimen source site, Specimen source site modifier, Collection method, Treatment of specimen, Transport medium/Specimen preservative, and Specimen handling.
- CDC USE ONLY:** Fields for Package ID#, Delivered to Unit #, Opened By, Unit Specimen ID#, and Date received at CDC. A 'CDC Specimen Identification label' is also present.
- ORIGINAL SUBMITTER:** Fields for Name (Laboratory Director or designee), Institution name, Street Address, City, State, ZIP Postal Code, Country, Fax, Phone, Patient ID, Alternative Patient ID, Specimen ID, and Alternative Specimen ID.

The form is lengthy and detailed. Have all the information before you begin. It cannot be saved if not completed.

Consultation is required prior to specimen submission. A brief written clinical summary with pertinent medical information (e.g., rash onset date, rash type, symptoms, smallpox vaccination date if relevant) and exposure history should be included.

Points of Contact, details on specimens required, and storage of specimens prior to shipping can be found at:

<https://www.cdc.gov/laboratory/specimen-submission/detail.html?CDCTestCode=CDC-10515>.

APPENDIX B

Packaging and Shipping Specimens

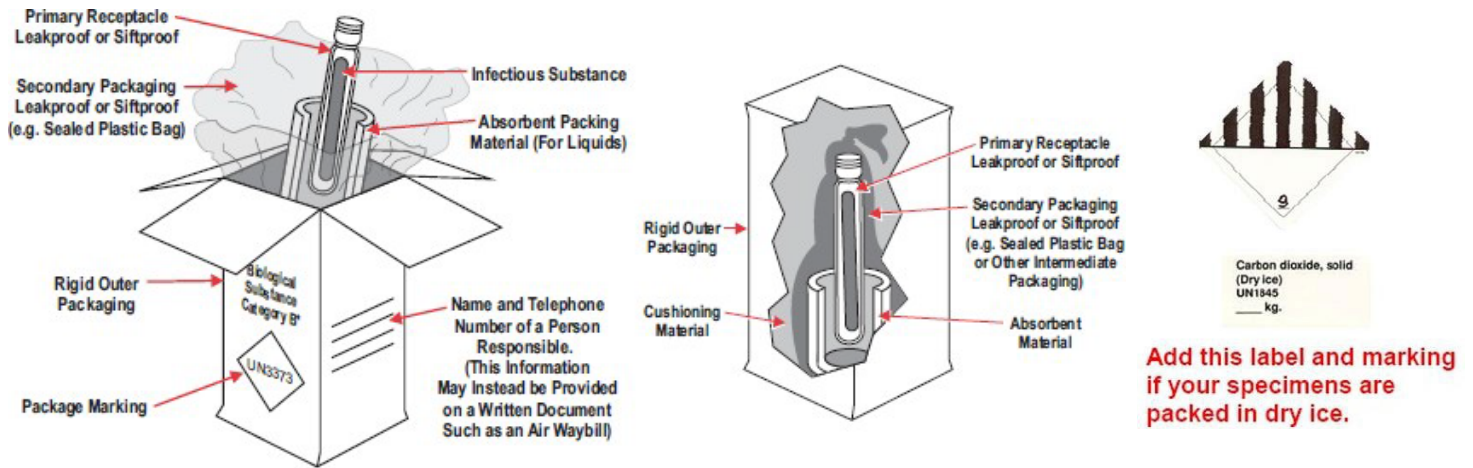
Specimens are shipped under hazardous material guidelines of the US DOT 49 Code of Federal Regulations (CFR) Parts 171-180 and assigned UN 3373, Biological substances, Category B under Department of Transportation and IATA regulations.

For additional guidance see: <https://www.cdc.gov/smallpox/lab-personnel/specimen-collection/pack-transport.html> (Category B Infectious Substance)

1. How do you package specimens?

- All persons packing and shipping infectious materials must be trained and certified every two years in compliance with the Department of Transportation or the International Air Transport Association.
- Triple pack all specimens in:
 - Leakproof primary receptacle; multiple primary receptacles should be individually wrapped or separated
 - Leakproof secondary receptacle, and
 - Rigid outer packaging
- If specimen is a liquid, place absorbent material between the primary and secondary receptacle.
- Place a list of contents and paperwork between the secondary receptacle and outer packaging.
- Label outer packaging with:
 - Infectious substance (diamond-shaped label)
 - Proper shipping name and UN 3373 certification mark
 - Shipper and consignee identification (name, address, and telephone)
 - Package orientation arrows if primary receptacle exceeds 50 mL or more
- Ensure that specimens are frozen at the required temperature (e.g., $<-20^{\circ}\text{C}$) prior to packing.
- Within the secondary container, place sufficient dry ice to surround the sealed secondary packaging, and add further insulation. It is important to note that surrounding the secondary packaging on all sides with the dry ice has shown to improve the length of time the specimen remains frozen during transit. Dry ice:
 - Should not come in direct contact with the primary receptacle.
 - Should not be used as a substitute for padding, as it will dissipate during transport.
 - Will sublime at a rate of 5-10 pounds every 24 hours; therefore, 5-10 pounds of dry ice is required in an overnight shipment.
- Secondary packaging must be surrounded by an outer, secondary container (i.e., a styrofoam cooler) with walls that are, at minimum, two inches thick.
- Complete and submit CDC Form 50.34 (see Appendix A) with the shipment.

Packing and Labeling of Category B Infectious Substance Specimens



2. What should be included with the specimens?

- The MPX submission form/information required by the lab performing the specimen analysis (State Public Health LRN lab, a DoD LRN-participating laboratory, or a commercial laboratory such as Labcorp). If submitting to CDC for confirmation, the CDC Form 50.34 sent electronically should also be copied and included along with any additional case history.

3. Where should specimens be shipped?

- Use shipping address provided by a State Public Health LRN lab or DOD LRN lab or by whichever commercial lab is being utilized (e.g., Labcorp)
- Specimens sent to the CDC for confirmation should be shipped to the following address:

<Insert CDC Point of Contact>
 Centers for Disease Control and Prevention
 RDSB/STATT Unit 47
 1600 Clifton Road NE
 Atlanta, GA 30329
 <Insert CDC Point of Contact's Telephone Number>

4. Do I need permits for shipping specimens?

- The usage of permits for shipping should be evaluated on a case-by-case basis.
- Permits may be necessary when shipping diagnostic specimens within the United States.
- When required, the activity receiving the shipment must hold the CDC Import Permit and/or USDA/APHIS VS 16-6 Permit; the receiving activity must provide a copy of the Permit to the shipping activity so that it can be included with the shipping papers when necessary for shipment.
- Permits are required when shipping to the U.S. from foreign countries (contact the CDC Poxvirus lab).

APPENDIX C

Glossary/Abbreviations

CBC = Complete Blood Count
CDC = Centers of Disease Control and Prevention
CFR = Code of Federal Regulations
DCLS = Division of Consolidated Laboratory Services
EBV = Epstein Barr Virus
EDTA = Ethylenediaminetetraacetic acid
ESR = Erythrocyte Sedimentation Rate
GLP = Good Laboratory Practice
HCP = Healthcare Provider
HIV = Human Immunodeficiency Virus
IATA = International Air Transport Association
IAW = In accordance with
IHD = Defense Health Agency's Immunization Healthcare Division
LRN = Laboratory Response Network
MPX = Monkeypox (virus)
MTF = (Military) Medical Treatment Facility
PCR = Polymerase Chain Reaction
PHS = Public Health Service
POC = Point of Contact
R/O = Rule Out (Exclude)
RVSH = Regional Vaccine Safety Hub (San Diego, San Antonio, Ft. Bragg, National Capital Region)
SPV = Smallpox vaccine/vaccination
TELCON = Telephonic Communication
USDA = United States Department of Agriculture
VIGIV = Vaccinia Immune Globulin

Attachment 2: Clinical Evaluation and Management of Patients Under Investigation (PUI)

Clinical Evaluation and Management of PUI ***Notify facility Infection Prevention and Control and Installation Public Health immediately***		
	Mild or uncomplicated disease	Severe and/or complicated disease OR at increased risk for severe disease*
Isolation	Follow CDC Monkeypox Infection Control Guidance https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control.html	
Symptoms	<ul style="list-style-type: none"> - Fever and mild to moderate pain - Pruritus - Nausea/Vomiting - Dyspepsia - Skin lesions 	<ul style="list-style-type: none"> - Severe pain - Proctitis - Gastrointestinal bleeding - Urethritis - Phimosis - Balanitis - Bacterial skin infection - Pharyngitis, tonsillitis, and epiglottitis - Bronchopneumonia - Eye involvement; - Myocarditis - Hemorrhagic disease - Confluent lesions - Sepsis - Encephalitis - lesions in anatomic areas where it may cause severe harm such as strictures and scarring (e.g., eyes, mouth, genitals, anus).
Coinfections	<ul style="list-style-type: none"> - Screen for other sexually transmitted infections (STIs) and treat accordingly 	<ul style="list-style-type: none"> - Screen for other STIs and treat accordingly - As applicable, give antibiotics for superimposed bacterial infection (based on site/infection)
Symptomatic and Supportive Care**	<ul style="list-style-type: none"> - Standard treatment for symptoms - Maintain euvolemia - Assess for anxiety and depressive symptoms - Prevent secondary infection 	<ul style="list-style-type: none"> - Standard treatment for symptom management, including severe pain and infection control. - Maintain euvolemia - Assess for anxiety and depressive symptoms - Assess/promptly treat secondary bacterial infection
Antivirals***	<ul style="list-style-type: none"> - Not required 	<ul style="list-style-type: none"> - Tecovirimat (TPOXX®): first-line for all ages, use under EA-IND (minimum weight = 3kg) - Cidofovir: alternative antiviral to

		<p>TPOXX[®] (contraindicated for pregnant women during the first trimester and women that are breastfeeding; risk of renal toxicity)</p> <ul style="list-style-type: none"> - Vaccinia Immune Globulin Intravenous (VIGIV): adjunct to TPOXX[®] for severe case or if TPOXX[®] contraindicated; consider for use in pregnant women and neonates in consultation with Peds ID - Brincidofovir: antiviral; not yet available from Strategic National Stockpile (SNS) but CDC is developing EA-IND
Discontinue Isolation	<ul style="list-style-type: none"> - No new lesions for 48 hours - All lesions have crusted over - No mucous lesions - Intact skin remains underneath - Patient is febrile for 72 hours - No new symptoms are present 	<ul style="list-style-type: none"> - Follow hospital guidance and local public health authority

*** Conditions resulting in increased risk for severe disease:**

- People with immunocompromise (HIV/AIDS, leukemia, lymphoma, generalized malignancy, solid organ transplantation, therapy with alkylating agents, antimetabolites, radiation, tumor necrosis factor inhibitors, high-dose corticosteroids, being a recipient with hematopoietic stem cell transplant <24 months post- transplant or ≥24 months but with graft-versus-host disease or disease relapse, or having autoimmune disease with immunodeficiency as a clinical component)
- Pediatric patients, especially those less than age 8
- Pregnant or breastfeeding women
- History of or presence of active atopic dermatitis, or other active exfoliative skin condition

****Treatment Options for Symptomatic and Supportive Care of All Suspected or Confirmed Infection:**

1. Antipyretic: acetaminophen.
2. Analgesia: acetaminophen
3. Antiemetic: standard
4. Antipruritic: H1 antihistamine (e.g., diphenhydramine, hydroxyzine)
5. Skin Care: keep skin clean and dry
6. Oral lesions: salt water gargles, alcohol-free antiseptic oral rinse

7. Proctitis: sitz bath, topical anesthetic, stool softeners
8. Nutrition: hydration and electrolyte maintenance.

*****Considerations for Antiviral and VIGIV Therapy for Monkeypox Disease:**

There are no specific antiviral treatments that are FDA-approved for monkeypox infection. Antivirals used to treat smallpox such as tecovirimat (TPOXX[®]), cidofovir (Vistide[®]), and brincidofovir (Tembexa[®]) may be considered for use in the high risk populations and those with severe disease under the expanded access Investigational New Drug (EA-IND) protocol. There are no efficacy data available for treatment of monkeypox in human with either cidofovir or brincidofovir. Brincidofovir is not currently available from the SNS but the CDC is developing an EA-IND protocol for use.

Tecovirimat was approved for smallpox treatment under the “Animal Rule” regulation and efficacy was established based on the animal model. There are little to no data on tecovirimat efficacy in humans at this time. The safety and efficacy profile for tecovirimat in the treatment of monkeypox disease will be investigated as a randomized controlled trial that is currently being developed by the National Institute of Health. EA-IND protocol has weight-based dosing for all ages (minimum weight requirement 3kg).

Vaccinia Immune Globulin Intravenous (Human) (VIGIV) which is approved for treatment of complications due to vaccinia vaccination may be considered for treatment of monkeypox during an outbreak under the expanded access protocol. There is no efficacy data on VIGIV in the treatment of monkeypox in human. Consider use as adjunct therapy to antiviral for severe cases. VIGIV may be beneficial for pregnant women and neonates, strongly recommend consultation with Pediatric Infectious Disease for management in this population.

The decision to prescribe any antiviral or VIGIV is based on clinical assessment and shared decision making between the clinician and patient that includes a thorough discussion about the risk and benefits of the intervention.

Attachment 3

Identify – Isolate – Inform

Monkeypox 2022

Clinical Evaluation and Management of Patients under Investigation (PUI)

Information Current as of 8 Aug 22

EXPOSURE

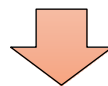
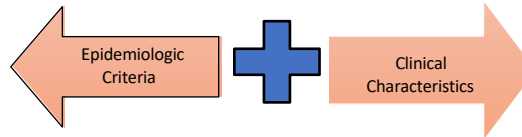
Within 21 days of illness onset:

1. Contact with person(s) with suspected or confirmed monkeypox **OR**
2. Contact with person(s) with rash consistent with monkeypox **OR**
3. Multiple or anonymous sexual partners **OR**
4. Close contact with known monkeypox case without proper PPE **OR**
5. Contact with an animal with suspected monkeypox **OR**
6. Travel to a location where *Monkeypox virus* is endemic (e.g. areas of central and west Africa)

EXPOSURE RISK

- **High:** Unprotected contact between person's skin, mucous membrane and the skin, lesions, bodily fluids of a patient **or** contaminated materials
 - Being inside patient's room or w/in 6 feet of patient during any procedures that may create aerosols without wearing an N95/respirator or eye protection
- **Intermediate:** Being w/in 6 feet for 3 hrs or more of unmasked patient without wearing, at a minimum, a surgical mask **OR**
 - Activities resulting in contact between sleeves or other parts of individual's skin and the patient's skin lesions/bodily fluids/soiled linens or dressings while wearing gloves but not gown

IDENTIFY



ISOLATE

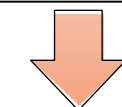
Anyone being tested for monkeypox is considered a Patient Under Investigation (PUI) and should be told to isolate pending test results.

For patients presenting in-person:

- Provide patient with a well-fitted mask
- Place patient in a private room with door closed. Airborne infection isolation room, if available
- Don PPE: N95 respirator or equivalent, gown, gloves, and eye protection.
- Waste should be managed as regulated medical waste (discarded in red biohazard bags)
- Disinfect areas/equipment that contacted patient

For patients evaluated via telehealth:

- Advise patient to avoid close contact with other people and animals, including pets
- Wear a well-fitting mask when in close contact with others at home



INFORM

Public Health or Preventive Medicine
Infection Prevention and Control
Infectious Disease Physician On-Call

DHA Immunization Healthcare
Division's 24/7 Support Center at
877-438-8222 (DSN: 761-4245).

CDC 24/7 Operations Center at
770-488-7100.

SIGNS AND SYMPTOMS

Rash

- Lesions are firm or rubbery, deep-seated, well-circumscribed, and often develop umbilication
- May look like pimples or blisters that are painful or itchy
- May be confined to only a single or few lesions
- May be located on or near the genitals or anus, but could also be on other areas (hands, feet, chest, face, or mouth)
- Lesions may progress through various stages: macular, papular, vesicular, or pustular

Prodromal symptoms may be present and occur before rash, after rash appears, or not at all:

- Fever, chills
- Malaise
- Headache, muscle aches, backache
- Swollen lymph nodes
- Respiratory symptoms (sore throat, nasal congestion, or cough)
- Rectal symptoms (purulent or bloody stools, rectal pain, or rectal bleeding)

MANAGEMENT*

EXPOSED & SYMPTOMATIC:

1. Notify facility infection prevention and control and public health of a suspected monkeypox case.
2. Initiate symptomatic treatment.
3. Consider other causes of rash including syphilis, herpes, chancroid, varicella zoster / chickenpox, molluscum contagiosum.
4. Evaluate for STIs as clinically indicated.
5. Consider infectious disease consultation for patients with high suspicion of monkeypox who present with severe illness or risk factors for progression to severe disease.

*Co-infections with monkeypox and sexually transmitted infections (STIs) may occur. The presence of one does not rule out the other.

EXPOSED without Clinical Characteristics

- Consider Post Exposure Prophylaxis (PEP) vaccination ASAP. JYNNEOS is available for Public Health-identified close contacts
- Educate exposed person about:
 - Incubation period
 - Signs & Symptoms recognition
 - Transmission prevention

Adapted with permission by Dr. Kristi L. Koenig, County of San Diego EMS Medical Director & Professor Emerita, UC Irvine

Sources:

Koenig KL, Bevilacqua CK, and Marty AM. Monkeypox 2022 Identify-Isolate-Inform: A 3I Tool for frontline clinicians for a zoonosis with escalating human community transmission. *One Health* 15 (2022). <https://doi.org/10.1016/j.onehit.2022.100410>

CDC's Monkeypox website: <https://www.cdc.gov/poxvirus/monkeypox/about.html>

CDC's Monkeypox guide for clinicians: <https://www.cdc.gov/poxvirus/monkeypox/pdf/What-Clinicians-Need-to-Know-about-Monkeypox-6-21-2022.pdf>

CDC's Monkeypox Case Definition and Epidemiological Criteria: <https://www.cdc.gov/poxvirus/monkeypox/clinicians/case-definition.html>

Attachment 4
Defense Health Agency Immunization Healthcare Division (DHA IHD) Clinical
Guidance for Applying an Alternative Regimen for Route-Dosing of JYNNEOS Vaccine
for Monkeypox Protection

16 Aug 2022

Background:

On 09 Aug 2022, FDA issued Emergency Use Authorization (EUA) for alternative route-dosing of JYNNEOS vaccine for monkeypox protection.(1) FDA EUA allows this *alternative regimen* of intradermal administration of 0.1 mL, in contrast to FDA licensure of the *standard regimen* of subcutaneous administration of 0.5 mL of JYNNEOS. Scientific support for the alternative regimen is based on a clinical trial of more than 500 healthy adults published in 2015.(2) Justification for the alternative regimen is based on critically short supply of JYNNEOS for monkeypox protection during the current public health emergency. On 10 Aug 2022, CDC updated guidance for monkeypox response to reflect the alternative regimen for route-dosing of JYNNEOS vaccine. (3)

DHA IHD General Recommendations:

DoD response to the monkeypox public health emergency remains consistent with our federal partners. Military Medical Treatment Facilities (MTFs) may administer JYNNEOS for monkeypox protection using either the standard regimen (subcutaneous administration of 0.5 mL doses) or the alternative regimen (intradermal administration of 0.1 mL doses). A complete primary series of JYNNEOS is two doses spaced at least 28 days apart, under either the standard regimen or alternative regimen.

DHA IHD Guidance for Special Populations:

- Immunocompromise. When immunocompromised patients are eligible for monkeypox vaccination, DHA IHD recommends that clinicians administer JYNNEOS under the standard regimen. Immunocompromise is defined by the CDC Advisory Committee for Immunization Practices.(4) This recommendation acknowledges that the scientific literature supporting the alternative regimen for JYNNEOS did not include immunocompromised patients.
- HIV Infection. When HIV-infected patients are eligible for monkeypox protection, DHA IHD recommends that clinicians administer JYNNEOS under the standard regimen, regardless of immunocompromised status. This recommendation is based on specific CDC guidance for HIV-infected patients.(5)
- Persons younger than age 18 years. When people younger than age 18 are eligible for monkeypox vaccination, DHA IHD recommends that clinicians administer JYNNEOS under the standard regimen. Note that use of JYNNEOS in people younger than age 18 is supported by FDA EUA, rather than FDA licensing, and this authorization covers only the standard regimen for administration.(6)
- Persons with a history of keloid scarring. When people with a history of keloid scarring are eligible for monkeypox vaccination, DHA IHD recommends that clinicians administer JYNNEOS under the standard regimen. This recommendation is consistent with CDC guidelines.(3)

- When persons who are eligible for monkeypox vaccination specifically request JYNNEOS administration under the standard regimen, DHA IHD recommends that clinicians administer JYNNEOS under the standard regimen, if at all possible.

Eligibility for Monkeypox Vaccination:

DoD beneficiaries are considered eligible for monkeypox vaccination in accordance for CDC guidance. This guidance has evolved since first posted, and will continue to evolve. Current guidance covers vaccination of people for: (a) Post-exposure prophylaxis (PEP) after known monkeypox exposure, (b) Expanded post-exposure prophylaxis (PEP++) after presumed monkeypox exposure, and (c) pre-exposure prophylaxis (PrEP) for a limited number of people with occupational exposure to monkeypox. Vaccine eligibility is found in Table 1 [Vaccination Strategies Used in the 2022 US Monkeypox Outbreak] of CDC guidance.(3) Because eligibility for monkeypox vaccination requires individual clinical review of exposures and risks, Standing Orders for vaccine administration are not appropriate at this time.

ACAM2000 for Monkeypox Vaccination:

Because ACAM2000 is a high-risk vaccine, JYNNEOS remains the preferred vaccine to protect patients from monkeypox in most situations. Use of ACAM2000 for monkeypox protection may be appropriate for people who have received ACAM2000 in the past with no problems, and have no contraindications to current receipt of ACAM2000.

Considerations for JYNNEOS in persons who previously received ACAM2000 has raised questions. CDC advises that ACAM2000-experienced patients are eligible for monkeypox PEP and PEP++, and that intradermal dosing of JYNNEOS can be considered for these patients. See Table 6 [Special Populations] in CDC guidance.(3) Prior to the current monkeypox emergency, ACIP advised that ACAM2000-experienced patients would require only a single dose (booster) of JYNNEOS to be adequately protected.(7) A single intradermal dose of JYNNEOS may be adequate for boosting ACAM2000-experienced patients, but this has not been formally studied and is not covered under FDA EUA. Therefore, DHA IHD advises that clinicians may apply shared-clinical-decision-making to consider JYNNEOS vaccine – under either the standard regimen or alternative regimen, using either one dose or two doses – for ACAM2000-experienced patients who are eligible for monkeypox vaccination.

Ordering JYNNEOS Vaccine:

MTFs should continue to order JYNNEOS via the USAMMA-DOC portal. MTFs do not need to specify whether vaccine will be administered under the standard regimen or alternative regimen when placing vaccine orders. Each MTF should order the quantity of JYNNEOS that the MTF estimates would meet demand for monkeypox protection under current eligibility guidelines. MTFs should understand that the critically limited supply of JYNNEOS may delay fulfillment of large orders.

Documenting JYNNEOS Vaccine:

Immunization clinics should be careful to document JYNNEOS accurately in electronic health records (EHRs; i.e., AHLTA or MHS GENESIS). Whether the standard regimen or alternative regimen is applied, both the route (subcutaneous or intradermal) and dose (0.5 mL or 0.1 mL) of JYNNEOS should be accurately documented in the EHR.

Managing JYNNEOS Supply:

MTFs should prioritize being good stewards of limited JYNNEOS vaccine resources. Note:

- JYNNEOS is available only in 0.5 mL vials. When used for the alternative regimen (intra-dermal administration of 0.1 mL doses), all 5 doses from the vial must be used within 8 hours.
- When drawing 0.1 mL doses of JYNNEOS for intra-dermal administration, clinics should use the equivalent of tuberculin syringes with fine-gauge (e.g., 27-gauge) needles, to avoid vaccine waste in a too-large needle-syringe.
- Vaccine administrators must be appropriately trained in intra-dermal administration before delivering JYNNEOS under the alternative regimen. As per CDC guidance, mis-administered intra-dermal doses must be repeated. See Table 7, Interim recommendations for JYNNEOS vaccine administration errors and deviations, in CDC guidance.(3)
- Care should be taken to avoid temperature-compromise or light-compromise of JYNNEOS vaccine.
- JYNNEOS may be stored refrigerated between 2°C and 8°C (between 36°F and 46°F) for up to 8 weeks after thawing. After JYNNEOS vaccine vials are thawed, the beyond-use-date (BUD) should be written on vials and should never exceed the original expiration date. Please note that this BUD guidance differs from the package insert, which states that vaccine may only be stored in refrigerator for 12 hours after thawing. Correct BUD guidance (refrigeration up to 8 weeks after thawing) has been verified by manufacturer and CDC.(8)

Monkeypox vs. Smallpox:

All guidance contained in this document addresses response to the current monkeypox public health emergency. Monkeypox and smallpox should not be confused or conflated. DHA IHD recommendations to ‘pause’ routine administration of ACAM2000 for smallpox prevention remain unchanged. It has not been established whether an alternative route-dose regimen of JYNNEOS will protect against smallpox. Critically low supplies of JYNNEOS currently preclude the application of this vaccine, under any dosing regimen, for routine smallpox prevention.

*Note: Intra-dermal dosing of JYNNEOS will not be considered as meeting any Individual Medical Readiness or Force Health Protection requirements a Service Member may have for protection from Smallpox.

References:

1. FDA. Monkeypox Update: FDA Authorizes Emergency Use of JYNNEOS Vaccine to Increase Vaccine Supply. Posted 09 Aug 2022. <https://www.fda.gov/news-events/press-announcements/monkeypox-update-fda-authorizes-emergency-use-jynneos-vaccine-increase-vaccine-supply>
2. Frey SE, Wald A, Edupuganti S, et al. Comparison of lyophilized versus liquid modified vaccinia Ankara (MVA) formulations and subcutaneous versus intra-dermal routes of administration in healthy vaccinia-naïve subjects. *Vaccine*. 2015;33(39):5225-34. doi:10.1016/j.vaccine.2015.06.075
3. CDC. JYNNEOS Vaccine: Interim Guidance. Updated 15 Aug 2022. <https://www.cdc.gov/poxvirus/monkeypox/interim-considerations/jynneos-vaccine.html>

4. CDC Advisory Committee on Immunization Practices (ACIP). Altered Immunocompetence. General Best Practice Guidelines for Immunization. Updated 12 July 2022.
<https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html>
5. O'Shea J, Filardo TD, Morris SB, Weiser J, Petersen B, Brooks JT. Interim Guidance for Prevention and Treatment of Monkeypox in Persons with HIV Infection — United States, August 2022. *MMWR Morb Mortal Wkly Rep* 2022;71:1023-8.
<https://www.cdc.gov/mmwr/volumes/71/wr/mm7132e4.htm>
6. FDA. Fact Sheet for Healthcare Providers Administering Vaccine: Emergency Use Authorization of JYNNEOS for Prevention of Monkeypox Disease in Individuals Determined to be at High Risk of Monkeypox Infection. Posted 09 Aug 2022.
<https://www.fda.gov/media/160774/download>
7. Rao AK, Petersen BW, Whitehill F, et al. Use of JYNNEOS (Smallpox and Monkeypox Vaccine, Live, Nonreplicating) for Preexposure Vaccination of Persons at Risk for Occupational Exposure to Orthopoxviruses: Recommendations of the Advisory Committee on Immunization Practices - United States, 2022. *MMWR Morb Mortal Wkly Rep.* 2022;71(22):734-742. Published 2022 Jun 3. doi:10.15585/mmwr.mm7122e1
https://www.cdc.gov/mmwr/volumes/71/wr/mm7122e1.htm?s_cid=mm7122e1_w
8. CDC. JYNNEOS Vaccine Storage and Handling Summary. Posted 02 Aug 2022.
<https://www.cdc.gov/poxvirus/monkeypox/pdf/Storage-and-Handling-Summary.pdf>

Attachment 5

Resources

General:

Signs and Symptoms

<https://www.cdc.gov/poxvirus/monkeypox/symptoms.html> - UPDATED

Isolation and Prevention Practices for People with Monkeypox

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/isolation-procedures.html> - UPDATED

Considerations for Reducing Monkeypox Transmission in Congregate Living Settings

<https://www.cdc.gov/poxvirus/monkeypox/specific-settings/congregate.html> - UPDATED

2022 U.S. Monkeypox Outbreak

<https://www.cdc.gov/poxvirus/monkeypox/response/2022/index.html>

U.S. Map & Case Count

<https://www.cdc.gov/poxvirus/monkeypox/response/2022/us-map.htm>

Global Map & Case Count

<https://www.cdc.gov/poxvirus/monkeypox/response/2022/world-map.html>

Monkeypox Frequently Asked Questions

<https://www.cdc.gov/poxvirus/monkeypox/faq.html>

Technical Report: Multi-National Monkeypox Outbreak, United States, 2022 -

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/technical-report.html>

Patient should disinfect and do laundry according to CDC guidelines found here:

<https://www.cdc.gov/poxvirus/monkeypox/specific-settings/home-disinfection.html>.

Questions/Monkeypox-FAQ. Other tips may be found at:

<https://www.cdc.gov/poxvirus/monkeypox/reducing-stigma.html> .

Vaccination:

JYNNEOS: Package Insert for Providers on Standard Dosing

<https://www.fda.gov/media/131078/download>

Smallpox/Monkeypox Vaccine Information Statement (for Patients) | CDC (as of 8/23/2022)

<https://www.cdc.gov/vaccines/hcp/vis/vis-statements/smallpox-monkeypox.pdf>

Fact Sheet for Healthcare Providers Administering Vaccine: Emergency Use Authorization of JYNNEOS (Smallpox and Monkeypox Vaccine, Live, Non-Replicating) for Prevention of

Monkeypox Disease in Individuals Determined to be at High Risk for Monkeypox Infection (Alternative Dosing)

<https://www.fda.gov/media/160774/download>

Fact Sheet for Recipients and Caregivers about JYNNEOS (Smallpox and Monkeypox Vaccine, Live, Non-Replicating) to Prevent Monkeypox Disease in Individuals Determined to be at High Risk for Monkeypox Infection

<https://www.fda.gov/media/160773/download>

JYNNEOS Smallpox and Monkeypox Vaccine Storage and Handling Summary

<https://www.cdc.gov/poxvirus/monkeypox/pdf/Storage-and-Handling-Summary.pdf> - NEW

Guidelines for use of PrEP and PEP vaccination are updated here:

<https://www.cdc.gov/poxvirus/monkeypox/considerations-for-monkeypox-vaccination.html>

Vaccines

<https://www.cdc.gov/poxvirus/monkeypox/vaccines.html> - UPDATED

JYNNEOS Vaccine

<https://www.cdc.gov/poxvirus/monkeypox/interim-considerations/jynneos-vaccine.html#interim>

For Clinicians:

Clinical Recognition

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/clinical-recognition.html> - UPDATED

Guidance for Tecovirimat Use under Expanded Access Investigational New Drug Protocol during 2022 U.S. Monkeypox Cases

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/Tecovirimat.html> - UPDATED

Information For Healthcare Professionals

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/index.html>

Clinician FAQs | Monkeypox | Poxvirus | CDC

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/faq.html>

Interim Clinical Guidance for the Treatment of Monkeypox

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/treatment.html>

Clinical Considerations for Monkeypox in Children and Adolescents

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/pediatric.html>

Clinical Considerations for Treatment and Prophylaxis of Monkeypox Virus Infection in People with HIV

<https://www.cdc.gov/poxvirus/monkeypox/clinicians/people-with-HIV.html>

Clinical Considerations for Monkeypox in People Who are Pregnant or Breastfeeding
<https://www.cdc.gov/poxvirus/monkeypox/clinicians/pregnancy.html>

Obtaining and Using TPOXX (Tecovirimat)
<https://www.cdc.gov/poxvirus/monkeypox/clinicians/obtaining-tecovirimat.html>

Refer to https://a01.usamma.amedd.army.mil/mmqc/MessageView?MSG_ID=LIZ-220719-001, for detailed information about access to JYNNEOS vaccine for pre and post-exposure prophylaxis.

Laboratory:

How to Report Test Results
<https://www.cdc.gov/poxvirus/monkeypox/lab-personnel/report-results.html>

Information for Laboratory Personnel
<https://www.cdc.gov/poxvirus/monkeypox/lab-personnel/index.html>

Preparation and Collection of Specimens
<https://www.cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html>

Health Departments:

Information for Health Departments
<https://www.cdc.gov/poxvirus/monkeypox/healthdepts/index.html>

Case Definitions† for Use in the 2022 Monkeypox Response
<https://www.cdc.gov/poxvirus/monkeypox/clinicians/case-definition.html>

Case Reporting Recommendations for Health Departments
<https://www.cdc.gov/poxvirus/monkeypox/healthdepts/case-reporting.html>

Considerations for Monkeypox Vaccination
<https://www.cdc.gov/poxvirus/monkeypox/considerations-for-monkeypox-vaccination.html>

Community Engagement:

Safer Sex, Social Gatherings, and Monkeypox
<https://www.cdc.gov/poxvirus/monkeypox/sexualhealth/index.html> - UPDATED

Reducing Stigma in Monkeypox Communication and Community Engagement
<https://www.cdc.gov/poxvirus/monkeypox/reducing-stigma.html>

Morbidity and Mortality Weekly Reports (MMWR):

MMWR: Interim Guidance for Prevention and Treatment of Monkeypox in Persons with HIV Infection — United States, August 2022

https://www.cdc.gov/mmwr/volumes/71/wr/mm7132e4.htm?s_cid=mm7132e4_x - NEW

MMWR: Epidemiologic and Clinical Characteristics of Monkeypox Cases — United States, May 17–July 22, 2022

https://www.cdc.gov/mmwr/volumes/71/wr/mm7132e3.htm?s_cid=mm7132e3_x - NEW

Additional Resources:

Second meeting of the International Health Regulations (2005) (IHR) Emergency Committee regarding the multi-country outbreak of monkeypox | Public Health Emergency of International Concern

[https://www.who.int/news/item/23-07-2022-second-meeting-of-the-international-health-regulations-\(2005\)-\(ihr\)-emergency-committee-regarding-the-multi-country-outbreak-of-monkeypox](https://www.who.int/news/item/23-07-2022-second-meeting-of-the-international-health-regulations-(2005)-(ihr)-emergency-committee-regarding-the-multi-country-outbreak-of-monkeypox)

Building Healthy Online Communities: Health Information and Messaging on Monkeypox

<https://bhocpartners.org/sexual-health-info/stis/#toggle-id-16>

WHO Interim Rapid Response Guidance: Clinical Management and Infection Prevention and Control of Monkeypox

<https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1>

WHO: Community Engagement

<https://www.who.int/publications/i/item/9789240010529>

References to non-CDC sites are provided as a service and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites. URL addresses listed were current as of the date of publication.