

# Mpox (monkeypox)

<b>Signs and Symptoms</b>	<ul style="list-style-type: none"> <li>• Prodrome: does not always occur; if present, may be fever, chills, headache, muscle aches, backache, swollen lymph nodes, and exhaustion, cough or a sore throat.</li> <li>• Rash: follows 1 to 3+ days after prodrome (if any), may be on any part of the body and may spread. Isolated genital lesions (which can ulcerate) or rectal inflammation may also occur. Typically lesions progress over about 2 weeks: macule, papule, vesicle, pustule, scab. However, rash may be atypical, particularly on mouth or anogenital.</li> </ul>		
<b>Incubation</b>	Usually 7–14 days, range 3–21 days		
<b>Case classification</b>	<b>Clinical criteria:</b> new rash, fever, other consistent symptoms		
	<b>Epi criteria:</b> contact of a case or person with rash; man having in-person intimate close contact with men; travel to risk region; contact with exotic animal		
	<b>Note:</b> DOH is only counting and reporting confirmed and probable cases to CDC. Due to availability of test types, DOH does not differentiate between confirmed and probable cases in analyses and data products.		
	<b>Confirmed:</b> positive PCR OR Next-Generation sequencing OR positive culture for MPV	<b>Probable:</b> No other Orthopoxvirus risk AND positive lab test for orthopoxvirus	<b>Suspect:</b> New characteristic rash OR epi criterion and high clinical suspicion for mpox
<b>Differential diagnosis</b>	Smallpox, chickenpox, shingles, measles, coxsackievirus, molluscum contagiosum, drug allergy, insect bites, scabies, rubella, syphilis, mononucleosis, impetigo, scarlet fever; for genital lesions: syphilis, herpes, chancroid; MPV infection can co-occur with another infection		
<b>Treatment</b>	Encourage antiviral agents (investigational) where appropriate (see below for information on how to access); post-exposure vaccine may prevent infection. Special clinical considerations exist for persons living with HIV, children and adolescents, and persons who are pregnant and/or breastfeeding (see section 5A).		
<b>Duration</b>	2-4 weeks or longer; contagious until scabs shed and healthy skin appears		
<b>Exposure</b>	Person-to-person; rarely contact with exotic animal		
<b>Laboratory testing at PHL</b>	<p>Clinical testing available commercially; check with performing lab on available tests for MPV vs. orthopoxvirus. Local health jurisdiction (LHJ) can also arrange for orthopoxvirus testing for cases at PHL (PCR, confirmation available at CDC). Serology available at CDC.</p> <ul style="list-style-type: none"> <li>• <b>Specimens (for PCR):</b> swab <b>2-4 lesions with synthetic swabs. Use viral (not universal) transport medium or dry vial. Label each: name, DOB, collection date, body site</b></li> <li>• Refrigerate within an hour. Keep all specimens <b>cold if will arrive within 24 hours, otherwise freeze and ship frozen (except for serum)</b>. For each specimen use <a href="#">this form</a></li> <li>• See Specimen Collection and Submission Instructions <a href="#">here</a> and <a href="#">here</a></li> </ul>		
<b>Public health actions</b>  <b>URGENT</b>	<p>LHJ should initiate investigation of an mpox case within 24 hours and immediately report confirmed cases to DOH through WDRS.</p> <ul style="list-style-type: none"> <li>• Isolate potential case, obtain full clinical information, other test results, and if available digital photographs. DOH consultation available for testing and treatment decisions. Please notify DOH if a healthcare worker is diagnosed with mpox.</li> <li>• Identify close contacts; if case tests positive, interview contacts. Conduct symptom monitoring for 21 days and refer contacts for post-exposure vaccination (if applicable).</li> <li>• Provide infection control guidance (see details on <a href="#">home</a> and <a href="#">healthcare</a> settings)</li> </ul>		

# Mpox (monkeypox)

## 1. DISEASE REPORTING

### A. Purpose of Reporting and Surveillance

1. To understand the epidemiology of mpox in Washington State residents and to inform public health and healthcare organizations about conditions that have been diagnosed in residents.
2. To assist in the diagnosis and treatment of cases.
3. If applicable, to identify potentially exposed close contacts, healthcare workers, and laboratory personnel and to provide counseling.
4. To identify sources of transmission and to prevent further transmission.
5. To raise the index of suspicion of a possible bioterrorism event if no natural exposure source is identified.

### B. Legal Reporting Requirements

1. Health care providers and Health care facilities: *immediately* notifiable to **local health jurisdiction**
2. Laboratories: *immediately* notifiable to **local health jurisdiction**
3. Local health jurisdictions: **immediately notifiable to the Washington State Department of Health (DOH) through WDRS.**

### C. Local Health Jurisdiction Investigation Responsibilities

1. Begin follow up investigation within 24 hours upon identification of a case.
2. Report any case through the Washington Disease Reporting System (WDRS) as a Rare Disease of Public Health Significance. In the Clinical and Laboratory question package, select Mpox as the 'Rare disease of public health significance'. All case investigation data must be entered in the Mpox Wizard in WDRS. See below for more information about notifying Tribes of cases in potential tribal members.

## 2. THE DISEASE AND ITS EPIDEMIOLOGY

### A. Etiologic Agent

Mpox (monkeypox) virus (MPV), a DNA virus in the genus *Orthopox*. There are two clades, I and II; Clade II causes milder illness. There can be various strains within a clade. Related viruses are variola virus (cause of smallpox), vaccinia virus (smallpox vaccine), and cowpox virus. The 2022 outbreak is due to Clade IIb (with sublineages A and B).

### D. Description of Illness

Mpox (previously called monkeypox) illness often but not always begins with a prodrome including fever, chills, headache, muscle aches, backache, lymphadenopathy, and exhaustion, as well as cough or a sore throat. Lymphadenopathy can involve the neck, armpits, or groin, and be on one or both sides of the body but is not always present.

Either genital lesions (which can ulcerate) or rectal inflammation without external rash may occur without a febrile prodrome.

From 1 to 3 or more days after the prodrome (if present), a rash develops which may cause severe pain particularly in mucosal areas (e.g., much more painful than a herpes infection in similar distribution). The typical rash has deep-seated well-circumscribed firm discrete lesions, but smaller less typical lesions have also been described in the 2022 outbreak. Lesions often but not always start on the face and then spread to other body areas, particularly the extremities. Lesions can be varied: asynchronous (multiple stages on a body site), single, diffuse, limited to one body part (e.g., mucosal, anogenital), disseminated (particularly with immunosuppression), shallow rather than deep-seated, or under a nail. Spread is generally systemic, not by direct transfer of viral material. Typically (but not always) rash lesions progress through stages synchronously on a body site:

Stage	Stage Duration	Characteristics
Enanthem		Sometimes, lesions first form on the tongue and in the mouth.
Macules	1-2 days	Macular lesions appear (spot with change in skin coloring).
Papules	1-2 days	Lesions typically progress from macular (flat) to popular (raised); raised (palpable) solid lesion
Vesicles	1-2 days	Lesions then typically become vesicular (circumscribed, raised and filled with clear fluid).
Pustules	5-7 days	Lesions then typically become pustular (filled with opaque fluid); sharply raised, usually round and firm to the touch (deep seated). Finally lesions typically develop a depression in the center (umbilication). The pustules will remain for approximately 5-7 days before beginning to crust.
Scabs	7-14 days	By the end of the second week, pustules have crusted and scabbed over. Scabs will remain for about a week before falling off.

\* This is a typical timeline, but timeline may vary.

Vesicular or pustular lesions may ulcerate or umbilicate in the center and the surrounding skin may redden. Keratitis or pneumonia may occur. Secondary bacterial infection can cause abscesses. Penile lesions can result in phimosis or balanitis. Rectal lesions can interfere with bowel movements (due to pain) or even lead to obstruction. Lesions are often quite painful (especially at mucous membrane sites), while scabs are itchy. Lesions may leave pitted scars, altered pigment, or corneal scars if ocular involvement occurs. Rare complications include dehydration, sepsis, or encephalitis/encephalomyelitis (see [MMWR](#) for more information on the latter).

The total duration of symptoms is 2–4 weeks. Case fatality rates during prior Clade I outbreaks in Africa have reached 10%, with higher risk for children; Clade II (the clade causing the current outbreak) has historically had a lower case fatality rate. In the 2022 outbreak, few deaths (under 0.1% of cases) have been reported. Being immunocompromised (e.g., untreated HIV) appears to increase risk of severe or fatal outcome (see [CDC HAN](#)).

Clinicians should consider other conditions causing rashes including chickenpox, shingles, measles, coxsackievirus (hand foot mouth disease), scabies, drug allergy, insect bites, rubella, syphilis, molluscum contagiosum, mononucleosis, impetigo, scarlet fever, erythema toxicum, smallpox; for genital lesions: syphilis, herpes simplex virus infection, chancroid, varicella zoster. Note that multiple concurrent infections can occur (e.g., herpes and MPV infection). Resources below.

- [General FAQ](#)
- [CDC FAQ for clinicians](#)
- [WA DOH FAQ for clinicians](#)
- [CDC information on clinical recognition of the rash](#)
- [CDC guidance on MPV and pregnancy](#)

### **C. Mpox in Washington State**

Prior to 2022 no cases had been detected. In May 2022 Washington identified its first cases which were part of an international outbreak involving Clade II. Cases have been reported from across the United States and many countries and continents. See [WA DOH page](#) for WA data, [CDC page](#) for US data, and [CDC](#) and [WHO](#) pages for global data.

### **D. Reservoirs**

Although first recognized in a research monkey colony, the reservoir for the virus in Central and West African countries is unknown. Several species of primates and rodents are known to be susceptible to infection with the virus. Person-to-person transmission occurs with close or intimate contact, or through fabrics or material with lesion or scab contamination.

### **E. Modes of Transmission**

MPV infection is acquired by close contact with an infected animal or with an infected person. The virus is present in the rash, scabs and scab fragments, and, if there are mucosal lesions, in associated fluids. Contact with clothing or bedding contaminated with lesion fluid or scabs can result in transmission. Transplacental transmission can occur. Lesions can occur in the mouth and throat, but droplet transmission alone is rarely implicated, so prolonged face-to-face contact is likely necessary for spread. Transmission during an air flight has not been documented. Transfer to or from healthcare personnel appears minimal (in the absence of a sharps injury) but recommended precautions should be maintained. Transmission in a healthcare setting may have occurred through contaminated bedding (see [journal article](#)). See CDC [page](#) and [science brief](#) for more information.

## **F. Incubation Period**

The incubation period (time from infection to symptoms) for mpox is usually 7–14 days but can range from 3–21 days.

## **G. Period of Communicability**

Mpox is communicable from onset of the first symptom until the last scab separates with healthy skin below. Emerging evidence also suggests that pre-symptomatic transmission is possible. At this time, it is unclear whether pre-symptomatic transmission occurs prior to rash onset in individuals who do not experience a viral prodrome, prior to viral prodrome onset, or both. While cases of asymptomatic infection have been documented, there are no known cases of transmission from individuals with asymptomatic infection (i.e., individuals who never develop symptoms). CDC provides [further information on mpox transmission](#).

Detached scabs from mpox lesions can retain infectious virus. Shed scabs and fabrics contaminated with scabs should be handled in a safe manner. Virus may persist for weeks in fabrics.

## **H. Treatment**

Prompt use of antiviral agents should be considered to prevent severe illness or complications, particularly for persons at increased risk for severe infection (e.g., immunocompromised, persons who are pregnant/breastfeeding, children, people with a condition affecting skin integrity) or persons with severe disease and/or mucosal lesions (eye, mouth, anogenital area). See Section 5A for details about treatment, including instructions on accessing TPOXX and vaccine. There may be an applicable Expanded Access Investigational New Drug Protocol needed. See:

- [CDC treatment page](#)
- [CDC treatment information for clinicians](#)
- [CDC guidance on obtaining tecovirimat](#)

Other interventions may be appropriate, such as antibiotics if lesions develop secondary bacterial infections. Special clinical considerations exist for persons who are living with HIV, children and adolescents, and persons who are pregnant and/or breastfeeding (see section 5A and [CDC guidance on mpox and pregnancy](#)).

CDC recommends vaccination within four days from the date of exposure in order to prevent onset of the disease. If given within 4-14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease. More information about post-exposure vaccination for close contacts is found later in this document (Section 5D; also see Section 7 for pre-exposure vaccination options). Vaccinia immune globulin intravenous (VIGIV) can be considered for prophylactic use if vaccine cannot be given.

## **I. Immunization Recommendations**

Vaccination (pre-exposure) is recommended for the following groups:

- Gay and bisexual men and transgender individuals who have had multiple or anonymous gay, male bisexual, or transgender sex partners in the last 6 months.
- People who have used methamphetamine in the last 6 months.

- People who have exchanged sex for money, drugs, or other purposes in the past 6 months.
- People who have been sexually assaulted, regardless of gender or sexual orientation.
- People who have had sexual contact or prolonged skin-to-skin exposure with people who were exposed to mpox.
- A new diagnosis in the last 12 months of one or more nationally reportable sexually transmitted infections (i.e., acute HIV, chancroid, chlamydia, gonorrhea, or syphilis).

Additionally, pre-exposure vaccination is recommended for certain persons at risk for occupational exposure to Orthopoxviruses (see [recent MMWR](#) for further information). Most clinicians and laboratorians *not* performing orthopoxvirus/MPV testing are not advised to receive pre-exposure vaccination. There is no recommendation for routine vaccination of health care workers due to effective protection provided with appropriate personal protective equipment (PPE). A [recent study in Colorado](#) found there was very low risk to health care workers exposed to patients with mpox despite incomplete adherence to PPE. However, if sufficient vaccine supply becomes available, vaccine eligibility should be broadened to include healthcare and public health workers who provide direct care to individuals with syphilis or other STIs as well as all individuals who have had multiple or anonymous sex partners in the last 3 months.

More detailed [DOH guidance](#) is available on use of the JYNNEOS vaccine. CDC provides [detailed guidance on mpox vaccination](#); see also the [Vaccine Information Statements \(VIS\)](#).

### 3. CASE DEFINITIONS

The situation is currently still evolving; case definitions may change in the future.

#### A. Case Definition (June 1, 2022)

Note that a person's categorization may change as the investigation continues (e.g., a person may go from Suspect to Probable). Also note exclusion criteria below.

##### *Suspect case:*

- New characteristic rash\* OR
- Meets one of the epidemiologic criteria and has a high clinical suspicion for mpox [Clinical suspicion may exist if presentation is consistent with illnesses confused with mpox (e.g., secondary syphilis, herpes, and varicella zoster)].

##### *Probable case:*

- No suspicion of other recent *Orthopoxvirus* exposure (e.g., *Vaccinia virus* in ACAM2000 vaccination) AND demonstration of the presence of:
  - *Orthopoxvirus* DNA by polymerase chain reaction of a clinical specimen OR
  - *Orthopoxvirus* using immunohistochemical or electron microscopy testing methods OR

- Detectable levels of anti-orthopoxvirus IgM antibody during the period of 4 to 56 days after rash onset

*Confirmed case:*

- Demonstration of the presence of mpox (monkeypox) virus DNA by polymerase chain reaction testing or Next-Generation sequencing of a clinical specimen OR isolation of mpox (monkeypox) virus in culture from a clinical specimen

## **B. Epidemiologic Criteria for Diagnosis**

Within 21 days of illness onset:

- Reports having had contact with a person who had a similar-appearing rash or who received a diagnosis of confirmed or probable mpox OR
- Had close or intimate in-person contact with individuals in a social network experiencing mpox activity, this includes men who have sex with men (MSM) who meet partners through an online website, digital application (“app”), or social event (e.g., a bar or party) **OR**
- Traveled outside the US to a country with confirmed cases of mpox or where mpox (monkeypox) virus is endemic **OR**
- Had contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.)

## **C. Exclusion Criteria**

A case may be excluded as a suspect, probable, or confirmed mpox case if:

- An alternative diagnosis\* can fully explain the illness **OR**
- An individual has symptoms consistent with mpox but does not develop a rash within 5 days of illness onset **OR**
- A case’s specimens do not demonstrate the presence of orthopoxvirus or mpox (monkeypox) virus or antibodies to orthopoxvirus

**Note:** DOH is only counting and reporting confirmed and probable cases to CDC.

\* The characteristic rash associated with mpox lesions involve the following: deep-seated and well-circumscribed lesions, often with central umbilication; and lesion progression through specific sequential stages—macules, papules, vesicles, pustules, and scabs; this can sometimes be confused with other diseases that are more commonly encountered in clinical practice (e.g., secondary syphilis, herpes, and varicella zoster). Historically, sporadic accounts of patients co-infected with mpox (monkeypox) virus and other infectious agents (e.g., varicella zoster, syphilis) have been reported, so patients with a characteristic rash should be considered for testing, even if other tests are positive.



## 4. DIAGNOSIS AND LABORATORY SERVICES

### A. Diagnosis

Testing for MPV is done at multiple clinical laboratories and Washington State Public Health Laboratories (WAPHL). A decision to test is based on the provider's assessment. WAPHL does preliminary testing (identifying Orthopoxvirus which is part of the definition for a probable case). Some specimens positive for Orthopoxvirus are forwarded to CDC for confirmation as MPV.

### B. Services Available at the Washington State Public Health Laboratories (WAPHL)

WAPHL can confirm Orthopoxvirus and rule out smallpox virus to diagnose a probable case. Additional testing such as MPV confirmation for some specimens, serology, microscopy, and culture is done at CDC.

Note that WAPHL require all clinical specimens have two patient identifiers, a name **and** a second identifier (e.g., birth date) on both the specimen label and submission form. Due to laboratory accreditation standards, specimens will be rejected for testing if not properly identified. For swabs also include the specific body site (e.g., left arm).

See [WAPHL Laboratory Test Menu](#) for specimen collection and submission instructions for testing at WAPHL. For testing at other commercial labs, please obtain guidance from the performing laboratory.

See also CDC guidance on [collecting and handling specimens](#)

### C. Specimen Collection for WAPHL

Use appropriate person protective equipment when collecting specimens. For WAPHL obtain 2-4 specimens from separate lesions. Scrub the lesion firmly with a swab to collect human cells – avoid use of sharps and do not unroof the lesion. If no lesions exist, scabs can be tested with prior approval – call WAPHL at 206-418-5562 if this is the only specimen collection option. Oral or rectal swab are **not** acceptable specimens unless there is a visible lesion to swab. Place a specimen in a screw-top vial with viral transport medium (**not** universal transport medium – CDC will not confirm specimens in UTM) or into a dry vial. Refrigerate specimens within one hour of collection. If specimen will **arrive** within 24 hours of collection, specimens can be shipped refrigerated. Otherwise freeze all specimens to -70° C to -20° C (except serum, which can be refrigerated if it will arrive within seven days of collection). Ship serum cold and all other specimens cold (if **arriving** within 24 hours of collection) or frozen.

See [additional DOH guidance](#) for details of specimen collection including storage and shipping temperatures.

Label each specimen container with two identifiers (e.g., name and date of birth), collection date, and the body site of the lesion (e.g., “left hand second digit”). Each specimen should be packaged with its form in a separate bag. Multiple specimen bags can be combined in a secondary bag or container. For each specimen, please enclose a completed [WAPHL MPV form](#).



## 5. ROUTINE CASE INVESTIGATION

### A. Evaluation of Suspect Cases

Evaluation of suspect cases will often be conducted by healthcare partners. However, if a local health jurisdiction is asked to assist in evaluation of a suspect case, the investigator may wish to interview the person and others who may be able to provide pertinent information, as well as review available medical records including digital photographs of a rash and epidemiologic information including risk factors. Consider obtaining information regarding:

- Symptoms preceding the rash including the first symptom and the date it occurred. Did the person have a fever, headache, muscle aches, backache, swollen lymph nodes, malaise/exhaustion, respiratory symptoms (sore throat, nasal congestion, cough)?
- Description of the rash? (Deep-seated and well-circumscribed? What stage/stages? Progression from macular and papular to vesicular and pustular? Lesions on a body part occur at the same stage? Painful or itchy?)
- Body part where the first lesion occurred
- Body parts now affected
- Underlying medical conditions, particularly any immunosuppression
- Any history of smallpox vaccination? If so, date and type?

Depending on the clinical context other potential diagnoses to consider might include varicella (chickenpox or zoster, i.e., shingles); hand, foot, and mouth disease; measles; scabies; molluscum contagiosum; herpes simplex; allergic skin rashes; syphilis or other STIs; drug eruptions; polymorphic eruption of pregnancy. Note that dual infections can occur (e.g., herpes and MPV infection).

Advise use of appropriate personal protective equipment when evaluating the patient and obtaining specimens for MPV testing and for other potential causes (see [CDC infection control guidance](#)). The person should be in home isolation while testing is pending and should be provided information about infection prevention, including measures to reduce further spread of the rash to themselves or others (see below for more details on infection prevention).

### B. Obtaining Laboratory Testing

Providers can order testing through clinical laboratories without consultation. Advise the provider to consider additional testing for alternative diagnoses associated with rashes such as syphilis, herpes, or chickenpox. Providers should also consider concurrent testing for HIV and other applicable sexually transmitted infections. Given the increased risk of severe mpox and the concurrent risk factors, nearly all patients with mpox should be tested for HIV; if HIV testing was not performed prior to diagnosis with mpox, encourage providers to complete HIV testing urgently (unless there is a clear reason not to test for HIV). When a patient is diagnosed with mpox, providers should also consider evaluation for other potential immunocompromising conditions and take steps to optimize immune function (if possible) for immunocompromised patients.

If testing at Washington State Public Health Laboratories is being requested, local health

jurisdictions should contact DOH ([mpoxconsult@doh.wa.gov](mailto:mpoxconsult@doh.wa.gov) or 206-418-5500) for approval prior to submitting specimens. While testing and evaluation are being conducted, the person should be in home isolation (see Section E below) and can be considered for treatment before test results are available (below).

If orthopoxvirus testing is positive, the person should continue home isolation through the end of their contagious period (see the Infection Prevention section for more information). If orthopoxvirus testing is negative, an alternative diagnosis should be pursued, and the need for continued home isolation determined based on clinical suspicion or alternate diagnosis (e.g., varicella).

If a false positive result is suspected, check the PCR Ct value. A Ct value of  $\geq 34$  may indicate a false positive (e.g., low level of viral DNA that may represent cross-contamination). Re-extract and rerun a specimen with a high Ct value and suspected false positive result (i.e., person at low risk); see [MMWR](#) for more information.

### C. Providing Consultation on Clinical Management

Healthcare partners should contact public health to discuss clinical management of people with risk factors for severe disease or clinical evidence of severe disease. CDC has issued special clinical considerations for persons who are:

- Living with HIV: Rash may be atypical (e.g., disseminated, confluent.) Promptly offer treatment if infected or vaccination (post-exposure prophylaxis) if a close contact. Monitor people with mpox closely, particularly for secondary bacterial infections if the HIV infection is inadequately treated. Never give ACAM2000 (replicating vaccine) to any person with HIV infection or to their close contacts. For details see [CDC guidance](#) and [MMWR](#).
- Children and adolescents: Children are thought to have a higher risk of severe disease, so it is important for a person with mpox to isolate from children in the household. If a child or adolescent is infected with MPV, data for pediatric infections are limited but rare complications could include abscess, airway obstruction due to severe lymphadenopathy, cellulitis, corneal scarring, keratitis, encephalitis, pneumonia, or sepsis. For details see [CDC guidance](#).
- Pregnant or breastfeeding: Other Orthopoxvirus infections are known to be more severe during pregnancy. Prioritize pregnant and breastfeeding persons for treatment. Viral transmission can occur in utero or perinatally, or with close contact during breast feeding. Stillbirth, preterm delivery, and neonatal infections have been reported. For details see [CDC clinical guidance](#).

Treatment of confirmed or suspected infection is with antiviral agents under protocols for Expanded Access Investigational New Drugs (EA-IND), which requires informed consent and various forms. Patient visits can be conducted via telemedicine and laboratory testing is optional. Healthcare providers should seek tecovirimat from their [local health jurisdiction](#), and can be referred to [this online checklist](#) that outlines the forms associated with the EA-IND process. Forms required under the EA-IND can be returned to CDC after treatment begins. CDC is available for consultation if needed for prescribing tecovirimat (TPOXX), which can be given in oral (better absorption if taken after a high fat meal) or IV form (LHJs can call CDC's Emergency Operation Center at

770-488-7100 and ask for a clinical consultation). Tecovirimat can be prescribed for children >3 kg and adults, with the IV formulation contraindicated for creatinine clearance <30 ml/min. See CDC guidance on [tecovirimat use](#) and on [obtaining tecovirimat](#). Providers can consult CDC for use of trifluridine (Viroptic) to treat ocular complications or for assistance considering other potential treatments.

When considering the use of tecovirimat, clinicians and patients should understand 1) the lack of data on tecovirimat effectiveness in people with mpox, 2) the lack of data indicating which patients might benefit the most from tecovirimat, and 3) the concern for resistance to tecovirimat, which could render the drug ineffective for any treated patients. Encourage antiviral treatment for persons with:

- Severe disease (e.g., hemorrhagic disease, confluent lesions, sepsis, encephalitis, or other conditions requiring hospitalization)
- High risk of progressing to severe disease:
  - Immunocompromising condition (e.g., advanced/uncontrolled HIV, 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, particularly patients younger than 8 years of age
  - History or presence of atopic dermatitis, persons with other active exfoliative skin conditions (e.g., eczema, burns, impetigo, varicella zoster virus infection, herpes simplex virus infection, severe acne, severe diaper dermatitis with extensive areas of denuded skin, psoriasis, or Darier disease [keratosis follicularis])
  - Current pregnancy or breastfeeding
  - One or more complications (e.g., secondary bacterial skin infection; gastroenteritis with severe nausea/vomiting, diarrhea, or dehydration; bronchopneumonia; concurrent disease or other comorbidities)
- Involvement of mucous membrane sites or other anatomic areas which might result in serious sequelae that include scarring or strictures (e.g., eyes, pharynx, penile foreskin, vulva, vagina, urethra, or rectum)
- Progressive disease, particularly if patient requires pain control

Treatment can be started early for a high-risk patient, even before test results are available. Each healthcare facility needs to follow the EA-IND protocol; healthcare providers can be referred to [this online checklist](#) that outlines the forms associated with the EA-IND process. There is also optional pharmacokinetic testing of plasma at an outside laboratory (Alturus) to help inform drug exposure. More information about optional pharmacokinetic testing can be found on the [CDC obtaining tecovirimat page](#).

It is strongly recommended that providers who will be prescribing tecovirimat work through their [local health jurisdiction](#). Local health jurisdictions needing assistance with obtaining tecovirimat can email [mcm@doh.wa.gov](mailto:mcm@doh.wa.gov) or can complete [an online form to request tecovirimat](#). Local health jurisdictions can order tecovirimat for pre-positioning in certain situations.

Local health jurisdiction investigators and tribal public health staff in Washington can also contact DOH to request clinical consultation either by email ([mpoxconsult@doh.wa.gov](mailto:mpoxconsult@doh.wa.gov)) or by calling 206-418-5500 to reach the clinical epidemiologist on-call.

#### **D. Infection Prevention Recommendations**

A person being tested for MPV should isolate until test results are available. If the test is positive, the person should isolate at home until all scabs are dried and shed, and healthy skin has formed (2-4 weeks). If a person with mpox is not able to isolate at home and needs assistance with isolation housing, see [DOH Isolation and Quarantine guidance](#).

The virus spreads in the body systemically, but theoretically auto-inoculation could occur into cuts or mucous membranes. Recommend that the patient not use contact lenses while lesions are present; if they must use contact lenses, they should adhere to strict thorough hand hygiene when touching the lens or eye. The patient should consider not shaving, since small cuts could be infected by contaminated towels or garments.

A person in isolation should take steps to prevent transmission. Wear a tight-fitting mask when around others at home. Cover lesions as much as possible with clothing or bandages. The person should also wear a mask and cover lesions if they need to leave home for follow-up medical care. Follow strict hand hygiene, particularly after touching lesions or potentially contaminated fabric or items. Do not share dishes or utensils. Clean and disinfect counters, surfaces, light switches, and handles frequently with appropriate household disinfectants (below). Avoid shaking out dirty fabric. Wash potentially contaminated clothing or bedding separately with detergent in hot water, and dry in a clothes dryer on a hot setting. Put shed scabs or bandages from lesions in a plastic zip bag, seal, and discard in a dedicated lined trash can, then clean any potentially contaminated surface. Consider use of disposable gloves if there are lesions on the hands. Waterproof mattress covers, blankets, coversheets, or other barriers can be used on upholstered furniture. Environmental sampling in one residential setting found PCR-positive but culture-negative swabs throughout the household (see [MMWR](#)).

In particular, the person with mpox should avoid contact with anybody who has a weakened immune system, or who is pregnant or breast-feeding. The person should also avoid contact with wild or domestic mammals including pets (see Section F below). Household members should limit contact with the infected person, their garments, and their towels and bedding, and if possible, not share a bathroom. Use an EPA-registered disinfectant (below) in shared spaces to clean a shower, toilet, sink, faucet, or counter.

For infection prevention at home see [CDC guidance for clinicians](#) and [CDC guidance for the public](#). The EPA also provides [information on appropriate disinfectants](#). CDC provides separate guidance on [infection prevention in healthcare settings](#).

A person being tested for MPV or diagnosed with mpox should avoid public transit. If they must take public transit for essential activities (i.e., healthcare appointments), they should wear a well-fitting mask at all times and cover all areas of skin that have a rash. CDC provides additional guidance about [preventing transmission to others](#). CDC advises that persons with mpox not travel; however, federal public health travel restrictions (Do Not Board and Public Health Lookout [DNB/LO]) will not be used to restrict the travel of

all individuals with mpox. If a person must travel, persons with mpox should be afebrile, not have any respiratory symptoms, and be advised to cover all their lesions and wear a well-fitting mask during travel. DNB/LO will be considered only for persons with suspected/probable/confirmed mpox who meet at least one of the following criteria: currently has a fever, currently has respiratory symptoms, is unable/unwilling to wear a mask during travel or is unable/unwilling to cover lesions. In addition, at least one of the following must be met: not aware of diagnosis or aware of diagnosis but not following public health recommendations, likely to travel on a commercial flight involving the United States or travel internationally by any means, or travel restrictions are needed to respond to a public health outbreak or health enforce a public health order. LHJs may email [travelhealth@doh.wa.gov](mailto:travelhealth@doh.wa.gov) for additional guidance or for DNB/LO orders

## E. Notification Processes

### LHJ notification to DOH

Local health jurisdiction staff should notify DOH immediately of a probable or confirmed case through the Washington Disease Reporting System (WDRS).

### DOH and LHJ notification to Tribes of cases for which Tribes might have jurisdiction

If requested by a Tribe, DOH will alert the designated contact at each Tribe when a probable or confirmed case reported in WDRS is possibly a member of said Tribe or a person who resides within the Tribe's jurisdiction. These potential tribal cases will be identified with: 1) a residential zip code that overlaps tribal boundaries; **or** 2) a zip code for a post office covering mailboxes only in counties that the tribal lands overlap. DOH is also providing Tribes with read/write access to WDRS for all cases in counties that overlap tribal lands so Tribes can access these cases.

Local health jurisdictions **should not** proactively ask about tribal membership during a case investigation. However, if a person chooses to provide information during a case investigation that identifies them as a tribal member or as residing on tribal lands, local health jurisdiction staff **should notify the Tribe**. Local health jurisdictions **should not** record tribal affiliation in WDRS or other data systems. To avoid duplication, Tribes and local health jurisdictions should develop processes in partnership for designating which jurisdiction will investigate cases in tribal members who do not reside on tribal lands.

### DOH notification to Tribal Epidemiology Centers (TECs) of cases in individuals who identify as American Indian or Alaska Native:

If requested, DOH will alert a designated contact at the Northwest Tribal Epidemiology Center (NWTEC) and/or the Urban Indian Health Institute (UIHI) of a probable or confirmed case with race information indicating American Indian or Alaska Native identity. The race information will be identified either from Electronic Laboratory Reporting, case investigation, or manual data entry by a local health jurisdiction. NWTEC will be provided read access to WDRS for these cases.

## F. Conducting Case Investigation and Contact Tracing

As with other communicable diseases, there are several goals when conducting case investigation and contact tracing:

**Identify potential sources of infection**

Ask about exposures during the 21 days prior to symptom onset:

1. Travel particularly outside the United States including to a country with confirmed cases or with endemic MPV
  - a. Determine dates and locations of travel including: country, city, and any large gatherings or special events attended
  - b. Obtain air travel information: date, time, flight number, city of departure, city of arrival, seat number, if known names of those in adjacent seats
2. Man who regularly has close or intimate in-person contact with other men
3. Contact with a person having known mpox or with a person having a similar rash
4. Recently received or in contact with a person who received smallpox vaccination with a live virus vaccine

**Identify potentially exposed persons**

Ask the case-patient or a person under investigation to identify their close contacts. Potentially exposed close contacts are those who: had sexual contact; touched the rash or affected skin; had prolonged skin-to-skin contact by activities such as hugging, cuddling, or kissing; or shared eating utensils, towels, clothes, or bedding. Ask about: household members and overnight guests, sexual partners and sexual contacts, travel or healthcare or dental visits, industry and occupation, in-person meetings or events, contact sports like basketball or wrestling, or staff providing personal care like hair dressing, massage, or health services. If air travel is identified, obtain air travel information: date, time, flight number, city of departure, city of arrival, seat number, and if known names of those in adjacent seats. Also determine if the person wore a mask and covered all lesions. Report case-patients who traveled by air travel to DOH CDE by emailing [mpoxconsult@doh.wa.gov](mailto:mpoxconsult@doh.wa.gov).

Once exposed close contacts are identified, assess their degree of exposure and their health status for risk of severe disease to determine whether prompt mpox post-exposure prophylaxis (PEP) with vaccination is appropriate (see below). Conduct interviews with close contacts and enroll them in symptom monitoring.

**Identify additional individuals at risk (cluster investigation)**

If possible, broaden the interview to identify individuals in the case-patient's sociosexual network who, although not exposed to mpox by the case-patient, would benefit from mpox vaccination. This approach is called cluster investigation; identified individuals are termed "cluster contacts". These individuals might include friends, partners of sex partners, prior sexual partners, people who attend the same venues and events, or otherwise have similar risks. Cluster contacts can then be contacted and referred for vaccination. Vaccination of these individuals can both protect them and reduce transmission in the sociosexual network. Identified cluster contacts may also benefit from other preventive health services, such as HIV and STI screening and HIV pre-exposure prophylaxis (PrEP).



A similar process of broadening the interview to identify cluster contacts can be used during close contact interviews. This approach will help identify additional individuals who would benefit from mpox vaccination as well as other preventive health services, such as HIV and STI screening and HIV pre-exposure prophylaxis (PrEP).

Depending on impacted population (e.g., men who have sex with men), should consider using LHJ Disease Intervention Specialist (DIS) staff for case and contact investigations. LHJ staff should assess for risk of HIV/STIs and refer for testing and treatment accordingly.

During cluster investigation outreach as well as broader community message, avoiding stigma is essential. Community partners can help develop effective messaging. See [CDC guidance on reducing stigma](#) for more information. CDC also provides [information about safe social gatherings and safer sex](#).

### G. Decisions on Post-Exposure Prophylaxis and Symptom Monitoring

DOH recommends using the CDC exposure risk assessment framework below to guide decisions about post-exposure prophylaxis and symptom monitoring for exposed contacts:

#### CDC Interim Community Exposure Risk Assessment and Recommendations for Monitoring and Postexposure Prophylaxis in Persons Exposed to Mpox (Monkeypox) Virus in a Community Setting

Degree of exposure	Criteria	Recommended actions for persons meeting criteria
Higher	<ul style="list-style-type: none"> <li>- Contact between an exposed individual's broken skin or mucous membranes with the skin lesions or bodily fluids from a person with mpox, OR</li> <li>- Any sexual or intimate contact involving mucous membranes (e.g., kissing, oral-genital, oral-anal, vaginal, or anal sex [insertive or receptive]) with a person with mpox,<sup>1</sup> OR</li> <li>- Contact between an exposed individual's broken skin or mucous membranes with materials (e.g., linens, clothing, objects, sex toys) that have contacted the skin lesions or bodily fluids of a person with mpox (e.g., sharing good, handling or sharing of linens used by a person with mpox without having been disinfected or laundered), OR</li> <li>- Exposure that, at the discretion of public health authorities, was</li> </ul>	<p>Persons:</p> <ul style="list-style-type: none"> <li>- Should be notified of exposure</li> <li>- Should be monitored [by public health unless alternate arrangements made by public health] for 21 days after last exposure</li> <li>- Continue daily activities (e.g., go to work or school) as long as they do not have mpox signs or symptoms</li> <li>- Not travel on commercial air flights during their monitoring period.</li> <li>- Be interviewed for cluster investigation</li> <li>- Should not donate blood, cells, tissue, breast milk, semen, or organs during the symptom monitoring period.</li> </ul>



	<p>recategorized to this risk level (i.e., exposure that ordinarily would be considered a lower risk exposure, raised to this risk level because of unique circumstances).</p>	<p>Recommend PEP (vaccination)</p>
Intermediate	<ul style="list-style-type: none"> <li>- Being within six feet for three hours or more (cumulative) of an unmasked person with mpox without wearing a surgical mask or respirator, OR</li> <li>- Contact between an exposed individual’s intact skin with the skin lesions or bodily fluids from a person with mpox, OR</li> <li>- Contact between an exposed individual’s intact skin with materials (e.g., linens, clothing, sex toys) that have contacted the skin lesions or bodily fluids from a person with mpox without having been disinfected or laundered, OR</li> <li>- Contact between an exposed individual’s clothing with the persons with mpox’s skin lesions or bodily fluids, or their soiled linens or dressings (e.g., during turning, bathing, or assisting with transfer)<sup>2</sup>, OR</li> <li>- Exposure that, at the discretion of public health authorities, was recategorized to this risk level (e.g., if the potential for an aerosol exposure is uncertain, public health authorities may choose to decrease risk level from high to intermediate).</li> </ul>	<p>Persons:</p> <ul style="list-style-type: none"> <li>- Should be notified of exposure.</li> <li>- Should be monitored for 21 days after last exposure.</li> <li>- Can continue their daily activities (e.g., go to work or school) as long as they do not have signs or symptoms consistent with mpox.</li> <li>- Should not donate blood, cells, tissue, breast milk, semen, or organs during the symptom monitoring period.</li> </ul> <p>Consider offering PEP (vaccination); informed clinical decision making recommended on an individual basis to determine if the benefits of PEP outweigh the risk.</p>
Lower	<ul style="list-style-type: none"> <li>- Entry into the living space of a person with mpox (regardless of whether the person with mpox is present), and the absence of any exposures above.</li> </ul>	<p>Persons:</p> <ul style="list-style-type: none"> <li>- Should be notified of exposure.</li> <li>- Should be monitored for 21 days after last exposure.</li> <li>- Can continue their daily activities (e.g., go to work or school) as long as they do not have signs or symptoms consistent with mpox.</li> <li>- Should not donate blood, cells, tissue, breast milk, semen, or organs during the symptom monitoring period.</li> </ul>

		<p>PEP is not recommended. Consider offering pre-exposure prophylaxis (vaccination) dependent on presence of risk factors.</p>
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<sup>1</sup>Additionally, individuals who report that a sex partner was diagnosed with mpox in the past 14 days should be offered PEP (even if they are not named as contacts by an identified person with mpox). People who have been sexually assaulted (regardless of gender or sexual orientation) should also be offered PEP.

<sup>2</sup>If the exposed individual is wearing gloves but not a gown, and as a result the exposed person’s clothing touches the patient’s skin lesions or bodily fluids, or their soiled linens or dressings, this is considered an intermediate risk exposure.

Contacts who are not healthcare workers should monitor for 21 days from last exposure. During the 21-day monitoring period:

- If a rash occurs:
  - An individual should contact the local health jurisdiction and their healthcare provider.
  - An individual should follow isolation and prevention practices\* until (1) the rash can be evaluated by a healthcare provider, (2) testing is performed, if recommended by their healthcare provider, and (3) the results of testing are available and negative.
- If other symptoms are present, but there is no rash:
  - An individual should follow isolation and prevention practices for 5 days after the development of any new symptom, even if this 5-day period extends beyond the original 21-day monitoring period.
    - If 5 days have passed without the development of any new symptom and a thorough skin examination reveals no skin changes such as rashes or lesions, isolation and prevention practices for mpox can be stopped.
  - If a new symptom develops again at any point during the 21-day monitoring period (including during a 5-day isolation, if applicable), then a new 5-day isolation period should begin where the individual follows isolation and prevention practices.
  - An individual should be advised to contact their healthcare provider as needed.

Isolation and prevention practices can be ended prior to 5 days if a healthcare provider or public health authority believes the rash, signs, or symptoms are not due to mpox and there is a clear alternative diagnosis made that doesn’t require isolation. The decision on when to end symptom monitoring and home isolation, either during the 21-day monitoring period or any 5-day extension, should be made with input from the local health jurisdiction.

For more information see CDC guidance on [symptom monitoring](#) and on [isolation procedures](#).

For healthcare workers with occupational exposure, see Section 6: Managing Special Populations.

## H. Providing Post-Exposure Prophylaxis (Vaccination)

Prompt mpox **post-exposure prophylaxis (PEP)** with appropriate vaccines may reduce the chance of infection or severe illness in persons exposed to MPV. CDC recommends PEP vaccination within four days from the date of exposure to prevent onset of the disease. If given within 4-14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease. PEP is recommended for asymptomatic persons including close contacts or healthcare personnel who had direct contact with lesions, scabs, crusts, or bodily fluids, or who had over 3 hours of unprotected respiratory exposure (see 5C and 6A). The dosing schedule for PEP vaccination with the JYNNEOS™ vaccine is a 2-dose series, given at a 28-day interval. If the exposed individual develops symptoms of mpox prior to receiving PEP vaccination, they should not be vaccinated. If the exposed individual receives dose 1 of PEP and then develops mpox, in most circumstances they should not receive dose 2 (if the individual is immunocompromised, they may be eligible to receive dose 2 after individual consultation and shared decision-making with a healthcare provider).

To more accurately reflect mpox vaccination strategy, WADOH transitioned from utilizing the term expanded PEP or PEP++ to instead identify those who remain at high risk of exposure. The goal remains to reach additional persons with risk factors that might have recently exposed them to MPV even if they have not had a documented exposure to someone with a confirmed diagnosis and to reach people with risk factors for infection before they are exposed. This allows the addition of criteria that expand the population of people eligible for vaccination, while still focusing on those at high risk of MPV exposure. Outreach to and vaccination of individuals who meet the categories below should be prioritized with vaccine supply limitations.

*Non-replicating vaccine* (JYNNEOS™ also known as Imvamune or Imvanex) is a 2-dose series that can be given unless there is allergy to any vaccine component. Limited doses are available. JYNNEOS™ is a non-replicating (also called replication-deficient) live virus vaccine. There is no visible “take” and no risk for spread to other parts of the body or other people. JYNNEOS™ is considered safe for administration to those with weakened immune systems. Although it has not been studied in U.S. clinical trials, JYNNEOS™ has been administered in other countries without safety concerns identified following administration.

People who received JYNNEOS™ are not considered vaccinated until 2 weeks after they receive the second dose of vaccine. The standard regimen for JYNNEOS™ involves a subcutaneous route of administration with an injection volume of 0.5 mL. In the context of the current national Public Health Emergency (PHE), an alternative regimen involving intradermal (ID) administration with an injection volume of 0.1 mL may be used under an Emergency Use Authorization (EUA).

*Replicating vaccine such as ACAM2000* is not currently being used in Washington State (it may be available at military facilities). If replicating vaccines are distributed in the future, it is important to note that replicating vaccine is **contraindicated** for those with immunodeficiency. Due to risk of severe infection (progressive vaccinia) with replicating vaccine virus, it **should not** be given to a contact with weakened immune systems, including patients with leukemia, lymphoma, organ transplantation, generalized malignancy, HIV/AIDS, cellular or humoral immune deficiency, radiation therapy, or treatment with antimetabolites, alkylating agents, high-dose corticosteroids (>10 mg prednisone/day or equivalent for  $\geq 2$  weeks) or other immunomodulatory drugs. Persons with atopic dermatitis, eczema or other exfoliative skin conditions should not receive a replicating vaccine like ACAM2000.

Health care providers should work with their local health jurisdictions to obtain vaccine for PEP. If support or guidance is needed, contact WADOH Immunizations at 360-236-3595.

CDC provides [detailed guidance on mpox vaccination](#) and also provides information on [specific populations](#), including children. See also the [Vaccine Information Statements \(VIS\)](#).

Vaccinia immune globulin intravenous (VIGIV) can be considered for prophylactic use in an exposed person for whom PEP vaccination following exposure to MPV is contraindicated.

Report vaccine adverse events to [VAERS](#)

For pre-exposure vaccination see Section 7C.

## I. Zoonotic and Environmental Evaluation

Animal-related issues

Infection has been documented in rodents and non-human primates, but all mammals should be considered susceptible to MPV infection. Transmission from an infected person to a pet dog has been documented during the current outbreak. Persons with mpox should take steps to avoid infecting pets, domestic animals, and wildlife. Notify Office of CD Epi Zoonotic Disease (206-418-5500) for an animal exposed to a human case. For detailed guidance see [DOH](#) and [CDC](#) guidance.

Environmental issues (also see Section 5D above)

Persons in isolation should separate from others, do their own laundry, and safely dispose of scabs, bandages, and potentially contaminated materials. Virus may persist weeks or months. Standard household disinfectants should be used on contaminated surfaces, with frequent cleansing of counters, surfaces, light switches, and door handles. See [CDC guidance on infection control in the home](#).

## 6. MANAGING SPECIAL SITUATIONS

### A. Occupational Exposures in Healthcare Workers

Correct and consistent use of PPE when caring for a patient with mpox or working with materials which have been in contact with those patients is highly protective and prevents

transmission to healthcare workers. However, unrecognized errors during the use of PPE (e.g., self-contaminating when removing contaminated PPE) may create opportunities for transmission to healthcare workers. Therefore, in the absence of an exposure described below, healthcare workers who enter a contaminated patient room or care area while wearing recommended PPE should be aware of the signs and symptoms of mpox; if any signs or symptoms of mpox occur, healthcare workers should notify occupational health services for further evaluation and should not report to work (or should leave work, if signs or symptoms develop while at work).

**CDC Guide to Assessing Risk of Healthcare Workers with Occupational Mpox (Monkeypox) Virus Exposures to Guide Monitoring and Recommendations for Postexposure Prophylaxis**

Risk level of exposure	Exposure characteristics	Recommendations
Higher	<ul style="list-style-type: none"> <li>- Unprotected contact between an exposed individual’s broken skin or mucous membranes and the skin lesions or bodily fluids from a patient with mpox (e.g., inadvertent splashes of patient saliva to the eyes or mouth of a person), or soiled materials (e.g., linens, clothing), OR</li> <li>- Being inside the patient’s room or within six feet of a patient with mpox during any medical procedures that may create aerosols from oral secretions (e.g., cardiopulmonary resuscitation, intubation), or activities that may resuspend dried exudates (e.g., shaking of soiled linens), without wearing a NIOSH-approved particulate respirator with N95 filters or higher and eye protection.</li> </ul>	<p>Persons:</p> <ul style="list-style-type: none"> <li>- Should be monitored for 21 days after last exposure [by public health or occupational health].</li> <li>- Can continue their daily activities (e.g., go to work or school) as long as they do not have signs or symptoms consistent with mpox.</li> </ul> <p>PEP (vaccination) should be recommended.</p>
Intermediate	<ul style="list-style-type: none"> <li>- Being within six feet for a total of three hours or more (cumulative) of an unmasked patient with mpox without wearing a facemask or respirator, OR</li> <li>- Unprotected contact between an exposed individual’s intact skin and the skin lesions or bodily fluids from a patient with mpox, or soiled materials (e.g., linens, clothing), OR</li> <li>- Activities resulting in contact between an exposed individual’s clothing and the patient with mpox’s skin lesions or bodily fluids, or their soiled materials (e.g., during turning, bathing, or assisting with transfer) while not wearing a gown</li> </ul>	<p>Persons:</p> <ul style="list-style-type: none"> <li>- Should be monitored for 21 days after last exposure [by public health or occupational health].</li> <li>- Can continue their daily activities (e.g., go to work or school) as long as they do not have signs or symptoms consistent with mpox.</li> </ul> <p>Consider offering PEP (vaccination); informed clinical decision making</p>

		recommended on an individual basis to determine if the benefits of PEP outweigh the risk.
Lower	- Entry into the contaminated room or patient care area of a patient with mpox without wearing all recommended PE, and in the absence of any exposures above	<p>Persons:</p> <ul style="list-style-type: none"> <li>- Should be monitored for 21 days after last exposure.</li> <li>- Can continue their daily activities (e.g., go to work or school) as long as they do not have signs or symptoms consistent with mpox.</li> </ul> <p>PEP not recommended.</p>

Asymptomatic healthcare providers with exposures to MPV do not need to be excluded from work, but should be monitored (e.g., at least a daily self-assessment conducted by the exposed healthcare worker for signs and symptoms of mpox) for 21 days after their last exposure. If symptoms develop, healthcare providers should be managed as described below. If mpox is ruled out, they may still have work restrictions recommended if their diagnosis is one where restriction from work is recommended (e.g., varicella).

During the 21-day monitoring period:

- If a rash occurs, healthcare workers should:
  - Inform occupational health program
  - Be excluded from work until (1) the rash can be evaluated, (2) testing is performed, if indicated, and (3) the results of testing are available and negative.
- If other symptoms are present, but there is no rash, healthcare workers should:
  - Be excluded from work for 5 days after the development of any new symptom, even if this 5-day period extends beyond the original 21-day monitoring period.
    - If 5 days have passed without the development of any new symptom and a thorough skin examination reveals no skin changes, HCW could return to work with permission from their occupational health program.
  - If a new symptom develops again at any point during the 21-day monitoring period, then HCW should be excluded from work and a new 5-day isolation period should begin.

Healthcare workers with mpox should be excluded from work until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed

underneath. Ultimately, the decision on when to return to work will be made with their occupational health program, and potentially with input from public health authorities.

See [CDC guidance on healthcare worker exposures](#) for more information.

#### E. Mpox in educational settings

For schools, early care and education programs, and other settings serving children or adolescents see [CDC guidance for schools and childcare facilities](#). CDC also provides [guidance for institutions of higher education](#).

#### C. Investigation of potential MPV reinfection

At this time, MPV reinfection has not been documented. However, mpox disease in the current outbreak has differed from mpox disease in prior outbreaks. It is also possible that immunocompromised people will be at increased risk of reinfection. Regardless of immune function, people with prior mpox who develop a new rash consistent with mpox should be tested for MPV.

When a new positive test is reported for a person with a prior positive test, LHJs should investigate to determine whether the new positive result likely represents persistent viral shedding from the initial infection vs. a reinfection. The following information may be helpful in determining the level of suspicion for reinfection:

- Clinical rationale for the most recent positive test
- Patient's current signs and symptoms
- Clinical details of the patient's initial/prior infection (e.g., severity, lesion sites, complications)
- Whether the patient had full resolution/healing of lesions in the initial/prior illness episode
- Information on any immunocompromising conditions
- Information on the lesion site tested and on specimen collection procedure for the most recent positive test
- Cycle threshold (CT) value for the most recent positive test
- Information on any potential recent exposures

If an MPV reinfection case is suspected, please contact DOH Clinical Epidemiology ([mpoxconsult@doh.wa.gov](mailto:mpoxconsult@doh.wa.gov) or 206-418-5500). A DOH clinical epidemiologist will consult with you and may recommend further testing (e.g., MPV sequencing or serologies) and/or consultation with CDC.

If the second/most recent positive test result likely represents persistent viral shedding from the initial infection, please notify the DOH WDRS team so that they can merge the cases in WDRS. This request can be made via the WDRS task functionality (preferred) or by contacting [GCDWDRSDevelopers@doh.wa.gov](mailto:GCDWDRSDevelopers@doh.wa.gov). If using the WDRS task functionality, please assign tasks to "GCD Statewide Zoonotic Edit." Additional guidance and user instructions on creating and assigning tasks in WDRS can be found on the [WDRS SharePoint site](#) under "WDRS Training Videos."



**ACKNOWLEDGEMENTS**

This document is a revision of the Washington State Guidelines for Notifiable Condition Reporting and Surveillance published in 2002 which were originally based on the Control of Communicable Diseases Manual (CCDM), 17<sup>th</sup> Edition; James Chin, Ed. APHA 2000. We would like to acknowledge the Oregon Department of Human Services for developing the format and select content of this document.

**UPDATES**

June 2022: Separated from Rare Disease guideline and expanded

June 10, 2022: More details provided about symptoms (Section 2B); for case definition positive IgM also requires no suspicion of other recent Orthopox exposure, exclusion criterion for negative tests requires high-quality specimens (Section 3); swab specimens suggested 2-4, shipping changed to Category B (Section 4); updated recommendations for isolation, contact monitoring, and completion of isolation (Section 5C); zoonoses information expanded (Section 5F), public education added (Section 7A)

June 29, 2022: clinical description updated in Section 2B to include symptoms apart from typical presentation (can be shallow lesions, few lesions, multiple stages); specimen collection updated testing without unroofing lesions (Section 4); added antiviral and vaccine information (Section 5A, 5D); zoonotic information previously in Section 5F removed due to development of a separate guidance.

July 26, 2022: new CDC link for infection during pregnancy (Section 2B); added information about clinical testing outside of PHL (Section 4A); expanded details about appropriate patients for antiviral treatment (Section 5A); summary of CDC's more streamlined protocol for obtaining tecovirimat (Section 5D); expanded infection prevention in the home including avoiding self-inoculation (Section 5E); additional resources for preventing transmission (Section 6A).

August 5, 2022: changes to viral transport medium preferred to dry vial for PHL testing, scabs tested only with prior laboratory approval (Section 4)

August 17, 2022: added pregnancy-related resource (Section 2B); link added for new specimen submission form (Section 4C); citation for recommending treatment for pain control (Section 5A); added VIGIV as post-exposure option in Section 5D.

October 25, 2022: updated incubation period to 3-21 days; case counts updated Section 2; added timeline table for rash progression (Section 2B); additional CDC links in Section 2B; additional detail related to evaluation of suspect cases (Section 5A); added recommendations for additional testing dependent on risk population (Section 5B); referenced MMWR related to false positives (Section 5B); additional detail for clinical management of special populations (Section 5C); additional clarification for considerations in using tecovirimat (section 5C); added link to online request form for TPOXX and link to guidance for EA-IND forms (section 5C); added detail regarding the use of public transit and a reference for environmental sampling results reported for a residential setting (Section 5D); added new information regarding tribal notifications (Section 5E); included detail and new guidance on cluster contact investigations, examples of close contacts, and recommended public health action by type of contact (Sections 5F and 5G); updates to use of post-exposure vaccine (Section 5H); added recommendations for assessing risk for healthcare providers with MPV exposure and recommended public health actions and monitoring (Section 6A); added CDC link for settings servicing children (Section 7B); updates to pre-exposure vaccine recommendations and added detail clarifying pre-exposure vaccine for healthcare workers (Section 7C).

November 2, 2022: minor edits to correct hyperlinks and streamline terminology

December 20, 2022: for WAC revision combined provider and facility reporting requirement, updated laboratory submission (Section 1B); minor reorganization of content; addition of recommendations for potential MPV reinfection, change in terminology given renaming of disease to mpox

March 7, 2023: added information on pre-symptomatic transmission

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email [civil.rights@doh.wa.gov](mailto:civil.rights@doh.wa.gov).