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Mpox toolkit for health-care workers

World Health Organization
European Region

Contents

Introduction

Mpox is a viral infection that spreads primarily through close physical contact, including sexual contact, and less commonly through contact with contaminated surfaces and objects.

In 2022, a major mpox outbreak was reported for the first time in several previously non-endemic countries, including those in the WHO European Region. Mpox clade II, responsible for the outbreak, continues to circulate in the Region, with the emergence of mpox clade I cases amplifying its public health significance.

Healthcare workers are central to the mpox response, from diagnosing and treating patients to preventing the spread of the virus and providing patient counseling. This toolkit offers practical guidance on identifying mpox, testing, treatment, infection prevention and control, and effective communication with patients.

This leaflet is intended to provide general information and guidance and is not a substitute for professional medical advice.

How to recognize mpox case

Think "suspected mpox" if you see a patient:

- who has an unexplained acute skin rash, mucosal lesions or swollen lymph nodes;

AND

- acute rash or skin lesions cannot be explained by common causes including varicella zoster, herpes zoster, measles, herpes simplex, bacterial skin infections, disseminated gonococcus infection (DGI), primary or secondary syphilis, chancroid, lymphogranuloma venereum (LGV), granuloma inguinale, molluscum contagiosum, allergic reaction, and any other locally relevant common causes of papular or vesicular rash.

Think "probable mpox" if you see a patient with:

- an unexplained acute skin rash, mucosal lesions or swollen lymph nodes;

AND

- recent contact (within 21 days) with a person who has confirmed mpox.

A confirmed case of mpox is when you have a laboratory confirmed infection. A confirmed case is when we find mpox virus DNA in a patient's sample using special tests (PCR or genetic sequencing).

What to do when you see a suspected and probable mpox case.

1. Always use adequate personal protective equipment (PPE) (such as gloves, a gown, a mask (medical or a respirator), and eye protection) when examining patients or taking samples.
2. Support immediate clinical needs (e.g., low blood pressure, low oxygen).
3. Isolate the patient.

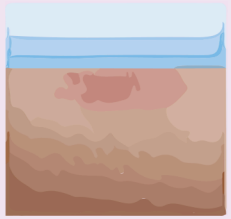
Report cases of mpox to public health authorities immediately as recommended by national guidelines.

Types of questions to ask the patient:

- Have you recently travelled? To which countries did you travel?
- How long have you had the rash? What other symptoms have you experienced?
- Have you been in close contact with anyone who has been diagnosed with mpox or has had a similar rash or other symptoms?
- Have you had any new sexual partners in the last 21 days?

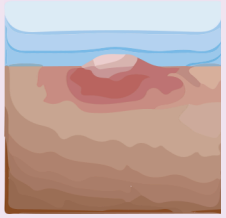
Use these questions to understand risk factors, not to rule out mpox. Diagnosis should be based on clinical presentation and testing.

Mpox lesions over time



Lesions emerge as flat, reddened areas.

Lesions develop into firm, elevated bumps.



Lesions enlarge and contain clear fluid within.

Fluid inside lesions turn into opaque, yellowish form.

Lesions form crusty, itchy scabs as they heal.

How to test for mpox

People who meet the definition for a suspected or probable mpox case should be tested for mpox. Timely testing is essential for the early identification of infected individuals, including the detection of the relevant clade.

An mpox rash can mimic other conditions, which are important to consider for differential diagnosis, such as:

- **viral infections**, including chickenpox (varicella zoster virus), herpes simplex virus, measles, molluscum contagiosum, zika virus, chikungunya, dengue fever, foot and mouth disease, and other enteroviral infections;
- **bacterial infections**, such as primary or secondary syphilis, disseminated gonococcal infection (DGI), chancroid, lymphogranuloma venereum (LGV), granuloma inguinale, rickettsia pox, and other bacterial skin and soft tissue infections; and
- **other diseases**, such as scabies and vasculitis.

If clinical and epidemiologic suspicion remains high, consider mpox even if another pathogen is identified.

Specimen collection

Collect samples from skin or mucosal lesions, as follows.

- Use Dacron or polyester flocked swabs.
- Swab lesions vigorously to ensure adequate viral DNA collection.
- Specimens from two lesions of the same type can be collected in one tube.
- IMPORTANT: Keep lesion fluids and crusts in separate containers.

If there are no visible lesions, collect oropharyngeal, anal or rectal swabs. Note that negative results from these sites don't rule out mpox.

Specimen storage and transport:

- Store within one hour of collection as follows:
  - Refrigerate (2-8°C) OR
  - Freeze (-20°C or lower).
- For transport >7 days, store at -20 °C or lower.
- For long-term storage (>60 days), use -70 °C.
- Avoid repeated freeze-thaw cycles.
- Use triple packaging for transport.
- Transport as a Category B biological substance.

PCR is the recommended test method. Blood PCR is not recommended for diagnosis, due to the risk of false negatives. Use appropriate protective gear when collecting samples.

Interpretation:

- A positive lesion MPXV PCR confirms mpox.
- A positive orthopoxvirus PCR (e.g., OPXV-specific PCR without MPXV-specific PCR or sequencing) without mpox-specific confirmation needs further MPXV testing for confirmation.
- Negative swab results alone are insufficient to rule out infection in a suspected case. If there is strong clinical and epidemiologic suspicion of mpox then the patient should be reswabbed and tested. An alternate test can be used if available.

How to protect yourself from mpox at the workplace

The proper use of personal protective equipment (PPE) and adherence to infection control practices are crucial in protecting yourself and preventing transmission of mpox in health-care settings when caring for patients with suspected or confirmed mpox.

1. Use appropriate PPE.

- Wear gloves, a gown, a mask (medical or a respirator), and eye protection.

2. Practice adequate hand hygiene.

- Perform hand hygiene according to WHO's Five moments for hand hygiene.

3. Handle linen and waste safely.

- To avoid dispersing infectious particles, do not shake contaminated linens.
- Handle infectious waste according to local guidelines.

4. Clean and disinfect surfaces and medical equipment.

- Regularly clean and disinfect patient-care areas and equipment using approved cleaning and disinfection products.

5. Manage your exposures.

- If you have been exposed to mpox you should:
  - undergo medical evaluation, and possible interventions may be considered; and
  - notify infection control, occupational health and public health authorities immediately.

6. Get vaccinated.

- Consider vaccination if available and recommended for you, especially if you're at a high risk of exposure.

How to provide clinical care for mpox patients

Patient pathway

Follow the steps below for clinical care.

1. Screen and triage all patients with rash and fever/lymphadenopathy for mpox, using the WHO case definition.

2. Triage suspected mpox patients to assess disease severity and risk factors.

3. Test people with suspected mpox.

Care for people with mild mpox

Patients with mild, uncomplicated mpox should isolate at home if conditions allow. The patient should stay in a separate room or, if not possible, in an area separated from others by a curtain on screen.

1. Provide patients with symptomatic treatment for mpox, including pain relief, fever reduction and care for lesions.

2. Provide advice on appropriate nutrition and supplements as needed.

3. Maintain daily communication with home-isolated patients and inform them about signs of complications requiring urgent care.

Care for people with severe or complicated mpox

Patients with severe or complicated mpox, or underlying risk factors, such as immunodeficiency or poorly managed HIV infection, should be isolated and treated in a hospital or health-care facility.

1. Provide patients with symptomatic treatment for mpox, including pain relief, fever reduction and care for lesions.

2. Provide advice on appropriate nutrition and supplements as needed.

3. Use antivirals or other specific therapeutics against monkeypox virus in a clinical research context if indicated and available.

How to talk to patients about mpox

Your compassionate, non-judgmental approach is crucial in building trust and ensuring patients access health services and feel supported throughout their mpox experience.

1. Listen actively.

Use open-ended questions : “How long did you have the rash?”
Show interest through non-verbal cues, such as eye contact or nodding.
Reflect back: “So you’re saying you’re worried about infecting your family…”

2. Acknowledge and address concerns.

Let patients express feelings: “It sounds like you’re feeling overwhelmed.”
Use empathetic statements, such as, “I understand this isolation period must be challenging for you.”
Explore concerns, for example, by saying, “What aspect of mpox concerns you the most right now?”

3. Provide clear, simple information.

“Mpox spreads through close contact. It’s not like flu that spreads easily through air.”
“The rash typically lasts 2–4 weeks. During this time, it’s crucial to avoid close contact with others.”
“If you develop fever over 38 °C or have trouble breathing, call us immediately.”

4. Address uncertainty.

“Based on current evidence, most people recover fully from mpox without complications.”
“We’re still learning about long-term effects. We’ll update you as we know more.”

5. Combat stigma.

Instead of “mpox patient” say “person diagnosed with mpox”.
“Anyone can get mpox. It’s not limited to any specific group.”

6. Ensure understanding.

“Could you tell me in your own words how you’ll care for your rash at home?”
“What questions do you have about what we’ve discussed?”

7. Maintain confidentiality.

“Your health information is private. We only share what’s necessary for public health reasons.”

8. Offer support.

“We have counselors available if you’d like to talk about how you’re feeling.”
“Here are some ways to stay connected with loved ones while in isolation…”

9. Follow up.

“I’ll call you in three days to check how you’re doing. Is that okay?”
“Here’s a reliable website for updates on mpox.”

Resources

Surveillance, case investigation and contact tracing for mpox (monkeypox): Interim guidance, 20 March 2024

Diagnostic testing for the monkeypox virus (MPXV): interim guidance, 10 May 2024

Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022

Infection prevention and control and water, sanitation and hygiene measures for home care and isolation for mpox in resource-limited settings

Mpox screening form for health care facility entrances

A risk communication, community engagement and infodemic management toolkit for mpox elimination: 17 May 2023 update