

Mpox (Monkeypox) outbreak toolbox

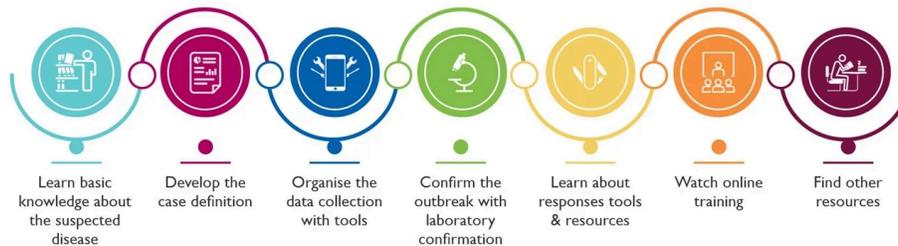
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Key reference documents

- [Mpox health topic page](#)
- [Mpox fact sheet](#)
- [Mpox: What we Know English/French](#)

[2022-2023 Mpox Outbreak: Global Trends](#)



Case definitions

WHO suggested outbreak case definition

Suspected case

i) A person who is a contact of a probable or confirmed mpox case in the 21 days before the onset of signs or symptoms, and who presents with any of the following: acute onset of fever ($>38.5^{\circ}\text{C}$), headache, myalgia (muscle pain/body aches), back pain, profound weakness, or fatigue.

OR

ii) A person presenting with an unexplained acute skin rash, mucosal lesions or lymphadenopathy (swollen lymph nodes). The skin rash may include single or multiple lesions in the ano-genital region or elsewhere on the body. Mucosal lesions may include single or multiple oral, conjunctival, urethral, penile, vaginal, or anorectal lesions. Anorectal lesions can also manifest as ano-rectal inflammation (proctitis), pain and/or bleeding.

AND

for which the following common causes of acute rash or skin lesions do not fully explain the clinical picture: varicella zoster, herpes zoster, measles, herpes simplex, bacterial skin infections, disseminated gonococcus infection, primary or secondary syphilis, chancroid, lymphogranuloma venereum, granuloma inguinale, molluscum contagiosum, allergic reaction (e.g., to plants); and any other locally relevant common causes of papular or vesicular rash.

N.B. It is not necessary to obtain negative laboratory results for listed common causes of rash illness in order to classify a case as suspected. Further, if suspicion of mpox or MPXV infection is high due to either history and/or clinical presentation or possible exposure to a case, the identification of an alternate pathogen which causes rash illness should not preclude testing for MPXV, as co-infections have been identified.

Probable case

A person presenting with an unexplained acute skin rash, mucosal lesions or lymphadenopathy (swollen lymph nodes). The skin rash may include single or multiple lesions in the ano-genital region or elsewhere on the body. Mucosal lesions may include single or multiple oral, conjunctival, urethral, penile, vaginal, or anorectal lesions. Ano-rectal lesions can also manifest as ano-rectal inflammation (proctitis), pain and/or bleeding.

AND

One or more of the following:

- has an epidemiological link to a probable or confirmed case of mpox in the 21 days before symptom onset
- has had multiple and/or casual sexual partners in the 21 days before symptom onset
- has a positive test result for orthopoxviral infection (e.g., OPXV-specific PCR without MPXV-specific PCR or sequencing)

Confirmed case

A person with laboratory confirmed MPXV infection by detection of unique sequences of viral DNA by real-time polymerase chain reaction (PCR)^c and/or sequencing.

For further guidance on testing please refer to Laboratory testing for the monkeypox virus: Interim guidance.³²

Discarded case

A suspected or probable case for which laboratory testing of lesion fluid, skin specimens or crusts by PCR and/or sequencing is negative for MPXV^c. Conversely, a retrospectively detected probable case for which lesion

testing can no longer be adequately performed (i.e., after the crusts fall off) and no other specimen is found PCR-positive, would remain classified as a probable case. A suspected or probable case should not be discarded based on a negative result from an oropharyngeal, anal or rectal swab or from a blood test alone.

Definition of mpox death for surveillance purposes

A mpox death for surveillance purposes is defined as a death in a probable or confirmed mpox case unless the alternative cause of death is trauma. In the endemic setting where access to laboratory confirmation of mpox is limited, this definition includes deaths among persons with suspected (clinically compatible) mpox, which are to be considered suspected mpox deaths. The diagnosis for mpox can also be confirmed after the death has occurred if there is sufficient lesion material to perform PCR testing. There should be no period of complete recovery between the illness and death for the death to be recorded as a mpox death.

Reinfection case definition

Suspected mpox reinfection

- A person who currently meets the criteria for a confirmed case of mpox

AND

- Has a documented history of a previous episode of mpox, as a suspected, probable or confirmed case.
- It is unclear if the person presented full clinical resolution of the previous episode.

Probable mpox reinfection

- A person who currently meets the criteria for a confirmed case of mpox

AND

- Has a documented history of a previous episode of mpox, as a probable or confirmed case.
- Full clinical resolution of the previous mpox episode occurred.
- The time between the resolution of the first episode and the onset of new symptoms is less than three months.

Confirmed mpox reinfection

- A person who currently meets the criteria for a confirmed case of mpox

AND

- Has a documented history of a previous episode of mpox, as a confirmed case.
- Full clinical resolution of the previous mpox episode occurred.
- The time between the resolution of the first episode and the onset of new symptoms is three months or more.
- When possible, strain differentiation is undertaken using genetic sequencing.

OR

- Has a probable mpox reinfection (as described above) with significant strain differentiation between the two MPXV infections (e.g. different lineage and descendant lineages) using genetic sequencing.

Definition of a contact

A person who has been exposed to an infected person during the infection period i.e., the period beginning with the onset of the index case's first symptoms and ending when all scabs have fallen off, and who has one or more of the following exposures with a probable or confirmed case of mpox:

- direct skin-to-skin and skin-to-mucosal physical contact (such as touching, hugging, kissing, intimate or sexual contact)
- contact with contaminated materials such as clothing or bedding, including material dislodged from bedding or surfaces during handling of laundry or cleaning of contaminated rooms
- prolonged face-to-face respiratory exposure in close proximity
- respiratory exposure (i.e., possible inhalation of) or eye mucosal exposure to lesion material (e.g., scabs/crusts) from an infected person
- the above also apply for health workers potentially exposed in the absence of proper use of appropriate personal protective equipment (PPE)⁴

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1. *The person has been exposed to a probable or confirmed mpox case. Please see below definition of a contact.*
 2. *Serology can be used for retrospective case classification for a probable case in specific circumstances such as when diagnostic testing through PCR of skin lesion specimens has not been possible, or in the context of research with standardized data collection. The primary diagnostic test for mpox diagnosis is PCR of skin lesion material or other specimen such as an oral or nasopharyngeal swab as appropriate. Serology should not be used as a first line diagnostic test.*
 3. *PCR on a blood specimen may be unreliable and should also not be used alone as a first line diagnostic test. If blood PCR is negative and was the only test done, this is not sufficient to discard a case that otherwise meets the definition of a suspected for probable case. This applies regardless of whether the blood PCR was for OPXV or MPXV specific.*
 4. *Clinical Management and Infection Prevention and Control for Mpox: Interim rapid response guidance – 10 June 2022.*



**Data collections
tools**

- Case report form: [Word](#)
 - Case investigation form: [PDF](#)
 - Electronic tools: [Godata website](#)
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Laboratory confirmation

- [Diagnostic testing for the monkeypox virus \(MPXV\): interim guidance](#) (Geneva: World Health Organisation, 24 April 2024)
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Response tools and resources

- [Surveillance, case investigation and contact tracing for Mpox, Interim guidance](#) (Geneva; World Health Organization, 20 March 2024).
 - [Clinical Management and Infection Prevention and Control for Monkeypox: Interim rapid response guidance](#) (Geneva, World Health Organization, 10 June 2022).
 - [Vaccines and immunization for Mpox: interim guidance](#) (Geneva, WHO, World Health Organization, 16 November 2022).
 - [Updated vaccination advice for outbreak response.](#)
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Training

English

- [Mpox and the 2022-2023 global outbreak](#) (Geneva: World Health Organization; 2020).
- [Mpox: Introduction for African outbreak contexts](#) (Geneva: World Health Organization; 2020).
- [Mpox epidemiology, preparedness and response for African outbreak contexts: Open WHO course.](#) (Geneva: World Health Organisation; 2020).
- [Mpox and the 2022-2023 global outbreak](#)

Français

- [Variole du singe : Cours d'introduction aux contextes d'épidémies en Afrique](#) (Geneva: World Health Organization 2020).
 - [Variole du singe : Épidémiologie, préparation et réponse aux contextes d'épidémies en Afrique](#) (Geneva: Organisation Mondiale de la Santé ; 2022).
 - [La variole simienne et l'épidémie mondiale de 2022-2023](#)
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Other resources

- [WHO's Science in 5: Mpox](#) (Geneva: World Health Organization; 2022)
 - [Managing epidemics: Key facts about major deadly diseases](#) (page 170) (Geneva: World Health Organization; 2018). Soon updated.
 - [Emergence of mpox in West Africa and Central Africa, 1970–2017](#). Weekly Epidemiological Record No. 11, 16 March 2018.
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Public Health Advice

- [Public Health Advice on protecting yourself and others from mpox](#)
- [Public Health Advice for men who have sex with men on preventing mpox](#)
- [Public Health Advice for gatherings during the mpox outbreak](#)
- [Public Health Advice for gay, bisexual and other men who have sex with men on mpox](#)
- [Public Health Advice on mpox and sex-on-premises venues and events](#)
- [Public Health Advice for sex workers on mpox](#)
- [Public Health Advice on understanding, preventing and addressing stigma and discrimination related to mpox](#)
- [Public health advice on mpox and congregate settings: settings in which people live, stay or work in proximity](#)

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