***Mpox UKHSA advice summary for NBT (version 28/08/2024)***

Mpox is a viral infection belonging to same family of viruses as the smallpox virus. It is endemic in Central and West Africa and continues to cause outbreaks. There are two distinct groups;

* **Clade II Mpox.** This was responsible for the 2022 UK outbreak, generally causes mild infection and is no longer considered a high consequence infectious disease (HCID). Around 10-20 cases are reported each month in the UK in 2024 to date and the outbreak is largely in gay, bisexual, and other men who have sex with men without documented history of travel to endemic countries.
* **Clade I Mpox,** which is recognised to be more severe and with a higher associated mortality. It remains a high consequence infectious disease (HCID) which requires isolation and management in a specialist centre.

**At the time of writing (August 2024) there is a large clade I mpox outbreak in central Africa with the threat of imported infections to the UK. When assessing patients with suspected mpox it is important to identify any risk factors for clade I/HCID Mpox.**

**Presentation**

The symptoms of mpox begin 5-21 days (av 6-16 days) after exposure with initial clinical presentation of fever, malaise, lymphadenopathy and headache.

Within 1 to 5 days after the appearance of fever, a rash develops, often beginning on the face or genital area then spreading to other parts of the body. The rash changes and goes through different stages before finally forming a scab which later falls off. An individual is contagious until all the scabs have fallen off and there is intact skin underneath. Treatment for mpox is mainly supportive. Clade II Mpox is usually a mild clinical illness which self resolves in a few weeks. Clade I Mpox is associated with more severe disease with a documented mortality of 4-11% in a lower income healthcare setting.

  

**Mpox does not spread easily between people**. Spread of mpox may occur when a person comes into close contact with an animal, human, or materials contaminated with the virus. The virus enters the body through broken skin (even if not visible), the respiratory tract, or the mucous membranes (eyes, nose, or mouth).

**Person-to-person spread may occur** through direct contact with mpox skin lesions or scabs; contact with clothing or linens (such as bedding or towels) used by an infected person; or through respiratory transmission, such as coughing or sneezing of an individual with a mpox rash. Sexual contact was the primary driver of transmission during the 2022 clade 2 outbreak. This may not be the case with the current clade 1 outbreak – whilst at the time of writing there has only been one clade I case reported in Europe, in affected West African countries around two thirds of infected people were under 15 years of age.

**Case Definitions for mpox (HCID and non-HCID)**see: [Mpox: case definitions - GOV.UK (www.gov.uk)](http://Mpox:%20case%20definitions%20-%20GOV.UK%20(www.gov.uk)) **Confirmed case**
A person with a laboratory confirmed mpox infection (mpox PCR positive)

**Possible case**
A person with a febrile prodrome compatible with mpox infection where there is known prior contact with a confirmed case in the 21 days before symptom onset.

OR a person with an illness where the clinician has a high suspicion of mpox, such as unexplained lesions, including but not limited to:

* Genital, ano-genital or oral lesion(s) – for example, ulcers, nodules
* Proctitis – for example anorectal pain, bleeding

Febrile prodrome consists of fever ≥ 38°C, chills, headache, exhaustion, muscle aches (myalgia), joint pain (arthralgia), backache, and swollen lymph nodes (lymphadenopathy).

**Probable case**
A person with an unexplained rash on any part of their body plus one or more classical symptom(s) of mpox infection and either:

* has an epidemiological link to a confirmed or probable case of mpox in the 21 days before symptom onset
* identifies as a gay, bisexual or other man who has sex with men (GBMSM)
* has had one or more new sexual partners in the 21 days before symptoms onset

 Symptoms are: acute illness with fever (>38.5oc), intense headaches, myalgia, arthralgia, back pain, lymphadenopathy

**CONSIDER HCID (ie Clade I) MPOX IN ALL POSSIBLE/PROBABLE CASES**

**The following patients should be managed as suspected HCID cases**

* Confirmed or clinically suspected mpox but clade not yet known **and:**
	+ there is a travel history to the Democratic Republic of the Congo (DRC) or specified countries where there may be a risk of Clade I exposure (check [Operational mpox HCID (Clade I) case definition - GOV.UK (www.gov.uk)](https://www.gov.uk/guidance/operational-mpox-monkeypox-hcid-case-definition), or a link to a suspected case from those countries, within 21 days of symptoms onset
	+ or there is an epidemiological link to a case of Clade I mpox within 21 days of symptom onset

**Mpox is not considered an HCID if the lab confirms clade II MPXV or a confirmed/suspected mpox case of unknown clade has none of the epidemiological characteristics listed above.**

**Cases should be managed as Confirmed HCID Mpox where clade I MPXV has been confirmed**

**PPE for Mpox and suspected Mpox**

**HCID Mpox (possible/probable/confirmed)**
There has been recent national changes to recommended PPE for managing suspected HCID – see details of changes [here](https://www.england.nhs.uk/national-infection-prevention-and-control-manual-nipcm-for-england/addendum-on-hcid-ppe/) and full National infection prevention and control manual (NIPCM) for England [here](https://www.england.nhs.uk/national-infection-prevention-and-control-manual-nipcm-for-england/).

In summary, PPE should include FFP3 mask, eye protection, long sleeved fluid repellent disposable gown, gloves, wellington boots. The healthcare professional should have been shown to be competent in donning and doffing this PPE. Donning instructions can be found here [Donning A1 (hcid-training.co.uk)](https://www.hcid-training.co.uk/wp-content/uploads/2024/08/HCID-Donning-A1.pdf). Doffing instructions can be found here. [Doffing A1 (hcid-training.co.uk)](https://www.hcid-training.co.uk/wp-content/uploads/2024/08/HCID-DOffing-A1.pdf)

**Non-HCID mpox. (possible/probable/confirmed)**

Droplet and contact precautions. Gloves, fluid resistant facemask, long sleeved fluid repellent gown and eye protection. FFP3 mask should be worn if aerosol generating procedures are expected to take place.

**Assessment of probable/possible cases**

NB: where possible, pregnant women and severely immunosuppressed individuals (as outlined in the [Green Book](https://www.gov.uk/government/publications/contraindications-and-special-considerations-the-green-book-chapter-6)) should not assess or clinically care for individuals with suspected or confirmed mpox.

Ideally a patient should be risk assessed remotely or with the protection of a screen prior to clinical assessment. If this is not possible then non-HCID Mpox PPE (see above) can be used for the initial questioning, but there should be no patient contact.

1. Ask: “Have you got 1 or more of the following symptoms: rash to any part of your body, fever, new lump/s in neck, groin or under your arm?”

**If no – standard PPE can be used as routinely indicated.**

1. If yes, ask whether they meet one of the three criteria in the “Probable case definition” above AND/OR whether they meet any of the criteria for HCID mpox.

If they meet ONLY the criteria for “probable” clade 2 mpox then they can managed with droplet and standard precautions.

If they meet the HCID criteria, further assessment should be conducted in HCID mpox PPE by clinician trained in donning and doffing. Contact the infectious diseases team (9290) in hours or discuss with microbiology out of hours.

**NOTE: in addition to the above other patients may meet the “possible” definition and testing should be considered for all those with febrile prodrome symptoms who have had contact with a known mpox case in the last 21d, and in those where clinicians have a high index of suspicion for Mpox (e.g. classical rash without other features, prodrome symptoms in those at high risk).**

**Action for possible mpox cases**

**Clade II non-HCID Mpox**

This is not an HCID. Patients should be swabbed and tested (see below). Admission is generally not necessary – patients should be advised to isolate at home until recovery with remote support and clear routes for admission should it become necessary (Infectious Diseases SpR via bleep 9290 or [www.unitysexualhealth.co.uk/for-professionals)](http://www.unitysexualhealth.co.uk/for-professionals)

Where admission is required it should be to a respiratory isolation area (27b at Southmead for NBT patients) cared for by staff wearing appropriate PPE. Reasons for admission include: severe pain (usually proctitis), eye disease, secondary bacterial infections, very severe widespread lesions, rarely encephalitis and pneumonitis.

**Clade I HCID mpox**

All patients considered as having possible HCID mpox *of any severity* must be discussed with Infectious Diseases team or Infection SpR on call to discuss testing and management. Infection clinicians will liaise with the imported fever service & Rare and Imported Pathogens Laboratory (RIPL) and advise on testing. The patient should be placed in an isolation area pending admission to 27b under Infectious Disease (via acute medical take out of hours).

If the patient meets criteria for possible/probable HCID mpox **diagnostic sampling should be undertaken by clinicians trained in donning and doffing HCID PPE.** Results will take 24-48h depending on when sent – it is not performed at NBT. Cases with confirmed HCID mpox will be transferred to a specialised HCID centre.

**Taking a swab (non-HCID and HCID mpox)**

***Remember to take separate tests for other causes of rash and illness, e.g. chicken pox, and treat where indicated – mpox is rare and VZV etc will be more likely.***

* Inform the virology lab that you are sending a sample for testing – specifically state if HCID risk. The lab must be informed to ensure appropriate precautions with the sample.
* Ensure that you are wearing the minimum appropriate PPE as above:

**Probable/possible HCID mpox.** FFP3 mask, eye protection, long sleeved fluid repellent disposable gown, gloves, boots.

**Probable/possible non-HCID mpox.** Gloves, fluid resistant facemask, long sleeved fluid repellent gown, eye protection.

* Choose “Other specialist and reference tests” within ICE requesting and enter clinical info and “Mpox testing”
* The most important sample to take is a viral swab in viral culture medium or viral transport medium (for example Virocult®) from an open sore or from the surface of a vesicle. If other wounds are present, ensure that the sample is definitely taken from an ulcer, vesicle, or crusted vesicle. Rub the swab over the lesion and place the swab in the viral culture tube or viral transport medium. Label the tube with the patient’s name and date of birth, the date and site of the sample. Please note that unlabelled tubes cannot be processed.
* If all the lesions are crusted, scrape scab material into a dry plain universal container and label as above.
* If the patient has fever prodrome, sore throat or other systemic symptoms, you should also take an EDTA blood sample and a throat swab. Urine samples may also be sent in a universal container and will be tested if deemed necessary for clinical management.
* For high-risk contacts of a confirmed case who have developed systemic symptoms but do not have a rash or lesions for sampling, you should take a throat swab in viral transport media. Note that even if the throat swab is negative, the individual must continue with monitoring and isolation as instructed and should be reassessed and sampled if further symptoms develop.
* Samples for investigation of other infections, including VZV, sexually transmitted infections etc, should be packaged separately, with separate ICE requests as they are processed locally.
* Samples should be sent to the NBT lab.

**Post exposure prophylaxis**

The smallpox vaccine (Imvanex) is the recommended vaccine for post-exposure prophylaxis against mpox in the UK. The vaccine is most effective if given within four days of exposure but it can be given up to 14 days post-exposure if required. This process is managed by UKHSA/UHBW in BNSSG. Local vaccine supplies have been ordered. Further precautions for exposure to HCID Mpox may be needed as advised by the local UHKSA health protection team.

**Community cases**

All cases of suspected HCID Mpox should be transferred to 27b under the infectious diseases team for investigation (see NBT HCID policy). This can be achieved by discussing with the Infectious Diseases team (bleep 9290 in hours), and with the on-call infection SpR, site team and on call medical take out of hours.

**References and useful resources**

UKHSA Mpox guidance. [Mpox (monkeypox): guidance - GOV.UK (www.gov.uk)](https://www.gov.uk/government/collections/monkeypox-guidance)

Current operational HCID mpox definition and at risk countries. [Operational mpox HCID (Clade I) case definition - GOV.UK (www.gov.uk)](https://www.gov.uk/guidance/operational-mpox-monkeypox-hcid-case-definition)

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**New unexplained lesions including (but not limited to) genitals, ano-genital or oral lesions or proctitis.**

**OR**

**Fever, chills, headache, fatigue, myalgia, lymphadenopathy and contact with confirmed Mpox within 21 days**

**NO**

Not suspicious for Mpox, assess with standard precautions

**POSSIBLE MPOX**

**If typical Mpox lesions and epidemiological risk (contact with confirmed case, gay or bisexual MSM, new sexual partner s in last 21d), classed as PROBABLE MPOX**

**ASSESS FOR RISK OF HCID MPOX (Clade I)**

**Travel to countries with risk of Clade I Mpox exposure (e.g. DRC, CAR, Uganda, Kenya, Cameroon, Burundi, see** Operational mpox HCID (Clade I) case definition - GOV.UK (www.gov.uk)

**OR contact with confirmed HCID Mpox in last 21 days**

**MANAGE AS SUSPECTED HCID MPOX (Clade I)**

* **Isolate in side-room**
* **Contact Infectious Diseases team (blp 9290) or Infection SpR OOH**
* **Use HCID assessment PPE (see above)**
* **Collect diagnostic samples for Mpox (lesion swabs +/- throat swan and blood EDTA)**

**MANAGE AS SUSPECTED non-HCID MPOX (Clade II)**

* **Isolate in side-room**
* **Contact Infectious Diseases team (blp 9290) or Infection SpR OOH**
* **Use standard droplet/contact precautions + eye protection**
* **Collect diagnostic samples for Mpox (lesion swabs +/- throat swan and blood EDTA)**

**NO**

**YES**

**YES**