

Infection Prevention and Control guidance for Monkeypox - Full Clinical Guideline

Reference no.: CG-CLIN/4073/22

1. Introduction

Monkeypox primarily occurs in Central and West Africa. First diagnosed in the UK in 2018, monkeypox had been a rare and sporadic imported infection. The NHS England HCID network successfully managed all seven imported cases from 2018-2021.

At present, there is a large outbreak of monkeypox in several European countries, including in the UK. While the UK's first case in May 2022 involved travel to Nigeria, all subsequent cases have none of the typical exposure risk and represent chains of transmission with the UK population.

The UK clinical and public health response to monkeypox was initially based on the HCID system. This was highly precautionary and designed for complete containment around a single case. It was also designed prior to the confirmed availability of vaccine and treatment. Illness appears to be mild; this is why the specific current outbreak clade has been derogated and is no longer being considered at HCID.

2. Aim and Purpose

A risk stratified clinical approach has been developed to ensure that confirmed cases of monkeypox receive appropriate care, while also managing transmission risk.

There is a need to balance the requirement to contain the spread of monkeypox within healthcare settings, whilst acknowledging that the NHS is adopting a more proportionate approach to admissions, based on patient level assessment and stratification of risk

3. Definitions, Keywords

<p>HCID</p>	<p>In the UK, a high consequence infectious disease (HCID) is defined according to the following criteria:</p> <ul style="list-style-type: none"> • acute infectious disease • typically has a high case-fatality rate • may not have effective prophylaxis or treatment • often difficult to recognise and detect rapidly • ability to spread in the community and within healthcare settings • requires an enhanced individual, population and system response to ensure it is managed effectively, efficiently and safely <p>HCIDs are further divided into contact and airborne groups:</p> <ul style="list-style-type: none"> • contact HCIDs are usually spread by
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	<p>direct contact with an infected patient or infected fluids, tissues and other materials, or by indirect contact with contaminated materials and fomites</p> <ul style="list-style-type: none"> airborne HCIDs are spread by respiratory droplets or aerosol transmission, in addition to contact routes of transmission
Clade	A group of organisms considered as having evolved from a common ancestor
Febrile Prodrome	Febrile prodrome consists of fever $\geq 38^{\circ}\text{C}$, chills, headache, exhaustion, muscle aches (myalgia), joint pain (arthralgia), backache, and swollen lymph nodes (lymphadenopathy).

4. Infection Prevention & Control Guidance for Monkeypox

Immediate Actions if suspected Monkeypox:

- On arrival, provide the patient with a fluid repellent surgical mask (unless clinically contraindicated). This should be worn for the duration of the consultation / assessment unless removed for clinical assessment / treatment.
- Isolate the patient in an ensuite single room, (or with a commode if an ensuite room is not available), under airborne respiratory precautions
- Airborne respiratory PPE required

Notify the local Health Protection Team –

- RDH and FNCH - 0344 225 4524, option 1
- QHB, SRP, SJH - 0344 225 3560

4.1 Case definition

Possible case

A possible case is defined as anyone who fits one or more of the following criteria:

- a febrile prodrome compatible with monkeypox infection, where there is known prior contact with a confirmed case in the 21 days before symptom onset
- an illness where the clinician has a suspicion of monkeypox, 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

Probable case

A probable case is defined as anyone with an unexplained rash or lesion(s) on **any part** of their body (including genital/perianal, oral), or proctitis (for example anorectal pain, bleeding) and who:

- has an epidemiological link to a confirmed, probable or highly probable case of monkeypox in the 21 days before symptom onset

or

- identifies as a gay, bisexual or other man who has sex with men (GBMSM)
- or
- has had one or more new sexual partners in the 21 days before symptom onset

Actions on a possible or probable case

- Test for monkeypox, see section 4.8
- Take travel history: if patient reports a travel history to West or Central Africa in the 21 days before symptom onset please discuss with the [imported fever service](#), as these patients may need to be managed as having a high consequence infectious disease. Undertake additional contemporaneous tests to rule out alternative diagnoses if clinically appropriate and if not done already.

If admission of patient required for clinical reasons, admit to single room isolation at negative or neutral pressure at local hospital site with respiratory protective equipment (RPE) and personal protective equipment (PPE) (with appropriate IPC arrangements).

Or, if patient not requiring admission for clinical reasons: self-isolation at home (based on assessment by the clinician and following UKHSA guidance).

Or, if patient not requiring admission for clinical reasons but self-isolation at home is not possible for social or medical reasons following clinician assessment: isolation in single room at negative or neutral pressure at local hospital site with RPE and PPE pending test result (prioritise probable cases).

Highly probable case

A highly probable case is defined as a person with an orthopox virus PCR positive result in 2022 and where monkeypox remains the most likely diagnosis.

Confirmed case

A confirmed case is defined as a person with a laboratory-confirmed monkeypox infection (monkeypox PCR positive) in 2022.

Action on a confirmed or highly probable case

All confirmed or highly probable cases should be assessed for the need for admission based on either clinical or self-isolation requirements. The NHS provides [guidance on management of patients with confirmed monkeypox](#).

All confirmed or highly probable cases should be notified to the local health protection team by the clinician.

4.2 Transmission

Monkeypox does not spread easily between people.

Spread of monkeypox may occur when a person comes into close contact with an infected animal (rodents are believed to be the primary animal reservoir for transmission to humans), human, or materials contaminated with the virus. Monkeypox has not been detected in animals in the UK.

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 monkeypox skin lesions or scabs (including during sexual contact, kissing, cuddling or holding hands)
- coughing or sneezing of an individual with a monkeypox rash when they are close to you
- contact with clothing or linens (such as bedding or towels) used by an infected person

4.3 Clinical presentation

The illness begins with:

- Fever
- Headache
- Muscle aches
- Backache
- Swollen lymph nodes
- Chills
- Exhaustion
- Joint pain

Within 1 – 5 days after the appearance of fever, a rash develops, often beginning on the face 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.

Monkeypox infection is usually a self-limiting illness and most people recover within several weeks. However, severe illness can occur in some individuals.

4.4 Incubation Period

The incubation period is the duration / time between contact with the infected person and the time that the first symptoms appear. The incubation period for monkeypox is between 5 and 21 days

4.5 Infectious period

An individual is infectious until all the scabs have fallen off and there is intact skin underneath. The scabs may also contain infectious material.

4.6 Isolation

- Patients must be isolated in an ensuite single room. If an ensuite room is not available a single room with a commode
- Patient to remain in the room
- Door to remain closed
- Wherever possible, the patient should not attend other department for investigation until a monkey pox diagnosis is received. Portable investigation, such as X-rays, are permitted. The department undertaking the investigation must be informed of the risk, wear airborne PPE and be FIT tested.

4.7 PPE

The Trust hierarchy of controls assessment has identified that the ventilation in ward areas and emergency department does meet the minimum six air changes an hour.

Due to this and the fact that airborne transmission from patients with evidence of lower respiratory tract infection or systemic illness cannot be excluded, airborne PPE is required for all suspected and confirmed patients:

- Fit tested FFP3
- Disposable fluid resistant gown
- Disposable gloves – no requirement for double gloving
- Full face visor

Airborne PPE donning poster - [20200821_COVID-19_Airborne_precautions_..._on_PPE_gown_version_quick_guide-1.pdf \(publishing.service.gov.uk\)](#)

Airborne PPE Doffing poster - [20200821_COVID-19_Airborne_precautions_..._PPE_gown_version_quick_guide_-1-1.pdf \(publishing.service.gov.uk\)](#)

4.8 Testing

Monkeypox is diagnosed by PCR test on a viral swab taken from one of more vesicles or ulcers.

Two swabs (green viral swab, in normal transport) are required:

One for monkeypox

One for HSV/VZV/Ent/other.

Take the viral swabs from an open sore or from the surface of a vesicle. If other wounds are present, ensure that the sample is definitely taken from a vesicle, an ulcer or a crusted vesicle. Rub the swab over the lesion and place the swab in the viral culture tube or viral transport medium. Throat swabs are also suitable samples if there are pharyngeal lesions, atypical lesions, or if the patient is a contact of a confirmed case without a typical rash.

For high-risk contacts of a confirmed or highly probable case who have developed systemic symptoms but do not have a rash or lesion for sampling, you should take a throat swab in viral transport media. Please note that even if the throat swab is negative, the individual must continue with monitoring and isolation as instructed by UKHSA and be re-sampled if further symptoms develop.

Samples for other infections should be packaged separately, with separate request forms

There is no need for Grab Bags or urgent calls to the lab, email notifications etc unless you desire clinical discussion with a virologist about the case.

Once sample are collected, they must be hand delivered to Pathology reception. Do not use the POD system. There is no requirement for a rigid container. The Microbiology laboratory will send the appropriate samples to the Sheffield Laboratory for monkeypox testing and process the other tests.

Airborne PPE must be worn when collecting samples.

4.9 Environmental Decontamination

Inpatient and outpatient settings

Patient isolation rooms must be cleaned at least daily using a combined detergent/disinfectant solution at a dilution of 1,000 ppm chlorine.

Increased frequency of cleaning is required for areas where there may be higher environmental contamination rates:

- Toilets / commodes, particularly if the patient has diarrhoea
- Frequently touched surfaces

Terminal Decontamination

Following a patient transfer, discharge or once the patient is no longer considered infectious, bedding and curtains must be removed from the room. Linen is managed as infectious linen

Reusable non-invasive equipment – decontaminate in the room prior to removal with either combined detergent/disinfectant solution at a dilution of 1,000 ppm chlorine or a chlorine wipe

The room should be cleaned and decontaminated with combined detergent/disinfectant solution at a dilution of 1,000 ppm chlorine. Hydrogen peroxide decontamination is not required unless directed by the infection prevention and control team.

Staff undertaking cleaning must wear airborne PPE and be FIT tested for the FFP3 respirator, including after the patient is discharged

4.10 Decontamination of reusable equipment

Wherever possible, patient care equipment should be dedicated to the individual.

Decontamination of reusable patient care equipment must be performed with either combined detergent/disinfectant solution at a dilution of 1,000 ppm chlorine or a chlorine wipe.

4.11 Linen

Contamination linen poses a risk for transmission of monkeypox.

All linen generated in the care of suspected or confirmed monkeypox patients must be managed as infectious linen and bagged into a water soluble or soluble seam (alginate) bag then placed into a polythene bag.

Ensure a laundry receptacle is available as close as possible to the point of use for immediate linen deposit.

Do not:

- Rinse, shake or sort linen
- Place used linen on the floor or any other surface, e.g. locker or tabletop
- Re-handle infectious linen once bagged
- Overfill laundry receptacle (not more than 2/3 full)

4.12 Waste

All waste generated in the care of suspected or confirmed monkeypox must be managed as infectious waste.

4.13 Visitors

Visitors should be restricted. If essential, visitors should be restricted to those who already have had exposure to the suspected / confirmed patients.

Visitors must not leave the isolation room to go anywhere else in the hospital

4.14 Contacts

Any individual who has exposure to monkeypox will be classed as a contacts. The risk is assessed against:

Exposure risk 3 (High) – unprotected direct contact or high-risk environmental contact

Exposure risk 2 (Medium) – unprotected exposure to infectious materials including droplet or airborne potential route

Exposure risk 1(Low) – protected physical or droplet exposure, no physical contact, unlikely droplet exposure

Details on actions taken dependant on risk level is available via

[Monkeypox contact tracing guidance: classification of contacts and advice for vaccination and follow up \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/67444/monkeypox_contact_tracing_guidance_classification_of_contacts_and_advice_for_vaccination_and_follow_up.pdf)

Individuals who have contact with a suspected or confirmed monkeypox patients must be recorded on the contact list, see appendix One. The information will be shared with the Health Protection team to identify category of exposure and necessary actions.

4.15 Post exposure prophylaxis

UHDB do not hold stocks of post exposure prophylaxis. The national Incident Management team / Health Protection Team will advise on whether contacts require this and identify where to access supplies.

4.16 De-isolation and discharge of monkeypox infected patients

Hospital de-isolation criteria

Clinical criteria

The patient is judged clinically well enough for safe de-isolation as judged by the clinical team managing the patient.

Laboratory criteria

The patient is polymerase chain reaction (PCR) negative on all 3 of the following samples:

- EDTA blood*
- urine
- throat swab

*It is acceptable not to send EDTA blood if no sample was sent previously because the patient was well throughout admission.

Lesion criteria

The following criteria all apply:

- there have been no new lesions for 48 hours
- there are no mucous membrane lesions
- all lesions have crusted over, all scabs have dropped off, and intact skin remains underneath

Discharge from an isolation facility or isolation ward to another hospital ward, a different in-patient facility or a residential facility (including care homes and prisons)

Discharge from an isolation facility or ward to another hospital ward, different inpatient facility or residential facility can only be considered if the de-isolation criteria in the clinical, laboratory and lesion criteria sections above are all met.

If there is any doubt, clinicians should discuss virological testing of persistent lesions with the UKHSA Rare and Imported Pathogens Laboratory (RIPL).

Discharge from hospital to home

Patients meeting the clinical, laboratory and lesion criteria as stated above can be discharged from hospital to home without requirement for ongoing isolation (that is, full de-isolation).

Patients meeting the clinical criteria but not meeting either laboratory or lesion criteria may be discharged from hospital to continue isolation at home where it is safe to do so after assessment by their treating clinician. They must be able to isolate away from any members of their household who are: children aged under 12, pregnant women or immunosuppressed individuals as per [green book definition](#). They must not go to work, school or public areas and should avoid close contact with other people in their household.

Patients with any lesions should remain in regular contact with their clinician until all lesions have crusted over and all scabs have dropped off. Ongoing contact may be required after de-isolation.

Complex and severe cases, with slow clinical and virological resolution may require additional specialist guidance on risk management following discharge from hospital on a case-by-case basis.

Caring for monkeypox at home

Patients should be given clear safety-netting guidance, including resources detailing what expected symptoms are and how to treat these. They should also map out what the concerning symptoms to look out for are, and when, where and how to escalate and get help at all time periods. Symptom diaries and strategies for monitoring progress and recovery should also be shared, including where appropriate monitoring tools, for example thermometers, oximeters.

4.17 Pregnant women

Pregnant women must not work with suspected or confirmed monkeypox patients

As direct contact is a route of transmission breast feeding is not currently recommended when the mother is suspected or confirmed to be infected with monkeypox

4.18 Health Protection (Notification) Regulations

The Health Protection (Notification) regulations 2010 have been amended to include monkeypox as a notifiable disease to Schedule 1 and monkeypox virus as a notifiable causative agent to Schedule 2.

Medical practitioners are required to notify the relevant local authority if a patient which, in their view, could be, or is confirmed as monkeypox.

Laboratories are required to notify UKHSA if they identify a monkeypox virus when they test a sample.

5. References (including any links to NICE Guidance etc.)

Monkeypox: background information. The epidemiology, symptoms, diagnosis and management of monkeypox infections. [Monkeypox: background information - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

UKHSA (2022). Investigation into monkeypox outbreak in England: technical briefing 8. [Investigation into monkeypox outbreak in England: technical briefing 8 - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

UKHSA (2022). Monkeypox contact tracing guidance: classification of contacts and follow up advice for non-HCID strains of monkeypox. [Monkeypox contact tracing guidance: classification of contacts and advice for vaccination and follow-up: version 12 \(3 August 2022\) \(publishing.service.gov.uk\)](http://publishing.service.gov.uk)

UKHSA (2022). Management of laboratory confirmed monkeypox infections. [B1794-management-of-laboratory-confirmed-monkeypox-infections-V4.pdf \(england.nhs.uk\)](http://www.gov.uk)

UKHSA. (2022). Monkeypox diagnostic testing. Information on taking, submitting and processing samples which potentially contain monkeypox virus. [Monkeypox: diagnostic testing - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

UKHSA (2022). De-isolation and discharge of monkeypox infected patients: interim guidance. [De-isolation and discharge of monkeypox-infected patients: interim guidance - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

6. Documentation Controls

Reference Number From Library and Knowledge Service Manager	Version: 1.1		Status Final	
Version / Amendment History	Version	Date	Author	Reason
	1	June 2022	Helen Forrest	New guidance
	1.1	31.10.2022	Helen Forrest	Updated to reflect updated guidance
Intended Recipients: this guidelines is intended for use by all UHDB staff, students and contractors				
Training and Dissemination: via NETi				
Development of Guideline: Helen Forrest Job Title: Head of Infection Prevention and Control				
Consultation with: Consultant Virologists Consultant Microbiologists Clinical Teams Occupational Health Facilities Management				
Linked Documents:				
Keywords: Monkeypox				
Business Unit Sign Off			Group: Date:	
Divisional Sign Off			Group: Infection Prevention and Control Committee Date: June 2022	
Date of Upload			Oct 2022	
Review Date			As guidance changes or every 3 years	
Contact for Review			Head of Infection Prevention & Control	

7. Appendices

Appendix one – Monkeypox Contact list

Please record details of people entering the single room / contact of suspected / confirmed Monkeypox

NAME OF PATIENT:

NHS NUMBER:

HOSPITAL NUMBER:

DATE OF BIRTH:

WARD:

SITE:

Date	Name	Date of Birth	Address	Telephone Number	Level of Contact e.g. no contact with body fluids. Contact with body fluids with/without PPE/ breaches in PPE	Staff / Visitor

Reference no.:
