NHS National Services Scotland

Mpox IPC advice for healthcare settings

Mpox (previously known as Monkeypox): Management of suspected and confirmed cases

Version 02.00

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ARHAI Scotland

Antimicrobial Resistance and Healthcare Associated Infection

Disclaimer: When an organisation, for example a health and care setting, uses products or adopts practices that differ from those stated in the National Infection Prevention and Control Manual, that individual organisation is responsible for ensuring safe systems of work including the completion of a risk assessment approved through local governance procedures.

This Guidance has been developed as part of an emergency response to the ongoing mpox situation and therefore does not follow normal NIPCM methodology and process.

Version history

Version	Date	Summary of changes	Rationale for update
V1.0	01/06/2022	First publication	
V1.1	06/06/2022	Greater clarity on symptomology associated with PPE use – section 2.2 Clarity on cleaning and PPE requirements – section 2.3 Inclusion of PPE requirements for vaccinators when vaccinating contacts who do not meet possible/probable/confirmed case definition – section 2.7	
V1.2	08/07/2022	Updated to reflect changes to HCID categorisation of MPX outbreak clade. Changes made throughout the document to refer to MPX outbreak clade. Updated to include Department of Transport Multilateral Agreement M347 on the re-categorisation of waste for MPX outbreak clade to Category B.	The Advisory Committee on Dangerous Pathogens (ACDP). considered the data provided on the UK cases, these have not been severe, and vaccination available/deployed. The committee recommended that the West African Clade MPX strain Lineage B.1 should no longer be classified as a HCID. Updated to reflect waste generated by possible, probable and confirmed MPX West African Clade Lineage B.1 cases can be treated as Category B waste as per the Department for Transport Multilateral Agreement M347 under section 1.5.1 of ADR on

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			the carriage of Monkeypox virus
V1.3	18/08/2022	Update to reflect agreed name changes to Monkeypox variants with current outbreak variant identified as Monkeypox (Clade IIb)	Following the WHO agreeing on new names for monkeypox virus variants, to align the names of the monkeypox disease, virus and variants – or clades – with current best practices, removing the names West African and Central African or Congo Basin. The WHO agreed to name the clades using Roman numerals. Ref: Monkeypox: experts give virus variants new names (who.int)
V1.4	26/01/2023	Update to reflect UKHSA derogation from HCID for MPXV (organism that causes mpox) Change of name from Monkeypox to mpox.	The ACDP recommended that **all** of clade II MPXV should no longer be classified as an HCID. The ACDP recommended that Clade I should remain an HCID. The 4 Nations Public Health Agencies have reviewed this advice and agreed with the view of ACDP. Ref: HCID status of mpox - GOV.UK (www.gov.uk)

Version	Date	Summary of changes	Rationale for update
V1.5	29/06/2023	Review of extant guidance following update to UKHSA IPC guidance. No changes to ARHAI Scotland guidance, condensed general information and updated electronic links to UKHSA guidance as appropriate.	Review of guidance following step-down of outbreak measures.
V1.6	15/08/2024	Updated in response to the outbreak of Clade I mpox in the African Region, declared a public health emergency of international concern by the World Health Organization Update to mpox HCID case definition and addition of HCID PPE table.	
V1.7	02/09/2024	Updated to include summary table of IPC management and additional distinction of management between HCID and non-HCID mpox Clades.	Table created to provide additional clarity following stakeholder enquiries regarding PPE, waste and linen management.
V1.8	06/09/2024	Section 2.3 – Decontamination – Updated to reflect PPE requirements during decontamination. Section 2.5 – Linen Management - Updated to reflect UK 4 Nations consensus to manage used linen for confirmed Clade I HCID cases as Category B waste.	Clarity provided to convey importance of PPE use during decontamination. Linen Management - Following discussion and consensus at UK IPC 4-Nations meeting to ensure alignment across 4-Nations.
V1.9	07/10/2024	Updated throughout to combine ‘probable’ and ‘possible’ case definitions into one ‘suspected’ case definition.	Following updates to UKHSA guidance for suspected mpox - to simplify definitions and

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		Rationale for update column within version control included to provide additional context.	to ensure alignment across 4-Nations.
V1.10	16/10/2024	Updates to Section 2 made following the restructure of UKHSA operational case definitions and the UKHSA publication of Clade I mpox: country list.	UKHSA have restructured the operational case definition to describe symptoms of mpox and epidemiological criteria to help inform testing and reporting of suspected cases: Mpox: guidance on when to suspect a case of mpox UKHSA have published a map and list of countries affected by current and historic cases of clade I mpox indicating where there may be a risk of clade I mpox exposure: Clade I mpox: affected countries These documents aim to support healthcare professionals on when to suspect mpox and how to decide if a suspected case needs to be managed as a High Consequence Infectious Disease (HCID).
V02.00	29/11/2024	Update to General information section following identification of cases.	This ensures that there is no reference to the UK having had no cases when the total currently stands at 5. Numbers not used to future-proof.

Version	Date	Summary of changes	Rationale for update
		Updated version numbering to reflect use of NHS NSS Naming Convention	Not applied retrospectively to minimise confusion although it is recognised this is a risk.

Contents

1. General information

General information on mpox including case definitions, clinical pathways and contact tracing can be found in the PHS guidance: Mpox guidance for health protection teams.

This document outlines the infection prevention and control advice for healthcare workers who may be involved in the care of suspected or confirmed cases of mpox. The guidance is based on the published Mpox Principles for control of non-HCID mpox in the UK: 4 nations consensus statement from the UK Health Security Agency (UKHSA) and associated UKHSA Mpox guidance collection. The guidance should be read in conjunction with the National Infection Prevention and Control Manual (NIPCM) and links to the appropriate sections of the NIPCM will be provided within this guidance.

There are two known clades of mpox virus (MPXV): Clade I and Clade II. Transmission of mpox to humans can be due to zoonotic transmission or person-to-person spread.

The overall risk of Clade I MPXV to the UK population is currently considered low, with few identified cases. However, given the ongoing outbreaks, it is important to remain alert to cases that have a link to specified countries or with an unusual presentation compared to Clade II mpox cases, which have been seen in the UK since 2022.

Clade I MPXV remains a high consequence infectious disease (HCID) in the UK. Infection with Clade I MPVX has been reported to cause more severe mpox disease with a higher case fatality rate. An overview of countries reporting Clade I mpox (current and historic), indicating the level of risk of exposure is available.

2. Patient management

The possibility of mpox should be considered in line with the UKHSA guidance for suspected mpox and the operational case definition as detailed below.

Consider mpox where a case presents with:

1. a prodrome (fever, chills, headache, exhaustion, myalgia, arthralgia, backache, lymphadenopathy), and where there is known prior contact with a confirmed or suspected case of mpox in the 21 days before symptom onset

Or

2. an mpox-compatible rash anywhere on the skin (face, limbs, extremities, torso), mucosae (including oral, genital, anal), or symptoms of proctitis, and at least one of the following in the 21 days before symptom onset:
    - recent new sexual partner
    - contact with known or suspected case of mpox
    - a travel history to a country where mpox is currently common
    - link to an infected animal or meat

If the rash is highly clinically suggestive of mpox, but you cannot identify a risk factor, discuss with local infection services whether to consider mpox testing alongside the more common differential diagnosis.

Consider common infections such as chickenpox or shingles, herpes simplex virus, and enterovirus in the differential diagnosis. These circulate widely and are more common than mpox; exclude as appropriate.

2.1 When to consider clade I mpox, a high consequence infectious disease (HCID operational case definition)

In a person with clinically suspected mpox, they should be managed as HCID if they meet one or more of the following criteria:

- has a travel history to specified countries where there may be a risk of clade I exposure in the 21 days before symptom onset (see affected country list)

- has an epidemiological link to a confirmed or suspected case of clade I mpox in the 21 days before symptom onset
- has a relevant zoonotic link, including contact with a wild or captive mammal that is an African native species (this includes contact with derived products, for example, game meat)

2.2 Patient placement

In line with the hierarchy of controls, efforts should be made to perform telephone triage or assessment to help establish symptoms present and risk associated with potential mpox in advance of any face-to-face contact where possible.

If mpox infection is suspected from initial case investigation, the local Infection Prevention and Control team must be contacted, and the patient should immediately be isolated in a negative-pressure single room where available, or a single neutral pressure room with dedicated medical and patient care equipment. Positive pressure single rooms must **not** be used. Where there are minimal numbers of negatively pressurised rooms, these should be prioritised for suspected or confirmed cases. Suspected or confirmed Clade I mpox cases must be managed as an HCID requiring transmission-based precautions and HCID personal protective equipment (PPE) (see Table 1 below).

Inpatients are not required to wear a Fluid Resistant Surgical Mask (FRSM) while in a single or isolation room. However, patients with suspected or confirmed mpox moving between care areas should be provided with a FRSM to wear - where this can be tolerated and does not compromise their clinical care, for example when receiving oxygen therapy.

2.3 Personal Protective Equipment (PPE)

Use PPE to prevent exposure to blood and or body fluids and to prevent direct contact with the patient.

PPE must establish a full barrier against contact with contaminated surfaces, splash, spray, bulk fluids and aerosol particles.

For Clade I HCID mpox PPE, donning and doffing guidance should be followed as per the NHS Education for Scotland TURAS video.

Posters for PPE to be used for confirmed or suspected Mpox Clade I (HCID) are available in the NIPCM.

Donning and doffing step-by-step instructions for non-HCID PPE can be found in Appendix 6 of the NIPCM.

Table 1: PPE requirements for HCID (suspected or confirmed Clade I MPXV)

PPE needed	PPE required for HCID
To protect body area including head and neck	The HCW should change into scrubs. Disposable fluid repellent coverall (with hood) plus high-grade disposable plastic apron over the coverall.
To protect feet	Wellington style boots and disposable overboots to enter room
To protect face, including mucous membranes of the eyes, mouth and respiratory tract	FFP3 respirator and compatible full length visor/face shield to enter room
To protect hands	Disposable surgical gloves x2 (double gloving)

Note: The PPE outlined above is consistent with that described in VHF guidance and does not represent a change in the existing Scottish ensemble.

Table 2: Minimum PPE requirements for suspected or confirmed non-HCID mpox (Clade II MPXV)

Definition categories	Minimum PPE required
Where symptoms are mild (this may include a localised rash) and there is no evidence of respiratory symptoms.	• **Gloves – single pair**. Ensure hand hygiene is performed appropriately prior to and after removal of gloves • Fluid Resistant Surgical Facemask (FRSM) • Apron
Suspected or Confirmed – Where symptomology includes respiratory symptoms, widespread rash **AND/OR** clinically deteriorating as a direct result of mpox **AND/OR** prolonged close contact with a patient and their environment for example an overnight inpatient admission stay	• **Gloves – single pair.** Ensure hand hygiene is performed appropriately prior to and after removal of gloves. • FFP3 respirator[1] • Fluid resistant gown/coveralls • Eye/face protection

[1] A full face visor is required in addition to a FFP3 respirator where the respirator is not fluid resistant. HCWs must be fit tested prior to donning a respirator and perform a fit check each time it is donned.

ARHAI Scotland recognise that some Infectious Disease Units will have established processes and procedures for HCID PPE which will be clearly defined as ‘standard practice’ for that area, which may include the application of a high-level unified ensemble for all HCIDs. Should they choose to adopt these to prevent confusion they may do so.

2.4 Decontamination

Staff cleaning the room should wear PPE in line with section 2.2 whist the patient is still present. Staff responsible for decontamination of healthcare environments where clinically suspected or confirmed mpox cases are managed must be trained in the correct use of all products and the necessary PPE.

Equipment in the room where a suspected or confirmed case is being managed should be kept to a minimum. Single patient use items such as B/P cuff, single use wash bowl, thermometers are recommended. Reusable patient care equipment should be dedicated to the patient as far as practicable. The mpox virus will be destroyed by hospital detergents and disinfectants.

Decontamination of reusable patient care equipment after use on all suspected or confirmed case should be in line with Appendix 7 of the NIPCM. Staff must wear PPE in line with section 2.2.

Cleaning and decontamination of the patient room within healthcare settings should be undertaken using:

- a combined detergent/disinfectant solution at a dilution of 1,000 parts per million available chlorine (ppm av.cl), or
- a general-purpose neutral detergent in a solution of warm water followed by disinfection solution of 1,000ppm av.cl.

Manufacturers' guidance and recommended product "contact time" must be followed for all cleaning/disinfection solutions.

Increased frequency of decontamination/cleaning schedules should be incorporated into the environmental decontamination schedules for rooms occupied by suspected or confirmed cases.

Terminal decontamination

Inpatient rooms must be terminally cleaned following discharge, transfer or when the suspected or confirmed mpox case is deemed no longer infectious as below.

For suspected and confirmed cases of **HCID Clade I mpox**, a combined detergent/disinfectant solution at a dilution of 1,000 parts per million available chlorine (ppm available chlorine (av.cl.)) or a general purpose neutral detergent in a solution of warm water followed by disinfection solution of 1,000ppm av.cl. should be used following discharge or transfer as per NIPCM. Staff must wear PPE in line with section 2.2 of this document. Linen, curtains and bed screens should be held for suspected cases until sample results are available. If the case is confirmed HCID Clade I, linen should be treated as Category B waste (see section 2.5). HPV room decontamination may be considered as part of the terminal clean.

For suspected or confirmed **non-HCID Clade II** cases, this should be in line with Transmission Based Precautions in Section 2.3 of the NIPCM.

In primary care settings where a consultation with a suspected or confirmed mpox case has taken place, ensure thorough cleaning using the same products stated above once the patient leaves the room and wearing the PPE outlined in section 2.2. This must include all equipment and surfaces and as a minimum and a full floor clean at the end of the day.

2.5 Waste

By international agreement, samples and waste from **all** mpox cases are classified as Category B for transport and waste management. Infectious waste from these individuals can be treated as healthcare (clinical) Category B waste as per Multilateral Agreement M347 under section 1.5.1 of ADR on the carriage of monkeypox virus and can be disposed of in an orange bag for alternative treatment and do not have to be sent for incineration. The waste will be assigned to UN3291, clinical waste.

If there is any chemical or pharmaceutical contamination, the waste must be consigned in a yellow container (or purple if cytotoxic/cytostatic) and incinerated or sent to a permitted site for disposal as per national regulation.

Note: Viral cultures of MPXV remain classified as Category A.

2.6 Linen management

Contaminated clothing and linen are a potential source of transmission. Care must be taken not to shake the linen and prevent dispersal of skin scales.

Ideally, infectious linen should be stored securely until diagnostic results are available. If mpox is ruled out manage linen as infectious linen in line with Appendix 8 of the NIPCM.

If mpox is confirmed, linen should be held securely until clade is established. Linen from a suspected or confirmed HCID Clade I mpox case **must not be returned to the laundry.** If HCID Clade I mpox is confirmed, the linen must be disposed of as Category B waste as outlined in section 2.4.

All linen generated during the care of a suspected or confirmed case of Clade II non-HCID mpox must be managed as infectious linen in line with Appendix 8 of the NIPCM.

2.7 Safe management of blood and body fluids

Spillages of blood and/or other body fluids associated with a suspected or confirmed case of mpox must be treated immediately in line with Appendix 9 of the NIPCM.

Please refer to Appendix 1 of this document for a summary table of the above.

2.8 IPC advice for MPXV vaccination teams

If vaccinating a suspected or confirmed mpox case, the content of this guidance document should be followed.

If vaccinating asymptomatic contacts who **do not** fit the suspected or confirmed case definition or HCWs as part of a routine response where that HCW has not had any exposure to a case of mpox, IPC requirements are those in line with standard IPC vaccination protocols and there is considered no additional risk. Gloves are not

routinely required for vaccination. An SBAR detailing the evidence around this is available.

2.9 Visitors

Visitors to suspected or confirmed mpox inpatients should be restricted where possible. If essential, for example carer, parents or guardians, individual advice should be sought from IPCT/HPT regarding the safest way to arrange a visit.

Appendix 1 – Summary of mpox IPC management

IPC Measure	Mpox Clade I[1] (HCID) Suspected or confirmed cases Previously known as: Congo Basin or Central African clade	Mpox Clade II[1] (non-HCID) Suspected or confirmed cases Previously known as: West African clade
Advisory Committee on Dangerous Pathogens (ACDP) Hazard Group[2]	3	3
Transportation of viral cultures	Category A	Category B
Transportation of samples and Categorisation of waste[3]	Category B	Category B
Waste management	Clinical waste stream with appropriate PPE	As per TBPs
Linen management	Store securely until results available. If confirmed Clade I, manage as Category B waste with appropriate PPE	As per TBPs
Equipment management **Environmental management**	As per TBPs with appropriate PPE	As per TBPs
Personal protective equipment	As per table 1	As per table 2

Notes:

1. refer to Monkeypox: experts give virus variants new names (who.int)
2. refer to The Approved List of biological agents: Advisory Committee on Dangerous Pathogens (hse.gov.uk)
3, See Multilateral Agreement M347 under section 1.5.1 of ADR on the carriage of monkeypox virus, By derogation of paragraph 2.2.62.1.4.1, Section 3.2.1. (Table A, 'Dangerous goods list') and Chapter 4.1 of 'Accord relatif au transport international des marchandises dangereuses par route' (ADR), infectious substances containing monkeypox virus except for cultures of monkeypox virus may be carried under UN 3373 or UN 3291, as appropriate.