Infection Prevention and Control Precautions for healthcare workers for Possible or Mpox infection: West Africa (clade II)

V1.3 04.08.2023

Ver	Date	Changes from previous version
1.3	04.08.2023	Updated references and links to "Interim Public Health Guidance for the Management of Mpox Cases and Household Contacts" which has been retired to new document "Checklist for Public Health on management of mpox cases and their contacts"
1.2	13.06.2023	Update and change to preferred term mpox replacing monkeypox, in accordance with WHO recommendations. Rewording of West African Clade Monkeypox (WA-MPX) to West Africa (clade II)
1.1	22.09.2022	This guidance refers to West African Clade Monkeypox (WA-MPX) The guidance does not cover Congo Basin Monkeypox CB-MPX clades and management of high consequence infectious diseases (HCID). Changes to declassification of healthcare risk waste from Category A (for HCMI) to category B for WA-MPX Inclusion of Point of care risk assessment (PCRA). Changes to cleaning and disinfection recommendations
V1.0	03.06.2022	Initial Document

Note: If you have any queries on this guidance please contact the AMRIC team at hcai.amrteam@hse.ie

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Introduction

This document provides specific guidance for healthcare workers on infection prevention and control precautions for the management of probable, suspected or confirmed West Africa (clade II) only.

NOTE: This guidance does not cover Congo Basin mpox CB-MPX Clades, as these are considered a high consequence infectious diseases (HCID) and therefore have specific infection prevention and control requirements.

This is a stand-alone guidance document as it requires specific detail on the management of mpox in different healthcare settings. It is important to recognise that core elements of infection prevention and control (IPC) are contained within the Department of Health (2023). NCEC National Clinical Guideline No. 30 Infection Prevention and Control, available at: http://health.gov.ie/national-patient-safety-office/ncec/ and therefore this guidance should be read and interpreted in conjunction with the national guidance document, This document was informed by guidance from:

- World Health Organisation (WHO)
- European Centre for Disease Control (ECDC)
- UK HSA
- Public Health Public Health England (PHE)

Scope

This guidance applies to all healthcare workers in all healthcare facilities.

Key facts:

- Mpox (monkeypox) is a viral illness caused by the monkeypox virus, a species of the genus Orthopoxvirus. Two different clades exist: clade I and clade II
- Common symptoms of mpox are a skin rash or mucosal lesions which can last 2–4 weeks accompanied by fever, headache, muscle aches, back pain, low energy, and swollen lymph nodes
- Mpox can be transmitted to humans through physical contact with someone who is infectious, with contaminated materials, or with infected animals
- Laboratory confirmation of mpox is done by testing skin lesion material by PCR.
- Mpox is treated with supportive care. Vaccines and therapeutics developed for smallpox and approved for use in some countries can be used for mpox in some circumstances
- In 2022–2023 a global outbreak of mpox was caused by a strain known as clade IIb.
- The global outbreak of mpox was declared a public health emergency of international concern (PHEIC) on 23 of July 2022
- Mpox can be prevented by avoiding physical contact with someone who has mpox. Vaccination can help prevent infection for people at risk (World Health Organisation, WHO, 2023)

Background and clinical features

The disease mpox (formerly monkeypox) is caused by the monkeypox virus (commonly abbreviated as MPXV), an enveloped double-stranded DNA virus of the Orthopoxvirus genus in the Poxviridae family, which includes variola, cowpox, vaccinia and other viruses. The two genetic clades of the virus are clades I and II.

The monkeypox virus was discovered in Denmark (1958) in monkeys kept for research and the first reported human case of mpox was a nine-month-old boy in the Democratic Republic of the Congo (DRC, 1970). Mpox can spread from person to person or occasionally from animals to people. Following eradication of smallpox in 1980 and the end of smallpox vaccination worldwide, mpox steadily emerged in central, east and west Africa. A global outbreak occurred in 2022–2023. The natural reservoir of the virus is unknown – various small mammals such as squirrels and monkeys are susceptible.

Infection control, personal protection and prevention

Person-to-person transmission of mpox can occur through direct contact with infectious skin or other lesions such as in the mouth or on genitals; this includes contact which is:

- face-to-face (talking or breathing)
- skin-to-skin (touching or vaginal/anal sex)
- mouth-to-mouth (kissing)
- mouth-to-skin contact (oral sex or kissing the skin)
- respiratory droplets or short-range aerosols from prolonged close contact

The virus then enters the body through broken skin, mucosal surfaces (e g oral, pharyngeal, ocular, genital, anorectal), or via the respiratory tract. Mpox can spread to other members of the household and to sex partners. People with multiple sexual partners are at higher risk.

Animal to human transmission of mpox occurs from infected animals to humans from bites or scratches, or during activities such as hunting, skinning, trapping, cooking, playing with carcasses, or eating animals. The extent of viral circulation in animal populations is not entirely known and further studies are underway.

People can contract mpox from contaminated objects such as clothing or linens, through sharps injuries in health care, or in community setting such as tattoo parlours.

For individuals with infection who have evidence of oropharyngeal lesions, lower respiratory tract involvement or severe systemic illness requiring hospitalisation, the possibility of airborne transmission cannot be excluded.

For information and links to other relevant mpox guidance refer to: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/

Where possible, pregnant women and immunocompromised/suppressed individuals should not assess or clinically care for individuals with suspected or confirmed West Africa (clade II). Refer to the following guidance for more information: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Monkeypox%20in%20Pregnancy%20Guidance%20for%20maternity%20services.pdf

Management of suspected, probable and confirmed cases of West Africa (clade II) infection presenting to an acute healthcare setting

Based on experience to date, most patients will not require management in the acute healthcare setting and can be managed safely in the community, refer to the checklist for Public Health on management of mpox cases and their contacts https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Public%20Health%20Advice%20for%20Monkeypox%20Infection%20advice%20for%20confirmed%20cases%20and%20close%20contacts.pdf for detail.

Standard precautions should be used with all patients at all times.

A point of care risk assessment (PCRA) should be conducted to determine the likelihood of onward transmission of the virus will determine which are the most important elements such as - hand hygiene, appropriate choice and use of PPE, and appropriate patient placement. Refer to the following links for resources on point of care risk assessment (PCRA) https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/infectioncontrolandhai/posters/A3%20Poster%20Resist.final%20online%20version.pdf and

https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/hcai/resources/general/how-to-use-a-point-of-care-risk-assessment-pcra-for-infection-prevention-and-control-copy.pdf

Details on assessment and testing pathway for use in acute settings can be found here: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Monkey%20Pox%20Assessment%20and%20testing%20pathway_Acute%20settings.pdf

Conducting a point of care risk assessment (PCRA) is an ongoing process during care of the person as this will help decide on patient placement, extent of disease and appropriate initial PPE.

On suspicion that a patient may have West Africa (clade II) infection, they should be immediately placed in a single room, ideally in a negative pressure isolation room (if available). If one is not available, the person should be isolated in a single room with en-suite bathroom facilities.

Initial management, informed by the initial PCRA, should include contact, droplet, and airborne precautions.

NB: Airborne precautions should be implemented as a precautionary measure for the following reasons:

- until varicella has been out ruled
- the extent of the rash and the lesions has been determined
- It has been determined that the patient does not have any upper/lower respiratory tract symptoms.

NOTE: some patients may present with obvious symptoms and lesions or may present with symptoms such as proctitis and no cutaneous lesions, indicating a lower risk of onward spread, therefore a PCRA will support correct selection of PPE depending on the situation.

When carrying out the initial assessment of a person t a **fluid-resistant surgical face mask (Type 11R)** may be considered adequate if;

1(A.) a differential diagnosis of Varicella has been out-ruled (at initial assessment/ triage stage).

To determine this, ask the patient the following questions:

- Have you ever had chicken pox? If the patient cannot remember, ask if they can recall whether their siblings ever got chicken pox
- Have you ever been vaccinated against chicken pox?
- Do you have a rash? If yes, where exactly is the rash and can you describe what it looks like?

and

(B.) the patient has lesions, but has no oropharyngeal or respiratory symptoms,

(C.) there are no activities occurring in the patient area that could cause dispersal of skin squames (for example during bed making), and

(D.) the HCW does not have any direct physical contact with the patient and/ or their immediate surroundings.

2. If a patient has respiratory symptoms and/ or oropharyngeal lesions and/ or a diagnosis of varicella has not been out-ruled - **a respirator mask (FFP2/3) and eye protection** should be worn following a point of care risk assessment.

3. Eye protection (goggles or visor) is only necessary if there is a risk of splash to the HCWs eyes/ nose or mouth, for example where sampling involves de-roofing of lesions, or if a

patient has oropharyngeal lesions or respiratory symptoms and the HCW is in close proximity to the patient i.e. within 1m.

4. Disposable nitrile gloves should be worn when a HCW anticipates any direct contact with non-intact skin, a rash, skin lesions, mucous membranes, body fluids, contaminated surfaces or equipment and with used bed linen/ patient clothing.

5. A plastic apron is required if a HCW's skin or clothing is likely to come in direct contact with the patient's skin or the patient's immediate surroundings. A gown is not usually required unless extensive contact with the patient's skin or their immediate surroundings is anticipated and/ or there is gross environmental contamination (for example if a patient is actively bleeding etc.)

Additional information on mpox can be found on: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/

Ambulatory care

For possible, probable or confirmed cases attending ambulatory healthcare (e.g. outpatients, emergency departments, urgent care centres, general practice, STI clinics), patients should be placed in a single room for assessment. A local pathway for mpox assessment and management separate to other patient pathways should be in place. The patient should be asked to wear a fluid resistant surgical mask if tolerated, especially in the pre-assessment phase.

Patients who present to ambulatory care areas and who are identified as contacts should be managed as per the definitions in the following guidance: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Monkey%20Pox%20Assessment%20and%20testing%20pathway_Clinical%20Settings.pdf

Environmental hygiene in ambulatory care settings

Spread of mpox by fomites is a recognised transmission route, so environmental decontamination with appropriate cleaning and disinfection agents must be a priority. The risk of environmental contamination increases with the increasing development and spread of skin lesions.

Cleaning and disinfection: − In a room where a suspected or confirmed mpox case was examined, disposable covers of the physical examination bed should be carefully discarded - avoiding shaking. The examination bed and any other room furniture that may have been contaminated with material from the rash should be carefully wiped with detergent followed by a disinfectant or a combined detergent disinfectant solution. Disinfectants should be prepared and used according to the manufacturer's instructions. Vacuuming or dry sweeping should be avoided; damp cleaning is recommended. Single-use disposable cleaning

equipment (i.e. disposable paper towels, detergent wipes disposable cleaning cloths) is recommended.

Management of suspected, probable / confirmed West Africa (clade II) infection (mpox) hospitalised inpatients

The following link to the Isolation quick guide for cases of mpox Infection, V1.7 20/04/2023 is available on the following link: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Isolation%20quick%20guide%20monkeypox.pdf

Conduct a point of care risk assessment to support correct selection of personal protective equipment (PPE) as outlined above.

Patient placement

Transfer patient to a single room with negative pressure ventilation (if available), if one is not available then, they should be isolated in a single room with en-suite bathroom facilities. Continue isolation while awaiting test results.

Please note: Airborne precautions may be stood down following the results of the point of care risk assessment if: the responses to points 1 (A-C) are negative; however, any such decision to change the level of IPC precautions must only be undertaken by the local IPC team in conjunction with the clinical team.

If airborne precautions are no longer necessary, healthcare workers can use a fluid resistant surgical mask (type IIR) or continue wearing a FFP2/3 mask.

For detailed advice on PPE, donning and doffing procedures and transmission -based precautions refer to the relevant sections in the National Standards for Infection and Prevention Control (IPC) 2023.

Additional advice on the use of PPE in the context of the COVID-19 pandemic is found on the following link: https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/ppe/Current%20recommendations%20for%20the%20use%20of%20PPE.pdf

Environmental Hygiene in an Acute inpatient setting

Cleaning and disinfection: a full terminal clean of inpatient rooms is required when a patient is discharged or transferred and the room is vacated, using a detergent followed by a disinfectant or a combined detergent disinfectant solution. Disinfectants should be prepared and used according to the manufacturer's instructions. Vacuuming or dry sweeping should be avoided, damp cleaning is recommended. Single-use disposable cleaning equipment (e.g. disposable towels/ cloths) is recommended.

Linen

The risk of environmental contamination increases with the increasing development and spread of skin lesions. The biological material that is most potentially infectious consists of skin lesions, lesion fluid and detached scabs. Inhalation of lesion debris is thought to pose a risk to those changing/ handling contaminated bedding material. Bearing this in mind, the extent and severity of lesions as well as the immune competence of a patient with suspected West Africa (clade II) mpox infection should be considered during the IPC PCRA.

The risk can be reduced by personnel wearing appropriate PPE when engaged in bed making including a fluid resistant surgical mask (Type IIR), gloves and apron. Items of clothing and/ or bed linen should not be shaken or handled in a manner that may disperse infectious particles. Potentially contaminated clothing or bed linen should be carefully placed in an alginate bag, then placed in a colour coded laundry bag and managed as fouled or infected laundry.

Waste

Waste from individuals suspected or confirmed to have West Africa (clade II) mpox virus is no longer treated as Category A infectious waste. The Health & Safety Authority approved the downgrading of mpox waste from Category A to Category B waste for transport. In accordance with HSE/DoHC Healthcare Risk Waste Management Segregation Packaging and Storage Guidelines for Healthcare Risk Waste, the waste should be assigned to UN3291, clinical waste, un-specified, n.o.s and transported in yellow wheeled bins for treatment in Ireland by steam sterilisation. The waste can be packaged as normal and transported and treated as per normal processes at the Stericycle facility. .

NOTE: The approval by the Health & Safety Authority states that mpox waste cannot be exported/ sent outside of the State for treatment. As Stericycle send some waste to their facility in Northern Ireland for treatment it is therefore important to continue to notify Stericycle about a confirmed cases of mpox to ensure that this waste is transported to the appropriate facility where it can then determine where this customer's waste will be treated.

Management of patients in the non-acute healthcare setting

For guidance on the assessment pathway for clinical settings in the community, refer to the following : https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Monkey%20Pox%20Assessment%20and%20testing%20pathway_Primary%20care%20Settings.pdf

Home isolation may be used for clinically well patients with possible, probable or confirmed cases as determined by the primary clinician. Patients should be advised to remain in self-isolation pending test result. The patient may drive home if feeling well enough to drive. Alternatively the patient may be driven home by a person who has already had significant

exposure to the case. Patients and their household contacts should be advised to adhere to Public Health advice on reducing their contacts and preventing infection.

Further information is available on the following website: https://www.who.int/health-topics/monkeypox#tab=tab_1

For possible, probable or confirmed cases who are ambulatory and well with limited lesions, covering those lesions and wearing a face covering/mask reduces the risk of onward transmission.

Individuals with possible, probable or confirmed West Africa (clade II) should avoid close contact with others until all lesions have healed, and scabs dried off. This should include staying at home unless requiring medical assessment or care, or other urgent health and wellbeing issues.

Close household and non-household contacts of confirmed cases should be risk assessed and managed in line with the checklist for Public Health on management of mpox cases and their contacts: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Public%20Health%20Advice%20for%20Monkeypox%20Infection%20advice%20for%20confirmed%20cases%20and%20close%20contacts.pdf

Cleaning to reduce risk from the environment in the community settings can be effectively achieved without using specialist services or equipment.

The risk of transmission in the home environment for possible, probable or confirmed cases can be reduced by the case performing regular domestic cleans and washing their own clothing and bed linen in a domestic washing machine.

Transport from the community to healthcare facilities for possible, probable or confirmed cases should be via private transport where possible. Where private transport is not available, public transport can be used but busy periods should be avoided. Any lesions should be covered by cloth (for example scarves or bandages) and a face covering must be worn.

In the home and non -acute settings, healthcare workers, caregivers and relatives should avoid touching skin lesions and the bedding and other personal belongings of the affected person with bare hands; instead they should wear disposable gloves and practice strict hand hygiene.

Other residential settings

Within non-domestic residential settings (for example adult social care, prisons, homeless shelters, refuges), community isolation facilities, individuals who are clinically well should be managed in a single room with separate toilet facilities where possible.

In domestic and non-domestic settings where healthcare is being provided, waste generated is classified as healthcare risk waste and should be managed as Category B Infectious waste.

Where possible, pregnant women and immunocompromised/suppressed individuals should not assess or clinically care for individuals with suspected or confirmed West Africa (clade II). Guidance is available on the following link: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Monkeypox%20in%20Pregnancy%20Guidance%20for%20maternity%20services.pdf

Close contacts of confirmed cases in these settings should be assessed for vaccine, following the contact recommendations.

Management of contacts

Contacts should be managed as per the definitions in links contained in HPSC website: https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/ under the following section: Management of Cases and Contacts https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/Public%20Health%20Advice%20for%20Monkeypox%20Infection%20advice%20for%20confirmed%20cases%20and%20close%20contacts.pdf

Further information

Further information can be found on the following links:

https://www.hpsc.ie/a-z/zoonotic/monkeypox/guidance/

Notifiable disease reporting arrangements are in accordance with Public Health guidance https://www.hpsc.ie/notifiablediseases/

https://www.gov.uk/guidance/monkeypox

https://www.cdc.gov/poxvirus/monkeypox/about.html

https://www.ecdc.europa.eu/en/all-topics-z/monkeypox/factsheet-health-professionals

http://www.who.int/mediacentre/factsheets/fs161/en/

https://www.who.int/docs/default-source/documents/emergencies/outbreak-toolkit/monkeypox-toolbox-20112019.pdf?sfvrsn=c849bd8b_2

https://openwho.org/courses/monkeypox-introduction

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European Centre for Disease Prevention and Control (ECDC) https://www.ecdc.europa.eu/en/all-topics-z/monkeypox/factsheet-health-professionals

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