Interim Infection Prevention and Control Precautions for healthcare workers for Possible or Confirmed Human Monkeypox infection (HMI): WA-MPX Clade

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Ver.	Date	Changes from previous version
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 African Monkeypox Clades (WA_MPX clades) only.

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

This document should be used in association with the "Draft National Standards for Infection

Prevention and Control (IPC), 2022" which is available at the following link:

https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

This document was informed by guidance from:

- 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.

Current situation

Since early May, there has been an ongoing international outbreak of Human Monkeypox infection (HMI) caused by the monkeypox virus (MPXV). On 23/7/22, the Director General of the World Health Organization (WHO) declared the global monkeypox outbreak to be a Public Health Emergency of International Concern (PHEIC). This is the first time that chains of transmission have been reported in Europe without known epidemiological links to West or Central Africa. To date the cases have been of the WA_MPX clades which is known to have lower mortality in endemic countries than the CB-MPX Clades. Cases have atypical clinical features and have had mild symptoms. In addition, the cases have been predominantly affecting a specific population, namely men who identify as gay, bisexual and other men who have sex with men (gbMSM).

Background and clinical Features

Details on HMI can be found on the following link:

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/

Infection control, personal protection and prevention

The principal mode of person-to-person transmission is understood to be direct contact with WA-MPX Clade virus (MPX) lesions or with an affected person's clothing, bedclothes and other personal belongings that have been in contact with the lesions.

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 on case definitions refer to:

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

Where possible, pregnant women and immunocompromised/suppressed individuals should not assess or clinically care for individuals with suspected or confirmed WA-MPX Clade. This will be reassessed as evidence emerges.

Management of suspected, probable and confirmed cases of WA-MPX Clade infection (MPX) in the 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.

Standard precautions should be used with all patients at all times- a point of care risk assessment (PCRA) 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.

See the Draft National Standards for Infection and Prevention Control (IPC) 2022 for guidance on the following:

- Hand Hygiene
- Alcohol-based hand rub
- Respiratory hygiene and cough etiquette

- Safe management of linen (Laundry)
- Management of blood and body fluid spills
- Management of waste

Details on assessment and testing pathway for use in acute settings can be found here:

https://www.hpsc.ie/az/zoonotic/monkeypox/guidance/Monkey%20Pox%20Assessment%20and%20testing%20pathwa y_Clinical%20Settings.pdf

Conduct a point of care risk assessment. On suspicion that a patient may have WA-MPX Clade infection, they should be immediately placed in a single room, ideally in a negative pressure isolation room (if available), if one is not available , then they should be isolated in a single room with en-suite bathroom facilities.

Immediately conduct a point of care risk assessment (PCRA) and implement 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.

Conduct a point of care risk assessment (PCRA) to determine the initial level of personal protective equipment (PPE) required.

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.

As standard practice undertake a point of care risk assessment (PCRA) for every interaction with each patient (refer to the IPC PCRA poster A3 Poster Resist (hpsc.ie) and refer to the following link on how to conduct a PCRA How to use a point-of-care risk assessment (PCRA) for infection prevention and control (hpsc.ie)

When carrying out the initial assessment of a patient 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 same-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.

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 deroofing 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 skin 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 Monkeypox can be found on: https://www.hpsc.ie/a-z/zoonotic/monkeypox /guidance/Monkeypox %20Clinicians%20Public%20Health.pdf

Management of suspected, probable / confirmed WA-MPX Clade infection (MPX) hospitalised inpatients

Minimum level of PPE required:

- Respirator Mask: FFP2/FFP3
- Eye protection: Goggles/ Visor
- Disposable nitrile gloves
- Impervious Long-sleeved gown

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.

Further guidance on PPE, donning and doffing procedures can be found on:

https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

For further guidance on transmission -based precautions, see the Draft National Standards for Infection and Prevention Control (IPC) 2022.

https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

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 HMI 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/az/zoonotic/monkeypox/guidance/HMI%20Management%20of%20Contacts.pdf

Management of Contacts

Contacts should be managed as per the definitions in the following guidance:
https://www.hpsc.ie/az/zoonotic/monkeypox/guidance/HMI%20Management%20of%20Contacts.pdf

Staff Uniforms/Clothing

See "Draft National Standards for Infection and Prevention Control (IPC) 2022
https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

Environmental Hygiene; Routine and Terminal Cleaning

Spread of MPXV 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.

Ambulatory Care

Cleaning and disinfection: – In a room where a suspected or confirmed MPX 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; wet cleaning is recommended. Single-use disposable cleaning equipment (i.e. disposable paper towels, detergent wipes cleaning cloths) is recommended.

Acute inpatient setting

Cleaning and disinfection: -- a full terminal clean of inpatient rooms is required when a patient is discharged/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, wet cleaning is recommended. Single-use disposable cleaning equipment (e.g. disposable towels/clothes) is recommended. Detail on cleaning and disinfection are included in Appendix 3

For further detailed information on standard cleaning and disinfection see the "Draft National Standards for Infection and Prevention Control (IPC) 2022"
https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

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 WA-MPX Clade 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.

NB The use of fans is not recommended as this may lead to dispersal of infectious particles during bed making.

For further guidance refer to the "Draft National Standards for Infection and Prevention Control (IPC) 2022".

https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

Waste

Waste from individuals suspected or confirmed to have WA-MPX Clade virus will no longer need to be treated as Category A infectious waste for the purpose of transport. Waste from these individuals can now be transported as Category B infectious waste, however all sites must continue to notify Stericycle (1-800-937628) in relation to collections of healthcare risk waste from confirmed WA-MPX Clade cases.

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

Waste management should follow best practice and as adhere to relevant national local guidelines, specific legislation and regulations.

Further details for the specific management of waste for MPX is available on the following link: https://www.hpsc.ie/az/zoonotic/monkeypox/guidance/Procedure%20for%20Assembly%20of%20Category%20A%20Was te%20Packaging.pdf

Also see the "Draft National Standards for Infection and Prevention Control (IPC) 2022"

https://www.hse.ie/eng/about/who/nqpsd/nirp/ncec-ipc-guideline-2022-for-consultation.pdf

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/az/zoonotic/monkeypoxWA-MPX Clade /guidance/Monkey%20Pox%20Assessment%20and%20testing%20pathwa y_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.

Factsheets provide guidance for the management of patients, refer to the following link: https://www.hpsc.ie/a-z/zoonotic/monkeypox/factsheets/

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 WA-MPX Clade 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 contact management guidance: https://www.hpsc.ie/az/zoonotic/monkeypox/guidance/HMI%20Management%20of%20Contacts.pd f

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 cases bedding and other personal belongings with bare hands, they should wear disposable gloves, and observe 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 WA-MPX Clade. This will be reassessed as evidence emerges.

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

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European Centre for Disease Prevention and Control (ECDC) Monkeypox infection prevention and control guidance for primary and acute care settings https://www.ecdc.europa.eu/en/publications-data/monkeypox-infection-prevention-and-control-guidance-primary-and-acute-care

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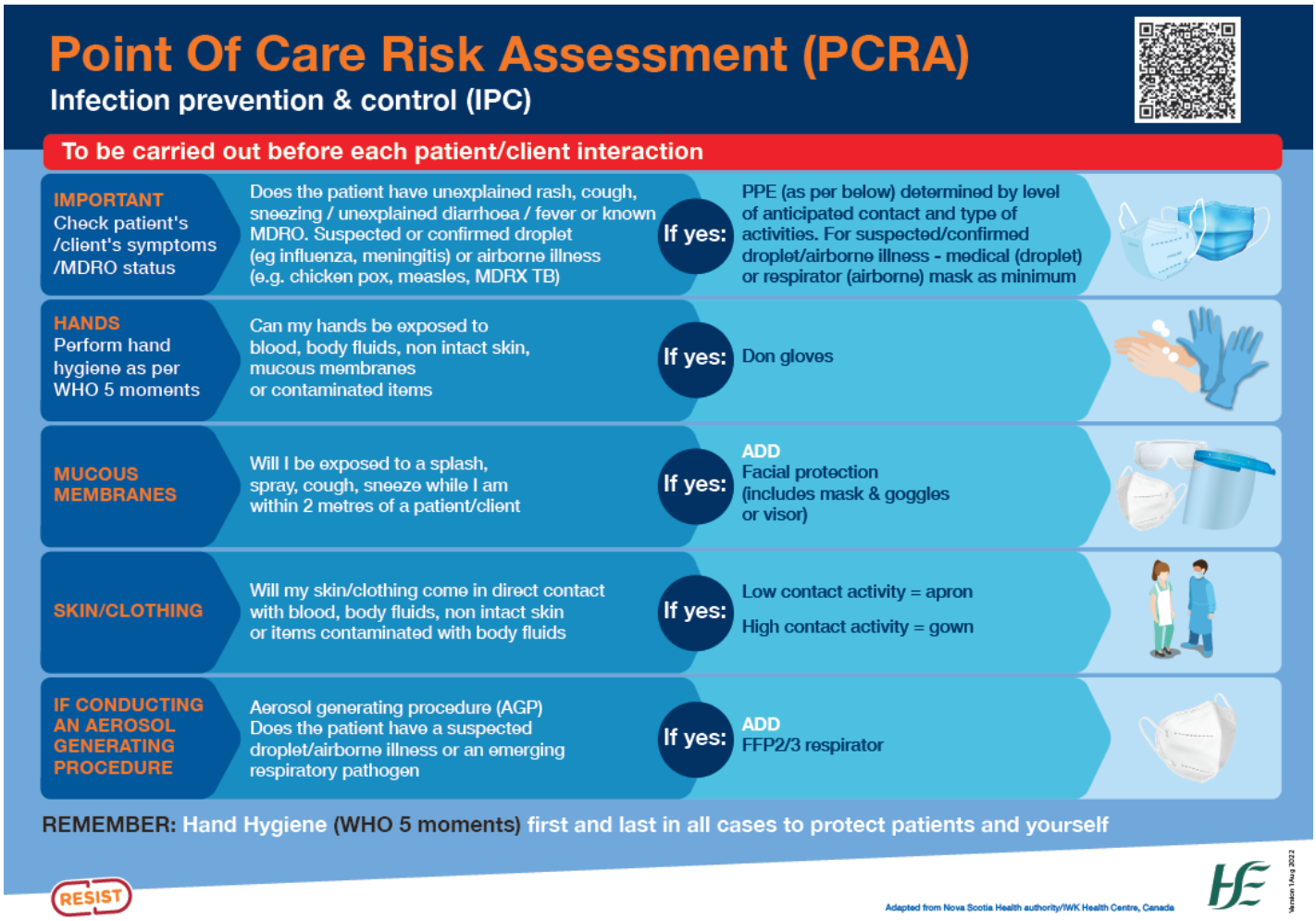
Appendix 1 Point of care risk assessment (PCRA)

This is a generic IPC tool to support precautions required and PPE selection for all patients at all times



Appendix 2 How to use a Point-of-Care Risk Assessment (PCRA) for Infection Prevention and Control

Important: Use for all patients at all times

The PCRA is an element of routine practice which should be conducted *before* every patient/client/resident interaction by a healthcare worker (HCW) to assess the likelihood of exposing themselves and/or others to infectious agents/transmissible microorganisms.

This PCRA supports the selection of appropriate actions and additional Personal Protective Equipment (PPE) to minimise the risk of exposure in addition to any Infection Prevention and Control (IPC) recommendations already in place.

This is a general tool, and risk assessments may vary from person to person.

Step 1

Before each patient interaction, a healthcare worker must assess the following:

PATIENT

What are the patient's symptoms (e.g., respiratory symptoms, e.g. coughing, unexplained fever, rash, enteric symptoms, diarrhoea)?

Are there additional precautions (droplet, contact, airborne) in place?

Has the patient a history of multi-drug resistant organisms (MDROs) etc.?

Is the patient well, independent and able to perform hand hygiene and practice respiratory etiquette etc.?

Has the patient been recently screened for infectious symptoms (e.g. triage, review of daily symptom check)?

TASK

What type of task am I carrying out (e.g., providing direct face-to-face care, potential for contact with blood/body fluids, personal care, performing an aerosol generating procedure (AGP), non-clinical interaction)?

Is additional equipment required to safely carry out the task (standard precautions, e.g., use of dressings, provide tissues, emesis basin)

ENVIRONMENT

Are there potential hazards that may impact my task (e.g. physical clutter)?

Is there a risk to/from other individuals (e.g., shared rooms, mobile patients with infectious symptoms)?

Is there enough space for physical distancing to be maintained?

Can my planned work area be properly clean and disinfected?

Step 2

Choose appropriate actions and PPE including the following:

Hand hygiene (as per WHO 5 Moments)

Respiratory etiquette (e.g. offer the patient a mask, if tolerated, support the patient to use tissues/their elbow to cover coughs)

Personal space (e.g. encourage the patient to respect other's personal space)

Implement additional precautions if required (e.g. droplet and contact precautions as required)

Environmental and equipment cleaning and disinfection (e.g. clean & disinfect environmental surfaces and reusable equipment between each use)

Patient placement e.g. prioritise patients with risks for infectious agents to single rooms (where possible)

Select PPE items based on required additional precautions and your own risk assessment, as per the PCRA poster.

NOTE: Reassessment of PPE requirements should occur as the clinical scenario develops to reflect changes in transmission risk.

For further information, refer to **Draft National Guidelines for Infection and Prevention Control (IPC) 2022, ncec-ipc-guideline-2022-for-consultation.pdf (hse.ie).**

Adapted from Nova Scotia Health authority/IWK Health Centre, Canada

Appendix 3 Cleaning procedures

Routine environmental cleaning

General surfaces and the cleaning requirements for each can be divided into 2 groups as illustrated in the table below:

Table. Cleaning requirements for routine environmental cleaning

Minimally touched surfaces	**Frequently touched surfaces**
Floors, ceilings, walls and blinds	**Doorknobs, bed rails, table-tops, light switches and sanitary ware**
A detergent solution (diluted as per manufacturer's instructions) is adequate for cleaning general surfaces and non-patient care areas. Damp mopping is preferable to dry mopping. Flat mops are recommended for effective cleaning and these should be decontaminated in washing machines dedicated for this purpose. Cleaning cloths should be colour coded in line with the area of the environment/function for which they are intended. They should be set aside for washing or disposal after each use. Walls and blinds should be cleaned when visibly dusty or soiled. Window curtains should be regularly changed in addition to being cleaned when soiled or exposed to MDROs.	Should be cleaned more frequently than minimally touch surfaces. Detergent solution (diluted as per manufacturer's instructions) can be used with the exact choice of detergent determined by the surface and likely degree of contamination. Detergent impregnated wipes may be used for a single piece of equipment or a small area but should not be used routinely as a replacement for the mechanical cleaning process. Particular attention is required to ensure that sinks, shower and related fittings are cleaned on a regular basis and that water drains freely and thoroughly so that there is no pooling of water.

Risk assessment

The methods, thoroughness and frequency of cleaning and the products used for different surfaces are determined by risk analysis and reflected in healthcare facility policy. Infection control

professionals typically use a risk assessment approach to identify frequently touched surfaces and then coordinate an appropriately thorough cleaning strategy and schedule with the cleaning staff.

A detergent solution is recommended for routine cleaning. When MDROs are suspected or known to be present routine cleaning is intensified and the use of a detergent solution is followed by the use of a disinfectant so that surfaces are cleaned and disinfected. Alternatively, a combined cleaning and disinfection agent may be used.

Cleaning method and product choice

Routine cleaning with detergent and water followed by rinsing and drying is the most useful method for removing microorganisms from surfaces. Detergents help to lift dirt and microorganisms so that they can be rinsed away with clean water. Mechanical cleaning (scrubbing the surface) physically reduces the number of microorganisms on the surface. Rinsing with clean water removes the loosened microorganisms and any detergent residue from the surface. Drying the surface makes it harder for microorganisms to survive or grow.

Disinfectants are usually only necessary if a surface that has already been cleaned with detergent and water is suspected or known to have been contaminated by MDROs and or other potentially infectious material including blood and other body fluids. Most microorganisms do not survive for long on clean surfaces when exposed to air and light and routine cleaning with detergent and water should be enough to reduce numbers. Disinfectants are used after routine cleaning or as a combined cleaning/disinfecting agent during an outbreak of for example a gastrointestinal disease.

When choosing an appropriate product, the following factors should be considered:

- the impact of cleaning and disinfection products on the wider environment.
- cleaning products used on different surfaces should be determined by risk assessment.
- initial mechanical cleaning with a suitable detergent followed by disinfection with a chlorine-based product such as sodium hypochlorite where indicated or another appropriate disinfectant.

- the intended purpose of the product as per manufacturer's instructions.
- that manufacturer's instructions can be complied with in the facility.
- the suitability of the product for the type and size of the surface to be cleaned.
- the practical application of using the product or technology with available resources including trained staff.
- the effectiveness of the product against particular microorganisms including microbiological activity and contact time to kill microorganisms

Terminal cleaning

Terminal cleaning and disinfection is the thorough cleaning/disinfection of all surfaces including floors and re-useable equipment either within the whole healthcare facility or within an individual ward/department/unit/room. Terminal cleaning and disinfection is intended to ensure that, to the greatest possible extent pathogenic organisms are removed or inactivated to avoid the risk of transmission to subsequent users of healthcare services and healthcare workers. Terminal cleaning and disinfection may be required in the following circumstances:

- following an outbreak or increased incidence of a communicable infection.
- following discharge, transfer or death of a person who has had a known communicable infection.
- following use of an area to support application of Transmission-based Precautions for a person/cohort.

Terminal cleaning and disinfection should be performed on the advice of the Infection Prevention and Control Team or manager in charge of the ward/unit/facility. The terminal cleaning and disinfection should not commence until the relevant area has been fully vacated.