



## **Infection Prevention and Control**

### **Background**

Infection prevention and control is an important part of safe patient care. Concerns about the possible spread of blood-borne diseases and the impact of emerging, highly contagious respiratory and other illnesses, require podiatrists to establish, evaluate, continually update, and monitor their IPAC strategies and protocols.

These Standards of Practice are broader than the previous versions and reflect current knowledge of the transmission of infection and how to prevent and control it.

These guidelines have been written for healthcare workers in Podiatry practice in Nova Scotia.

Patient safety is a cornerstone of care and preventing healthcare-associated infections is a priority. All patients have a right to expect certain standards when accessing healthcare, and not to be exposed to unnecessary risks.

Podiatrists must put in place measures to protect staff from such risks, and staff must co-operate with these to protect themselves and others.

Practitioners need to understand the risk of cross infection. Risk assessments determining possible routes of transmission of infectious agents must be carried out. These risks must be mitigated through the implementation of effective infection prevention and control measures, such as those described in this document. These are an essential part of high-quality care and contribute to the safety of patients, healthcare staff and others.

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## **1. Infection Control Policy**

All practitioners and their staff:

- Must be aware of the policy and have sufficient training and resources to implement it
- Understand and follow the Infection Control Guidance which aims to reduce the risk of transmission of infection to patients, staff and others, from the work being carried out
- Co-operate in any measures required to prevent the spread of infection
- Ensure that wherever care is delivered they have available appropriate supplies of:
  - materials for hand decontamination
  - sharps containers
  - personal protective equipment
- Complete CPD on Infection Prevention and Control as required for continued professional registration
- Provide relevant information on Infection Prevention and Control (IPC), including information on hand hygiene, to patients and carers if requested

Podiatrists should make the Infection Control Policy available for patients and other stake holders to view if requested, and take part in any audit of the policy which may be undertaken by delegated authorities.

Podiatrists must undertake risk assessments for specific procedures and for specific cases of infection, to inform where additional infection control measures need to be put in place. These will be properly documented and reviewed. Advice on risk assessment should be sought as appropriate.

Other relevant policies must also be followed e.g. decontamination, waste management etc.

## **2. Standard Precautions**

Standard precautions should be followed at all times.

Standard Infection Control Precautions (SICPs) must be put in place to reduce the risk of transmission of micro-organisms during healthcare activities. They are necessary to ensure the safety of patients, health care workers and visitors to healthcare settings/environments.

Standard Precautions developed from Universal Precautions, which were first introduced to prevent the spread or transmission of blood borne pathogens to healthcare providers. Standard Precautions now incorporate the necessary elements to prevent the transmission of a wide range of infectious agents, not only to healthcare personnel but also to patients and others.

As we cannot tell who might carry infectious micro-organisms Standard Precautions must be used whenever and wherever health care is being provided.

Standard Infection Control Precautions cannot prevent infection transmission from all infectious agents, and where specific infectious agents are suspected or known additional transmission based precautions may be required (e.g. droplet precautions for preventing the spread of influenza).

The Standard Infection Control Precautions include:

- Hand decontamination
- Use of Personal Protective Equipment (PPE)
- Occupational Exposure Management including sharps
- Safe disposal of clinical waste
- Correct dealing with spillages of blood and body fluids
- Management of the Healthcare Environment
- Management of Equipment
- Safe Care of Linen including Uniforms

### **3. Hand Decontamination**

“Hand hygiene, a very simple action, remains the primary measure to reduce healthcare associated infection and the spread of antimicrobial resistance, enhancing patient safety across all settings” (WHO 2005)

To prevent the spread of healthcare associated infection, it is vital for those providing care to decontaminate their hands at all the right times, and in the correct way.

Other infections, endemic in the community, are also commonly spread through direct or indirect contact, mediated by hands. Accordingly, proper hand hygiene, by everybody is required.

#### **3.1. When;**

During patient care hands must be decontaminated according to the 5 Moments Model

1. Clean your hands immediately before touching a patient
2. Clean your hands immediately after touching a patient or their immediate surroundings (including footwear and orthotics)
3. Clean your hands immediately before an aseptic technique
4. Clean your hands immediately after an exposure risk to body fluids (and after glove removal)
5. Clean your hands after touching any object or furniture in the patient's immediate environment before leaving – even if the patient has not been touched

## **3.2. Using;**

### **3.2.1. Alcohol Hand Rub**

The effective use of alcohol based hand rubs will both remove transient, and reduce the number of resistant, micro-organisms. They are a practical and acceptable alternative to hand washing with soap and water in most situations.

Therefore alcohol hand gel (conforming to current Health Canada standards), should be available at all points of care and can be used except:

- Where there is potential for the spread of alcohol-resistant organisms (e.g. *Clostridium difficile* or other organisms that cause infectious diarrhoea)
- Where hands are contaminated with dirt/organic matter/body fluids
- When hands have become “sticky” with residue from the product

In all these cases hands should always be washed with soap and water.

However, if soap and water is not available, using alcohol hand gel is preferable to nothing in all situations.

There are some risks associated with alcohol gels and rubs which include:

- Ingestion and eye exposure
- Skin irritation
- Fire

Therefore, a local risk assessment should be undertaken that ensures placement of alcohol hand rub at the point of care, and minimises any risks associated with use.

### **3.2.2. Soap and Water**

Washing with plain soap and water mechanically removes transient micro-organisms. It is sufficient for

- Routine daily activities and
- Most clinical and social care tasks

It is the way to decontaminate hands when:

- They are visibly soiled with dirt/organic matter
- They are potentially contaminated with body fluids (e.g. after going to the toilet)
- When looking after/contact with patients/people suffering from vomiting or diarrhoea/*Clostridium difficile* infection
- After several consecutive applications of alcohol hand rub, when a sticky residue will build up

Soap should be provided in a dispenser and bar soap should not be used.

### **3.3. Antiseptic Solutions**

Antiseptic solutions include:

- Chlorhexidine gluconate
- Povidone Iodine
- Refer to Health Canada approved sanitization products

These reduce resident as well as removing/destroying transient micro-organisms. They may offer a prolonged effect, and carry on killing and inhibiting micro-organisms for a time after application

They are not necessary for most clinical activity, but may be advised for some invasive procedures, in outbreak situations, and for surgical hand decontamination and highly invasive procedures.

Alcohol hand rub can also be used following hand washing with soap and water, in place of antiseptic solution/antimicrobial soap, when a higher level of skin disinfection (e.g. before an aseptic task) is required.

#### **3.3.1. How**

To ensure that hands can be effectively decontaminated, podiatrists providing direct patient care should be:

- Bare below the elbow
- Have short, clean fingernails with no nail polish, false nails or polish
- Cover any cuts and abrasions with a waterproof dressing

#### **3.3.2. Hand Washing (with soap and water or antiseptic solution and water)**

An effective hand washing technique involves three stages: preparation, washing and rinsing, and drying. Preparation requires wetting hands under tepid running water before applying liquid soap or an antimicrobial preparation. The hand wash solution must come into contact with all of the surfaces of the hand. The hands must be rubbed together vigorously for a minimum of 20 - 30 seconds, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers. Hands should be rinsed thoroughly before drying.

An emollient hand cream should be applied regularly to protect skin from the drying effects of regular hand decontamination. If a particular soap, antimicrobial hand wash or alcohol product causes skin irritation an occupational health team should be consulted.

# Your 5 moments for hand hygiene at the point of care



1	<b>BEFORE PATIENT CONTACT</b>	<b>WHEN?</b> Clean your hands before touching a patient when approaching him/her <b>WHY?</b> To protect the patient against harmful germs carried on your hands
2	<b>BEFORE AN ASEPTIC TASK</b>	<b>WHEN?</b> Clean your hands immediately before any aseptic task <b>WHY?</b> To protect the patient against harmful germs, including the patient's own, from entering his/her body
3	<b>AFTER BODY FLUID EXPOSURE RISK</b>	<b>WHEN?</b> Clean your hands immediately after an exposure risk to body fluids (and after glove removal) <b>WHY?</b> To protect yourself and the healthcare environment from harmful patient germs
4	<b>AFTER PATIENT CONTACT</b>	<b>WHEN?</b> Clean your hands after touching a patient and her/his immediate surroundings when leaving the patient's side <b>WHY?</b> To protect yourself and the healthcare environment from harmful patient germs
5	<b>AFTER CONTACT WITH PATIENT SURROUNDINGS</b>	<b>WHEN?</b> Clean your hands after touching any object or furniture in the patient's immediate surroundings when leaving – even if the patient has not been touched <b>WHY?</b> To protect yourself and the healthcare environment from harmful patient germs

Adapted from WHO World Alliance for Patient Safety 2006

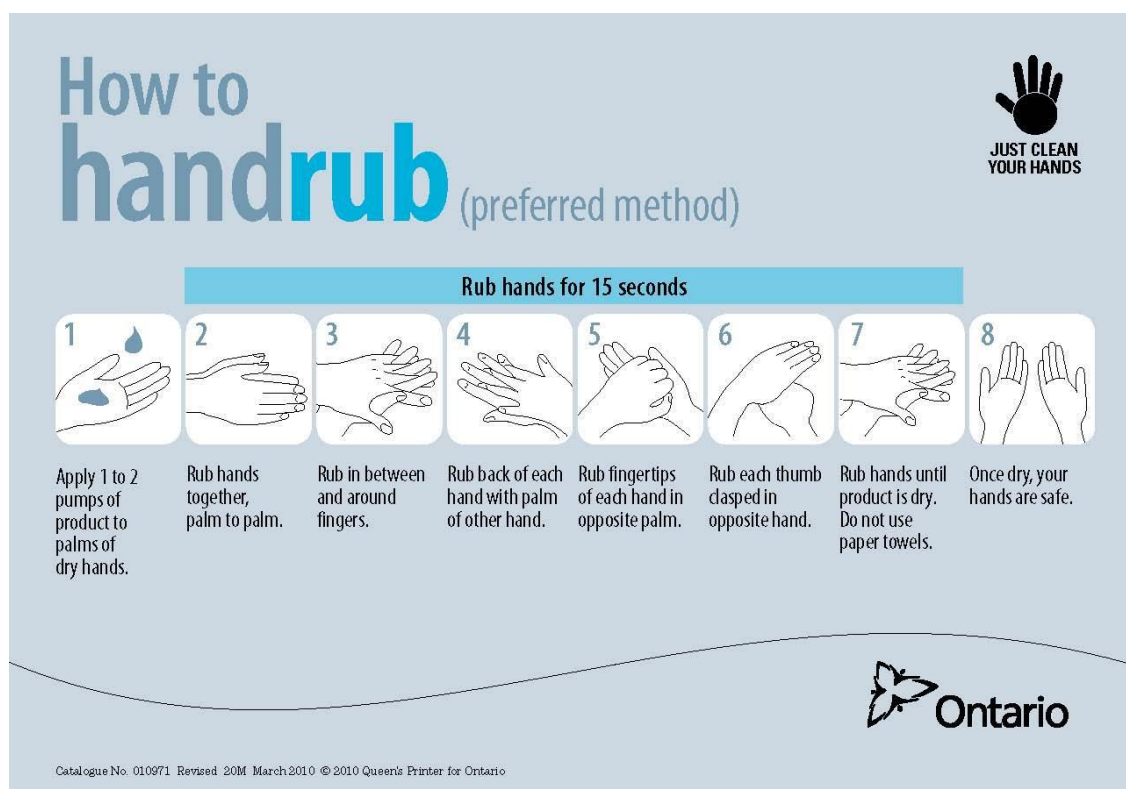




### 3.4. Hand Decontamination (with alcohol hand rub)

When decontaminating hands using an alcohol hand rub, hands should be free from dirt and organic material. The hand rub solution must come into contact with all surfaces of the hand. The hands must be rubbed together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry.





### 3.4.1. Hand Drying

Hands should be dried thoroughly using good quality paper hand towels. Dispose of paper towels into a hands free domestic waste bin.

In domiciliary settings ask the patient to provide a clean towel at every visit or take disposable paper towels into the home.

Reusable cotton towels must not be used in clinical areas.

### 3.4.2. Surgical Hand Decontamination

Use an approved antiseptic hand cleanser from a dispenser and carry out hand hygiene process for at least 2-3 minutes or as per manufacturer's instructions

Or:

Wash with plain soap and water followed by 2 applications of alcohol hand rub

Include wrists and forearms

Dry hands with sterile paper towel

### 3.5. Hand Health

An emollient hand cream should be applied regularly to protect skin from the drying effects of regular hand decontamination.

If a particular product used for hand decontamination causes skin irritation an occupational health specialist or suitable medical practitioner should be consulted.

## Where

Hands should be washed at designated hand wash basins which must not be used for other activities.

### Clinical hand wash basins

- Should have wrist, elbow, foot or movement sensor operated non-touch tap systems, if they do not, taps should be turned off after hand washing using a paper towel
- Should incorporate mixer taps or thermostatic mixer valves
- Should not have a plug or overflow
- The water jet should not discharge directly over the drainage hole
- Hand hygiene solutions should be available at the sink and preferably be wall mounted
- Liquid soap should be provided in sealed disposable cartridges, which are not refilled
- Dispensers should have clean nozzles and be in good working order
- There should be information at hand wash basins to remind staff how to decontaminate hands effectively

## 4. Personal Protective Equipment (PPE)

In healthcare, exposure to micro-organisms and chemicals cannot be eliminated so PPE is used to manage the risk.

PPE includes:

- Gloves
- Aprons/gowns
- Face, mouth/eye protection, e.g. masks/goggles/visors

PPE must be used where there is a risk that a healthcare worker may come into direct contact **with blood or other body fluids, non- intact skin, mucous membranes or contaminated equipment.**

Which PPE is required should always be decided following an assessment of the risk of contamination of the healthcare workers' clothing and skin by the patients' blood, body fluids, secretions or excretions and the risk of transmission of infection to the patient (see below).

## Use of PPE according to Risk

Low Risk	Moderate Risk	High Risk
No risk of contact with blood and body fluids	Risk that clothing or skin will be contaminated with blood and body fluid	Risk that eyes, clothing or skin will get splashed with blood and body fluids
PPE not required	Apron and gloves	Eye and face protection, water repellent gowns and gloves

Table of Personal Protective Equipment (PPE)	
<b>Gloves</b>	Non-sterile examination gloves shall be worn for all procedures. Gloves must be changed between patients. Sterile gloves shall be worn for invasive / surgical procedures. <b>Hands must be cleaned before donning gloves and after removing gloves.</b>
<b>Masks</b>	A mask and eye protection should be worn to reduce the exposure to aerosolized organisms during filing of nails. Masks should be changed between patients and/or when wet. Masks lose their effectiveness when wet. The member / assistant shall wear a mask and eye protection while performing a surgical procedure.
<b>Respirators</b>	Whilst Clinical Podiatry procedures are not considered to be aerosol generating events, N95 respirators are recommended for nail filing - if the equipment does not have a vacuum or water spray capability and/or if the patient has an airborne infectious agent (e.g. Mycobacterium Tuberculosis (TB)) where both podiatrist and patient should wear one.
<b>Facial/Eye Protection</b>	Impact resistant safety glasses, goggles, splash guards, or facial shields should be worn to protect the face from nail clippings and debris, as well as splashes and sprays contaminated with blood or other body fluids. Prescription eye glasses are not acceptable as eye protection as they do not provide sufficient protection from splashes around the top and sides of the glasses.

<b>Clinical Attire</b>	The member/assistant shall wear appropriate attire that is clean and washable (e.g., clothing / scrubs) for all routine and non-invasive procedures.
<b>Gown</b>	The member/assistant shall wear a sterile surgical gown and hair cover while performing invasive surgical procedures (below the dermis). Gowns should be cuffed and long sleeved, and offer full coverage of the body front, from neck to mid-thigh or below.

Most PPE is single use and should not be re-used.

The use of PPE such as gloves does not negate the need for hand hygiene. Hand hygiene should be performed before donning and immediately after removal/disposal of PPE.

All PPE must be:

- Adequate
- Effective
- Suitable
- Approved by Health Canada
- Selected, used, maintained, tested correctly by trained people, with appropriate records kept
- Stored correctly

Accordingly, all PPE must be:

- Appropriate for the task/purpose
- Suitable for the person using/wearing it with a selection of sizes available
- Available at the point of use
- Stored off of the floor, in a clean, dry area
- Dispensed directly from the original box/container
- In date and undamaged (PPE that is damaged during use should be removed immediately (safety permitting) and replaced
- Removed immediately following a procedure
- Disposed of immediately after use in the appropriate waste stream

It must not

- Interfere with the task
- Be reused for a different patient/client/procedure/area (It may be necessary to change PPE such as gloves and aprons between tasks on the same patient/client to prevent unnecessary cross contamination)
- Be a source of further contamination, e.g. by being removed and left on surfaces
- Be put on and removed incorrectly (see below)

## PUTTING ON PPE

### 1. Perform Hand Hygiene



### 2. Put on Gown

- Tie neck and waist ties securely



### 5. Put on Gloves

- Put on gloves, taking care not to tear or puncture glove
- If a gown is worn, the glove fits over the gown's cuff



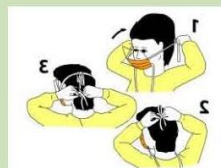
### 4. Put on Protective Eyewear

- Put on eye protection and adjust to fit
- Face shield should fit over brow



### 3. Put on Mask/N95 Respirator

- Place mask over nose and under chin
- Secure ties, loops or straps
- Mould metal piece to your nose bridge
- For respirators, perform a seal-check

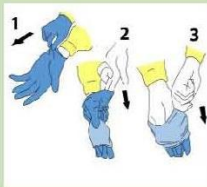




## TAKING OFF PPE

### 1. Remove Gloves

- Remove gloves using a glove-to-glove/skin-to-skin technique
- Grasp outside edge near the wrist and peel away, rolling the glove inside-out
- Reach under the second glove and peel away
- Discard immediately into waste receptacle



### 2. Remove Gown

- Remove gown in a manner that prevents contamination of clothing or skin
- Starting at the neck ties, the outer, 'contaminated', side of the gown is pulled forward and turned inward, rolled off the arms into a bundle, then discarded immediately in a manner that minimizes air disturbance



### 6. Perform Hand Hygiene

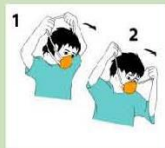


### 3. Perform Hand Hygiene



### 5. Remove Mask/N95 Respirator

- Ties/ear loops/straps are considered 'clean' and may be touched with hands
- The front of the mask/respirator is considered to be contaminated
- Untie bottom tie then top tie, or grasp straps or ear loops
- Pull forward off the head, bending forward to allow mask/respirator to fall away from the face
- Discard immediately into waste receptacle



### 4. Remove Eye Protection

- Arms of goggles and headband of face shields are considered to be 'clean' and may be touched with the hands
- The front of goggles/face shield is considered to be contaminated
- Remove eye protection by handling ear loops, sides or back only
- Discard into waste receptacle or into appropriate container to be sent for reprocessing
- Personally-owned eyewear may be cleaned by the individual after each use



## 4.1. Gloves

Gloves act as a physical barrier to prevent contamination by blood and body fluids, chemicals and micro-organisms. However the integrity of any glove cannot be taken for granted, and staff should be aware that complete protection or contamination prevention of their hands cannot be guaranteed.

Prolonged use of gloves can increase the risk of occupational dermatitis because of exposure to the substance or chemicals used to manufacture gloves.

Therefore, healthcare workers must undertake a risk assessment to decide if they need to wear gloves, and if so, which ones to use.

As for all PPE use, glove use should be based on a risk assessment of all tasks that involve potential risk.

This assessment should consider the potential for contact/contamination with blood/body fluids.

Are required for any procedure where exposure to blood/other body fluids or tissue may occur.

In practice, this means that podiatrists would normally need to wear single use disposable gloves for:

- All activities that have been assessed as carrying a risk of exposure to blood, body fluids, secretions or excretions
- All activities involving the use/handling of sharp or contaminated instruments
- All invasive procedures
- All contact with sterile sites and intact or non-intact skin or mucous membranes

Gloves may also need to be worn where treatment is being given to patients who are:

being nurses/cared for under contact precautions, due to infection risk. This should be communicated to the podiatrist by the medical staff/organisation implementing these precautions.

Podiatrists may need to use sterile gloves during clean/aseptic procedures.

Gloves must comply with the relevant Health Canada standards.

Gloves intended to protect the patient and those intended to protect the wearer, come under two different sets of regulations.

- Gloves worn as PPE must meet the Personal Protective Equipment Regulations as established by Health Canada
- Gloves used for patient protection are not classified as PPE, and are certified under medical devices regulations



All gloves used for direct patient care must:

- Be appropriate for the task

Sterile gloves should be worn during aseptic non-touch techniques where key parts/sites might be touched during the procedure

To protect the wearer:

- Do not use polythene gloves for clinical interventions
- Latex gloves may cause sensitivity/allergic reactions. If latex gloves are used ensure they are powder free and that non latex gloves are available for treatment of patients/use for staff that have sensitivity to latex (A risk assessment must be carried out). It is recommended that nitrile gloves are used instead of latex

Gloves must be:

- Put on immediately before an episode of patient contact or treatment
- Removed as soon as the activity is completed
- They may need to be changed several times, and hands decontaminated, during an episode of patient care, depending on the tasks being undertaken
- Torn, punctured or otherwise damaged gloves should not be used and should be removed immediately (safety permitting) if this occurs during a procedure
- Removed with care to prevent contamination of hands and clothing
- Disposed of immediately after used into the correct waste stream following risk assessment

Hand hygiene should be performed immediately after the removal and disposal of gloves.

Gloves are single use and must never be decontaminated.

#### **4.2. Aprons and Gowns**

A plastic disposable apron should be worn for close contact with patients if there is a risk that clothing may be exposed to blood, body fluids, or potentially infectious debris.

Wear a long-sleeved fluid-repellent gown if there is a risk of extensive splashing of blood, body fluids, secretions or excretions onto skin or clothing.

Disposable plastic aprons or gowns must be:

- Single use for one procedure or one episode of direct patient care
- Removed immediately following use (avoid touching the front outside surface during removal) and disposed of into the correct waste stream following risk assessment.

### 4.3. Face Masks and Eye Protection

Face masks and eye protection must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes.

Respiratory protective equipment, for example an N95 mask, must be used when clinically indicated.

A risk assessment should be undertaken to determine the level of protection required.

**A splash proof surgical mask, with eye protection if required, is usually sufficient to protect healthcare workers from the risk of infections transmitted through droplet and splashes.**

However healthcare workers may be exposed to potentially infectious particles in the air. There is some evidence that podiatrists may be exposed to airborne particles containing micro-organisms when filing/drilling nails if the equipment does not have vacuum or water spray capability a N95 mask should be worn; or if a patient has an airborne infectious disease then a N95 mask should be worn by both podiatrist and patient to mitigate these risks.

Goggles should be used to prevent splashing, or contamination of the eyes. This would include contamination by dust which may contain micro-organisms during drilling. Staff should not assume that spectacles will provide adequate protection.

Goggles must 'wrap around' the eye area to ensure side areas are protected.

They should either be single use or decontaminated after use according to manufacturers' instructions.

A face shield/visor may be considered, in place of a surgical mask and goggles, where there is a higher risk of splattering of blood/other body fluids.

Face protection must not be touched while being worn and must be removed promptly after use, avoiding contact with the front surface. Remove using the straps/earloops/goggle legs only (manufacturers' instructions where given should be followed). Turn masks inwards after removal for disposal.

Practitioners should use devices such as pocket masks to protect against exposure during mouth-to-mouth resuscitation

### 4.4. Safe Use and Disposal of Sharps and Management of Exposure to Blood borne Viruses

Exposure to potentially infectious body fluid/blood may be caused by:

- A cut or puncture of the skin by a contaminated sharp (blade, needle)
- Through exposure of broken skin to body fluid/blood
- Bites which break the skin and draw blood.

Such exposure may result in the transmission of blood borne viruses such as HIV, Hepatitis B (HBV) and Hepatitis C (HCV). Infection with these pathogens may be serious. Even where no infection is acquired, the emotional impact of such an injury

may be severe and they have the potential to result in costly litigation.

Transmission of Blood borne virus requires inoculation of an infectious dose of infected body fluid into a susceptible recipient. The infecting dose may be as low as a visible drop of blood. However, individual factors affect the risk of transmission.

The following body fluids are considered as high-risk for the transmission of blood borne viruses:

- Blood and blood products
- Cerebrospinal fluid
- Semen and vaginal secretions
- Peritoneal fluid
- Pericardial fluid
- Synovial fluid
- Pleural fluid
- Amniotic fluid
- Breast milk
- Any other body fluid containing visible blood
- Any unfixed organs or tissues

**In relation to blood-borne infections urine, faeces, vomit, sweat, tears, skin and sputum are not considered high risk unless visibly blood-stained.**

Risk is dependent on the prevalence of the viruses in the population and on the transmission rate –it is higher for HBV and HCV than for HIV.

The risk of transmitting blood borne viruses from patients to staff is greater than from staff to patients. Unfortunately, inoculation (sharps) and exposure injuries to healthcare staff are common.

There is no evidence that BBVs can be transmitted by blood contamination of intact skin, by inhalation or by faecal-oral contamination. A simple injury, which does not break the skin or does not involve the inoculation of body fluids, is unlikely to lead to the transmission of infection.

There is a smaller risk of transmission from splashes to eyes, nose or mouth with infected blood or body fluid.

BBVs are potentially transmissible by a human bite through mucous membrane exposure if the bite breaks the skin of the person bitten.

Thankfully most sharps injuries and other exposures to blood and body fluids are preventable.

#### **4.4.1. Percutaneous (often called Sharps) Injuries**

The highest risk of transmission of blood borne viruses from patients to healthcare staff is via percutaneous exposure.

Percutaneous exposure results from inoculation with a sharp instrument such as a scalpel

blade or needle, used in clinical care, which may have been contaminated with blood, or a “high-risk” body fluid. However lancets, razors, scissors, test tubes and even fragments of bones or patients’ teeth can also cause sharps injuries.

The risk of infection following percutaneous injury caused by a contaminated needle is:

- One in three for hepatitis B;
- One in 30 for hepatitis C
- One in 300 for HIV (HPA 2008)

And will depend on a number of factors, which include:

- Whether the device was previously in the patient’s vein or artery;
- How infectious the patient is at the time of the injury
- The depth of the injury
- The type of sharp used

Injuries involving hollow bore needles contaminated with appreciable amounts of blood carry the most risk.

Injuries which are caused by sharp devices occur:

- During use
- After use, before disposal
- During disposal
- After disposal

Injuries may affect cleaners and other staff handling waste after disposal if sharps are not disposed of properly.

Injuries have also been caused by sharps left in vehicles used by healthcare staff.

#### **4.4.2. Mucutaneous Injuries**

Involve contamination of mucous membranes (eye, mouth, nose), or of broken skin with blood, or another “high-risk” body fluid.

Although transmission of BBVs may result from mucutaneous exposures, the risk is much lower than that associated with percutaneous injuries. The risk of acquiring HIV after a single mucutaneous exposure is less than one in 2000.

However, these incidents happen more frequently than percutaneous exposure.

#### 4.5. Minimising the Risk of Occupational Exposure to Blood borne Virus

Preventing exposure incidents is best achieved through risk assessment and application of a hierarchy of controls.

- Follow safe systems of work (see below)
- **Risk assess and use appropriate personal protective equipment (PPE)** where there is any risk of contact with body fluids (See earlier above section on PPE) where there is any risk of contact with body fluids
- When providing care, closed-toed shoes should be worn to avoid contamination with blood or other body fluids or potential injury from sharps.
- Have Hepatitis B vaccination if at risk of exposure
- Use and dispose of sharps safely

##### 4.5.1. Use and Disposal of Sharps

- Risk assess all tasks involving the use of sharps, putting in place any additional measures required to prevent injury
- Minimise unnecessary use of sharps
- Use sharps safety devices if a risk assessment has indicated that they will provide safer systems of working for healthcare workers, carers and patients.
- Use gloves when using sharps
- Needles must not be bent or broken before disposal and must not be recapped.
- Never try and retrieve items from a sharps bin
- Use the appropriate sized bin for the sharps that you are using and for the number of sharps you are likely to produce

Sharps:

- Should be handled as little as possible.
- Must not be passed directly from hand to hand
- Must be discarded immediately by the person generating the sharps waste into a sharps container conforming to current standards

Sharps containers must:

- Comply with standards
- Be assembled properly
- Be labelled properly
- Be kept in a safe position that
  - Is accessible at the point of care when in use
  - allows for safe disposal of sharps
  - avoids spillage

- is not accessible to the public
- is out of the reach of children
- Only be used for the disposal of sharps
- Not be filled above the fill line
- Must be disposed of when the fill line is reached
- Must be temporarily closed when not in use
- Should be disposed of every 3 months even if not full
- Is sealed after use and not emptied into larger bins or put into waste bins or bags

#### 4.6. Transport of sharps

Transport used sharps as little as possible

Do not keep unnecessary supplies of sharps in your car

Make sure that sharps bin are transported in a secure way, to prevent spillage, boxes must be kept upright and secured during transport. This can best be achieved by carrying the box in a suitable, marked, secondary container.

Check the container /boot at the end of each session to ensure no sharps have been dropped or spilled in the vehicle

If sharps have been spilled, do not use the affected area and, if necessary, the whole vehicle until made safe

Contaminated vehicles should be cleared as soon as possible without compromising safety, e.g. using a torch, a special tool / device to avoid hand contact, and Personal Protective Equipment (PPE), being wary of sharps hidden in crevices and fabrics

**Remember - failing to take adequate precautions to protect oneself and others from the risk of sharps injury is potentially a criminal offence under health and safety legislation.**

#### 4.7. Immunisation

Hepatitis B vaccine is highly effective in reducing occupational Hepatitis B transmission.

Hepatitis B vaccination is recommended for healthcare workers who may have direct contact with patients' blood or blood-stained body fluids. This includes all staff that are at risk of injury from blood-contaminated sharp instruments.

#### 4.8. Protecting patients

Any practitioners undertaking an Exposure Prone Procedure (EPP), must have had the necessary tests and immunisations to enable them to undertake the procedure with the minimum of risk to themselves and others.

*(Exposure Prone Procedures (EPPs) are those where there is a risk that injury to the worker may result in exposure of the patient's open tissues to the blood of the worker)*

*These procedures include those where the worker's gloved hands may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all time. (This will not apply to general podiatry practice)*

There is no requirement for testing of healthcare workers not undertaking EEPs for blood-borne viruses. However, if healthcare workers think that they have been exposed to BBV, then they have a professional duty of care to patients to seek medical advice on the need to be tested for blood-borne viruses. If they are subsequently found to be infected, they should get specialist medical advice on the need to modify their working practices to protect patients.

#### **4.9. Sharps Injuries and management**

Sharps injuries must be immediately dealt with. Please see Sharp Injuries guidelines for specific information on how to manage a sharps injury.

### **5. Waste Disposal**

Healthcare waste must be:

- Segregated immediately by the person generating the waste into appropriate colour-coded storage or waste disposal bags or containers which are compliant with current national legislation
- Labelled, stored, transported and disposed of in accordance with current national legislation

### **6. Management of The Environment**

Micro-organisms persist in the environment and the design and the condition of the healthcare environment and of fixtures and fittings is important in infection control.

When premises are being upgraded or built, infection prevention and control should be a consideration.

Clinical areas should be kept tidy and clutter free to allow effective cleaning and prevent accumulation of dust.

Surfaces that are not smooth, impervious and intact can harbour bacteria and prevent effective cleaning. Environmental surfaces, fixtures and fittings and furnishings in clinical areas and areas used to store clinical supplies, should have easy-to-clean, smooth impervious surfaces, be water-resistant and preferably tolerate appropriate disinfection.

Work surfaces and hard floors should be smooth-finished, intact, durable, of good quality, washable, should not allow the pooling of liquids and be impervious to fluids.

Carpets are not recommended in clinical areas or where they are likely to be contaminated with body fluids.

Curtains in treatment areas should be disposable or cleaned when soiled or periodically.

## 6.1. Environmental Cleaning

Cleanliness is intrinsically linked to infection prevention and control. A clean, well ordered environment provides the foundation for excellent infection control practice to flourish.

All parts of the healthcare environment must be visibly clean but good cleaning ensures that things not only look clean but that they are clean.

It is recommended that cleaning is carried out based on the *Infection Prevention and Control (IPC) Guidance Document* and that cleaning standards are audited on a regular basis to ensure standards are maintained

Practitioners should ensure that cleaners:

- Have received training in cleaning a healthcare environment which includes infection prevention and control and safe handling of waste and sharps
- Have adequate personal protective equipment available to them
- Store cleaning equipment in a separate designated area
- Have adequate and suitable hand-washing facilities

Different spaces require different types and frequencies of cleaning depending on the activities carried out in those spaces. See below for suggested cleaning frequencies.

Element	Standard	Minimum Cleaning Frequency		
		High-risk <i>Public thoroughfares and toilets Sterile supply areas Minor surgery</i>	Significant-risk <i>Clinic rooms, treatment rooms, attached toilets and staff areas</i>	Low-risk <i>Administrative areas, record and storage areas</i>
Clinical equipment	All parts visibly clean	One full clean daily and between every patient use	One full clean daily and between every patient use	
Medical gas equipment	All parts visibly clean	One full clean daily	One full clean daily	
Switches/sockets	Visibly clean	Daily	Daily	Weekly
Walls	Visibly clean	Check daily Dust weekly Wash yearly where required and as practicable	Check daily Dust weekly Wash yearly Where required and as practicable	Check weekly Periodically wash where required and where practicable



Ceiling	Visibly clean	Dust monthly Wash yearly where required and as practicable	Dust monthly Wash yearly where required and as practicable	Periodically wash where required and where practicable.
Doors	Visibly clean	Full clean daily	Full clean daily	Full clean weekly
Internal glazing	Visibly clean and smear free	Check and clean daily Full clean weekly	Check and clean daily Full clean weekly	Full clean weekly
External glazing	Clean	Full clean every 3 – 6 months	Full clean every 3 – 6 months	Full clean every 3 – 6 months
Mirrors	Clean and smear free	Full clean daily	Full clean daily	Full clean weekly
Heating / Radiators	Visibly clean	Full clean daily	Full clean daily	Full clean monthly
Ventilation grills, extract and inlet	External part of grill visibly clean	Weekly	Monthly	Monthly
Hard floors	Complete floor Including edges and corners should have a uniform shine and be visibly clean	Clean daily Wet mop daily Machine clean weekly  Strip and reseal yearly if required	Clean daily Wet mop daily Machine clean monthly  Strip and reseal yearly if required	Clean weekly Wet mop weekly Machine clean quarterly  Strip and reseal every 2 years if required
Soft floor	Complete floor Including edges and corners should be visibly clean. Should have a uniform appearance and an even colour with no stains / watermarks	Clean daily Shampoo every 6 months where required and as practicable.	Clean daily Shampoo annually where required and as practicable.	Clean weekly Shampoo every 2 years where required and as practicable.
Electrical items	Visibly clean	Dust daily Clean monthly	Dust daily Clean monthly	Dust and clean Monthly

Personal IT equipment	Visibly clean		Wipe daily	Wipe weekly
Shared IT equipment	Visibly clean		Wipe after use	Wipe after use
Cleaning equipment	Visibly clean	After each use	After each use	After each use
Low surfaces	Visibly clean	Daily	Daily	Weekly
Chairs	Visibly clean	Weekly	Weekly	Weekly
Tables	Visibly clean	Daily	Daily	Weekly
Patient couches	Visibly clean	Wash daily Decontaminate between each patient	Wash daily Decontaminate between each patient	N/A
Trolleys	Visibly clean	Wash daily Decontaminate between each patient	Wash daily Decontaminate between each patient	N/A
Hand wash containers	Visibly clean	Daily	Daily	Daily
Waste bins	Visibly clean	Daily Deep clean weekly	Daily Deep clean weekly	Daily Deep clean weekly
Curtains and blinds (clinical)	Visibly clean	Clean, change or replace 6 monthly	Clean, change or replace yearly	Clean, change or replace twice yearly
Toilets	Visibly clean	Twice daily	Daily	Daily
Sinks	Visibly clean, free from build-up of scale and other deposits	Twice daily	Daily	Daily

Most areas can be cleaned with plain detergent and warm water, but a suitable disinfectant (as recommended by WHO / Department of Health) should be available for cleaning body fluid spills or where a deeper level of decontamination is required.

## 7. Management of Patient Equipment

Equipment used for the care of patients is a potential source of infection, and must be decontaminated appropriately between uses (unless single use in which case it must not be re-used) and stored so as to prevent contamination.

It must be:

- stored clean and dry (not on the floor, and not in an area with dirty equipment or where decontamination takes place)
- checked for cleanliness prior to use, e.g. when being removed from storage
- decontaminated appropriately, according to risk assessment and manufacturer's instructions, and:
  - On a routine, documented schedule
  - Between uses (always)
  - When visibly dirty
  - Immediately when spillages or contamination with blood/other body fluids has occurred

The level of decontamination required will depend on the use of the equipment and the level of contamination.

There are three levels of decontamination:

- Cleaning
- Disinfection
- Sterilisation

The table below is a guide on the level of decontamination required according to risk.

<b>Minimal Risk</b>	Surfaces that will not come into direct contact with patients	<b>Cleaning and drying adequate</b>
<b>Low Risk</b>	Surfaces and equipment that come into contact with intact skin	<b>Cleaning and drying adequate</b>
<b>Intermediate Risk</b>	Items in contact with intact mucous membranes, or diseased or damaged skin, or items that are heavily contaminated with virulent or readily transmissible pathogens or substance or items to be used on highly susceptible Immuno-compromised patients	<b>High-level disinfection or sterilisation required</b>
<b>High Risk</b>	Equipment that enters sterile cavities or vascular systems, or is in contact with a break in the skin or mucous membrane	<b>Sterilisation required</b>

Equipment that may have been contaminated with blood or body fluids (other than urine) should be disinfected with a chlorine releasing agent.

It is important to note that neither disinfection nor sterilisation can take place without prior cleaning. Consequently, where disinfection is required items must first be cleaned, using detergent and dried (unless a product which can demonstrate it achieves both, such as a Universal Wipe is used).

Alcohol is a disinfectant and will only work effectively on clean items.

Wipes can be useful for cleaning and decontamination of small areas of the environment and for equipment, but it is important to make sure that the wipe being used will decontaminate to the level required and that a proper method is used to prevent recontamination. Where detergent wipes are used, items/areas must also be dried.

**It is always important to follow manufacturer's instructions and WHMIS data sheets and have risk assessments in place where chemicals are being used.**

When undertaking decontamination of equipment

- Use personal protective equipment (PPE)
- Take account of hand hygiene

### **7.1. Second-hand equipment**

All instruments and items of equipment must be decontaminated correctly before being sold, lent or repaired and this should be documented.

### **7.2. Orthotics**

Used orthotics must be decontaminated before being sent to the laboratory, they should not be sent if they pose a risk of transmission of infection. Discuss any concerns with the laboratory before sending.

## **8. Spillages of bodily fluids**

If blood/bodily fluids are spilled, the spillage should be dealt with as soon as possible.

Only staff trained in the correct procedure should manage blood and other body fluid spillages, practitioners should ensure they know the procedures and how to undertake them and provide education and training to any staff members potentially involved in the management of blood and body fluid spillages.

Appropriate personal protective equipment (e.g. single-use disposable gloves and plastic apron) should always be worn when dealing with blood and other body fluid spillages.

Blood and body fluid spillages should be directly treated with a chlorine releasing agent such as sodium hypochlorite. (Except for urine spillages which should **not** be directly treated using a chlorine releasing agent such as sodium hypochlorite).

**Products (e.g. chlorine releasing solutions/granules) for management of blood and body fluid spillages should always be carefully prepared and used in accordance with manufacturer's instructions, data sheets and WHMIS assessments.**

Contaminated soft furnishings and carpets that cannot withstand chlorine releasing agents should be cleaned with a solution of detergent and warm/tepid water followed by steam cleaning.

If it is not possible to use either of these methods, it may be necessary to dispose of contaminated soft furnishings.

## **8.1. Procedure**

Gather required equipment and put on PPE

### **For urine**

Soak up as much as possible using paper towels (a gelling agent can be used), clean the area with a detergent solution, then rinse the surface. **Do not use chlorine-releasing agents on urine.**

### **For blood and body fluids other than urine**

Soak up excess fluid using paper towels, then cover area with

- Sodium dichloroisocyanurate granules  
or
- With paper towels and gently flood with a 10,000 part per million solution of a chlorine releasing agent

leave for the required amount of time (follow manufacturer's instructions).

Scoop up the debris with paper towels and dispose in clinical waste.

Wash with detergent and water and dry.

**Small spills** e.g. drops of blood can be wiped away with a disposable towel soaked in disinfectant (containing 10,000ppm), followed by washing with detergent.

Commercially available spill kits/packs can also be used.

## **9. Respiratory hygiene/ Cough etiquette**

Respiratory hygiene was added to Standards of Infection Control following the global influenza pandemic.

Respiratory hygiene and cough etiquette should be applied as a standard infection control precaution at all times

The measures include:

- Covering nose and mouth with disposable single use tissues when sneezing, coughing, wiping and blowing noses
- Disposing of any used tissues into a waste bin

- Washing hands with soap and water after coughing, sneezing, using tissues, or after contact with respiratory secretions or objects contaminated by these secretions
- Keeping contaminated hands away from the mucous membranes of the eyes and nose

## 10. Other Measures

### **Transmission based precautions**

Patients who have specific infections, with a known route of transmission, may need to be managed with additional precautions (Standard Precautions always apply).

An example would be patients being nursed with contact/barrier precautions in a hospital setting. Advice should be sought from the Infection Prevention Control Team at the hospital / care setting where the patient is resident, before treatment is provided.

Where patients are under isolation precautions, or resident in wards/homes closed due to outbreaks, treatment should only be provided following a risk assessment which considers the need for treatment and the risk of cross infection. This risk assessment should be undertaken with the advice of the Infection Prevention Control team or applicable public health organisation.

Patients who have gastro-intestinal infection should be managed using enteric precautions. Patients with active symptoms of GI infection should not visit clinics, until 48 hours after resolution of symptoms.

Patients who are known to be colonised with MRSA or other potentially transmissible resistant organisms, which could cause infection in vulnerable people, should wherever practicable / possible be seen at the end of the day and enhanced cleaning put in place (or at the end of domiciliary caseloads)

## 11. **Specimens**

A specimen is a body substance, such as blood, sputum, pus, urine or faeces, taken from a person for the purpose of analysis. The aim of which is to identify micro-organisms that cause disease and to provide direction for appropriate treatment.

Specimens, if not handled and transported safely, can pose a risk of infection to others, including transport personnel.

Transport regulations require three layers of packaging for specimens in transit:

- A primary receptacle (the pot, vial or tube)
- A secondary packaging (the clear plastic bag)
- A leak proof outer packaging with appropriate cushioning and labelling including the appropriate symbol

The outer container used for carrying specimens to pathology laboratories must be secure and conform to relevant regulations and guidelines.

The purposes of transport infectious substances are classified as either Category A or Category B.

**Specimens which require transport will normally fall into the Category B group. However, it is important to be aware of Category A specimens.**

<b>Category A</b>	Category A specimens are those from a patient who has or may have a serious disease, which can be readily transmitted from one individual to another either directly or indirectly, and for which effective treatment and preventative measures are not usually available. They include new and emerging organisms and require additional arrangements for transport. For further guidance on transporting these types of specimens, contact your local Department of Health or the receiving laboratory.  <b>This category does not include MRSA or <i>Clostridium difficile</i></b>
<b>Category B</b>	Category B are Infectious substances that do not meet the criteria for inclusion in Category A. This includes most specimens and samples of excreta, secreta, blood and its components, tissue and tissue fluid swabs, and body parts being transported for purposes such as research, diagnosis, investigational activities, disease treatment or prevention

Fridges which may be used for storage of specimens must not be used for the storage of medicines or food.

## **12. Judicious use of Antimicrobials**

Infections which are resistant to antimicrobials are likely to be one of the biggest challenges to healthcare in the future.

Infection control and judicious use of antibiotics work together to help meet these challenges.

Use of antibiotics also puts patients at increased risk of *Clostridium difficile* infection.

Prescribers and users of antimicrobials have a responsibility to do so judiciously, and must not use them unnecessarily or irresponsibly.

Antimicrobial choice should be based on microbiology and the narrowest effective spectrum should be used.

Local guidelines should be followed where available.

## **13. Skin preparation**

Skin preparation aims to reduce microbial burden before treatment.

The best way of reducing this burden is to ensure that patient's feet are cleaned with soap and water before treatment.

Podiatrists should undertake a risk assessment before deciding on the skin preparation they choose.

This should take account of:

- Patient hygiene (many preparations have reduced activity in the presence of dirt and organic matter)
- Sensitivities, allergies and acceptability to patients
- Residue which might affect treatment e.g. moisturisers in skin wipes may leave a film that affects the use of a blade on skin)
- Type of procedure being undertaken (A 2% chlorhexidine in alcohol preparation would be recommended before an invasive procedure)

## 14. Uniform

Uniform or clothing that can be washed at least 60 degrees and ironed should be worn for direct patient care.

Uniform should only be donned within the workplace and not worn whilst travelling to and from work, except when doing domiciliary visits.

Clean workwear should be worn every day. It should be changed if it becomes heavily soiled or contaminated.

Work wear should be changed as soon as possible after patient care activities and not worn for other activities outside of the care environment.

It should be washed on a cycle that washes at 60 degrees for at least 10mins within its cycle after every day's clinical work.

It should be washed separately from other clothing and ironed.

Dirty uniforms should be transported in a plastic bag to prevent contamination.

Tops should be short sleeved and neck ties other than bow ties should not be worn.

Shoes should be closed in and protect the feet from possible sharps injury.

## 15. Staff Health

Professional staff has a responsibility to protect patients and others through appropriate vaccination. This includes having routine childhood vaccinations (or catching up) having seasonal flu vaccination and hepatitis B vaccination.

Podiatrists and their assistants who have potentially infectious illness, including flu symptoms should not work with patients until they are no longer infectious.

***Anyone with potentially infectious gastro-intestinal disease should not come to work until they have been symptom free for 48hrs.***



## **16. Aseptic technique**

An aseptic technique ensures that only uncontaminated equipment and fluids come into contact with susceptible body sites.

Asepsis reduces the risk of an infection developing as a result of a procedure being undertaken. It should be used during any clinical procedure that bypasses the body's natural defences, this includes all invasive procedures including wound care.

An aseptic technique involves specific actions and procedures performed under controlled conditions. The ability to control conditions will depend on the setting where the procedure takes place, but the principles remain the same:

- The area where the procedure takes place should be as clean as possible
- Minimise air disturbance in this area during the procedure e.g. avoid sweeping, using a fan, having construction work going on
- Perform hand hygiene prior to and during the procedure as required (see 5 Moments)
- Use sterile equipment
- Use a non-touch technique (utilise sterile gloves/forceps if required) to ensure that sterile parts are not contaminated

## **17. Domiciliary Visits**

Working in patient's homes can be challenging when it comes to managing infection prevention and control risks.

Specific risks should be assessed and documented. The podiatrist should manage the environment as best as they can, to manage any risks, and patients and carers should be given information and advice so that they can help to provide the most suitable environment.

The podiatrist must ensure that they have a safe, clean area from which to deliver treatment.

The use of a wipeable procedure tray is recommended. Instruments and other clinical items should not be put on the floor/beds etc.

Equipment taken in and out of patient's homes should be kept to a minimum, and decontaminated between visits.

Domiciliary, drill cases and bags should be able to be decontaminated, be visibly clean and be decontaminated after every domiciliary session, or before if contaminated/dirty.

Patients should be asked to remove any pets removed before treatment takes place.

Patients should be asked to provide suitable hand hygiene consumables. If they are unable to do so the podiatrist should consider carrying a small supply of paper towels/soap in a dispenser.

Alcohol hand gel should be carried so that it is available at the point of care.

Personal Protective Equipment should be carried so that it is kept clean and undamaged. Gloves should be dispensed directly from the original container and not kept in pockets etc.

In some circumstances and following risk assessment the use of additional PPE may be required e.g. overshoes.

## **18. Communication**

While bearing in mind patient confidentiality, others involved in a patients care should be informed of risks from infection.

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