



## Community Infection Prevention and Control Guidance for General Practice

(also suitable for adoption by other healthcare providers,  
e.g. Dental Practice, Podiatry)

# Sharps management and inoculation injuries


## SHARPS MANAGEMENT AND INOCULATION INJURIES

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**SHARPS MANAGEMENT AND  
INOCULATION INJURIES**

# SHARPS MANAGEMENT AND INOCULATION INJURIES

## 1. Introduction

### Sharps

Sharps include needles, cannulas, stitch cutters, scalpels, razor blades, broken glass, medical instruments, e.g. scissors, and other sharp objects.

Sharps which are handled inappropriately or not disposed of correctly are dangerous.

### Health and Safety

Healthcare employers, their contractors and employees have legal obligations under the *Health and Safety (Sharp Instruments in Healthcare) Regulations 2013 (the Sharps Regulations)*. All employers are required to ensure that risks from sharps injuries are adequately assessed and appropriate control measures are in place.

## 2. Good practice in sharps management

### Needle management

- Avoid unnecessary use of sharps.
- Where it is not reasonably practicable to avoid using sharps, safer sharps incorporating protection mechanisms should be used.
- For certain procedures, needle free equipment is available and must be used.
- Sharps should only be used where they are required, e.g. not for collection of urine samples from catheter bags.
- Request assistance when using sharps with reluctant or confused patients.
- Do not carry sharps in the hand. Sharps containers should be available at the point of use, i.e. where the sharp is used.
- Always use a sharps tray with an integrated sharps container.
- Do not pass sharps from hand to hand.
- Do not re-cap needles.
- Dispose of needle and syringes as one unit into a sharps container.
- If it is necessary to detach the needle, great care must be taken, preferably using the device on the sharps container.
- Always carry sharps containers away from the body, ensuring the temporary closure mechanism is closed.

### Ensuring safe use

- All staff (clinical and non-clinical) should be educated in the safe use and disposal of sharps and the action to take in the event of an injury.
- Sharps containers should be situated in a safe and secure place and not accessible to patients or visitors.
- In rooms or areas where sharps containers do not need to be moved, they should be wall-mounted near the point of use, i.e. where the sharp is used.
- At no time should a sharps container be placed on the floor.
- Sharps containers should comply with the UN3291 and British Standard BS7320.
- The correct size of the sharps container to be used should be determined according to the volume of sharps generated.
- Sharps should be placed into the correct colour coded sharps container:
  - Purple lid – sharps contaminated with cytostatic or cytotoxic medicines
  - Orange lid – sharps not contaminated with medicines
  - Yellow lid – sharps contaminated with medicines
- Always assemble sharps containers correctly, with the lid securely fastened to the base.
- Sharps containers must be labelled with the date and a signature when assembled, locked and disposed of. They must be labelled with their source prior to disposal.
- Sharps containers should not be used for any other purpose than the disposal of sharps.
- Sharps should be placed into the sharps container by the person using them.
- Never press down the contents to make more room or attempt to retrieve an item from the sharps container.
- After disposing of a sharp into the sharps container, the aperture should be moved into the temporary closure 'closed' position.
- The aperture must be 'locked' prior to disposal.
- Sharps containers must not be filled above the 'fill line' as this could result in sharps protruding through the aperture.
- Sharps containers should be disposed of when the fill line has been reached or when the container has been in use for three months, whichever is first.
- Sharps containers must not be placed inside waste bags prior to disposal.

### 3. Prevention of inoculation incidents

An inoculation incident is where the blood/body fluid of one person could gain entry into another person's body, such as:

- A sharps/needlestick injury with a used instrument or needle
- Spillage of blood or body fluid onto damaged skin, e.g. graze, cut, rash, burn
- Splash of blood or blood stained body fluid into the eye, mouth or nose
- Human bite causing skin to be broken

Many accidental exposures to blood and body fluids are, therefore, not classed as inoculation incidents, e.g. splashes onto intact skin. In these circumstances, washing the contaminated area thoroughly with liquid soap and warm running water is all that is required. Exposure to vomit, faeces and urine (unless visibly blood stained) and to sterile sharps are also not considered as inoculation injuries.

Compliance with the above guidance on good practice in sharps management should reduce the risk of a contaminated sharps injury.

In addition:

- All staff should protect their skin, as skin is an effective barrier to micro-organisms. Any cuts or abrasions should be covered with impermeable dressings to provide a barrier
- The use of disposable gloves provides additional protection as long as dexterity is not impeded. New phlebotomists learning the procedure should be taught to undertake venepuncture with gloves
- Disposable gloves should be worn for invasive procedures and when there is a risk of exposure to contaminated sharps
- Facial personal protective equipment should be worn when there is a risk of blood splashing to the mucous membranes, e.g. eyes, nose, mouth

### 4. Always

- Use standard precautions.
- Dispose of single-use items after one use.
- Dispose of waste as per local policy.

## 5. Risk of infection from inoculation incidents

Following a specific exposure, the risk of infection will vary depending on the nature of any pathogens in the patient's blood, the type of inoculation and the amount of virus in the patient's blood or body fluid at the time of exposure.

Surveillance studies indicate that the risk of seroconversion following exposure to blood from HIV infected patients is approximately 1 in 300 for percutaneous (needlestick) injury and 1 in 1,000 for mucous membrane exposure.

The risk of acquiring hepatitis B virus from a hepatitis B antigen positive source is approximately 1 in 3, for an unvaccinated individual. Vaccination is protective.

The risk of acquiring hepatitis C through inoculation with a hepatitis C positive source is approximately 1 in 30.

## 6. Action to be taken following an inoculation incident

### Immediate management of inoculation injuries

- **Bleed it** - if there has been a puncture wound, encourage bleeding of the wound by squeezing it under running water (do not suck the wound).
- **Wash it** - the injured area or damaged skin should be washed thoroughly with liquid soap and warm running water and dried. Blood or body fluid splashes to the eyes, nose or mouth should be irrigated copiously with water.
- **Cover it** - cover the wound with a waterproof dressing.
- **Report it** - report the injury to your manager immediately and complete an incident form.
- **Seek advice** - seek medical advice immediately from your Occupational Health provider or GP. Out of normal office/surgery hours, attend the nearest A&E department.

Where A&E advice has been sought, your Occupational Health service/GP should be informed to ensure that they are able to:

- a) Follow up and give any on-going support, and
- b) Complete the organisational reporting procedure

## 7. Management of significant exposures

The term source is used for the patient whose blood or body fluids were involved, and the term recipient for the member of staff who has been exposed or injured.

A risk assessment should be made based on the significance of the exposure, the recipients' prior immunity to hepatitis B and the known or likely status of the source for blood borne viruses. This should be carried out by your GP, Occupational Health provider or A&E.

If the source patient is known, every attempt should be made to obtain a blood specimen for testing for blood borne viruses. To avoid discrimination, it is standard practice for the source patient to be offered tests for the three main blood borne viruses, hepatitis B, hepatitis C and HIV. Appropriate pre-test counselling and informed consent is a pre-requisite of testing the source patient.

Bloods from the recipient will also be required for serum save. The taking of blood specimens and the approach to the source patient for permission to test should be managed by a third party, i.e. somebody other than the recipient of the injury.

## 8. Reducing the risk of hepatitis B transmission

Hepatitis B vaccination is effective in preventing hepatitis B transmission.

- All staff exposed to sharps or other inoculation risks should have had the opportunity for hepatitis B vaccination and antibody measurement to check for their response.
- All staff likely to be in contact with sharps or inoculation risks should be aware of their immunisation status regarding hepatitis B.
- Depending on the circumstances of the exposure and the immune status of the recipient, the recipient may be advised to have immediate additional vaccine doses or to receive hepatitis B immunoglobulin.
- Seeking early advice is the key to successful intervention to prevent transmission.

## 9. Reducing the risk of hepatitis C transmission

No specific post exposure prophylactic measures are advised beyond basic first aid. In the event of a source proving to be hepatitis C positive, specific advice on subsequent testing and management will be provided through your



Occupational Health provider including advice on preventing onward transmission.

## 10. Reducing the risk of HIV transmission

In the case of a significant exposure to a known or suspected HIV infected source, or if there is evidence of AIDS related illness, then HIV post exposure prophylaxis (PEP) should be offered. HIV post exposure prophylaxis is most effective if started within one hour of exposure, but can still be offered up to 2 weeks later. Advice must be sought from your Occupational Health provider/ GP or A&E, who will perform a risk assessment, and advise on therapy.

PEP treatment is usually only available from an A&E department, so if the patient is known or suspected to be HIV positive, go straight to A&E.

## 11. Exposure incidents in the community

Occasionally, members of the public will present to GPs following a community exposure, typically an injury with a discarded syringe. In this instance, where the source is unknown, an accelerated course of hepatitis B vaccine is recommended. Community prevalence of HIV and hepatitis C remain low and no specific action in respect of these viruses is indicated.

The incident should be reported to the Consultant in Communicable Disease Control (CCDC) at your local Public Health England Team.

If the source is known, a risk assessment is required and further intervention may be advised. GPs should discuss these cases with the CCDC or the local Consultant Microbiologist.

Persons subject to penetrating human bites should also be offered a course of hepatitis B vaccination and should have their wound medically assessed because of the risk of bacterial infection.

Action	Information
Counsel patient regarding risk	Risk is low for discarded needles. For needlesticks/inoculations from a known positive source, the risk is detailed in this guidance
Particularly for human bites, or injuries following fights	Consider the need for antibiotic prophylaxis
Immunise the patient using the accelerated schedule	3 doses of hepatitis B vaccine at 0, 1 and 2 months with a booster at 12 months

Action	Information
If previously vaccinated offer a booster of vaccine	
In the event of an unimmunised patient exposed to a known hepatitis B positive source, consider the use of hepatitis B immunoglobulin following discussion with CCDC or Consultant Microbiologist	HBIG is only available for named patients through the CCDC or Consultant Microbiologist and is seldom indicated in community incidents
Consider testing for hepatitis C at 3 and 6 months in the case of significant exposure to a used needle	
In the event of exposure to a known HIV positive transmission risk, consider the use of PEP for HIV	

Blood tests on the recipient are not strictly necessary, but may be done if the patient wishes to have specimens stored for medico-legal purposes depending on the nature of the incident. Following discussion with the Consultant Microbiologist or CCDC, it may be appropriate for some patients to arrange follow-up blood tests for blood borne viruses where significant risk or anxiety is present.

If a cache of needles has been discovered, the Local Authority should be contacted to arrange for their safe disposal.

### 12. Infection Prevention and Control resources, education and training

The Community Infection Prevention and Control (IPC) Team have produced a wide range of innovative educational and IPC resources designed to assist your Practice in achieving compliance with the *Health and Social Care Act 2008* and CQC registration requirements.

These resources are either free to download from the website or available at a minimal cost covering administration and printing:

- Over 20 IPC Guidance documents (Policies) for General Practice
- 'Preventing Infection Workbook for General Practice'
- 'IPC CQC Inspection Preparation Pack for General Practice'
- IPC audit tools, posters, leaflets and factsheets
- 'IPC Advice Bulletin for GP Practice Staff'

In addition, we hold educational study events in North Yorkshire and can arrange bespoke training packages and 'Mock IPC CQC Inspections'. Prices vary depending on your requirements and location.

Further information on these high quality evidence-based resources is available at [www.infectionpreventioncontrol.co.uk](http://www.infectionpreventioncontrol.co.uk).

### 13. References

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