



Management of Sharps Injuries or Splash Incidents

Seriousness of complication		Frequency of complication	
Minor complication		Common	
Worrying complication		Occasional	X
Moderate complication	X	Infrequent	
Serious, but not major		Rare	
Major complication		Very rare	

Title	Management of Sharps Injuries or Splash Incidents		
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Definition:

Sharps Injury: Exposure to blood or body fluids caused by laceration or puncture of the skin (these can include bites or scratch by sharp). Sharps include needles, scalpels, broken glass or any items that may lacerate or puncture the skin.

Splash Incident: Where blood or body fluids comes into contact with the eyes, mouth, broken skin or mucous membranes.

Introduction:

An inoculation incident can occur to any person, a staff member, patient, visitor or contractor. Inoculation risk infections are primarily blood borne and pose a risk to those in whom blood to blood contact occurs (including Hepatitis B, Hepatitis C and HIV)¹.

Incidence:

An RCN survey carried out in 2008 of 4407 nurses found that just under half (48%) had been injured with a needle or sharp previously used on a patient and that 52% of those surveyed feared an injury. A significant number felt that they had received no or little training from their employer². A similar survey carried out among a group of UK surgeons showed that 44% anonymously admitted to having a needle-stick injury. Only 3 of the 33 (9%) who sustained a needle-stick injury said that they followed the agreed local policy³. Current data compiled by Public Health England in December 2014 warns that health care workers still remain at risk from blood borne viruses⁴.

Areas of caution:

Blood borne viruses – risk of transmission

Health care workers are particularly at risk from exposure to blood-borne viruses. Accidental exposure to blood or other body fluids from patients can lead to infection if the patient is infected with a blood-borne virus such as HIV, Hepatitis B and Hepatitis C. Infection is not only damaging for health, it could prevent certain work within the healthcare setting.

Published and observed risk of blood borne virus transmission amongst health care workers following a percutaneous injury from a known infected patient¹:

Blood-borne virus	Risk of transmission
Hepatitis B (HBV)	1 in 3
Hepatitis C (HCV)	1 in 30
HIV	1 in 300

Blood-borne viruses are those viruses that are transmitted from the blood of one person to the blood of another person. Of particular concern are Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Human Immunodeficiency Virus (HIV).

Minimising the risk:

Vaccination

Hepatitis B infection can be effectively avoided by vaccination. There is currently no vaccine available for Hepatitis C (HCV) or HIV.

Prevention of avoidable exposure in an occupational setting

1. General measures

- Wash hands before and after contact with each patient and before putting on and after removing gloves.
- Change gloves between patients.
- Cover with waterproof dressings any existing wounds, skin lesions and all breaks in exposed skin and wear gloves if hands are extensively affected.
- Wear gloves where contact with blood can be anticipated.
- Avoid sharps usage where possible and where sharps usage is essential, exercise particular care in handling and disposal.
- Avoid wearing open footwear in situations where blood may be spilt or where sharp instruments or needles are handled.
- Clear up spillage of blood promptly and disinfect surfaces.
- Pre-employment occupational health assessment should identify those with damaged skin (e.g. fissured hand eczema) who may be at higher risk of occupationally acquired infection and ensure that advice is given about minimising any occupational health risk to which they may be exposed.
- Wear gloves when cleaning equipment prior to sterilisation or disinfection, when handling chemical disinfectant and when cleaning up spillages.
- Follow safe procedures for disposal of contaminated waste.

2. Specific measures (Dependent on the procedure being undertaken)

- Use of new, single-use disposable equipment for all injections is highly recommended. Re-usable equipment should only be considered if single use is not available and if the sterility can be documented according to manufacturer's instructions with appropriate audit (e.g. time and temperature indicators).
- Discard contaminated sharps immediately and without recapping in puncture and liquid proof sharps containers.
- Document the quality of the sterilisation for all medical equipment used for percutaneous procedures.

- Wash hands with soap and water before and after procedures; use protective barriers such as gloves, gowns, aprons, masks and goggles for direct contact with blood and other body fluids.
- Disinfect instruments and other contaminated equipment.
- Handle soiled linen properly. Soiled linen should be handled as little as possible. Gloves and leak proof bags should be used if necessary. Cleaning should occur outside patient areas, using detergent and hot water.

National Institute for Health and Clinical Excellence (NICE) recommendations⁵

1. Safe use and disposal of sharps:

- Sharps should not be passed directly from hand to hand and handling should be kept to a minimum.
- Used needles must not be bent or broken before disposal and must not be recapped.
- Used sharps must be discarded immediately by the person generating the sharps waste into a sharps container conforming to current standards.

2. Sharps containers:

- Must be located in a safe position that avoids spillage, is at a height that allows the safe disposal of sharps, is away from public access areas and is out of the reach of children.
- Must not be used for any other purpose than the disposal of sharps.
- Must not be filled above the fill line.
- Must be disposed of when the fill line is reached.
- Should be temporarily closed when not in use.
- Should be disposed of every three months even if not full, by the licensed route in accordance with local policy.

3. Use sharps safety devices if a risk assessment has indicated that they will provide safer systems of working for healthcare workers, carers and patients.

4. Train and assess all users in the correct use and disposal of sharps and sharps safety devices.

More detailed advice, including use of blunt-tipped needles, and 'neutral zones' for passing of sharps during surgery, are available in "Guidance for Clinical Health Care Workers"⁶.

Immediate management of a sharps injury or splash incident

INCIDENT

- Stop work immediately
- Seek first aid

FIRST AID

- Contaminated needle stick, sharps injury, bite or scratch - Encourage bleeding, by squeezing, wash with soap and running water, cover with a dressing.
- Blood or body fluid in the eyes or mouth - Irrigate with copious quantities of cold water, or preferably eye wash solution do not swallow, rinse.
- Blood or body fluid on broken skin - Encourage bleeding if possible and wash with soap under running water (but without scrubbing).
- Ascertain the HIV/Hep B status of the donor and or assess risk of infection. Social history may indicate risk if status known.

REPORT

- Report the incident and discuss with a local public health consultant immediately via Occupational Health or Hospital Emergency Department or GUM Clinic who will carry out a risk assessment to determine the need for post exposure prophylaxis.
- Discuss type of injury, donor HIV status if known, etc. In the case of definite exposures to blood or other high-risk body fluids known or considered to be at high risk of HIV infection, post-exposure prophylaxis (PEP) should be offered as soon as possible, preferably within one hour of the incident. It may still be worth considering up to 72 hours after the exposure, but the relative benefit of prophylaxis diminishes with time.

References

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