

Prevention of Sharps Injuries in Healthcare

Information Sheet

March 2011

The purpose of this information sheet is to highlight control measures required in the healthcare setting to prevent sharps injuries occurring.

Sharps injuries in the healthcare setting may result in the transmission of blood borne viruses (BBVs) such as hepatitis B (HBV) hepatitis C (HCV) or Human Immune Deficiency Virus (HIV). Healthcare workers may acquire a BBV if exposed to infected blood or body fluids. This could be via the mucous membranes (eyes, mouth and nose), through broken skin or through an inoculation injury where the skin is punctured or scratched by a needle or sharp device that has been used in a medical procedure, this final route is known as a needle stick or sharps injury.



The risk of occupational acquisition of a BBV from a patient to a healthcare worker is related to:

- The prevalence of the virus in the patient population
- The efficiency of the virus transmission after a single contact with blood
- The nature and frequency of occupational blood contact
- The susceptibility of the healthcare worker

The risk of infection following a percutaneous injury, especially a deep penetrating injury involving a hollow bore needle or a device visibly contaminated with infected blood has been estimated at 1 in 3 for HBV, 1 in 30 for HCV and 1 in 300 for HIV¹.

HEALTH AND SAFETY LAW

The main legislation covering the risk of exposure to injury and infection from sharps at work is the Safety, Health and Welfare at Work Act, 2005 and the Safety, Health and Welfare at Work (Biological Agents) Regulations, 1994 and amendment Regulations, 1998.

¹ Eye of the Needle, Health Protection Agency, UK, 2008

Framework Agreement

Council Directive 2010/32/EU of the 10th May 2010 implements the 'Framework Agreement on prevention of sharp injuries in the hospital and healthcare sector'.

The Agreement aims to protect workers in the healthcare sector at risk of injury from all medical sharps and the risk of infections caused by medical sharps. In the Directive sharps are defined as 'objects or instruments necessary for the exercise of specific healthcare activities, which are able to cut, prick, cause injury and/or infection'.

The Directive provides for an integrated approach to risk assessment, risk prevention, training, information, awareness raising and monitoring and for response and follow up procedures. The Council Directive can be viewed in the Official Journal of the European Union available at the EUR-lex website and the HSA website at www.hsa.ie. Each member state including Ireland has 3 years to transpose the Directive into national legislation (by May 2013).



HEALTH AND SAFETY MANAGEMENT

The employer must ensure that there is a management framework in place to protect the safety health and welfare of all employees and to provide a safe working environment. Evidence of this includes;

- An up to date and relevant safety statement incorporating the elements specified in legislation
- A process of hazard identification and risk assessment
- Clear procedures on safe work practices
- Access to competent advice
- Consultation and communication with staff
- A comprehensive education and training program
- A robust system of reporting of incidents including a systems cause analysis and identification of remedial measures
- A system to monitor, review and audit health and safety performance

Risk Assessment

Risk assessment must be undertaken where there is potential for sharps injury. When undertaking a risk assessment all available information must be considered to determine whether specific controls are required. The main findings of a risk assessment must be brought to the attention of relevant workers. Risk assessment should include the following steps;

Identify the Hazards:

Is there a potential for sharps injuries? If yes....

Decide who might be harmed and how:

Which employees and others e.g. nurses, cleaning staff, visitors etc may be exposed to sharps injuries and how might this happen e.g.

handling contaminated sharps, handling healthcare risk waste etc. Consider the frequency of exposure, the level of training required and other relevant factors relating to the circumstances.

Assess the Risk:

Assess how likely it is that a sharps injury could cause ill health and decide if existing controls are adequate or whether further controls are necessary.

Following this evaluation you may need to consider making improvements to existing controls with priority for action. A number of control measures may be required to achieve a safe working environment.

Record the Findings of the risk assessment and implement them:

It is also advisable to include for audit purposes:

- Who is responsible for carrying out any further actions
- A timescale for doing so.

Review and Revise (if necessary) the risk assessment on a regular, scheduled basis or ahead of schedule if something suggests that the original assessment is no longer valid e.g. as a result of an incident or a change in work practices.

CONTROLS RELATING TO THE PREVENTION OF SHARPS INJURIES

The Department of Health and Children has stated that the most effective way of preventing transmission of blood-borne pathogens in the healthcare setting is to make the working environment as safe as possible by having good infection control practices, by the implementation of standard precautions and by the provision of effective risk management policies².

² The Prevention of Transmission of Blood- Borne Diseases in the Health-Care Setting, Department of Health and Children, 2005

Some basic preventive measures to protect workers against BBVs include:

- Hand washing after each patient contact and after contact with blood or body fluids
- The wearing of disposable gloves for all activities that carry a risk of exposure to blood or body fluids
- The wearing of disposable plastic aprons or long sleeved fluid repellent gowns whenever there is a risk of exposure of the clothing and/or skin to blood or body fluids
- Face/eye protection should be worn where there is a risk of blood or body fluids splashing into the face or eyes
- Covering cuts or abrasions with waterproof dressings
- Cleaning spills of blood and body fluids immediately wearing appropriate protective clothing and using suitable disinfectants
- Discarding used sharps carefully into designated sharps containers at the point of use and storing sharps boxes securely out of reach of clients, visitors and children
- Sharps containers should not be filled above the fill line marked on the container
- Needles should not be re-sheathed

Where there is a risk of sharp injuries the employer must consider the following based on risk assessment;

Elimination and Engineering Controls

Eliminating the unnecessary use of sharps by implementing changes in practice where this is possible.

The provision of medical devices incorporating safety engineered protection mechanisms which are safe to use, based on risk assessment. Prior to introducing any needle stick injury prevention

device the healthcare practitioners should thoroughly evaluate devices to ensure their suitability for use and to ensure they do not create any other hazard to the patient or to the healthcare worker.

Needle stick injury prevention devices include needles that retract into the syringe after use, those that have a protective shield over the needle and systems that do not use needles.

Where these devices are provided healthcare workers must be trained in their correct use.

Safe Use and Disposal of Sharps

Specify and implement procedures for the safe use and disposal of sharp instruments and for the safe storage and disposal of contaminated waste. Workers must be made aware of the correct procedures and the procedures should be regularly assessed to ensure they are effective.

Work Organisation

Improving the work organisation and the work environment can help reduce the risk of injury, such as improving supervision to ensure compliance with safe work practices, ensuring good task lighting, etc

Vaccination

Where the risk assessment indicates that there is a risk of exposure to BBVs, the appropriate vaccines must be made available (free of charge) to the employee where required. It is also necessary to test for an appropriate response to the vaccine. Currently a vaccine is available for protection against HBV and not for HCV or HIV.

Access to Competent Advice

Have access to competent advice with regard to the prevention of and protection from risks to safety health and welfare of persons at work.

Depending on the size and complexity of the organisation competent advice with regard to the management of sharps injuries may include access to competent occupational health advice and infection control specialists. Smaller healthcare providers may require the services of a qualified medical practitioner with suitable expertise and experience in this area, who could in turn seek specialist advice where required.

Awareness Raising, Information and Training

Take appropriate measures to raise awareness amongst employees of the risk associated with sharps and make available information and training on the relevant policies, procedures and preventive measures.

Post Exposure Management

Have in place procedures for the management of an inoculation injury from a contaminated sharp.

Workers must be made aware of the first aid procedures to be followed in the case of an inoculation incident with a contaminated sharp.

Prompt medical advice is important and is usually given in an Emergency department or by an Occupational Health Medical professional. The circumstances of the incident need to be assessed without delay to determine the most appropriate course of action.

Counselling should be made available to an injured employee as appropriate.

REPORTING OF ACCIDENTS, INCIDENTS AND DANGEROUS OCCURRENCES

It must be the policy in the workplace that all employees and any others working on the premises report to the person in charge any work related accident, incident or near miss event, without unreasonable delay. This includes sharps injuries and near miss events. This will ensure that any person suffering injury or ill health can be attended to and that the incident can be investigated with a view to preventing recurrence.

In keeping with the requirements of Part X of the Safety, Health and Welfare at Work (General Application) Regulations 1993, where a work related injury results in an employee being absent from work for more than 3 consecutive days, the employer must report it to the Health and Safety Authority (HSA) on line or by using an IR1 form available from the HSA.

Under the Safety, Health and Welfare at Work (Biological Agents) Regulations 1994 and amendment Regulations 1998, the employer must inform the HSA of any work related sharps injury where the circumstances of the event are such that the incident could cause severe human infection/human illness e.g. a percutaneous injury with a contaminated sharp where the source patient is known or found to be positive for hepatitis B, hepatitis C or HIV. The IR3 Report of Dangerous Occurrence Form may be used to report the incident to the HSA, available at www.hsa.ie.

There is a voluntary system of user reporting of incidents involving medical devices to the Irish Medicines Board at www.imb.ie.

Sources of Further Information:

The Prevention of Transmission of Blood- Borne Diseases in the Health-Care Setting, Department of Health and Children, 2005

Further information on related topics is available at www.hsa.ie or by contacting the HSA Workplace Contact Unit at 1890 289389.