Sharps Safety Policy

1. **POLICY**

- The purpose of this policy is to design programs and protocols that incorporate the best practices to reduce the risk of sharps injury through the handling, storage, transport and disposal of sharps.

2. **PURPOSE**
    - The goal is threefold:

- To prevent, limit and minimize the risk of exposure to blood borne viruses (BBV);
- to promote awareness of each healthcare workers responsibilities in the safe management of sharps and occupational exposure; and
- to provide a framework for the education of healthcare workers in the safe handling of sharps.

3. **SCOPE**

- This policy applies to all care hospital staff. This policy should be used in conjunction with the HSE Area Policy Document for needle stick injury and other exposure incidents. Adherence to the recommendations will also provide protection from BBV infection to patients and other persons present in the health care

settings.

4. **RESPONSIBILITY**

- Managers / Department and Discipline Heads / Supervisors have the following responsibilities:
- Prior to the development of prevention strategies, conduct a risk assessment, in accordance with this policy.
- Conduct an on-going audit to measure compliance, identify challenges and implement changes to improve systems.
- Heads of Departments / Supervisors must be aware of the action required following an inoculation injury.
- Schedule education and training at employee induction and a yearly basis thereafter and retention of records of staff training;
- Ensure Standards Precautions poster is available in each clinical area for the management of Sharps/ inoculation injury.
- Ensure that Health Care Workers who report to them adhere to this policy.
- Staff / Health Care Workers have the following responsibilities:
- To conform and respect all aspects of Health and Safety legislation.
- To ensure the follow instructions, in accordance with local policy, and not place themselves or others in danger
- To ensure that they act in a safe manner where sharps are involved in accordance with Hospital Policy.
- To ensure that they are aware of this policy and staff must take responsibility for attending training sessions.

5. **DEFINITIONS**

- “Sharps” in this context are needles, sharp-edged instruments, broken glassware or any other item which may be contaminated by blood or body fluids and may cause laceration or puncture wounds, such as razors, sharp tissues such as spicules of bone and teeth may also pose a risk of injury. Sharps injury is a cut or skin penetration which has been used on a patient or in contact with a patient’s blood components or other body fluids.

6. **REFERENCES and RELATED STATEMENTS of POLICY and PROCEDURE**

- Department of Health and Children; Segregation Packaging and Storage Guidelines for Healthcare Risk Waste; (2004) 3rd Edition.
- Department of Health and Children; The Prevention of transmission of Blood-Borne Viruses in the Health Care setting (2005).
- Department of Health UK Guideline for Clinical Health Care Workers, Protection Against Infection with Blood-borne Viruses (2005).
- Health Protection Agency UK; Eye of the Needle (2005, added updated 2008); Surveillance of Significant Occupational Exposure to Blood Borne Viruses in Health Care Workers Centre for Infections; England, Wales and Northern Ireland Seven-Year Report.
- Health Protection Agency UK; Eye of the Needle (2006, added updated 2008) United Kingdom Surveillance of Significant Occupational Exposures to Blood Viruses in Health Care Workers.
- Health Service Executive (2005); Healthcare Risk Management Strategy.
- Health Service Executive, Mid-Western Area; Policy

Document for Needle stick Injuries and Other Exposure Incidents, Draft (2006).

- HSE West, Mid-Western Regional Hospitals, Limerick. (2010) Hand hygiene Policy.
- HSE West Mid- Western Regional Hospitals Limerick (2010) Policy on Healthcare Risk Waste and its Segregation & Disposal within the HSE Mid-West Area

7. **PROCEDURE**

- **Introduction**
- In order to avoid unnecessary occupational exposure to potentially infectious agents, particularly those microorganisms that may be found in blood and other body fluids, precautions are essential while providing care. It must always be assumed that every person encountered could be carrying potentially harmful microorganisms that might be transmitted and cause harm to others, and that precautions to prevent exposure to these and subsequent harm in others receiving or providing care must be taken as standard.
- Sharps injuries are one of the most common types of injury to be reported to Occupational Health services by healthcare staff. The greatest occupational risk for transmitting a blood borne virus (BBV) is through parenteral exposure, e.g. a needle stick injury, especially those needles with hollow bores where blood may reside. Risks can also exist from splashes of blood/body fluids/excretions/secretions particularly to mucous membranes; however, these are generally considered to be smaller. There is no evidence that BBVs can be transmitted through intact skin, inhalation or through the faucal oral route. However, precautions are important to protect all who may be exposed, particularly when treatment for certain BBVs is not readily available. The risks of occupationally acquiring

other infections are not as clearly documented; however, Standard Infection Control Precautions should help to prevent exposure to all infectious agents.

- **Risk of Transmission of Blood Borne Viruses**
- The risk of transmission of BBVs is greater from patient to Healthcare Workers than from healthcare worker to patient. In the health care setting transmission, most commonly occurs after percutaneous exposure to a patient's blood by "sharps" or "needle stick" injury.
- The risks of acquiring a blood borne infection following a needle stick injury from a positive source;

Hepatitis B virus – 1 in 3 'e' antigen positive

Hepatitis C virus – 1 in 30

HIV – 1 in 300

- Exposure to hepatitis C remains the greatest risk 48% of cases E ye of the needle report 2008)
- **Risk Assessment**
- Health care staff carrying out clinical procedures should at all times observe written policies.

The development of prevention strategies should be preceded by a risk assessment.

- **Clinical Audit**
- Ongoing audit should be part of quality improvement to measure compliance identify challenges and implement changes to improve systems for better outcomes.
- **How to Reduce the Risk of Sharps Injury**

1. **Safe Handling of Sharps**

The most efficient method of BBV transmission in Health Care is by percutaneous exposure to infected blood. Many percutaneous injuries are preventable. Such injuries may occur while hollow bore needles are being prepared for disposal, eg

whilst attempting to re-sheath a needle manually after venepuncture. Implementation of the following procedures for the safe handling and disposal of sharps will reduce the risks;

- Avoid the use of sharps if possible.
- All staff who handle sharps should be immunized against Hepatitis B.
- Sharp containers in use must comply with National Standards.
- Sharp containers must be assembled correctly with identification label signed including the name of ward, hospital, date and signature.
- Sharp containers should be available at the point of use, including drug, cardiac arrest trolleys and within a tray device with room for an integral container or wall mounted.
- When transporting a used syringe (e.g. arterial blood sampling) remove the needle using a removal device and attach a blind hub prior to transportation.
- It is the user’s responsibility to dispose of used sharps as soon as possible after use.

2. **Safe Disposal of Sharps**

- Inspect the refuse bag before removal / transport in case of inappropriate disposal of sharps.
- Never discard needles / syringes / sharps in a polythene bag.
- Discard sharps at the point of use into a sharps container and immediately following use.
- Discard disposable syringes and needles wherever possible as a single unit, into sharps containers.
- Sharps such as small quantities of broken glass, drug vials, used needles, razors, blades etc. must be carefully disposed of into approved sharps containers.
- Never attempt to decant contents of small sharps containers into larger containers.

- Never dispose of sharps in containers used for storage of other wastes, or place used sharps containers in clinical waste bags.
- Never leave sharps lying around.
- Never insert fingers / hand past the level of the lid.
- Close the aperture on the disposal of each sharp at the patient’s bed side.
- Ensure Sharp containers are free from protruding sharps.
- Sharp containers should not be filled above the fill line. Replace when ¾ full.
- Once full the container aperture is locked, tagged and identification label signed.
- The person locking the sharps container must tag the Sharps container.
- Do not re-sheathed or bent needles.

3. **Safe Handling of Sharps**

- Avoid re-sheathing needles manually and re-sheath as a last resort.
- To re-sheath safely, place sheath on a flat surface. Only re-sheath needles if a device is available to allow this to be done using one hand only. If such a device is not immediately accessible, the single-handed scoop method may be used, i.e. the HCW holds the barrel of the syringe and scoops the needle cap from a hard, flat surface on to the end of the needle. Only when the needle tip is covered should re-sheathing be completed with the other hand. Re-sheathing devices should be decontaminated regularly.
- In certain situations, it may be necessary to remove the needle from the syringe i.e. when performing blood gases. In this instance use either; needle-removing device located on some Sharp containers or re-sheath needle using technique described above and then remove needle. Needle forceps or other suitable devices should be readily available.

- Remove needles and attach blind hubs to syringes containing arterial blood which are to be sent to the laboratory. Intravascular guide wires and glass slides must be disposed of as sharps.
- Do not pass sharps from hand to hand. Use kidney dish / tray.
- When using sharps during a procedure, ensure that they do not become obscured by dressings, paper toweling or drapes etc.
- Ask for assistance when taking blood / giving injections to uncooperative or confused patients
- Do not dispose of sharps with other clinical waste.

4. **Storage**

- **Ensure** Sharp containers are located / positioned / stored appropriately off the floor.
- **Ensure** Sharp containers are used in accordance with ergonomic manual handling principles i.e. using brackets.
- **Ensure** Sharp containers are located / stored safely, away from the public and out of reach of children.
- All sharps containers must be disposed of into yellow wheelie containers or stored in suitable locked area in-accordance with the Segregation Packaging and Storage Guidelines.
- Sharp containers must be stored in a locked holding area while awaiting collection for disposal.
- Sharp containers awaiting removal by a contractor should be stored in a secure, protected area.

5. **Transport**

- Transport a sharps container by the handle and away from the body.
- Sharp containers must be transported and placed in an upright position. Handle carefully.
- Personnel involved in the removal of Sharp containers

for disposal must wear heavy duty gloves and protective clothing.

- If a sharp object is found, protect self, remove item carefully and place into a sharp's container. **Do not physically handle a sharp object use a dustpan to manipulate the sharp instead**
- The designated person responsible for the removal / disposal of Sharp containers must ensure sharp containers are **tagged**, sealed / locked before removal for disposal.
- Inform the department head or designate if there is a breach in the system.

6. **Education and Training**

- Heads of Disciplines /Heads of Departments / Supervisors should be aware of the action required following an inoculation injury.
- All Health Care Workers can identify where the safe handling and disposal of sharps policy is located.
- Health Care Workers should attend education and training at induction and yearly thereafter. Each Head of Department / Head of Discipline should have a record of staff training.
- Ensure Standard Precautions poster is available in each clinical area for the management of sharps / inoculation injury.
- **Measures to Reduce Risks during Surgical Procedures**
- Most percutaneous injuries in the operating theatre or during obstetric/midwifery procedures are caused by sharp suture needles.
- Double gloving does not "prevent" sharps injury, but has been shown to effect up to a six-fold decrease in inner glove puncture. In the event of percutaneous injury, the volume of blood transmitted may also be reduced due to the enhanced wiping effect of two layers of glove.
- The use of blunt-tipped needles can further reduce the

incidence of glove puncture and percutaneous injury. Although unsuitable for suturing skin and bowel, they can be used effectively for all other components of abdominal closure. For skin and bowel closure, stapling devices are a safer alternative to sharp suture needles.

- In order to minimize the risk of injury, the tasks of each member of the surgical team should be outlined. Specific hazards and measures to reduce the risks from these should be identified for each team member and should be reviewed periodically.
- **Reducing the Risk of Percutaneous Exposure: Methods, Procedures and Equipment**

The following measures may reduce the risk of percutaneous exposure and should be considered where practicable:

- Have no more than one person working in an open wound/body cavity at any time (unless essential to the safe and successful outcome of an operation);
- Use a “hands-free” technique where the same sharp instrument is not touched by more than one person at the same time, avoid hand to hand passing of sharp instruments during an operation;
- Assure safer passage of necessary sharp needles and instruments via a “neutral zone”, announce when a sharp instrument or needle is placed there. The “neutral zone” may be a tray, kidney basin or an identified area in the operative field;
- Ensure that scalpels and sharp needles are not left exposed in the operative field, but always removed promptly by the scrub nurse having been deposited in the neutral zone by the operator or assistant;
- Use instruments rather than fingers for retraction, and for holding tissues while suturing;
- Use instruments to handle needles and to remove scalpel blades;
- Direct sharp needles and instruments away from own non-

dominant, or assistant’s hand;

- Remove sharp suture needles before tying suture; tie suture with instruments rather than fingers. Alternative equipment and procedure should be considered where practicable:
- Eliminate any unnecessary use of sharp instruments and needles, eg by appropriate substitution of electrocautery, blunt-tipped needles and stapling devices;
- Opt for alternative less invasive surgical procedures where practicable and effective;
- Avoid scalpel injuries associated with assembly/disassemb00.y, by using scalpels which are either disposable, have retractable blades or which incorporate a blade release device;
- Avoid the use of sharp clips for surgical drapes; blunt clips are available as are disposable drapes incorporating self-adhesive operating film;
- Consider double gloving with a larger pair of gloves innermost for optimum comfort.
- **Reducing Risk of Blood-Skin Contact**

The following measures may reduce the risk of blood-skin contact and should be considered:

- If a glove puncture is suspected or recognized, rescrub if possible and reglove as soon as safety permits;
- Change gloves regularly if performing, or assisting with a prolonged surgical procedure even if no glove puncture is suspected or recognized;
- Wear protective clothing for body, eyes and face according to risk assessment;
- Choose waterproof gowns, or wear a surgical gown with waterproof cuffs and sleeves and a plastic apron underneath if blood contact and therefore “strikethrough” is considered a risk – such as procedures anticipated to involve high blood loss;

- If legs or feet may be contaminated (as in obstetric and some other procedures performed in the lithotomy position), ensure that impermeable gown/apron covers legs and wear impermeable footwear. Wellington or calf length overbooks are preferable to shoes or clogs. Surgical drapes with “catch-basins” are available to reduce the risk of leg and foot contamination;
- Wear protective headwear and surgical mask. Male HCWs should consider wearing hoods rather than caps to protect freshly shaven cheeks and necks;
- Ensure that all blood is cleansed from a patient’s skin at the end of an operation before patient leaves theatre;
- Remove protective clothing including footwear on leaving the contaminated area. All contaminated reusable protective clothing, including footwear, should be subjected to cleaning and disinfection or sterilization, with appropriate precautions for those undertaking it. Footwear should be adequately decontaminated after use.
- **Measures to Reduce Eye and Other Facial Exposure**

Protect mucous membrane of eyes with protective eyewear. This should prevent splash injuries (including lateral splashes) without loss of visual acuity and without discomfort. Face shields may be considered appropriate for procedures which involve a risk of splatter of blood including aerosols or other potentially infectious material.

The information given in 7.5 to 7.9 draws on the following sources: Gerberding JL, Littell C, Tarkington A, Brown A, Schecter WP. Risk of exposure of surgical Personnel to patients’ blood during surgery at San Francisco General Hospital, N Engl J Med 1990: 322:1788-1793.

Hartley JE, Ahmed S, Milkins R, Naylor G, Monson JL, Lee PW. Randomised trials of blunt vs. cutting needles to reduce glove puncture during mass closure of the abdomen. Brit J Surg 1996 83:1156-7

Prevention of transmission of blood-borne pathogens. Ed. Rhodes RS and Bell DM; Surg Clin North Am 1995: 75:1047-1217

Thomas PB, Falder S, Jolly M, Saunders StN, Smith JR. The role of blunt-tipped needles and a new needle holder in reducing needle stick injury. J Obstet Gynaecol 1995; 15:336-7

Tokars JI, Bell DM, Culver DH, et al. Percutaneous injuries during surgical procedures. JAMA 1992; 267:2899-2904. Tokars JI, Culver DH, Mendelson MH, et al. Skin and mucous membrane contact with blood during surgical procedures: risk and prevention, Infect Control Hosp Epidemiol 1995: 16:703-711.

8. **IMPLEMENTATION PLAN**

- This guideline will be implemented by Heads of Disciplines, Nursing Support Services Management, General Services Management, Heads of Departments, Infection and Prevention Control Team in the Mid-Western Regional Hospitals.
- It is the responsibility of Heads of Discipline and Heads of Departments to ensure that this guideline is available/ brought to the attention of staff who report to them in their areas of responsibility.
- Staff have a responsibility to read this guideline and sign the Signature Sheet (Refer to Appendices).
- The Infection Prevention and Control Team will provide education and training sessions to relevant staff as part of the implementation process of this guideline.
- The receipt sheet should be returned to the infection Prevention and Control secretary.
- The Infection Prevention & Control team will be responsible for maintaining guideline receipt sheets from all Wards/Departments. It is the responsibility of Heads of Disciplines and Heads of Departments to maintain records locally.

9. REVISION AND AUDIT

- The Guideline will be reviewed by the Infection Prevention and Control Team and updated as necessary and at least every 2 years.
- An audit will be undertaken within one year of issue.