INFECTION CONTROL COMMITTEE
ST. LUKE'S HOSPITAL
MALTA

NEEDLESTICK INJURY & BODY FLUID EXPOSURE POLICY

Editor: Dr. M.A. Borg M.D., M.Sc.[Lond]
Infection Control Officer - SLH

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UNIVERSAL PRECAUTIONS

The term "Universal Precautions" implies that all patients are treated as being of the same infectious potential. In this way satisfactory precautionary measures are taken when dealing each and every patient.

UNIVERSAL PRECAUTIONS

Hands	Cover cuts and abrasions with water-proof plaster Wash with soap and water if contact with blood/body fluids
Gloves	Wear when contact with blood/body fluids is possible
Apron	Wear when contact with blood/body fluids is likely
Mask/Visor	Wear when splashing of blood/body fluids is likely
Clinical Waste	Dispose into yellow bags for incineration
Linen	Linen soiled with blood or body fluids should be placed in water soluble bags and then put into yellow laundry bags for transportation.
Spillages	All spillages should be treated with chlorine releasing granules as per disinfection policy

Additional protective measures are then taken for **higher-risk patients**, such as carriers of blood transmissible infections such as HIV, Hepatitis B or C as well as "at risk" groups known to have a higher incidence of such infections (e.g. intravenous drug abusers).

ADDITIONAL PRECAUTIONS

Single room	Only necessary if patients is uncooperative, demented or bleeding
Gloves	Double glove for surgical procedures or examination of body cavities
Disposable cutlery	Only needed if patient is bleeding from the mouth and automatic dish washing machines are not available.
Linen	All linen from high risk patients should be placed in water soluble bags and then put into yellow laundry bags for transportation.
Specimens	All specimen containers should be placed in a larger screw-capped container with the space in between filled with cotton wool. They should then be sealed in a polythene bag separate from the investigation form.

NEEDLESTICK INJURIES

A large number of injuries from 'sharps' occur in every hospital every year and St. Luke's is no exception. A high percentage of these injuries are avoidable and result from carelessness. **Many go unreported and unmanaged**. The person who uses a 'sharp' is personally responsible for its correct use and for its safe disposal. 'Sharps' that are disposed of incorrectly put the individual at risk and also other members of staff, patients, or visitors who may come into contact with them.

Although the major concern from accidental exposure to blood involves Hepatitis B and HIV infection, other infective organisms are also a hazard. The occupational risk of transmission of HIV is low, yet the consequences are serious and the psychological effects profound. All documented cases of transmission of HIV in the health care setting have resulted from inoculation with blood through a 'sharps' injury or through exposure of mucous membranes or non-intact skin to blood. Staff exposed to blood from known HIV infected patients have an approximate risk of 0.5% of sero-conversion after needle-stick exposure. By contrast a non-immune person runs a 20% risk of acquiring Hepatitis B virus from needle-stick exposure to blood containing HBsAg positive and anti-HBe negative.

DISPOSAL OF SHARPS

A 'sharp' may be defined as any item which has the potential to cut or penetrate the skin.

This includes

Any type of *needles*
Venflon introducers
Butterfly cannulae
Any type of *blades* including stitch cutters
Air vent (introducer spike) of i.v. administration sets,
Intravascular guidewires
Dental wires
Thoracic trocars
Glass items such as ampoules, capillary tubes, and glass slides
Broken thermometers
However *any* object which can penetrate intact skin must be treated as sharps and disposed of accordingly.

IF THERE IS ANY DOUBT ABOUT WHETHER AN ITEM IS A SHARP IT MUST BE TREATED AS ONE.

Sharps should be used only when absolutely necessary. All sharp objects, such as scalpel blades, needles, broken glass etc., must be disposed of in the approved manner and never be left lying where they are likely to cause injury to others. Other members of staff, visitors and patients must not be put at risk by the carelessness of others.

Needles must, on NO account be re-sheathed after their use. All disposable 'Sharps' must be immediately placed in a secure puncture-resistant bin suitable for incineration. It is important that when the sharps container is assembled, care is taken to ensure that the lid is securely in place. The sharps container must be stored in a secure area out of reach of the general public especially in areas where children are present.

It is essential that the containers are never over-filled since used needles protruding from the containers constitute a significant hazard to those who handle them. They should be replaced and sent for disposal when two-thirds full. Before removal, the container must be checked to ensure that the lid is securely attached to the base and that the flap has been made secure.

SHARPS MUST NEVER BE PLACED DIRECTLY INTO PLASTIC YELLOW BAGS FOR CLINICAL WASTE.

Summary:

1. Each ward should be in possession of a proper sharps container
2. Prior to use all needles, syringes and ampoules should be transported in a receiver on a tray or trolley.
3. THE SHARPS CONTAINER SHOULD BE TAKEN BY THE USER TO THE POINT OF USE.
4. Needles should NOT be re-sheathed after use. The user should dispose of the 'sharp' immediately into the designated container.
5. All items should be placed through the aperture in the lid BY THE USER HIM/HERSELF.
6. In cases of syringes, the needle should be removed using the needle removing slot purposely constructed into the lid of the sharps container.
7. All broken glass from thermometers and glass ampoules should be collected with dustpan and brush and placed immediately into the sharps container.
8. The sharps container should be locked once two-thirds full (as indicated by the level on the sharps container) and placed in the dirty utility. Do not overfill as the lid will not lock and may tempt other users to push down the contents with the risk of injury.
9. The container should be removed from the dirty utility just prior to transport to the incinerator. The sharps containers have carrying handles; therefore the container should always be held at a distance from the body whilst being transported.

HEPATITIS B VACCINATION

Vaccination against Hepatitis B is one of the most effective ways of reducing the risk of acquiring this infection in the hospital setting. The vaccine is totally safe, as it produced in yeast cells and provides a good immune response. It is therefore **essential** that all health care workers should make sure that they have received a complete course of three doses of Hepatitis B vaccine. Individuals whose work brings them into direct contact with patients should then have a blood sample taken 8 weeks after the third dose. If the anti-HBs antibody titre is more than 100 IU then no boosters will be needed subsequently. Individuals exhibiting lower titres will be assessed and advised by the Infection Control Physician.

INJURY PROCEDURE

Accidental injuries caused by "sharps" including needle-sticks must be dealt with immediately.

Encourage free bleeding, but under no circumstances should the wound be sucked. The wound is **washed liberally with saline or soap and water**, without scrubbing, and then covered with a waterproof dressing. Similarly, contaminated skin, conjunctivae or mucous membranes should be washed immediately. This applies to all situations at all times.

***Any* incident**, however small, MUST be reported PROMPTLY to the Infection Control Unit. In addition to filling in the NI 30 "Injury on Duty" form, details should also be recorded on the **Blood and Body Fluid Exposure Notification Form** available from the Infection Control Unit which should be submitted to the Unit within 24 hours. For exposure incidents occurring during the day, the Infection Control Nurse on duty should be informed immediately; injuries during the night should be reported first thing the next day. However, if the donor is known to be Hepatitis B or C or HIV positive or within a high-risk category, the Infection Control Unit must be informed immediately, even after working hours.

Exposure Management

A sample of blood will be taken within 24 hours from the exposed employee and tested for HBsAg, Hepatitis C and HIV. This will serve as a baseline to evaluate any future consequences of the injury. Furthermore, in the event of seroconversion following the incident, possible future social security claims will be invalid if these baseline investigations are not taken and recorded. The same tests will be repeated after 6 weeks and 6 months to ensure that seroconversion has not occurred following the incident.

If the donor is known, the Infection Control Unit will establish whether an indication for taking a blood sample from the patient for testing exists. If such a situation exists, the patient WILL BE FULLY INFORMED AND COUNSELLED as to the reason why the blood is being taken and which tests will be performed. If the patient refuses, no investigations will be performed against his/her will. The patient's blood should, after consent, be tested for the same parameters.

HEPATITIS B PROPHYLAXIS FOR **SIGNIFICANT EXPOSURE** EPISODES

Vaccination status of person exposed	**HBsAg known positive source**	**HB status unknown**	**HBsAg known negative source**
0 or 1 dose HB vaccine pre-exposure	Assessed by Infection Control Physician	Accelerated course of HB vaccine	Initiate normal course of HB vaccine
2 doses HB vaccine pre-exposure	Assessed by Infection Control Physician	One dose of HB vaccine	Finish normal course of HB vaccine.
3 doses HB vaccine pre-exposure	Assessed by Infection Control Physician	Consider booster dose of HB vaccine if anti-HBs titre is unknown	No action necessary

- Injuries from wayward needles in hospital will be managed as "**HB status unknown**". Should the ward or section in question have patients with known blood borne infections this be made known to the Infection Control Unit.
- Injuries from wayward needles in the community should also be managed as "**HB status unknown**". If any serological screening is contemplated, this needs only to be done six months after exposure.
- Needlestick injuries acquired from sources of unknown HB status but suggestive of increased risk of HB carriage should be immediately communicated to the Infection Control Unit to assess the need for modifications in management.

Accelerated Hepatitis B vaccine course: 0, week 1 & week 4 followed by booster at 1 year

Normal Hepatitis B vaccine course: 0, month 1 & month 6.

HEPATITIS C PROPHYLAXIS FOR **SIGNIFICANT EXPOSURE** EPISODES

There is currently NO available means of providing prophylaxis for needlestick injuries from Hepatitis C positive patients.

HIV PROPHYLAXIS FOR **SIGNIFICANT EXPOSURE** EPISODES

The prophylaxis of HIV involves the use of drugs with potentially serious side-effects and therefore should not be practised without first contacting the Infection Control Unit. Since prophylaxis must be started IMMEDIATELY after exposure, it is essential that needlestick injuries from patients who are HIV positive are reported WITHIN THE HOUR to the Unit.