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|  Department of Medicine | Doc. No: | SOP-Medicine-07 |
| | Standard Operating Procedure | |
| Title: Safe Handling and Disposal of Sharps | Ver No: | 004 |
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| Adeline Chow/Tong Koh Jong Prepared by | Prof Anantharaman Vathsala Approved By | 15-04-2022 Issue Date |

1. OBJECTIVE

This standard operating procedure (SOP) provides guidance on the safe handling and disposal of sharps in the Department of Medicine research laboratories.

2. SCOPE

This SOP applies to all staff and students working in the Department of Medicine research laboratories at MD1, MD6 and NUH.

3. RESPONSIBILITY

- 3.1 It is the responsibility of the PI to ensure that staff and students are appropriately trained in safe handling and disposal of sharps.
- 3.2 Staff and students are to ensure proper handling and use of sharps in accordance with this procedure. All persons using sharps must receive appropriate training from their supervisor in the safe use and disposal of sharps.

4. DEFINITION


Sharps are devices or objects with corners, edges, or projections capable of cutting or piercing skin or regular waste bags.

Examples of sharps include:

- Hypodermic needles, syringes, tubing
- Blunted needles
- Pasteur pipettes
- Blades (scalpels, razors, microtomes)
- Broken laboratory glassware
- Microscope slides
- Glass capillary tubes

5. HAZARDS

- a. Needles and sharps expose you to the risk of punctures and cuts, which can additionally provide a portal for the entry of pathogens and chemicals.
- b. Biologically & chemically contaminated sharps provide an additional infection and health risk.
- c. Sharps can be a hazard to both the user and others who may come in contact with them after disposal in the lab, all the way along the route to final disposal in the landfill or with a waste contractor. Even non-biological contaminated sharps, if not disposed of properly, can be a cause of concern when a caretaker is poked by them and the hazard/source is unknown.

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6. TRAINING

Get trained before using sharp devices. Improper use and poor technique can increase your risk of a sharps exposure or other injuries. Receive proper training from senior personnel on techniques and equipment specific to your lab setting before conducting a procedure involving biological or other hazardous materials.

All individuals who handle needle in lab are required to complete Safe Needle Usage in Research Laboratories (OSHBIO06) Training via LumiNUS.

7. PROCEDURES

7.1 General Precautions


- a. Substitute laboratory glassware for plastic-ware whenever possible. Routinely inspect laboratory glassware and discard items that are damaged, cracked, or chipped.
- b. Be alert at all times when handling sharps. Don't look away or become otherwise distracted while handling a sharp object.
- c. Select rounded or blunt end devices when practicable.
- d. Use cut-resistant gloves if practicable. In some cases, heavy rubber gloves (i.e., glassware washing) or double gloving (when manual dexterity is important) may be appropriate.
- e. Use instruments rather than bare hands to handle sharps. For example, use forceps to load or unload needles and scalpels; use tongs to pick up broken glass.
- f. Do not leave unprotected sharps (razor blades, scalpel tips, etc.) unattended on bench tops. Contain the sharp items in a tray or a suitable container.
- g. Protect the sharp when passing from one person to another. If not feasible, use verbal communication when passing.

7.2 Syringes and Needles

- a. Use devices with engineered sharps injury prevention features e.g. safety-engineered blood collection needles. These devices have built-in physical attributes such as safety shields which effectively reduces the risk of an exposure incident.
- b. Do not try to recap the needle of a syringe. An accidental puncture might occur. If recapping is required, justification shall be provided by the PI in the risk assessment and the following techniques shall be followed: one-handed "scoop" technique which uses the needle itself to pick up the cap, and then the cap is pushed against a hard surface to ensure a tight fit onto the device, or hold the cap with tongs or forceps and place over the needle.
- c. Used needles must not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal.
- d. Needles manufactured for single use should not be reused.

7.3 Precautions for the Disposal of Sharps

- a. Ensure that appropriate sharps disposal containers are placed close to the point of sharps usage eg. sharps disposal container within the BSC. available in the immediate work area: The sharps disposal container must be labeled with a biohazard symbol. Sharps disposal containers must be rigid, leak and puncture resistant proof, and sealable.
- b. When disposing needles and syringes, do not recap the needle nor remove the needle from the disposable syringe. Place the entire needle-syringe unit directly into the sharps container.

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- c. Sharps containers storing needles and syringes contaminated with biological materials cannot be placed in the normal trash.
- d. Dispose of all sharps into puncture resistant containers that do not allow the whole hand to go in.
- e. Do not overfill sharp containers beyond the recommended fill line or beyond 3/4 full.
- f. Do not try to retrieve items from sharps containers.
- g. Never force materials into a sharps container.
- h. All contaminated sharps are to be treated as infectious and disposed of only through licensed biohazardous waste collectors.
- i. Sharps containers should not be placed on the floor. If they are required to be put on the floor, the PI shall assess and ensure that there is no spillage or tripping hazard.
- j. Safety hazards identified with the sharps container, i.e. needles protruding from the container, needles not freely falling into the container, must be immediately reported to the safety lead or PI.

8. SHARPS / NEEDLESTICK INJURY

In the event of a sharps or needlestick injury, encourage bleeding, wash the punctured wound with soap and water and apply an appropriate skin disinfectant.

Inform the principal investigator or laboratory supervisor about the cause of the wound and organisms involved if any.

In the event of exposure to biological materials/infectious agents resulting in possible infection, disease or illness, contact Occupational Health Clinic for a medical assessment or proceed to NUH Accident & Emergency Unit after office hours.

9. INCIDENT REPORTING


All incidents or accidents have to be notified to OSHE within 24 hours via the online NUS Accident and Incident Management System (AIMS)

@https://inetapps.nus.edu.sg/osh/portal/eServices/ehs360_aims.html.

The AIMS report can be submitted by the injured staff/student, safety leads, his or her supervisor/representative if the staff or student is unfit/unable to do the initial report.

10. REVISION HISTORY

| Date Revised | Version No. | Author | Summary of Revisions |
|--------------|-------------|--------------------------------|--|
| 18-03-2016 | 001 | Ong Jun Liang / Yeo Soh Bee | |
| 01-10-2016 | 002 | Ong Jun Liang / Yeo Soh Bee | Section 6: Revised Accident and Incident Reporting System (AIRS) to Accident and Incident Management System (AIMS) |
| 15-04-2019 | 003 | Yeo Soh Bee | New additions: Section 4: Definition Section 5: Hazards Section 6: Training |

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| 15-04-2022 | 004 | Adeline Chow/ Tong Koh Jong | Section 6: Updated training portal LumiNUS. Section 7: Updated 7.2.b. Use of syringes and needles and 7.3.a and 7.3.i. Precautions for disposal of sharps |
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