



## GUIDELINES FOR THE SAFE USE OF SHARPS

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### PURPOSE

The purpose of these guidelines is to provide guidance for the safe use and disposal of sharp instruments (i.e., hypodermic needles, suture needles, scalpel blades, razor blades, glass pipette tips). The safe use of sharps may prevent needle stick injuries and reduce spray and aerosol hazards.

### SCOPE

This guideline applies to all Emory University and Emory University Hospital personnel whose occupational tasks or responsibilities include the handling and manipulation of sharps.

### IDENTIFIED HAZARDS

Needle sticks are associated with occupational exposures to infectious agents. Exposure routes include accidental sticks associated with parenteral injection and mucous membrane exposure. Mucous membrane exposure results from sprays and aerosols may occur when using needles and syringes to mix, expel or inject fluid.

### SHARPS INJURY PREVENTION

Needles - or other sharp instruments - should be restricted for use only when there is no alternative, such as for parenteral injection or phlebotomy. Plastic ware should be substituted for glassware whenever possible.

1. Sharps (used or unused) are disposed of in a sharps containers.
2. Needles should not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal; rather, they must be carefully placed in the conveniently located sharps container.
  - a. In the rare event that when it necessary to recap a needle, use a device designed to recap needles or the one-handed method (outlined in this guidance)
  - b. If it is necessary to remove an uncapped needle from a syringe it is recommended to use a device such as the sharps container or forceps to separate the needle from the syringe. Do not attempt to remove an unprotected needle from any device with your hands.
3. Syringes which re-sheath the needle, needle-less systems, and other safety devices should be used when possible.
4. If reusable glass syringes and needles are necessary, examine syringes for chips or cracks and needles for barbs and plugs prior to sterilization and before use. Disposable syringes and needles are preferred.

### SHARPS DISPOSAL

Promptly dispose of all sharps in appropriate containers, which should be sized to allow the sharps to freely and completely enter the container. Sharps Containers are:

- puncture resistant
- labeled or color-coded in accordance with OSHA and State of Georgia standards
- leak proof on the sides and bottom
- placed within easy reach of work stations
- closed when not in use



- closed when the container is  $\frac{3}{4}$  full and disposed of in the biohazardous waste stream

**NOTE: Do not recap needles prior to placing into sharps container.**

### STORAGE OF SHARPS CONTAINERS

- OSHA regulations require that during use, containers for contaminated sharps must be maintained upright throughout use. Additional restraint may not be necessary if workplace assessment reveals that sharps containers can be maintained in an upright position during use with no danger of being knocked over or spilled.
- For sharps containers used on **movable crash carts** in the hospital, the containers should be secured with brackets or other positioning mechanisms to minimize the likelihood of the container tipping or becoming overturned and should have a protective barrier over the opening to prevent protrusion of displaced sharps.

Commercially available containers which are designed to provide temporary barriers to protect employees during transport of containers from one area to another are permitted. These specially designed containers are equipped with counter-balanced doors or closable flaps for temporary closure and are suitable for mobile carts.

- The use of sharps containers with **safety flaps** (Fig B) is recommended. These containers facilitate one-handed disposal and have a built in flap which closes preventing used sharps falling out.

#### *A: Sharps Containers: Without Safety Flap*



#### *B: Sharps Containers: With Safety Flap*



### ONE-HANDED TECHNIQUE

In certain situations recapping may be necessary. If the procedure you are performing requires that you recap a needle, the one-handed technique as illustrated below may be used. Place the cap

on the counter top and "fish" it up with the needle when you are ready to recap, keeping your free hand out of the way. Alternately, recap a needle by grasping the cap in a forceps and sliding it over the needle.



Other methods for safely recapping needles are available. These include re-sheathing needles and bench top mechanical devices that hold caps while recapping.

Refer to [www.ehso.emory.edu](http://www.ehso.emory.edu) or contact the Biosafety Officer at [biosafe@emory.edu](mailto:biosafe@emory.edu) for additional information.



### SPRAY AND AEROSOL PREVENTION

To prevent exposure from sprays and aerosols:

- Use of needle-locking syringes is recommended.
- Fill syringes carefully to minimize air bubbles and frothing. Expel excess air, liquid and bubbles from the syringe vertically away from your eyes, nose and mouth.
- Do not forcefully expel a stream of fluid into an open vial or tube.
- When working with infectious, toxic or other dangerous materials, use engineering controls, such as a biosafety cabinet, plastic shield and/or appropriate PPE.

### REFERENCES:

1. Specifications on use of sharps containers are described in the OSHA regulations- under the Bloodborne pathogen standards, 1910.1030(d)(2)(viii).
2. See Emory University Bloodborne Pathogen Exposure Control Plan <http://www.ehso.emory.edu/content-manuals/BBPEXposureControlPlan.pdf>.
3. Regulations on sharps disposal in the State of Georgia are described in the Rules and Regulations of the State of Georgia Rule 391-3-4-.15: Biomedical Waste. <http://rules.sos.ga.gov/GAC/391-3-4-.15>
4. CDC/NIH guidelines outlined in Biosafety in Microbiological and Biomedical Laboratories (5th ed., 2007) states, "Only needle-locking syringes or disposable syringe-needle units (i.e., needle is integral to the syringe) are used for injection or aspiration of infectious material.
5. <http://www.cdc.gov/niosh/sharps1.html> Selecting, Evaluating and Using Sharps Disposal Containers.