Use and Disposal of Sharps

In health care settings, injuries from needles and other sharp items are the number-one cause of infections in staff from bloodborne pathogens. All staff who touch sharps are at risk of infection. Health care workers can be injured:

- When they recap, bend, or break hypodermic needles
- When they are stuck by a person carrying unprotected sharps
- When sharps show up in unexpected places, like linens
- During procedures in which they use many sharps, cannot see their hands, or are working in a small, confined space (such as during many gynecological procedures)
- When they handle or dispose of waste that contains used sharps
- When clients move suddenly during injections

Giving injections

Providers can be stuck or splashed with blood if a client moves suddenly; clients can be infected if the needle, syringe, or solution is contaminated. To minimize risks:

- Always warn the client before giving an injection.
- Always use a new or properly processed needle and syringe for every injection.

Before giving an injection, wash the injection site with soap and water if there is visible dirt on the skin. Wipe the client’s skin at the injection site with an antiseptic solution to minimize the number of microorganisms and reduce the risk of infections. Using a fresh swab, wipe in a circular motion from the center outward. If alcohol is used, allow the alcohol to dry in order to provide maximum effectiveness in reducing microorganisms.

IV fluids and multidose vials

Infections may be transmitted through these items if proper procedures are not followed.

IV fluids. Unhook the needle or catheter from the IV line. Dispose of the needle in a sharps-disposal container. Throw away the catheter and IV line and any remaining fluid. Microorganisms can survive and grow in IV fluids; never use the same IV line and fluid bag/bottle with multiple clients.

Multidose vials. Before filling a syringe from a multidose vial, check the vial to be sure there are no leaks or cracks. Check the solution to be sure it is not cloudy and that there is no particulate matter in the vial. (Most solutions are clear, although some, like Depo-Provera, are milky.) Wipe
the top of the vial with a fresh cotton swab soaked with 60%–70% alcohol and allow it to air-dry. Always use a new or correctly processed hypodermic needle and syringe every time medication is withdrawn from a multidose vial. Reusing the same syringe with multiple clients—even if the needle is changed—is not a safe practice. Also, never leave one needle inserted in the vial cap for multiple uses. This provides a direct route for microorganisms to enter the vial and contaminate the fluid between each use.

**Safe handling of sharps**

Health care workers can accidentally stick each other when passing sharps during a procedure. Always pass sharps in such a way that the surgeon and assistant are never touching the item at the same time. This is known as the “hands-free” technique.

**To use the hands-free technique:**

- The assistant puts the sharps in a “safe zone” using a designated part of the instrument stand or area on the field where instruments can be placed.
- The assistant tells the service provider that the sharps are in the safe zone.
- The provider picks up a sharp item, uses it, and returns it to the safe zone.

**Disposal and decontamination of sharps**

Improper disposal of contaminated sharps can cause infection throughout the community. To avoid injuries during sharps disposal:

- Avoid recapping needles
- Do not bend, cut, or break needles
- Do not remove needles from syringes before disposal
- Dispose of sharps in a puncture-resistant sharps container, such as a metal box, heavy cardboard box, or an empty plastic jug
- Wear utility gloves when disposing of sharps containers

**Recapping needles**

Whenever possible, dispose of needles immediately without recapping them. When recapping is necessary (for example, to avoid carrying an unprotected sharp), always use the “one-hand” technique.
Steps of the One-Hand Technique

**Step 1**
Place the cap on a flat surface and remove your hand from the cap.

**Step 2**
With one hand, hold the syringe and use the needle to "scoop up" the cap.

**Step 3**
When the cap covers the needle completely, use the other hand to secure the cap on the needle hub. Be careful to handle the cap at the bottom only (near the hub).

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**Sharps-disposal containers**
Use a puncture-resistant container for the disposal of used sharps. A sharps container may be made out of a heavy cardboard box, an empty plastic jug, or a metal container. Sharps-disposal containers should be located in any area where sharps are used (injection rooms, treatment rooms, operating theaters, labor and delivery rooms, and laboratories).

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**Decontaminating sharps**
Improperly discarded sharps can cause infections: when possible make sharps unusable by incinerating them in an industrial incinerator. When this is not possible, decontaminate sharps before disposal. (For more information about proper disposal, see page 68.) Sharps should also be decontaminated before being processed for reuse. (For more information about decontamination, see page 25.)
Steps of Decontaminating Needles and Syringes

**Step 1**
Immediately after use, fill the assembled needle and syringe with a 0.5% chlorine solution, and draw the solution in and out several times. (More information about the 0.5% chlorine solution appears on page 26.)

**Step 2**
Drop the needle and syringe into a container of 0.5% chlorine solution, and let them soak for 10 minutes.

**Step 3**
Remove the needle and syringe from the solution, either by hand or using pickups (lifters, cheetle forceps). If using your hands, be sure to wear utility gloves.

**Step 4**
Dispose in a sharps container. Or if the syringe and needle are reusable, rinse with clean water, drawing the water in and out several times, or clean immediately.

Management of injuries

If you are exposed to blood or other body fluids:
- Immediately wash cuts or puncture wounds with soap and water.
- Flush splashes to the nose, mouth, or skin with water.
- Irrigate splashes to the eyes with water or saline.

There is no evidence that cleaning a wound with an antiseptic or squeezing a wound decreases the risk of infection. Do not use caustic agents, such as bleach, on sharp-object injuries. As a precaution, all staff who are at risk of exposure to blood or other body fluids should be vaccinated against hepatitis B.
Postexposure prophylaxis

Postexposure prophylaxis with drugs or other therapy can reduce the risk of transmission of some bloodborne pathogens. Whether postexposure prophylaxis is indicated following exposure to blood or other body fluids depends on a number of factors, including the infection status of the client whose blood or fluids are involved, the type of exposure (a splash to the skin versus a deep puncture wound), whether or not the exposed person has been vaccinated against hepatitis B, how much time has passed since the exposure, and the availability of drugs or other therapy.

Some therapies include:

- **For hepatitis B**: Hepatitis B immune globulin and hepatitis B vaccine can reduce the risk of infection after exposure to blood or other body fluids containing the hepatitis B virus.
- **For HIV**: Several antiretroviral drugs, used either alone or in combination, have been recommended to reduce the risk of HIV transmission following accidental exposure in health care workers. These include zidovudine (AZT, Retrovir), lamivudine (3TC, Epivir), indinavir (Crixivan), and nelfinavir (Viracept).
- **For hepatitis C**: There is no postexposure prophylaxis available for hepatitis C. Neither immune globulin nor antiviral drugs have been shown to reduce the risk of hepatitis C transmission.

If you, a co-worker, or a client has been exposed to blood or other body fluids, consult an infectious disease specialist familiar with postexposure prophylaxis, if possible.

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**Sharps Tips:**

- Handle hypodermic needles and other sharps minimally after use, and use extreme care whenever sharps are handled.
- Avoid recapping needles and do not bend, break, or cut them before disposal.
- Dispose of hypodermic needles, scalpel blades, and other sharps in puncture-resistant containers immediately (or as soon as possible) after use.
- Always wear utility gloves when disposing of sharps containers.
- Always wear utility gloves when washing sharps.
- Use the “hands-free” technique to pass sharps during clinical procedures.