

NEEDLESTICK PREVENTION

Stick to Safety

INTRODUCTION

Needles and other sharp instruments are important tools for healthcare workers. Unfortunately, they can also put healthcare providers at risk for exposure to bloodborne pathogens.

The Centers for Disease Control and Prevention (CDC) estimate that 600,000 to 800,000 needlestick injuries occur each year among healthcare workers. Although nursing staffs sustain the most sharps related injuries, lab workers, doctors, housekeepers and all others who handle sharps are at risk for injury.

According to the Occupational Safety and Health Administration (OSHA), sharps injuries occur most often when disposing of needles, administering injections, drawing blood, recapping needles and handling trash and dirty linens.

Fortunately, needlestick and other sharps injuries can be reduced by using safer medical devices and following safe-handling techniques.

SOME NEEDLING FACTS

Research shows that needlestick injuries account for about 80 percent of exposures to blood. Most needlesticks occur with hypodermic needles, blood collection needles, suture needles and needles used in IV delivery systems. Needles with hollow bores, such as those used to give injections and draw blood, are most often associated with transmission of bloodborne pathogens.

If stuck by a contaminated needle, you may be exposed to bloodborne pathogens such as hepatitis B virus (HBV), hepatitis C virus (HCV) or human immunodeficiency virus (HIV). These viruses can cause serious diseases.

- Hepatitis B virus can cause serious liver disease.
- Hepatitis C virus can cause another serious liver disease.
- HIV can cause the immune system to break down leading to HIV infection and, in many cases, AIDS.

The CDC estimates 1.25 million people in the United States are chronically infected with HBV, about three million people are chronically infected with HCV, and up to 900,000 people are infected with HIV. Fortunately, there is a vaccine to prevent infection by HBV. However, no vaccine is available to protect you against HCV or HIV.

UNACCEPTABLE ODDS

Most needlesticks do not cause exposure to bloodborne pathogens. Even when stuck by a contaminated needle, a person does not necessarily contract the disease. If you are stuck with a sharp contaminated with:

- Hepatitis B virus, and you are not immunized against HBV, you have a 6 to 30 percent chance of contracting the hepatitis B virus.
- Hepatitis C virus, you have about a 1.8 percent chance (ranges zero to seven percent) of contracting the hepatitis C virus.
- HIV, your chances of becoming infected with HIV are 0.3 percent or 1 in 300.

Possible exposure to HBV, HCV or HIV can be traumatic, since the worker may have to wait up to one year to determine infection. Known as "the year in hell," this waiting period can greatly affect a worker's life and relationships.

SHARPS TECHNOLOGY

Sharps include any instrument or object capable of breaking the skin: needles, lancets, scalpels, rotating instruments - even broken glass. Sharps can also pierce gloves and other personal protective equipment.

Over the past decade, technological advances have provided safer devices that can reduce sharps injuries. A safer needle or sharps device includes built-in safety features to prevent injury before, during or after use. The CDC reports from 62 to 88 percent of sharps injuries can be prevented by using safer medical devices, such as needleless IV systems and blunted, retracted or shielded needles. Other safety devices found to prevent injury include retracted lancets, breakage-resistant blood capillary tubes and certain protective surgical equipment.

FIVE RULES OF SHARPS SAFETY

The key to sharps safety is in your hand. Follow these five rules to stay safe.

1. Roll up your sleeve to fight HBV

The hepatitis B vaccine has proven very effective. After immunization was promoted, the number of healthcare workers infected with HBV at work decreased from 12,000 in 1985 to 800 in 1995. To be effective the vaccine series must be completed.

Get vaccinated against HBV before an injury occurs.

2. A used sharp is a dangerous sharp

Many people infected with bloodborne pathogens show no symptoms for many years, yet are contagious. Standard Precautions were developed to protect you against the risk of bloodborne and other pathogens when providing healthcare. Applied to sharps, Standard Precautions means treating any used sharp as though infected.

3. Use sharps safety devices

Your Exposure Control Plan details sharps safety rules based on OSHA's Bloodborne Pathogen Standard and CDC guidelines. You will be asked to identify and evaluate the effectiveness of sharps safety devices. Make sure you know how to properly use safety devices beforehand.

- Use a safe needle device or needleless system for withdrawal of body fluids, accessing a vein or artery or administering medications or fluids.
- Use needleless systems or needles with engineered sharps protection for other procedures requiring needle devices, such as when joining IV lines or while suturing.
- Use non-needle sharps that include engineered sharps protection such as certain surgical equipment.

4. Use safe-handling techniques

For most procedures:

- Never shear, break, bend or recap contaminated sharps. When recapping is required by the procedure, use a resheathing device.
- Always direct the sharp's point away from yourself and others.
- Keep both hands behind the sharp instrument at all times.

During surgical procedures:

- Use longer forceps or hold at an acute angle to protect the hand holding forceps.
- Use instruments, not fingers, to hold tissue being sutured.
- Keep fingers clear of rotating instruments.
- Use no-hands procedures to handle contaminated sharps and eliminate hand-to-hand instrument passing.
- Check glove fit. Ill-fitting gloves can make you clumsy and lead to an injury.

5. *Dispose of sharps safely*

According to the National Institute for Occupational Safety and Health (NIOSH), as many as one-third of all sharps injuries happen due to improper disposal. To reduce injuries:

- Discard contaminated sharps immediately after use in rigid, puncture-resistant containers.
- Place sharps disposal containers in easy reach and slightly below eye level, wherever sharps are used, especially in patient and treatment rooms.
- Do not allow containers to overfill. Never reach into them.

Remember to protect yourself against sharps carelessly discarded in trash, in linens, on a table or even on the floor.

- Do not push trash down with hands or feet. Instead, gently shake down waste holding the bag's top.
- Carry waste and laundry bags by the top, away from your body.

IF YOU ARE STUCK

Do not panic if you are stuck with a contaminated sharp. Follow these simple steps:

- Immediately wash the area with non-abrasive soap and water. Do not use caustic agents, such as bleach.
- Next, report the exposure to the designated person right away, so that post-exposure evaluation, counseling and any necessary treatment can begin. Act quickly since some treatment should start right away.

The CDC estimates that about half of all sharps injuries are not reported. Report any sharps injury as directed in your Exposure Control Plan. Document the exposure incident including date, time, and type of sharp used; effectiveness of any safety device use; and how the injury could have been prevented, if possible. This information, entered into the Sharps Injury Log, helps to judge the effectiveness of current sharps safety devices.

GETTING TO THE POINT

Needles and other sharps are necessary for patient treatment. Pay attention to how you handle them. Follow safety precautions at all times:

- Get vaccinated against the hepatitis B virus.
- Treat any used sharp as a dangerous sharp.
- Use sharp safety devices.
- Follow safe-handling techniques with all sharps.
- Dispose of sharps safely.

Safe habits protect you from injury. Take the time to develop them.

