BLOODBORNE PATHOGENS
EXPOSURE CONTROL PLAN

Exposure Control Plan Introduction

This facility is committed to providing a safe and healthful workplace for the entire staff. This Exposure Control Plan is provided to eliminate or minimize occupational exposure to bloodborne pathogens (BBP) in accordance with OSHA standard 29 CFR 1910.1030, “Occupational Exposure to Bloodborne Pathogens.”

The primary intent of the Bloodborne Pathogens Standard is to:

- *Eliminate/minimize occupational exposure to hepatitis, HIV, and other bloodborne pathogens* *by adopting universal/standard precautions for blood and other potentially infectious materials.*

In other words, employers must provide a workplace that is as safe as possible for employees, especially from on-the-job contact with the blood and body fluids of others.

Part-time, temporary and per-diem workers are also covered by the Bloodborne Pathogens Standard. Temporary workers from an employment agency are typically on the payroll of the agency, but the medical facility exercises day-to-day supervision over them and would technically be considered their “employer” for OSHA purposes because the medical facility provides the potential for exposures to blood and body fluids. Obtain written assurance from the employment agency that hepatitis B vaccination has been administered and that immunity (titer) has been achieved before deployment in the workplace. Alternatively, a signed *Hepatitis B Vaccination Declination form* is acceptable (a master copy of this form is located behind Tab 11: Master Record Forms, Form 15. If this information cannot be obtained, this facility is responsible for providing the hepatitis B vaccination and subsequent titer for immunity. Independent contractors who provide a service to a medical facility, such as housekeepers and phlebotomists, fall under these same guidelines. These part-time, temporary and per diem workers also require documented annual training. Even if the employment agency provides general BBP training, the medical facility is responsible for site specific training, such as the location of PPE, location of spill kits, waste handling, and whom to notify if there is an exposure.
Overview of Bloodborne Pathogens Standard Components

This Exposure Control Plan includes the OSHA requirements pertinent to ambulatory medical facilities to comply with the Bloodborne Pathogens Standard:

**Step 1.** Determine which employees fall under the standard (determine employee exposure).

**Step 2.** Implement various methods of exposure control, including:
- Universal/standard precautions
- Engineering and work practice controls
- Personal protective clothing and equipment
- Housekeeping

**Step 3.** Vaccinate employees who fall under this standard against hepatitis B and obtain titer to demonstrate immunity. If first series fails, revaccinate and re-titer.

**Step 4.** Evaluate circumstances surrounding any exposure incident. Provide post exposure evaluation and follow-up for exposed employees.

**Step 5.** Train employees and communicate hazards to them upon hire and annually.

**Step 6.** Keep employee vaccination records and post exposure records for 30 years. Keep training records for 3 years.

The methods for implementing these elements of the Bloodborne Pathogens Standard are discussed in the following sections of this Exposure Control Plan. If requested, provide employees with a copy of this plan, free of charge, within 15 days of request.
A Quick Look at Occupational Exposure

The Bloodborne Pathogens Standard applies to all employees who are likely to be exposed to blood or other potentially infectious body fluids. This situation, termed "occupational exposure" is defined as:

"Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with potentially infectious materials that may result from the performance of an employee’s duties. Parenteral contact involves piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions."

OSHA’s definition of occupational exposure includes exposure that may take place on the job, such as providing first aid or CPR, whether it be to a patient or a fellow employee.

Industries Subject to the Bloodborne Pathogens Standard

OSHA specifies 24 industry sectors in which employees are in contact with or handle blood and other potentially infectious materials. All employers in these sectors, regardless of the number of employees, are subject to OSHA’s Bloodborne Pathogens Standard.

These industry sectors are:

- Physician Offices
- Dental Offices
- Hospitals
- Medical & Dental Laboratories
- Nursing Homes
- Medical & Dental Equipment Repair
- Hospices, Residential Care Facilities
- Dialysis Centers
- Drug Treatment Centers
- Government Outpatient Facilities
- Home Healthcare
- Funeral Home & Crematories
- Health Clinics in Industrial Facilities
- Personnel Services, Linen Services
- Research Laboratories
- Lifesaving
- Fire & Rescue
- Law Enforcement
- Correctional Institutions
- Schools
- Regulated Waste Removal
- Blood Collection & Processing Centers
Universal/Standard Precautions

“Universal precautions” refers to the practice of handling blood and other potentially infectious materials as if they are infectious. “Blood” includes plasma, platelets, wound exudates and medications derived from blood such as immune globulins, albumin, and factors 8 and 9. In 1996, the Centers for Disease Control and Prevention began recommending Standard Precautions for the care of all patients, regardless of their diagnosis or presumed infection status.

- **Standard Precautions** apply to 1) blood; 2) all body fluids, secretions, and excretions, *except sweat*, regardless of whether or not they contain visible blood; 3) non-intact skin; and 4) mucous membranes. Standard precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals.

- Standard precautions includes the use of: hand washing, appropriate personal protective equipment such as gloves, gowns, masks, whenever touching or exposure to patients’ body fluids is anticipated.

**Other Potentially Infectious Materials (OPIM)**

OPIM are defined by OSHA as:

- Unfixed tissues or organs.

- Body fluids:
  - cerebrospinal
  - synovial
  - pleural
  - peritoneal
  - pericardial
  - amniotic

- Semen and vaginal secretions.

- Saliva (in dental procedures only).

- Any body fluid visibly contaminated with blood.

- All body fluids in situations where it is difficult or impossible to differentiate between types of body fluids.

Apply universal/standard precautions when it can be *reasonably anticipated* that bloodborne transmission could occur on the job through cuts, needlesticks, and splashes or sprays to broken skin or mucous membranes, when working with blood and other potentially infectious substances.

This judgment is often subjective; employers, employees and OSHA Safety Officers may disagree as to the “reasonableness” of bloodborne transmission in a particular circumstance. If an employee believes that the potential for transmission exists, and the employer disagrees, consider what a jury might decide. If in doubt, err on the side of safety.
Implementing Universal/Standard Precautions

The safety practices of this facility must be followed by all employees exposed to blood and OPIM from any patient, regardless of the patient’s bloodborne infection status. The practices outlined below are effective (in addition to the other practices in this Exposure Control Plan) in preventing the exposure of healthcare workers to HIV, hepatitis B and C viruses, and other bloodborne pathogens.

Protective barriers are provided by this facility free of charge and must be used by employees to protect themselves. This Exposure Control Plan specifies the types of personal protective clothing and equipment that are used for the situations encountered in this facility.

To put universal/standard precautions into practice, employees must:

- Use barrier protection to prevent skin and mucous membrane contamination with blood and OPIM.
- Cover all skin lesions such as cuts, scratches, ulcers, or areas of dermatitis.
- Wear gloves when handling blood and OPIM, touching lab specimens and tissues, or handling items contaminated with blood or body fluids.
- Wash hands immediately after removing gloves.
- Wash hands or other skin surfaces thoroughly and immediately if contaminated with blood or body fluids.
- Take care to minimize the formation of droplets, spatters, splashes, and spills of blood or body fluids.
- Wear full-face protection during procedures that are likely to generate splashes of blood or body fluids.
- Not bend, break, remove, or recap needles after use.
- Place used needles and other sharp items into a puncture-resistant biohazard “sharps” container for disposal. Locate the container close to the work area.
- Decontaminate all surfaces exposed to blood and body fluids.

Bloodborne Pathogens

OSHA defines bloodborne pathogens of major concern as:

- Hepatitis B virus (HBV)
- Hepatitis C virus (HCV)
- HIV
- Syphilis
- Creutzfeldt-Jakob Disease
Other diseases transmitted by blood include:

- HTLV-I
- Malaria
- Babesiosis
- Brucellosis (due to Borrelia sp.)
- Leptospirosis
- Colorado Tick Fever
- Relapsing Fever
- Ehrlichiosis
- Colorado Mountain Spotted Fever
- Viral Hemorrhagic Fever
- West Nile Virus
- Lyme Disease (due to the bacteria, Borrelia burgdorferi)

Under non-work-related circumstances, these other organisms are transmitted by parenteral contact, such as sharing dirty needles, sexual intercourse, mosquito and tick bites, etc. In the workplace, bloodborne pathogens are transmitted through needlesticks, cuts and contact with non-intact skin and mucous membranes.

**Epidemiology of Bloodborne Pathogens of Concern to Healthcare Workers**

**HEPATITIS B Virus (HBV)** infection is a major infectious blood borne occupational hazard to healthcare workers. Death may result from acute and chronic hepatitis. Infected healthcare workers can spread the infection to family members or, rarely, to their patients. Hepatitis B vaccination, engineering and work practice controls, and personal protective equipment can prevent almost all of these occupational HBV infections.

HBV attacks and replicates in liver cells. Infection with HBV in a susceptible person can produce two types of outcomes: self-limited acute hepatitis B and chronic HBV infection. The most frequent response seen in healthy adults is development of self-limited acute hepatitis and the production of an antibody against HBsAg. The production of this antibody coincides with the destruction of liver cells and elimination of the virus from the body.

Unfortunately, the destruction of liver cells in an attempt to rid the body of this infection often leads to clinically apparent acute hepatitis B. About one third of infected individuals have no symptoms when infected with the virus. One third have a relatively mild clinical course of a flu-like illness, which is usually not diagnosed as hepatitis.

The other third have a much more severe clinical course, with jaundice (yellowing of the eyes and skin), dark urine, extreme fatigue, anorexia, nausea, abdominal pain, and, sometimes, joint pain, rash, and fever. These symptoms require hospitalization in about 20% of jaundiced cases, and often cause several weeks to months of lost work even in those cases that do not require hospitalization.
Fulminant hepatitis, which is about 85% fatal with even the most advanced medical care, develops in about 1% to 2% of reported acute hepatitis B cases, and an estimated 1 per 1,000 HBV infections.

The second type of response, development of chronic HBV infection, has more severe long-term consequences. About 6% to 10% of newly infected adults cannot clear the virus from their liver cells and become chronic HBV carriers. These individuals continue to produce HBsAg for many years—usually for life. HBV carriers are at high risk of developing chronic persistent hepatitis, chronic active hepatitis, cirrhosis of the liver, and primary liver cancer.

About 25% (of those who cannot clear the virus from their liver cells) develop chronic active hepatitis. The latter is a progressive, debilitating disease that often leads to cirrhosis of the liver after 10 to 20 years. Approximately 2,000 to 4,000 deaths occur each year in the U.S. from Hepatitis B-related liver disease.

About 7% to 30% of individuals who are occupationally exposed to hepatitis B virus will seroconvert after exposure if they are not vaccinated. The incubation period is 8 to 12 weeks.

**HEPATITIS C Virus (HCV)** is the most common cause of occupationally acquired illness. Hepatitis C is transmitted in the same manner as Hepatitis B. There is currently no vaccine available for Hepatitis C.

Hepatitis C can cause acute or chronic liver disease. It accounts for 70% of chronic hepatitis and 30% of end-stage liver disease in the US. The incubation period of acute HCV infection is 7 to 8 weeks, with 25% of patients developing symptoms including jaundice. Less than 15% of infected patients spontaneously clear HCV after 6 months of infection.

The risk of hepatitis C infection after accidental percutaneous exposure to HCV seropositive blood is variable: The average estimate is about 3%, the reported range is 0% to 10%. Of these seroconversions, 50% become carriers and may progress to serious chronic liver diseases such as cirrhosis or liver cancer. There have been needlestick conversions in healthcare workers to date (primarily nurses and physicians).

Treatment (e.g., interferon, immune serum globulin, or other antiretroviral agents) is not currently recommended for HCV prophylaxis. Treatment of chronic HCV infection includes combination interferon and ribavirin. Treatment results in eradication only in 30% to 40% of cases. Symptoms of hepatitis B and C are:

- Fever
- Rash
- Jaundice
- Dark urine
- Anorexia
- Right upper quadrant pain
- Nausea
<table>
<thead>
<tr>
<th>Bloodborne Pathogen</th>
<th>Incubation Period</th>
<th>Infectivity*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>6 to 12 weeks</td>
<td>0.3% (percutaneous)</td>
</tr>
<tr>
<td>HBV</td>
<td>8 to 12 weeks</td>
<td>7 to 30%</td>
</tr>
<tr>
<td>HCV</td>
<td>6 to 9 weeks</td>
<td>0 to 10%</td>
</tr>
</tbody>
</table>

*Percent of those occupationally exposed expected to seroconvert

**HIV (Human Immunodeficiency Virus)** is the virus that causes AIDS. Because the transmission of HIV is considerably less efficient than HBV, the risk of HIV infection to employees who must handle blood and other potentially infectious materials is less than for HBV infection (i.e., HIV results in fewer seroconversions following exposure incidents, estimated to be less than half of 1%).

HIV is a member of a group of viruses known as human retroviruses. HIV gradually depletes the number of white blood cells that are essential for immune function, rendering the infected individual increasingly susceptible to opportunistic infections and clinical disorders. These conditions can be aggressive, rapidly progressive, difficult to treat, and less responsive to traditional modes of treatment.

Infection with HIV is identified through testing the blood for the presence of HIV antibodies. Although the antibodies do not appear to defend or protect the host against HIV, they serve as markers of viral infection. Most people infected with HIV have detectable antibodies within six months of infection, with the majority generating detectable antibodies between six and 12 weeks after exposure.

The enzyme-linked immunosorbent assay (ELISA or EIA) technique used to detect HIV antibodies is sensitive, economical and easy to perform. However, this test can produce a false positive result. Therefore, current recommendations include repeating the ELISA test if the first test is positive. If the second test is also positive, another test, usually employing the Western blot technique, is used to validate the ELISA results. A positive ELISA test and a positive Western blot result indicate the presence of HIV antibodies and HIV infection.

The symptoms of HIV infection are:

- Fever
- Diarrhea
- Pharyngitis
- Headaches
- Joint or muscle pain
- Tiredness
- Weight loss
- Nausea
Update on AIDS in the Workplace

As of 2010, 57 documented transmissions and 143 possible transmissions had been reported in the United States. No confirmed cases of occupational HIV transmission to health care workers have been reported since 1999. Underreporting of cases to CDC is possible, however, because case reporting is voluntary. Healthcare workers who are exposed to HIV-infected blood at work have a 0.3% risk of becoming infected. In other words, 3 of every 1,000 such injuries, if untreated, will result in infection. By far the most common exposure (84%) was from puncture injuries. A much smaller amount of workers were infected through mucous membrane and/or skin exposures. HIV-infected blood was the source for 86% of all exposures.


Transmission of Bloodborne Pathogens

The most common modes of transmission in the workplace due to contact with blood and other potentially infectious substances are:

- Direct inoculation into a preexisting skin lesion (splash or spray onto non-intact skin)
- Needlesticks
- Sharps injuries from broken glass, scalpels, capillary tubes, slides, etc.
- Mucous membrane contact through sprays, splashes, rubbing into eyes, nose, mouth, etc.

In this facility, instances where bloodborne pathogens may be transmitted in the workplace are identified and engineering and work practice controls have been implemented. Personal protective clothing and equipment is also provided to and worn by applicable employees for identified tasks with reasonably anticipated exposure to blood and body fluids.

Exposure Determination

Personnel Who AreOccupationally Exposed

Complete the Exposure Determination List #1, located on page 5-12 and behind Tab 11: Master Record Forms (Form 8), specifying all the positions (job titles) in the facility for which there is definitely the risk of occupational exposure. List nurses, physicians, medical assistants, lab techs, and any other employee category that is occupationally exposed to blood and other potentially infectious materials in your facility. These employees may be referred to as Class I employees.
Exposure Prone Procedures

Examples of procedures that could expose employees to blood and potentially infectious substances are shown below. Use a check mark to indicate procedures done in your facility.

- Surgery
- Suturing
- Phlebotomy
- Injections
- Emergency intubation
- Wound dressing changes
- Wound irrigation
- Cleaning blood spills
- Lumbar punctures
- Taking rectal temperatures
- Endotracheal suctioning
- Using power saws
- Handling contaminated laundry
- Collecting filled sharps containers
- Cleaning contaminated instruments
- Cleaning/servicing contaminated equipment
- Cleaning blood or OPIM from patient care areas
- Microsurgery
- First Aid
- Other: ___________________________
- Other: ___________________________
- Other: ___________________________
- Assisting during surgery
- Trauma procedures
- Finger/heel sticks
- Starting an IV
- Pelvic exams
- Wound cleaning
- Wound packing
- Heparin locks
- Administering rectal medications
- Sigmoidoscopic procedures
- Shaving patients
- Specimen collection
- Endoscopic procedures
- Collecting biohazardous waste
- Removing joint fluid
- Removing rubber stoppers from blood tubes
- Using laser or electrocautery devices
- CPR (Cardio Pulmonary Resuscitation)
- Other: ___________________________
- Other: ___________________________
- Other: ___________________________
# BLOODBORNE PATHOGENS
## EXPOSURE DETERMINATION LIST #1

*Employees with Definite Risk of Exposure (Class I)*

*Note: A master copy of this form is located behind Tab 11: Master Record Forms (Form 8)*

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Department/Location</th>
<th>Date/Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phlebotomist</td>
<td>Laboratory</td>
<td></td>
</tr>
</tbody>
</table>
The following is a list from OSHA’s *Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens* of healthcare job classifications that may be associated with tasks that have occupational exposure to blood and other potentially infectious materials. The scope of the standard is not limited to employees in these jobs, according to the *Enforcement Procedures*.

Physicians, physician’s assistants, nurses, nurse practitioners, and other healthcare employees in clinics and physicians’ offices; employees of clinical and diagnostic laboratories; housekeepers in healthcare and other facilities; personnel in laundries that service healthcare institutions; tissue bank personnel; employees in blood banks and plasma centers who collect, transport, and test blood; freestanding clinic employees (e.g., hemodialysis clinics, urgent care clinics, health maintenance organization (HMO) clinics, and family planning clinics); employees in clinics in industrial, educational, and correctional facilities (e.g., those who collect blood, and clean and dress wounds); employees designated to provide emergency first aid; dentists, dental hygienists, dental assistants and dental laboratory technicians; staff of institutions for the developmentally disabled; hospice employees; home healthcare workers; staff of nursing homes and long-term care facilities; HIV and HBV research laboratory and production facility workers; employees handling regulated waste; custodial workers required to clean up contaminated sharps or spills of blood or OPIM; medical equipment service and repair personnel; emergency medical technicians, paramedics, and other emergency medical service providers; maintenance workers, such as plumbers, in healthcare facilities and employees of substance abuse clinics.

**Other Personnel Who Could Potentially Be Occupationally Exposed**

Complete *Exposure Determination List #2*, located on the next page and behind Tab 11: *Master Record Forms (Form 9)*, by listing job titles or employee names of those who could possibly be occupationally exposed and the tasks or procedures in which exposure could occur. Employees on this list are often called Class II employees. Keep this list indefinitely and update it whenever new procedures and employees are added.

In any instance where the professional judgment of an employee indicates a higher level of protection, such higher protection is authorized. Typically, an uncooperative or pediatric patient would constitute ample justification for increasing the level of protection.

A lower protection level may be initiated by an employee only in those rare and extraordinary circumstances where use of the required protective equipment would have prevented the delivery of healthcare or would have imposed an increased hazard to the safety of the worker or coworker. A complete report of the incident and situation must be made, in writing, immediately following the procedure. The report will be reviewed and investigated by the OSHA Safety Officer to determine if future changes to policies and procedures are required to prevent reoccurrence.
BLOODBORNE PATHOGENS
EXPOSURE DETERMINATION LIST #2

Employees with Possible Risk of Exposure (Class II)

Note: A master copy of this form is located behind Tab 11: Master Record Forms (Form 9)

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Employee Name</th>
<th>Tasks Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptionist</td>
<td>Mary Smith</td>
<td>Occasionally fills in for clinical personnel to perform fingersticks</td>
</tr>
</tbody>
</table>
**Employees Who Are NotOccupationally Exposed**

Examples include non-patient care staff such as office, billing, and reception.

**Restricted Access Areas**

Employees who are not occupationally exposed are restricted from areas where they could be exposed to blood and potentially hazardous material. Similarly, medical procedures that involve possible exposure to potentially hazardous materials are restricted to certain treatment rooms. Those who are not occupationally exposed, and therefore not listed on either Exposure Determination List #1 or #2, may not enter the following areas:

1. Designated treatment, examination, procedure, or utility rooms in which occupational exposure could occur or where potentially infectious waste is handled. These rooms are labeled on the outside of the entrance door with a sign reading “Authorized Personnel Only,” “Exam Room,” or “Treatment Room.”
2. Surgical suites.
3. Decontamination station(s) where contaminated instruments are rinsed/soaked.
4. Other restricted areas: ______________________________________________
   __________________________________________________________________

Take the following precautions in restricted access areas:

- Do not eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses in restricted areas. Food or drink may not be brought into a restricted area at any time. As this is sometimes a contentious area, especially with beverages, refer to the OSHA interpretation "Requirements for covered beverages at nurses' stations" at www.osha.gov.
- Do not keep food and drink in any refrigerator in a restricted area. Keep blood and other potentially infectious material that requires refrigerated storage in a refrigerator in a restricted access area that is appropriately labeled with the biohazard symbol.
- Transport potentially hazardous material between designated areas only in closed, leakproof containers to prevent contamination of non-restricted spaces.

**Engineering/Work Practice Controls**

Engineering and work practice controls are the primary means of eliminating or minimizing employee exposure to bloodborne pathogens. Engineering controls isolate or remove the hazard from the workplace. Examples of engineering controls are sharps disposal containers and self-sheathing needles.
**Work practice controls** are policies and procedures that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique, no-hands procedures in handling contaminated sharps, and eliminating hand-to-hand instrument passing in the operating room). If engineering and work control practices do not eliminate exposure, personal protective clothing and equipment is required.

**Biohazard Labels**

Biohazard labels are placed on the entrance to any area likely to contain blood and potentially infectious materials. OSHA requires the fluorescent biohazard sign as the appropriate label marking with red as the color code:

![Biohazard Sign]

Examples of areas and articles that require labeling are:

- The door to the laboratory or instrument decontamination area.
- The refrigerator or freezer doors that contain laboratory specimens.
- Containers of infectious waste (red bag waste).
- Sharps containers.
- Storage or transport containers for potentially infectious materials.
- Biohazardous waste storage areas.

Attach labels by string, wire, adhesive or any other method that will not allow them to accidentally fall off. Labels can also be part of the container itself (i.e., red bags or red containers can be substituted for labels). **Note:** Since red bags or containers can substitute for biohazard labels, red bags or containers CANNOT be used for non-biohazardous waste.

**Handwashing**

Sinks that provide an adequate supply of running, potable water, soap, and single-use towels or hot air drying machines are available and readily accessible to employees in all patient care and treatment areas. Faucet aerators are avoided because they are often contaminated with *Pseudomonas, Legionella* species, and other bacteria.

After reporting that healthcare workers’ adherence to handwashing standards has remained unacceptably low, the Centers for Disease Control and Prevention (CDC) handwashing guidelines recommend the following:
- Use an alcohol-based waterless antiseptic agent for routine hand decontamination in all clinical situations when hands are not visibly soiled.
- Wash hands with non-antimicrobial soap, provided by the employer at locations where alcohol-based waterless antiseptic agents are also available, when hands are visibly dirty or contaminated with proteinaceous material.

Posters, educational material and presentations are available at www.cdc.gov or through HCPro, Inc. Studies have shown that the use of alcohol-based hand sanitizers are effective if hands are not visibly soiled.

Areas where sinks or hand cleansers are provided in this practice are listed below. Employees in these areas replace handwashing articles when they are depleted.

<table>
<thead>
<tr>
<th>Handwashing Location(s)</th>
<th>Sink, Soap</th>
<th>Gel Hand Rub/Towelette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam Room #1</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
When to Wash Hands

Immediately wash hands and other skin surfaces that become contaminated with blood and/or other potentially infectious materials.

Wash hands:
- After each vascular access procedure (venipuncture, injections, etc.).
- Whenever gloves or other personal protective devices are removed.
- After handling laboratory specimens and collection containers.
- Before leaving an area where potentially infectious materials exist (lab, exam room, etc.).
- Before eating or drinking and after using the rest room.

How to Wash Hands

Remove rings, bracelets and watches. Use regular soap from a pump container. Do not use bar soaps because they are frequently wet and easily contaminated. Use antimicrobial soaps such as chlorhexidine or povidone-iodine only before performing invasive procedures.

Lather the hands, focusing on the fingers, palms, finger webs, back of the hand and wrists. Rub the palms together, right palm over the left back and left palm over the right back. Rub palm to palm with fingers interlaced, then each hand over the other, circling backward and forward. Finally, wash each thumb and wrist, circling with the opposite hand.

Wash hands with warm to tepid water for at least fifteen seconds, but to cover all areas of your hands you may need to take as long as thirty seconds. Rinse under a stream of warm water. Dry hands using an air dryer or paper towels.

To avoid touching a contaminated faucet handle after washing hands, sinks with foot pedals are ideal. If not available, after rinsing and drying hands with paper towels, use the paper towels to turn off the faucet.

Hand lotions in pump-type containers are provided and are replaced or cleaned at regular intervals.

Artificial Nails

Although not an OSHA regulation, CDC recommends that neither artificial nails nor nails longer than ½-inch are appropriate in a clinical setting. Eighty percent of bacteria on a person’s hand is concentrated around the nail bed and under the nail itself. Hand contamination increases when gloves provide a warm, moist environment for the bacteria. Therefore, the American Operating Room Nurses Association recommends that “artificial nails not be worn by operating room personnel,” and that “concerns have also been raised by others that use of artificial fingernails and nail polish may discourage vigorous handwashing.”
Sharps Safety

On January 18, 2001, OSHA amended the Bloodborne Pathogens Standard to require evaluation and implementation of sharps with built-in safety features. Examples of safety sharps are needleless devices, shielded needles, and blunt needles. If sharps without built-in safety features are being used for patient care procedures, attempt to locate products with built-in safety features to replace these traditional sharps.

Examples of “sharps” are:

- Medication cartridge syringes
- Needles for injection, vascular access, anesthesia, and IV therapy
- Suture needles
- IV catheters
- Lancets
- Scalpels
- Razors
- Trocars
- Surgical wires and pins
- Surgical instruments
- Glass slides
- Capillary tubes
- Pipettes
- Phlebotomy equipment, including butterflies

In no instance should glass capillary tubes be in use. Replace them with plastic capillary tubes.

What to Look for in Safety Devices

A safety sharp device has built-in safety controls to reduce needlestick injuries before, during or after use, and to make needlesticks less likely. In general, well-designed devices should:

- Allow the worker’s hands to remain behind the needle/sharp at all times.
- Be an integral part of the device and not an accessory.
- Work passively (require no activation by the worker). If user activation is necessary, the safety feature should be able to be engaged with a single-handed technique.
- Allow the worker to see whether the safety feature is activated.
- Be in effect before disassembly and remain in effect after disposal.
- Be as simple as possible, requiring little or no training.
Several Sharps Evaluation Forms are located behind Tab 11: Master Record Forms: the Safety Needle/Syringe Evaluation (Form 10), the Phlebotomy Device Evaluation (Form 11), and the Generic Safety Device Evaluation (Form 12), and the Sharps Evaluation Results Form (Form 13).

At least once per year, or as often as is deemed necessary, reevaluate whether or not the safest possible products are in use. Review employee injuries, incidents, and complaints regarding sharps – look for trends. Document the review on your Annual Facility Review Checklist, Form 5. If trends are noted, search for products to reduce risk in that situation. Consider safer sharps newly available. Retain all forms used in the evaluation process and reference them on the Annual OSHA Program Manual Review, Form 3. Use the protocol below to evaluate safety devices under consideration.

**Sharps Evaluation Procedure**

*For OSHA Safety Officers:*

1. Determine which products are to be evaluated and provide at least five or more test samples for each individual evaluating the product. (Each evaluator should have enough samples to disassemble and thoroughly examine each product's design.) Employees chosen for the Sharps Evaluation Procedure should evaluate the kind or category of product that they are currently using in the workplace. Frontline users of the product must participate in the evaluation.
2. Provide visual instructions and demonstrate the proper use of each device. Be sure testers can evaluate products in a simulated patient environment—provide training dummies, if needed (e.g., injection pads).
3. Review the instructions and rating system with each evaluator.
4. Require each evaluator to complete a Sharps Evaluation Form located behind Tab 11: Master Record Forms (Generic Safety Device Evaluation, Form 12).
6. Compile results on the Sharps Evaluation Results Form located behind Tab 11: Master Record Forms (Form 13). Keep this and all evaluation forms in this OSHA manual, regardless of whether the products passed or failed the evaluation.

A device that passes frontline employee evaluations should be put into use as soon as possible. If a particular device fails to meet acceptance criteria, continue searching for alternative safety devices to evaluate. Cost cannot be the reason that a product is not selected.

*For Evaluators:*

1. Re-enact all steps of intended or possible procedures performed with the device.
2. Attempt to misuse the device and circumvent or disable the safety feature.
3. Answer each question on the Sharps Evaluation Form, including any short answer sections at the end. If you do not understand a question, please write comments directly on the forms.
Use of Non-Safe Sharps

Safety needles need not be used for circumstances where bloodborne pathogen transmission is impossible. Examples of these situations are when medications are drawn up from a vial and the needle is changed before the patient is injected. Regardless of whether or not safety needles are in use, needles must still be disposed of in a sharps container.

Even in circumstances when contamination with patient blood and OPIM is possible, some valid reasons for not changing to a safety sharp for a particular purpose are:

- The product is not commercially available (in this case, search for another product).
- The product is not available in the size needed to perform the procedure.
- The product interferes with the patient procedure.

Reusable sharps such as large-bore needles, scalpels and saws pose the same percutaneous exposure hazard as disposable sharps. Before reprocessing, contain them in a manner that eliminates or minimizes the hazard of worker injury. For instance, containers to hold reusable sharps must conform to the same requirements as sharps containers (leakproof, puncture-proof) except they are not required to be permanently closable since these containers will themselves be reused but need to be covered for transport.

In instances where safety sharps are not in use, follow these precautions: Do not bend, break or remove needles from syringes. Recapping needles is strictly forbidden unless there is no feasible alternative or such action is required by a specific medical procedure, such as multiple injections of a single patient or drawing up medications. In these instances, and these instances only, use a safety device (forceps, tongs, etc.) or a one-handed scoop technique to recap or remove the needle.

In this facility recapping or removal (of uncontaminated needles) is allowed as stated below:

<table>
<thead>
<tr>
<th>Instances Where Needles Are Recapped/Removed</th>
<th>Recapping/Removal Device or Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Instances When Safety Sharps Are Not In Use

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Phlebotomy Needles

Regardless of whether a safety device is in use, never remove needles from syringes before placing them in a sharps container, even if the sharps container has a feature built into the lid specifically to remove needles. An example of such a device is phlebotomy equipment. OSHA prohibits the removal of contaminated needles from blood tube holders because these devices involve the use of a double-ended needle. Immediately discard blood tube holders with needles attached into a sharps container after the needle’s safety feature has been activated. Do not use the “clip-off” feature of the sharps container. Rather, discard the entire apparatus (covered needle and plastic barrel) into the sharps container.

Sharps Containers

After use, place disposable syringes, scalpel blades, pipettes, and other sharp items in a puncture-resistant, non-spillable disposal container bearing the biohazard label. All sharps must be discarded in a sharps container, even those with built-in safety mechanisms.

Locate sharps containers preferably within arm’s length of where sharps are commonly used for patient care. Locate wall-mounted sharps containers below employees’ line of sight. An ideal installation height for a fixed sharps container is 52 to 56 inches above the floor for disposal while standing and 38 to 42 inches above the floor for disposal while seated.

If an employee must go to a remote location or assume an awkward position to discard a sharp, it increases the possibility of an accidental needlestick or improper disposal. The NIOSH list of inappropriate sharps container locations includes in the corners of rooms, on the backs of doors, under cabinets, on inside cabinet doors, under sinks, in areas where people might sit or lie beneath the container, near light switches or room environmental controls, or where the container is subject to impact from pedestrian traffic or moving equipment. Also, make sure that the location of the container allows for viewing the fill line under normal light conditions. See Sharps Container Checklist, Form 12A, in Tab 11.
OSHA does not mandate wall-mounting sharps containers, but the agency does prohibit placing sharps containers in an area where accidental spillage can occur, such as on the floor or on the outer edge of a counter. Devices may be purchased to hold sharps containers firmly in place on a countertop. Alternatively, place sharps containers against a wall on a countertop or mount them on a wall. OSHA does mandate that sharps containers be secured from theft or access by unauthorized persons including patients.

It does not violate OSHA regulations for a worker to move a portable sharps container via a medical cart or carry it into a room where a procedure will be performed as long as it is sealed/leakproof during transport. In other words, if staff slipped and fell while transporting biohazardous waste, would it spill or leak out? If you use a sharps system that cannot expose the worker during transport, then it is compliant.

**Sharps Container Maintenance**

Sharps containers are inspected on a daily basis and replaced as often as necessary to prevent overfilling by individuals who work in the areas where sharps are in use. Overfilling is the most common problem with sharps containers. They should be filled only to the designated fill line or, if a fill line is not indicated on a particular container, no more than two-thirds full.

Sharps containers are not opened, emptied, or cleaned manually or in any other manner that would expose employees to the risk of sharps injuries.

If incidents or near misses occur when handling sharps containers, new designs or styles of sharps containers will be investigated and evaluated.

Other reasons to reassess the adequacy of current sharps containers are:

- Containers are too small to accommodate the volume of sharps.
- The ability to see the container’s contents from normal viewing positions and under normal lighting conditions, in order to determine remaining capacity, is limited.
- Procedures for replacing full containers are inadequate.

**Sharps Container Disposal Procedure**

Sharps containers are disposed of using the following procedure:

1. Wearing gloves, close the sharps container lid.
2. Remove the container from its brackets if it is mounted to a wall or a countertop.
3. Lock the lid and verify that there is no chance of leaking. If the container is capable of leaking, place it in a secondary container that is leakproof and labeled with the biohazard symbol.
4. Transport the closed sharps container to the area where hazardous waste awaits pickup by the commercial carrier.
Biohazardous Waste

Biohazardous waste policies and procedures are located behind Tab 8: Decontamination.

Laundry

Fluid-resistant coats or gowns that are used as personal protective apparel must be laundered by the employer and not sent home with the employee for cleaning.

Biohazardous laundry containers are located at the site of garment/linen use. Place reusable garments or linens (whether provided for employees or patients) that are soiled with blood, dried blood, or other potentially infectious materials in a leakproof container clearly marked with the biohazard symbol. Before discarding, examine for sharp objects.

Keep contaminated laundry separate from normally soiled laundry and handle it wearing appropriate PPE, including utility gloves.

Close laundry bags when removed from the hamper frame and take directly to the laundry pickup site or the washing machine in the facility. Then, decontaminate the hamper frame and install a new bag.

Select one of the choices below to reflect the procedures in place at this facility:

- This facility only uses disposable garments and linens.
- This facility uses reusable garments and linens that are not reasonably expected to become contaminated with blood and patient body fluid. Should contamination occur, the item is disposed of in the biohazardous waste container.
- This facility uses a commercial laundry service, _______________________, to handle biohazardous linens/garments.
- This facility launders reusable garments/linens in-house by:
  - Wearing utility gloves and protective gowns while inspecting garments/linens for sharp objects.
  - Handling contaminated laundry as little as possible with minimal agitation.
  - Following the manufacturer’s directions for laundering garments/linens.
  - Other facility-specific laundering instructions: __________________________
    __________________________
    __________________________
Personal Protective Clothing & Equipment

All employees on Exposure Determination List #1 or #2 shall be provided with personal protective equipment (PPE) whenever it is reasonably anticipated that the employee could be exposed to blood or other potentially infectious substances on the job. These employees receive education at time of hire and annually regarding when PPE is necessary; how to properly don, doff, adjust, and wear it; the limitations of PPE; and the proper care, maintenance, useful life, and disposal of PPE. See Bloodborne Pathogens PPE Checklist, Form 9A, in Tab 11.

PPE Strategy

First choice: Eliminate the hazard when possible or practical through the use of engineering or work practice controls.

Second choice: Expose only trained and properly protected workers to specific hazards.

Third choice: Purchase PPE such as hand, face, or body protection for employees when a hazard cannot be eliminated and administrative means are not feasible.

PPE is intended to function as protection against contamination with blood or other potentially infectious material. Surgical scrubs are not used as PPE. The PPE we provide is fluid-resistant in that it does not allow blood or other potentially infectious materials (OPIM) to pass through to the employee’s work clothes; street clothes; and skin, eyes, mouth, or other mucous membranes, under normal conditions of use.
**Locations of PPE**

Examples of PPE provided in this facility are:

<table>
<thead>
<tr>
<th>PPE</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloves</td>
<td></td>
</tr>
<tr>
<td>Gloves (utility)</td>
<td></td>
</tr>
<tr>
<td>Gowns, aprons or other fluid-resistant outerwear</td>
<td></td>
</tr>
<tr>
<td>Face protection (goggles, masks, shields)</td>
<td></td>
</tr>
<tr>
<td>Mouthpieces, other resuscitation devices</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

The OSHA Safety Officer is responsible for seeing that adequate supplies of PPE are maintained. Report low stock levels of PPE to the OSHA Safety Officer. Do not reuse disposable PPE that is contaminated–dispose of it immediately.

Those who wear PPE must examine it before each use and replace, if necessary. Do not use PPE if it is damaged to the point of not maintaining its effectiveness. If PPE is penetrated by blood or OPIM, remove it as soon as possible and dispose of properly. Employees must also remove PPE prior to leaving the work area. Used PPE may be disposed in regular trash unless visibly contaminated with blood or OPIM.

Wearing the required PPE is not optional. Employees may not decide to routinely decline the use of PPE due to inconvenience or personal preferences. However, rare exceptions may exist when, in the employee’s professional judgment, PPE use would:

- Prevent the delivery of health care or public safety services; or
- Pose an increased hazard to the employee’s safety or that of coworker(s)
When employees exercise judgment to decline the use of PPE, our organization investigates and documents the incident to determine whether changes can be made to prevent such occurrences in the future (See Form 9-A1). Employees are encouraged to report all such instances without fear of reprisal.

**Gloves**

Wearing gloves to provide a protective barrier to organism transmission has become standard practice in all clinical settings today. However, extreme variability in the quality of gloves has been widely reported. Leakage and tears have been reported to be as high as 59% in some circumstances with some glove varieties. Gloves should be purchased from a reputable vendor. Plastic film food handling gloves (“cafeteria” or “baggie” gloves) are not considered to be appropriate for use in exposure-related tasks.

Wear gloves in any situation where hands could come into contact with blood or other potentially infectious materials. Also wear gloves when handling or touching contaminated items or surfaces. Wash hands immediately after removing gloves.

**When to Wear Gloves**

- When touching patient mucous membranes or non-intact skin.
- While performing phlebotomy and other vascular access procedures.
- When processing body fluid specimens.
- While performing fingersticks or heelsticks.
- When touching items contaminated with blood or body fluids.
- While treating lacerations, abrasions, and compound fractures.

Workers should also wear gloves when they have hangnails, chapped hands or other abrasions on the hands.

**How to Wear Gloves**

- Wear gloves that fit properly. Place them to fit over your sleeve cuff.
- Before donning gloves, check for tiny punctures, discoloration, and other physical defects. Do not wear defective gloves.
- Remove gloves before handling non-contaminated items such as telephones and when leaving the area.
- Change gloves between patient contacts. Never wash or disinfect nitrile or vinyl gloves for reuse.
- Remove gloves in a way that minimizes contamination to hands and production of aerosols.
  - Grasp the outside of the glove with opposite gloved hand; peel off.
  - Hold removed glove in gloved hand.
  - Slide fingers of ungloved hand under remaining glove at wrist.
  - Peel glove off over first glove.
  - Discard gloves in a waste container.
- Wash hands immediately after removing gloves.

Never assume that wearing gloves is foolproof protection—even if the integrity of the glove is not compromised, the act of taking it off could lead to exposure. Moreover, gloves provide a barrier to contact, but neither vinyl nor nitrile procedure gloves are completely impermeable.

Replace gloves when they are torn, punctured, contaminated, or when their ability to function as a barrier is compromised. Disinfecting agents and petroleum-based hand creams may cause exam glove deterioration. Washing with surfactants could result in wicking (penetration of liquid into the glove via undetected pores). For these reasons, never wash or rewear nitrile and vinyl exam gloves.

While disposable gloves must be replaced as soon as practical when contaminated, obviously some critical procedures (i.e., surgery) cannot be interrupted to change gloves. The key words to evaluate are “practical” and “feasible.”

Utility gloves worn for cleaning up spills, however, may be decontaminated and reused as long as they continue to provide a functional barrier. Replace utility gloves when they show signs of cracking, peeling, tearing, punctures or other signs of deterioration.

**Latex Allergy**

Although not specifically required by OSHA at this time, suitable alternatives for latex-containing products should be found. At a minimum, begin to use powder-free latex gloves, since most of the latex antigens are located in the powder of latex gloves. Also, have epinephrine and resuscitation equipment available. The Centers for Disease Control and Prevention (CDC) suggests that alternative to latex gloves be used for healthcare workers including home health workers and their clients. Many healthcare facilities have advocated a “latex” safe policy and have minimized or eliminated the amount of latex used in products and supplies. The FDA requires that medical equipment and supplies be labeled as to whether the products contain latex or if the products are latex free.

If a healthcare worker is allergic to latex provide him/her with latex-free glove alternatives (e.g., vinyl, nitrile, and neoprene).
### Types of Glove Reactions

<table>
<thead>
<tr>
<th>Type of Reaction</th>
<th>Signs and Symptoms</th>
<th>Causes &amp; Cures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritant Contact Dermatitis: Non-allergic</td>
<td>• Localized reaction only on gloved hands.</td>
<td>• Frequent hand washing with harsh detergents or antiseptics such as iodophors, chlorhexidine, PCMX, triclosan and alcohol-based products.</td>
</tr>
<tr>
<td></td>
<td>• Burning, itchy, dry, cracked skin often with crusty hard bumps, sores and horizontal cracks.</td>
<td>• Gloves powder, which abrades skin.</td>
</tr>
<tr>
<td></td>
<td>• Frequent hand washing with harsh detergents or antiseptics such as iodophors, chlorhexidine, PCMX, triclosan and alcohol-based products.</td>
<td>• Gloves chemicals.</td>
</tr>
<tr>
<td></td>
<td>• Friction from paper towels, glove application and removal.</td>
<td>• Friction from paper towels, glove application and removal.</td>
</tr>
<tr>
<td></td>
<td>• Using too hot water to wash hands.</td>
<td>• Using too hot water to wash hands.</td>
</tr>
<tr>
<td></td>
<td>• Wearing gloves too long keeps skin wet, leaving it more susceptible to injury.</td>
<td>• Wearing gloves too long keeps skin wet, leaving it more susceptible to injury.</td>
</tr>
<tr>
<td>Type I: Latex allergy with immediate hypersensitivity; IgE-mediated; Protein allergy</td>
<td>• Within minutes of exposure, inflamed itchy redness, watery eyes, runny nose and asthma-like symptoms.</td>
<td>• Repeated exposure to latex protein allergens bound to powder and suspended in the air, settled on objects, or transferred by touch.</td>
</tr>
<tr>
<td></td>
<td>• Severe reactions include skin rashes, facial swelling, breathlessness, and rarely, anaphylactic shock.</td>
<td>• Use powder-free, low-protein or synthetic gloves.</td>
</tr>
<tr>
<td>Type IV: Allergic contact dermatitis with delayed hypersensitivity; Cell mediated chemical allergy</td>
<td>• Non-localized reaction can extend up the forearm.</td>
<td>• Repeated exposure to chemicals used in latex manufacturing.</td>
</tr>
<tr>
<td></td>
<td>• Red, swollen area with bumps, sores and horizontal cracks, appearing several hours after glove contact.</td>
<td>• Switch to a synthetic glove.</td>
</tr>
<tr>
<td></td>
<td>• May persist for many days.</td>
<td></td>
</tr>
</tbody>
</table>

**Preventing Allergic Reactions**

Workers with ongoing exposure to latex should take the following steps to protect themselves:

- Use non-latex gloves for activities that are not likely to involve contact with infectious materials.
- Use non-powdered latex gloves.
- Frequently clean work areas contaminated with latex dust (upholstery, carpets, ventilation ducts, and plenums).
- Frequently change the ventilation filters and vacuum bags used in latex-contaminated areas.
Several guidance documents about latex allergies in the healthcare setting are available from the National Institute for Occupational Safety and Health (NIOSH). Call (800) 356-4674 or go to www.cdc.gov/niosh/docs/2012-119/pdfs/2012-119.pdf.

In addition to workers, over time, there is a significant portion of the patient population that may also react to any latex used in your facility. A good risk management strategy would be to minimize the potential for contact with latex of any form, which would include the use of latex balloons for celebrations.

**Face Protection**

Use face protection whenever droplets of blood or other potentially infectious materials may splash or spray during a procedure. Be sure to cover both upper and lower halves of the face to protect eyes, nose, and mouth. Masks with eye protection (goggles or prescription glasses with side shields) are acceptable; chin-length face shields may also be worn.

Use mouthpieces, resuscitation bags, or other ventilator equipment in order to avoid exposure through mouth-to-mouth resuscitation.

The Harm Reduction Coalition (http://harmreduction.org) released a statement in response to new American Heart Association (AHA) guidelines recommending hands-only resuscitation as the appropriate emergency response to sudden cardiac arrest. The new AHA guidelines have received widespread publicity in the media, without mention of the accompanying exceptions for situations involving drug overdose, drowning, or collapse due to breathing problems. Review the first aid procedures outlined in Chapter 3 to determine the protocols that will be used in this facility.

**Body Protection**

The type of clothing worn as personal protection depends on the task and the degree of exposure anticipated. Use common sense when making these decisions. Any barrier material, including woven and non-woven material, should provide an effective means of protection for healthcare workers during use by preventing contamination and contact with bloodborne pathogens contained in blood and body fluids. Reusable fabrics should maintain their protective barrier through multiple laundering and sterilization cycles.

Scrubs are not considered protective garments nor are plain lab coats. If scrubs or lab coats are worn, they must be covered by appropriate gowns or aprons when working under circumstances where splashes or sprays with blood or OPIM is reasonably anticipated. Barrier materials may be flammable, so take care when exposing them to light and heat sources, electrosurgical devices, lasers, and other power equipment.

Select gowns and other body protection that:

- Have adequate barrier performance against liquids and microorganisms
- Are compatible with reprocessing methods, if they are reusable
- Are durable against tears and staining
• Lack toxicity
• Produce little or no lint
• Have a positive cost-benefit ratio

If a garment worn for personal protection becomes contaminated, remove it in such a way as to avoid contact with the outer surface. For example, roll up the garment when pulling toward the head for removal. If it cannot be removed without contaminating the face, the garment should be cut off.

If blood penetrates the inner surface, this constitutes an exposure incident. Check for cuts or scrapes or other non-intact skin when removing the garment. Wear foot and head protection such as surgical caps and shoe covers when gross contamination is possible. An example of this is orthopedic surgery.

Emergency Resuscitation Equipment

Pocket masks or ambu-bags are used for emergency resuscitation in place of mouth-to-mouth resuscitation.

When to Wear PPE

PPE is provided in this facility as follows:

<table>
<thead>
<tr>
<th>Task</th>
<th>Gloves</th>
<th>Fluid-Resistant Gown</th>
<th>Face Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleeding control with spurting blood</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bleeding control with minimal bleeding</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Emergency childbirth</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Blood drawing (venipuncture)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Blood drawing (fingerstick)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Starting an IV</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Endotracheal intubation, esophageal obturator use</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oral/nasal suctioning</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Handling/cleaning contaminated instruments</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Measuring blood pressure</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Taking oral temperatures</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Giving an injection*</td>
<td>Yes/No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Using surgical power tools, lasers, electrocautery devices</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Microsurgery with no anticipated splattering</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Removing rubber stoppers from blood tubes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*According to OSHA’s CPL 02-02-069 11/27/2001 Compliance Directive, gloves are usually not necessary when administering intramuscular or subcutaneous injections as long as bleeding that could result in hand contact with blood or OPIM is not anticipated.
**Hepatitis B Vaccine**

The hepatitis B virus (HBV) vaccine is offered to all employees who perform duties where there is risk of on-the-job exposure to bloodborne pathogens. All employees who can be reasonably expected to come into contact with blood and potentially infectious materials are listed on either **Exposure Determination List #1** or **#2** located on page 5-11 or 5-13.

The HBV vaccine is offered after an employee has undergone the required OSHA Bloodborne Pathogens Standard training and within 10 working days of initial assignment to clinical duties. The hepatitis B vaccine is administered at a reasonable place and time and under the supervision of a licensed physician.

Current public health recommendations require that the vaccine be administered in three doses in 3 months, through an intramuscular injection in the deltoid. Give the second vaccination 1 month after the first dose; the third injection, 6 months after the initial dose. Since the passage of the Needlestick Safety and Prevention Act in 2000, healthcare workers are required to have a titer drawn to demonstrate antibody formation 1 to 2 months after the third injection.

If the time frames for administering the hepatitis B vaccine cannot be exactly met, there is some leeway. According to the CDC ([www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf](http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf)), the second dose of vaccine may be given up to 2 months after the first dose. The third dose may be administered from 4 to 6 months after the first dose. CDC warns not to give all three doses over a time span of less than 4 months.

Administer injection as directed on the package insert. Evaluate the recipient’s gender and weight and select the correct size needle to prevent the dose from inadvertently being administered subcutaneously. Avoid “pinching” the deltoid. Subcutaneous injection is not as effective and therefore should only be used when intramuscular injection is contraindicated. The U.S. Public Health Service does not currently approve the intradermal route.

The HBV vaccine is offered at no cost to employees. Employees may not be required to use their own health insurance to pay for the HBV series. The use of a spouse’s insurance plan is not considered “at no cost” to the employee. OSHA prohibits reimbursing employees for the vaccine contingent upon length of employment. If a person leaves your employ before completion of the three-series vaccine, you are not responsible for providing the remaining vaccines.

The vaccine does not have to be administered in the following instances:

- The employee has already been vaccinated (three vaccine shots or, in the case of a non-responder, six) and has written proof of vaccination.
- Antibody testing indicates the employee is immune.
- The vaccine is contraindicated for medical reasons with written documentation on file.

If one of the three previous exemptions occurs, it must be documented in the employee’s medical record.
Safety of the Hepatitis B Vaccine

The OSHA Safety Officer informs employees about hepatitis B vaccination safety, benefits, efficacy, methods of administration, and availability. Pregnant workers need not be concerned about the HBV vaccine. The vaccine contains noninfectious HBsAg particles and should pose no risk to the fetus. Neither pregnancy nor lactation should be considered a contraindication to hepatitis B vaccination or immune globulin.

The hepatitis B vaccine may cause occasional side effects, which include but are not limited to pain, itching, bruising at the injection site, sweating, weakness, chills, blushing, and tingling, as well as any other warnings or contraindications in the vaccine manufacturer’s information. Also, check the manufacturer’s instructions to determine whether hypersensitivity to yeast is a contraindication to the particular vaccine used in the facility.

Documenting Employee Hepatitis B Vaccinations

The HBV Employee Vaccination Form, which may be used to document employee vaccination, is located behind Tab 11 (Form 16). Employees who decline the HBV vaccine must sign the HBV Vaccination Declination Form, also located behind Tab 11 (Form 15). If an employee initially declines the vaccine but later decides to accept it, the employer must provide the vaccine at that time at no cost to the employee.

Accurate documentation of the employee’s HBV vaccination serves as a useful tool in assisting healthcare professionals when administering post-exposure counseling and treatment to workers following a needlestick or sharps injury. OSHA requires employers to maintain an accurate copy of the HBV vaccination status of each employee covered under the bloodborne pathogens standard.

For employees presenting proof of vaccination, the CDC considers a reliable vaccination history to be a written, dated record of each dose of a complete series. For employees without proof and claiming vaccination by a previous employer, OSHA says to contact the employer and request the vaccination record. As it is a requirement that all employers maintain these records for the duration of employment plus 30 years, a previous employer who administered the hepatitis B vaccination would have copies of those records. If you cannot obtain those records, document your efforts to obtain the previous employers records and make it part of HBV Employee Vaccination Form (Form 16). Following this step, OSHA says you can accept from the employee a written statement regarding vaccination status, including the vaccination dates, or, when this is not possible, the approximate vaccination dates.

You may also use information from an acceptable vaccination record to continue a vaccinations series interrupted by employment instead of restarting it. If it can be documented that a new employee has already received part of the vaccination series, the healthcare professional responsible for the employee’s vaccination must use this information as part of the evaluation, according to OSHA.
If an employee can offer only verbal assurances (no written official documentation) that he or she previously received the HBV vaccination series, offer the entire vaccine series to the employee. Follow with a titer.

If the employee declines to receive the series, require a signed HBV Vaccination Declination Form. In the comments area, have the employee indicate that he or she previously received the HBV vaccination series but does not have documentation.

Note that revaccination causes no harm to those who are already immune or to those who may be HBV carriers. You may wish (but are not required) to prescreen employees who verbally attest to previous hepatitis B vaccination. Details are provided on page 5-33.

In this facility, documentation of employee vaccinations and employee refusals of the hepatitis B vaccine is kept by the OSHA Safety Officer in the confidential employee medical record.

Hepatitis B vaccinations are provided by _______________________________ at (specify location) _______________________________________________________.

**Titering Employees after the Hepatitis B Vaccination**

OSHA follows the most current U.S. Public Health Guidelines for pre-exposure and post-exposure antibody testing. OSHA announced in a November 27, 2001, Compliance Directive (CPL 2-2.69—Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens) that prevaccination serologic screening for prior HBV infection is not indicated for employees to be vaccinated because of occupational risk. However, OSHA made it clear that post-vaccination testing for antibody to hepatitis B surface antigen (anti-HBs) response is indicated, since knowledge of the employee’s antibody response helps to determine appropriate post-exposure prophylaxis.

**How to Determine Employee Immunity**

Once the hepatitis B vaccine has been administered, test the employee for immunity 1 to 2 months after the completion of the 3-dose vaccination series. Use a test for anti-HBs.

Revaccinate employees who do not respond to the primary vaccination series with a second 3-dose vaccine series. Then retest, unless the employee is HBsAg-positive (infected). Employees who do not respond to the initial 3-dose vaccine have a 30%–50% chance of responding to a second 3-dose series. Medically evaluate non-responders. Counsel non-responders who are HBsAg-negative about the need to obtain HBIG prophylaxis for any known or probable parenteral exposure to HBsAg-positive blood.

Revaccination causes no harm to those who are already immune or to those who may be HBV carriers. Although employees may choose to have their blood tested for antibodies to determine the need for the vaccine, employers may not make such
screening a condition of receiving the vaccination, nor are employers required to provide prescreening. Although studies have not identified cases of hepatitis B infection in previously vaccinated persons, it’s unclear how long immunity lasts, so the U.S. Public Health Service may require booster shots in the future.

Testing Employees Vaccinated before the Titer Requirement

Healthcare workers who were vaccinated for hepatitis B in the past but not tested for immunity should NOT be routinely tested. These employees will need to be tested if an exposure occurs. In case of exposure, refer to the table on page 5-40 for management guidelines. In addition to following these guidelines, if prophylaxis (HBIG and a booster dose of vaccine) is indicated, provide post-vaccination testing 3 to 6 months afterward. It’s necessary to perform post-vaccination testing at 3 to 6 months because testing earlier may only measure antibody from the HBIG administered. This post-vaccination test result should be recorded in the confidential employee medical record.

Types of Hepatitis B Tests

**Hepatitis B surface antigen (HBsAg):** A protein on the surface of hepatitis B virus; it can be detected in high levels in serum during acute or chronic hepatitis B virus infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make hepatitis B vaccine.

**Hepatitis B surface antibody (anti-HBs):** The presence of anti-HBs is generally interpreted as indicating recovery and immunity from hepatitis B virus infection. Anti-HBs also develops in a person who has been successfully vaccinated against hepatitis B.

**Total hepatitis B core antibody (anti-HBc):** Appears at the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with hepatitis B virus in an undefined time frame.

**IgM antibody to hepatitis B core antigen (IgM anti-HBc):** Positivity indicates recent infection with hepatitis B virus (less than 6 months). Its presence indicates acute infection.
### Interpreting Hepatitis B Test Results

<table>
<thead>
<tr>
<th>Tests</th>
<th>Results</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>- Susceptible</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>- Immune due to natural infection</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>- Immune due to hepatitis B vaccination</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>positive</td>
<td>- Acutely infected</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>IgM anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>positive</td>
<td>- Chronically infected</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td></td>
</tr>
<tr>
<td>IgM anti-HBc</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>HBsAg</td>
<td>negative</td>
<td>- Interpretation unclear; four possibilities:</td>
</tr>
<tr>
<td>Anti-HBc</td>
<td>positive</td>
<td>• Resolved infection (most common)</td>
</tr>
<tr>
<td>IgM anti-HBc</td>
<td>negative</td>
<td>• False-positive anti-HBc, thus susceptible</td>
</tr>
<tr>
<td>Anti-HBs</td>
<td>negative</td>
<td>• “Low level” chronic infection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resolving acute infection</td>
</tr>
</tbody>
</table>

New employee hepatitis B virus (HBV) vaccination flow chart

Use this flow chart as guide to determine whether to offer a new employee the HBV vaccination in accordance with OSHA’s Bloodborne Pathogens standard.

1. The employee is occupationally exposed to bloodborne pathogens. (Check or complete Forms 8 or 9)*
   - Yes
   - No
     - Offer of HBV vaccination is not necessary.

2. The employee has received bloodborne pathogens training including information about the HBV vaccination addressing efficacy, safety, method of administration, benefits of vaccination, and that it is at no cost to the employee.
   - Yes
   - No
     - Initiate training and document on Form 26. Go to step 3.

3. There is no documentation showing the employee having received the complete vaccination series, immunity status through antibody testing,** or contraindications for medical reasons.
   - Yes
   - No
     - Offer of HBV vaccination is not necessary. Record the documentation on Form 16.

4. The employee is offered the HBV vaccination and accepts.
   - Yes
   - No
     - Record the declination on Form 16 and have the employee complete Form 15.†

Record acceptance on Form 16. Schedule vaccination.†† Complete the dosing, titering, and responder sections as information becomes available.

See next page for notes and resources.
Notes
*Occupational exposure. According to the Bloodborne Pathogens standard, "Occupational exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties" [1910.1030(b)].

**With regard to prescreening for HBV, the employer shall not make prescreening participation a prerequisite for receiving the HBV vaccination [1910.1030(f)(2)(ii)].

In the absence of obtainable HBV vaccination records, the employer may accept a written statement by the employee detailing the date and results of a previous HBV vaccination, according to a February 2007 OSHA standards interpretation letter. In this instance, it would be prudent to also require the employee to sign the HBV vaccination declination form.

In following the recommendations of the USPHS, OSHA does not require serial titering after obtaining the initial titer one to two months after the third dose of the HBV vaccination series. At this time, the USPHS does not recommend HBV booster shots and, therefore, it is not an OSHA requirement. For example, if a newly hired employee produces a HBV vaccination record but no record of a titer, the employer is not required to titer the employee. In the event of a blood or OPIM exposure, treat the exposed employee as vaccinated but non-responder, according to USPHS guidelines.

† The employer must make the HBV vaccination available to an employee who initially declines the HBV vaccination but accepts it at a later date [1910.1030(f)(2)(iii)].

†† After completing training, the employer must provide/schedule the vaccination within 10 working days of the initial assignment and at a reasonable time and location [1910.1030(f)(1)(ii)(A) and (f)(1)(ii)(B)]. This means during paid time.

Resources
For more on HBV vaccination and OSHA compliance, see:

- Ask the expert: Hepatitis B vaccination and titer
- Ask the expert: New employee with hepatitis B vaccination, but no titer
- Ask the expert: Recommendation for hepatitis B booster
- Ask the expert: Timing for hepatitis B vaccination and titer
- OSHA expects extra steps when documenting hepatitis B vaccinations

Post-exposure Evaluation & Follow-up

In spite of employees’ best efforts to the contrary, accidents do happen. All workers must know how to respond quickly and correctly to accidental injuries and that post-exposure evaluation and follow-up are offered at no cost to employees.

What Is an Exposure?

For OSHA purposes, a reportable exposure event is:

- A cut to the skin or a mucous membrane from an article contaminated with blood or OPIM (e.g., needlestick).
- A splash or spray of blood or OPIM to non-intact skin or to a mucous membrane.

Note that splashes or sprays to intact skin are not considered exposure events. Your state’s OSHA definitions of reportable exposures may include bites and CPR. Review your state’s regulations to see what other exposures are reportable.

What to Do after an Occupational Exposure

OSHA requires that medical facilities follow the most recent Public Health post-exposure guidelines current at the time of the employee exposure. The following information is taken from the most current CDC guidelines (MMWR, Recommendations and Reports for HBV* and HCV*: June 29, 2001 / 50 (RR11); 1-67; for HIV*: Updated (2013) U.S. Public Health Service “Guidelines for the management of occupational exposures to human immunodeficiency virus and recommendations for post-exposure prophylaxis.”

Whenever new guidelines are released, this OSHA Program Manual is updated via HCPro’s Medical Environment Update.

* Note: the 2013 updated CDC guidelines apply only to HIV exposures. Recommendations regarding HBV and HCV are unchanged from those published in 2001.

STEP 1. Provide immediate care to the employee’s exposure site:

- Wash needlesticks and cuts with soap and water. There is no evidence that using antiseptics or expressing fluid by squeezing the wound further reduces the risk of transmission; however, the use of antiseptics is not contraindicated.
- Flush splashes to the nose, mouth, or skin with water. Irrigate eyes with clean water, saline, or sterile irrigants. (See Tab 8: Decontamination for more information about eyewashes).

STEP 2. Report incidents as soon as possible to the OSHA Safety Officer. HIV post-exposure prophylaxis (PEP) is best started within 2 hours of the HIV exposure. Therefore, time is of the essence. Give the OSHA Safety Officer information needed to complete the Incident Report/Sharps Injury (located on page 5-44 and behind
Tab 11). Failure to report an exposure incident is a serious offense. The fact that an
exposure incident is reported will not reflect negatively on an employee. If subsequent
investigation reveals violation of personal protective equipment use or other procedures
required by this Exposure Control Plan, disciplinary action is limited to those violations.

Note: OSHA requires Steps 3A and 3B to be performed as soon as feasible. Do not wait
for the completion of Step 3A before initiating Step 3B. These are concurrent actions.

STEP 3A. Obtain consent* from the source patient to draw blood to test for HBV, HCV,
and HIV infection:

- Test known source for HBsAg, anti-HCV, and HIV antibody (order a STAT rapid
test for HIV so PEP can be started right away if needed). If the source person is
NOT infected, further follow-up of the exposed worker is NOT necessary.
- If a source patient refuses testing and his/her infection status is unknown,
  consider medical diagnoses, clinical symptoms, and history of risky behaviors.
- If the source person is HIV seronegative and has no clinical evidence of AIDS or
  symptoms of HIV infection, no further testing of the exposed employee for HIV
  infection is indicated. The likelihood of the source person being in the “window
  period” of HIV infection is extremely small.
- For unknown sources, assess risk of exposure to HBV, HCV, or HIV infection by
  considering the likelihood of infection among patients in your setting.
- Do not test discarded needles or syringes for virus contamination.
- If a source patient cannot be tested or the source patient is unknown, such as in the
  case of a needlestick injury from a sharp in a sharps container, the exposed employee
  should be treated according to the CDC’s guidance for unknown, or unknown
  status, sources. Additional expert consultation may be warranted (see page 5-41).

*In most states, the source patient or anyone authorized legally to give consent on his/her behalf must be asked to
donate blood for testing. The source patient’s response [signed Source Patient Testing Consent Form located
behind Tab 11: Master Record Forms (Form 18-A) or verbal denial] must be documented and retained. For
jurisdictions that do not require consent of the source patient, “available” blood may be used for testing, if a sample is
available that had previously been drawn from the source patient.

STEP 3B. Obtain consent from the exposed employee to take a blood sample to be
tested as soon as possible after the exposure incident for HCV, HBV, and HIV. The
exposed employee need not make an immediate decision about having blood tested;
90 days are given after the baseline blood sample is collected to decide whether to test.
If the employee decides against immediate testing, the OSHA Safety Officer ensures
that the blood sample is preserved for 90 days.

STEP 4. Refer the exposed employee to a healthcare professional** who provides
counseling and, if required, appropriate PEP. Provide the exposed employee with the
following documents to take to a healthcare provider:

1. A copy of the Bloodborne Pathogens Standard (located behind Tab 12).
2. A copy of the Incident Report/Sharps Injury (located on page 5-43 and behind
   Tab 11).
3. Results of the source individual’s testing (if the source individual was tested).
4. All medical records relevant to the appropriate treatment of the employee (HBV immune status, history of hepatitis B vaccination and vaccine response).

**OSHA defines a “licensed healthcare professional” as a person whose legally permitted scope of practice allows he or she to independently perform the activities required for hepatitis B vaccination and post-exposure evaluation and follow-up. In some states, the State Board of Nursing allows licensed healthcare professionals other than physicians to carry out the procedures and evaluations required by OSHA for post-exposure follow-up.**

For HCV Exposures

- Immune globulin (IG) and antiviral agents are not recommended for PEP after exposure to HCV-positive blood. When HCV infection is identified early, refer the infected worker for medical management to a specialist knowledgeable in this area.
- Perform baseline and follow-up testing for anti-HCV and alanine aminotransferase (ALT) at 4 to 6 months after exposure or per the direction of your state/local health department.
- Perform HCV RNA at 4 to 6 weeks if earlier diagnosis of HCV infection is desired.
- Confirm repeatedly reactive anti-HCV enzyme immunoassays (EIAs) with supplemental tests.
- If the source patient is unknown or cannot be tested, perform baseline testing for anti-HCV and ALT, then repeat at 4 to 6 months after exposure and again at 12 months after exposure.
- No recommendations exist regarding restricting the professional activities of healthcare workers with HCV infection.

### Table 1: Types of Hepatitis C Tests

<table>
<thead>
<tr>
<th>Assay</th>
<th>Characteristics &amp; Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-HCV (EIA)</td>
<td>- Indicates infection with HCV</td>
</tr>
<tr>
<td></td>
<td>- Does not indicate immunity</td>
</tr>
<tr>
<td>Anti-HCV (RIBA, Immunoblot)</td>
<td>- Used to confirm anti-HCV EIA screen (above)</td>
</tr>
<tr>
<td>HCV RNA, qualitative</td>
<td>- Correlates with active virus; used to detect HCV in cases where anti-HCV is negative</td>
</tr>
<tr>
<td>HCV RNA quantitative</td>
<td>- Correlates with active virus; used to monitor viral load during treatment</td>
</tr>
</tbody>
</table>

For HBV Exposures

- Refer to Table 2: Recommended Post Exposure Prophylaxis for Exposure to Hepatitis B Virus, on next page.
### Table 2: Recommended Post-exposure Prophylaxis for Exposure to Hepatitis B Virus

<table>
<thead>
<tr>
<th>Vaccination and antibody response status of exposed workers</th>
<th>Treatment when source is found to be:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HBsAg(^2) positive</td>
<td>HBsAg(^2) negative</td>
</tr>
<tr>
<td>Unvaccinated</td>
<td>HBIG(^3) x 1 and initiate HB vaccine series</td>
<td>Initiate HBV vaccine series</td>
</tr>
<tr>
<td>Previously vaccinated known responder(^4)</td>
<td>No treatment</td>
<td>No treatment</td>
</tr>
<tr>
<td>Previously vaccinated known non-responder(^5)</td>
<td>HBIG x 1 and initiate revaccination or HBIG x 2(^6)</td>
<td>No treatment</td>
</tr>
</tbody>
</table>
| Antibody response unknown                                     | Test exposed person for anti-HBs\(^7\)  
  1. If adequate,\(^4\) no treatment is necessary  
  2. If inadequate\(^5\) administer HBIG x 1 and vaccine booster | No treatment | Test exposed person for anti-HBs\(^7\)  
  1. If adequate,\(^4\) no treatment is necessary  
  2. If inadequate,\(^5\) administer vaccine recheck titer in 1 to 2 months |

1. Persons who have previously been infected with HBV are immune to reinfection and do not require post-exposure prophylaxis.
2. Hepatitis B surface antigen.
3. Hepatitis B immune globulin; dose is 0.06 mL/kg, Intramuscularly.
4. A responder is a person with adequate levels of serum antibody to HBsAg (i.e., anti-HBs ≥ 10 mIU/mL).
5. A non-responder is a person with inadequate response to vaccination (i.e., serum anti-HBs, < 10 mIU/mL).
6. The option of giving one dose of HBIG and reinitiating the vaccine series is preferred for non-responders who have not completed a second 3-dose vaccine series. For persons who previously completed a second vaccine series but failed to respond, two doses of HBIG are preferred.
7. Antibody to HBsAg.

---

**For HIV Exposures**

- Refer to the updated CDC Guidelines for the most current recommended HIV Post-exposure Prophylaxis for Percutaneous Injuries, Mucous Membrane Exposures and Nonintact Skin Exposure. Your state/local health department or testing laboratory would also have the most current guidelines for healthcare worker exposures.
- Perform HIV-antibody testing for at least 6 months post-exposure (e.g., at baseline, 6 weeks, 3 months, and 6 months).
- Perform HIV antibody testing if illness compatible with an acute retroviral syndrome occurs.
- Extended HIV follow-up (e.g., for 12 months) is recommended for employees who become infected with HCV following exposure to a source co-infected with HIV and HCV.
- Additional expert consultation may be warranted (see page 5-41).
When to Get Expert* Consultation for HIV Post-exposure Prophylaxis

- Delayed exposure report (i.e., later than 24 to 36 hours):
  - The interval after which there is no benefit from post-exposure prophylaxis (PEP) is undefined.

- Unknown source (e.g., needle in sharps disposal container or laundry):
  - Decide use of PEP on a case-by-case basis.
  - Consider the severity of and the epidemiologic likelihood of HIV exposure.
  - Do not test needles or other sharp instruments for HIV.

- Known or suspected pregnancy in the exposed person:
  - Does not preclude the use of optimal PEP regimens. Do not use Viracept in PEP regimens for women with known or suspected pregnancy
  - Do not deny PEP solely on the basis of pregnancy.

- Resistance of the source virus to antiretroviral agents:
  - Influence of drug resistance on transmission risk is unknown.
  - Selection of drugs to which the source person’s virus is unlikely to be resistant is recommended, if the source person’s virus is known or suspected to be resistant to >1 of the drugs considered for the PEP regimen.
  - Resistance testing of the source person’s virus at the time of the exposure is not recommended.

- Toxicity of the initial PEP regimen:
  - Adverse symptoms, such as nausea and diarrhea are common with PEP.
  - Symptoms often can be managed without changing the PEP regimen by prescribing antimotility and/or antiemetic agents.
  - Modification of dose intervals (i.e., administering a lower dose of drug more frequently throughout the day, as recommended by the manufacturer), in other situations, might help alleviate symptoms.

**Local experts and/or the National Clinicians’ Post-exposure Prophylaxis Hotline at 888-448-4911.

Confidentiality of Post-exposure Procedures

OSHA does not prohibit offering employee postexposure evaluation and follow-up on site, according to a November 10, 2009 interpretation letter, but it acknowledges that confidentiality is easier to accomplish by using an outside facility such as the employee health department of a local hospital. Search for the letter by date at www.osha.gov. The boundary between employer and healthcare professional may be blurred in a medical setting in which the physician is both the employer and the evaluating health-care professional. In such cases during an inspection the OSHA Inspector/Compliance Safety Officer will ensure that requirements for consent and confidentiality have been followed.

Employee evaluation and post-exposure follow-up services are provided at no cost to employees at a reasonable time and place, and under the supervision of a licensed physician or other appropriately trained and licensed healthcare professional. The healthcare professional prescribes treatment (based on test results, according to current U.S. Public Health Service recommendations) and evaluates any reported illness to determine if the symptoms are related to HIV, HBV, or HCV development.
In this facility, post-exposure lab testing and medical evaluations are provided by:

__________________________________________________________________.

**Employee Counseling/Precautions**

Counsel the exposed healthcare worker to follow the CDC recommendations regarding preventing bloodborne pathogens transmission:

- Do not donate blood or plasma.
- Inform sex partners of potential exposure to infection.
- Avoid pregnancy during the follow-up period.
- Clean and disinfect surfaces on which blood or body fluids have spilled.
- Do not share razors, toothbrushes, etc.

Encourage any exposed healthcare worker undergoing HIV post-exposure prophylaxis (HIV PEP) to complete a full 4- to 6-week regimen. A substantial number of healthcare workers put themselves at risk for seroconversion by discontinuing HIV PEP early due to side effects. The most common symptoms are nausea (26.5%) and malaise/fatigue (22.8%). To promote a full course of PEP, inform healthcare workers about the following options their healthcare provider can prescribe to manage side effects and allow completion of the full regimen:

- Antimotility and antiemetic agents to target specific symptoms.
- Modifying the dose interval (i.e., administering a lower dose more frequently, if recommended by the manufacturer).

Provide psychological counseling for any exposed healthcare worker who becomes anxious or requests this component of exposure follow-up care.

### Occupational Exposure Management Resources

**PEP hotline 24/7** ................................................ 888-448-4911  •  www.nccc.uscsf.edu

For clinicians caring for health care workers who are exposed to blood-borne pathogens.

**HIV Antiretroviral Pregnancy Registry** .......... 800-258-4263  •  www.apregistry.com

Fax: (800) 800-1052  •  Research Park, 1011 Ashes Drive, Wilmington, NC 28405

E-mail: registry@nc.crl.com

**FDA** ................................................................. 800-332-1088  •  www.fda.gov/medwatch

Report unusual or severe toxicity to antiretroviral agents

MedWatch HF-2, FDA, 5600 Fisher’s Lane, Rockville, MD 20857

**CDC** ................................................................. 800-893-0485

Report HIV infections in healthcare workers and failures of PEP

**HIV/AIDS Treatment Information Service** ............................................. http://aidsinfo.nih.gov
INCIDENT REPORT/SHARPS INJURY
(1 of 2* Pages)

Complete this report for incidents and accidents. Document employee injuries that require more than simple first aid.

Situation/procedure: ____________________________________________________________
Date of incident: ___________________ Time of incident: ___________________
Exact location of incident: _______________________________________________________
Type of incident: (Check ALL that apply!)

- Near miss.
- Patient safety concern.
- Non-employee injury. Body part involved: _______________________
- Employee injury. Body part involved: _______________________
- Sharps injury. (Fill out Exposure and Sharps Injury on p. 2)
- Splash/spray to mucous membrane or nonintact skin. (Fill out Exposure on p. 2)
- Chemical injury: ___________________________ (Attach SDS)
  (Name of substance)
- Other. Specify: ____________________________________________

Employee name: ___________________ Employee title: ___________________

Circumstances of the incident: (What happened? How did it happen? Who was involved? What caused the incident?)

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________.

Engineering controls/work practices/protective equipment/safety devices in use at the time of the incident: ___________________
Witness/person familiar with incident: ____________________________________________
Resolution:

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________.

(Use reverse if necessary)

OSHA safety officer signature: ___________________ Date reviewed: ___________
Supervisor signature: ___________________ Date reviewed: ___________

*2nd page used only when indicated above.
EXPOSURE LOG

Route of exposure:
- Sharps injury
- Splash to* ________________.
- Spray to* ________________.

*Designate abraded skin, eye, mouth, etc.

Source patient name/description:
- Please refer to patient info below:

  Patient Name: ________________
  Age: _____ Sex: ________
  (or use patient sticker)

- Source individual's name is not available.
  Explain: __________________________ __________________________

Was source individual tested** for:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV test date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HBV test date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>HCV test date</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Obtain proper written consent, if required in your state, prior to testing. If source patient is already known to be positive for HIV, HBV, or HCV, new testing is not required.

Was source individual tested** for:

- HIV
- Hepatitis B
- Hepatitis C
- HCV

Date/time ________________ employee sent to ________________ for evaluation and follow up. If declined, attach Post-Exposure Medical Evaluation Declination (Form 18).

Complete and attach:
- Post-exposure Checklist (Form 17)
- File original Form 14 with all supporting attachments in confidential employee medical record.

SHARPS INJURY

Type/brand name of device involved in the exposure: ________________.

Did the device in use have engineered sharps injury protection?
- Yes
- No

If no, does the injured employee believe a protective mechanism could have prevented the injury?
- Yes
- No

Was the device used properly?
- Yes
- No

Was the protective mechanism activated?
- Yes
- No

Did the exposure occur:
- Before activation?
- During activation?
- After activation?

When/how did the exposure incident occur?
- During use of sharp
- Between steps of a multi-step procedure
- After use and before disposal of sharp
- While putting sharp into disposal container
- Sharp left in inappropriate place
- Overfilled sharps container
- Disassembling
- Other ________________

Does the exposed employee believe other controls (procedural, administrative, etc.) could have prevented the injury?
- Yes
- No

Comments:
______________________________
______________________________

Transfer the information in this box to the Sharps Injury Log, Form 14.

Maintain this record for the duration of employment plus 30 years.
## POST-EXPOSURE CHECKLIST

*Note: A master copy of this form is located behind Tab 11: Master Record Forms (Form 17).*

<table>
<thead>
<tr>
<th>Date</th>
<th>Post-exposure Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Incident Report/Sharps Injury Log completed.</td>
</tr>
<tr>
<td></td>
<td>Obtain consent from source patient and test for HBV, HCV, and HIV.*</td>
</tr>
<tr>
<td></td>
<td>Obtain consent from exposed employee and test for HBV, HCV and HIV.* +</td>
</tr>
<tr>
<td></td>
<td>Exposed employee offered the HBV vaccination again, if initially declined.</td>
</tr>
<tr>
<td></td>
<td>Employee referred to healthcare provider and given:</td>
</tr>
<tr>
<td></td>
<td>- A copy of the Bloodborne Pathogens Standard.</td>
</tr>
<tr>
<td></td>
<td>- Results of the source individual’s testing (if applicable).</td>
</tr>
<tr>
<td></td>
<td>- Exposed employee’s medical record relevant to this incident (SSN, HBV status, test results).</td>
</tr>
<tr>
<td></td>
<td>Healthcare provider given the source individual’s test results.</td>
</tr>
<tr>
<td></td>
<td>Written opinion from healthcare provider received within 15 days of the evaluation must include:</td>
</tr>
<tr>
<td></td>
<td>1. Whether HBV vaccination was recommended and whether or not the employee received the first shot in the series.</td>
</tr>
<tr>
<td></td>
<td>2. Verification that the employee has been informed of the results of the evaluation and told of any medical conditions resulting from exposure requiring further evaluation and treatment.</td>
</tr>
<tr>
<td></td>
<td>All added findings or diagnoses must be kept confidential and not included in the written opinion, which goes to the employer. Any further information about the results of the employee’s evaluation and medical conditions must be conveyed to the employee only and not included in the written opinion that goes to the employer.</td>
</tr>
<tr>
<td></td>
<td>Employee medical record (including written opinion above) is stored in a confidential** location and is not made available to employee’s employer.</td>
</tr>
<tr>
<td></td>
<td>Circumstances of the exposure incident are reviewed to determine whether modifications are needed to bloodborne pathogens policies and procedures.</td>
</tr>
</tbody>
</table>

* Obtain as soon as feasible. These are not sequential but concurrent steps.

+ Can be declined via declination form. If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

** The employee must give specific written consent for anyone to see his/her record. Maintain this confidential medical record for the length of employment plus 30 years.
POST-EXPOSURE MEDICAL EVALUATION DECLINATION FORM

Note: A master copy of this form is located behind Tab 11: Master Record Forms (Form 18).

Date of Exposure Incident: ___________
Employee Name: __________________

Employee Title: ____________________
Employee SSN: _____ - _____ - _____

In your own words, describe the exposure incident and the circumstances under which it occurred:
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

I have been trained on OSHA Safety Policies and Procedures. I understand that I could have contracted an infectious disease such as HIV, hepatitis B or hepatitis C during the exposure incident described above. I also understand the consequences of contracting these diseases. I have been offered, free of charge, testing to determine whether or not I have contracted an infectious disease. I have also been offered a medical evaluation by a healthcare professional for counseling and treatment. Despite this, I freely decline this post-exposure evaluation and follow-up care.

Employee Signature: ___________________________  Date: ___________

Employee Name (Print): ___________________________
Injection Safety

Information for Providers

Recent news reports and investigations by the CDC and state and local health departments have identified improper use of syringes, needles, and medication vials that have compromised patient safety during routine healthcare procedures. Infection outbreaks from these suspect procedures have mostly occurred in non-hospital settings such as medical and dental practices, clinics, and surgery centers.

Compliance with the exposure control plan of your bloodborne pathogen policy will protect your employees from patient-to-provider exposures. However, the investigations have found that the potential for patient-to-patient exposures exists even in facilities following the bloodborne pathogen standard.

Poor injection safety practices have resulted in one or more of the following:

- Transmission of bloodborne viruses to patients, including hepatitis B, hepatitis C, and HIV.
- Notification of thousands of patients of possible exposure to bloodborne pathogens and recommendation that they receive testing.
- Referral of providers to licensing boards for disciplinary action.
- Malpractice suits filed by patients.
- Indictment and conviction for second degree murder and 27 felony counts of a physician that did not follow safe injection precautions. (October 2013, Las Vegas, based on a hepatitis C outbreak in 2008 where a patient died from complications of hep C. The nurses practicing with this physician also received convictions on 27 felony counts with a life sentence in prison for not reporting unsafe practices.)

Such events serve as a reminder to employers of the serious consequences of failing to maintain strict adherence to safe injection practices during patient care and to have in place a system for reviewing infection control practices and educating staff members.

In particular, healthcare providers should never:

- Administer medications from the same syringe to more than one patient, even if the needle is changed.
- Enter a vial with a syringe or needle that has been used for a patient if the same medication vial might be used for another patient.

When these simple never events are not avoided, hepatitis C, hepatitis B, and HIV can be spread from patient to patient. Better protection is offered when medication vials can be dedicated to a single patient. It is important that:

- Medications packaged as single-use vials never be used for more than one patient.
- Medications packaged as multiuse vials be assigned to a single patient whenever possible.
- Bags or bottles of intravenous solution not be used as a common source of supply for more than one patient.
- Absolute adherence to proper infection control practices be maintained during the preparation and administration of injected medications.

**Unsafe Injection Practices and Disease Transmission**

Reuse of syringes combined with the use of single-dose vials for multiple patients undergoing anesthesia can transmit infectious diseases. The syringe does not have to be used on multiple patients for this to occur.

1. A clean syringe and needle are used to draw the sedative from a new vial.
2. It is then administered to a patient who has been previously infected with hepatitis C virus (HCV). Backflow into the syringe contaminates the syringe with HCV.
3. The needle is replaced, but the syringe is reused to draw additional sedative from the same vial for the same patient, contaminating the vial with HCV.
4. A clean needle and syringe are used for a second patient, but the contaminated vial is reused. Subsequent patients are now at risk for infection.

**Frequently Asked Questions:**

**Injection Safety FAQs for Providers**

**Overview**

**Q: What is injection safety?**

A: Injection safety, or safe injection practices, is a set of measures taken to perform injections in an optimally safe manner for patients, healthcare personnel, and others. A safe injection does not harm the recipient, does not expose the provider to any avoidable risks, and does not result in waste that is dangerous for the community. Injection safety includes practices intended to prevent transmission of infectious diseases between one patient and another, or between a patient and healthcare provider, and also to prevent accidents such as needlestick injuries.

**Q: What is aseptic technique?**

A: In this context, aseptic technique refers to a method of handling medications and injection equipment to prevent microbial contamination. Aseptic technique applies to the handling, preparation, and storage of medications. It also applies to the handling of all supplies used for injections and infusions, including syringes, needles, and intravenous (IV) tubing.
Q: What are some of the incorrect practices that have resulted in transmission of pathogens?

A: Practices that have resulted in transmission of hepatitis C virus (HCV) and/or hepatitis B virus (HBV) include the following:

- Using the same syringe to administer medication to more than one patient, even if the needle was changed.
- Using the same medication vial for more than one patient, and accessing the vial with a syringe that has already been used to administer medication to a patient.
- Using a common bag of saline or other IV fluid for more than one patient, and accessing the bag with a syringe that has already been used to flush a patient’s catheter.

Q: For what types of procedures have these incorrect practices been identified?

A: Unsafe injection practices that put patients at risk for HCV, HBV, and other infections have been observed during various types of procedures, including the following:

- Administration of anesthetics for outpatient surgical, diagnostic and pain management procedures.
- Administration of other IV medications for chemotherapy, cosmetic procedures, and alternative medicine therapies.
- Use of saline to flush IV lines and catheters.
- Administration of intramuscular (IM) vaccines.

The involved medications were in single-use vials, multi-dose vials, and bags. What they had in common were that the vials or bags were used for more than one patient and were entered with a syringe that had already been used for a patient; or the syringe itself was used for more than one patient.

Q: Can some of these incorrect practices also result in the transmission of bacterial infections?

A: Yes. These incorrect practices put patients at risk for bacterial, fungal, and viral infections.

Q: Do medication vials contain a preservative to prevent contamination?

A: Most multi-dose medication vials that are intended for several medication administrations contain a preservative to prevent bacterial growth. Single-use vials do not contain a preservative. The preservative has no effect on viruses. Safe injection practices and appropriate aseptic technique are necessary to prevent bacterial and viral contamination of medication vials that can result in patient infections.
Injection Procedures

Q: How should I draw up medications?

A: Parenteral medications should be accessed in an aseptic manner. This includes using a new sterile syringe and needle to draw up medications while preventing contact between the injection materials and the non-sterile environment. Proper hand hygiene should be performed before handling medications, and if a medication vial has already been opened, disinfect the rubber septum with alcohol prior to piercing it.

Q: Where should I draw up medications?

A: Medications should be drawn up in a designated “clean” medication area that is not adjacent to areas where potentially contaminated items are placed. Examples of contaminated items that should not be placed in or near the medication preparation area include: used equipment such as syringes, needles, IV tubing, blood collection tubes, needle holders (e.g., Vacutainer® holder), or other soiled equipment or materials that have been used in a procedure. In general, any item that could have come in contact with blood or body fluids should not be in the medication preparation area.

Q: What does single-use mean?

A: A single-use parenteral medication should be administered to one patient only. Single-use IV solutions should be administered to one patient only, during one treatment. Syringes and needles should be used for a single patient only for a single procedure.

Q: Is it acceptable to combine leftover medication from single-use vials?

A: NO. Do not administer medications from single-use vials or ampules to multiple patients or combine leftover contents for later use.

Q: Is it acceptable to use single-use medication vials or prefilled syringes for more than one patient?

A: NO. Medication vials that are labeled for single-use and prefilled medication syringes should never be used for more than one patient.

Q: Is it acceptable to leave a needle or other device inserted in the septum of a medication vial for multiple medication draws?

A: NO. A needle or other device should never be left inserted into a medication vial septum for multiple uses. This provides a direct route for microorganisms to enter the vial and contaminate the fluid.
Q: What is the best way to use multi-dose medication vials?

A: The safest thing to do is restrict each medication vial to a single patient, even if it’s a multi-dose vial. Proper aseptic technique should always be followed. If multi-dose medication vials must be used for more than one patient, the vial should only be accessed with a new sterile syringe and needle. These medications should also not be prepared in the immediate patient care area.

Q: When should a multi-dose medication vial be discarded?

A: Medication vials should be discarded upon expiration or any time there are concerns regarding the sterility of the medication.

Q: Is it acceptable to use the same syringe to give IM or subcutaneous (SC) injections to more than one patient if I change the needle between patients?

A: NO. Once they are used, the syringe and needle are both contaminated and must be discarded. Use a new sterile syringe and needle for each patient.

Q: Is it acceptable to use the same syringe to give an IM or IV injection to more than one patient if I change the needle between patients and I don’t draw back before injecting?

A: NO. A small amount of blood can flow into the needle and syringe even when only positive pressure is applied outward. The syringe and needle are both contaminated and must be discarded.

Q: If I used a syringe only to infuse medications into an IV tubing port that is several feet away from the patient’s IV catheter site, is it okay to use the same syringe for another patient?

A: NO. Everything from the medication bag to the patient’s catheter is a single interconnected unit. All of the components are directly or indirectly exposed to the patient’s blood and cannot be used for another patient. A syringe that intersects through ports in the IV tubing or bags also becomes contaminated and cannot be used for another patient. Separation from the patient’s IV by distance, gravity, and/or positive infusion pressure does not ensure that small amounts of blood are not present in these items.

Q: Are these recommendations new?

A: NO. These recommendations are part of established guidance. It is a well-established practice to never use the same syringe or needle for more than one patient, nor to enter a medication vial with a syringe or needle used for one patient if the same vial might be used for another patient.
Q: Why can’t I just visually inspect syringes to determine whether they are contaminated or can be used again?

A: Pathogens including HCV, HBV, and human immunodeficiency virus (HIV) can be present in sufficient quantities to produce infection even in the absence of visible blood. Similarly, bacteria and other microbes can be present without clouding or other visible evidence of contamination. Just because you don’t see blood or other material in a used syringe or IV tubing does not mean the item is free from potentially infectious agents. All used injection supplies and materials are potentially contaminated and should be discarded.

Q: How can healthcare providers ensure that injections are performed correctly?

A: To help ensure that staff understand and adhere to safe injection practices, we recommend the following measures:

- Designate someone to provide ongoing oversight for infection control issues.
- Develop written infection control/prevention policies.
- Provide training.
- Conduct quality assurance assessments.

Resources

A “Never” Event: Unsafe Injection Practices, CDC
www.cdc.gov/ncidod/dhqp/COCA_Unsafe_Injection_Practices.html

Injection Safety Information for Providers, CDC
www.cdc.gov/ncidod/dhqp/ps_providerInfo.html

The One and Only Campaign
www.oneandonlycampaign.org

The World Health Organization (WHO) Injection Safety site
www.who.int/injection_safety/en
INFECTION-CONTROL AND SAFE INJECTION PRACTICES TO PREVENT PATIENT-TO-PATIENT TRANSMISSION OF BLOODBORNE PATHOGENS

Injection safety
- Use a sterile, single-use, disposable needle and syringe for each injection and discard intact in an appropriate sharps container after use.
- Use single-dose medication vials, pre-filled syringes, and ampules when possible. Do not administer medications from single-dose vials to multiple patients or combine leftover contents for later use.
- If multiple-dose vials are used, restrict them to a centralized medication area or for single patient use. Never re-enter a vial with a needle or syringe used on one patient if that vial will be used to withdraw medication for another patient. Store vials in accordance with manufacturer’s recommendations and discard if sterility is compromised.
- Do not use bags or bottles of intravenous solution as a common source of supply for multiple patients.
- Use aseptic technique to avoid contamination of sterile injection equipment and medications.

Work environment
- Dispose of used syringes and needles at the point of use in a sharps container that is puncture-resistant and leak-proof and that can be sealed before completely full.
- Maintain physical separation between clean and contaminated equipment and supplies.
- Prepare medications in areas physically separated from those with potential blood contamination.
- Use barriers to protect surfaces from blood contamination during blood sampling.
- Clean and disinfect blood-contaminated equipment and surfaces in accordance with recommended guidelines.

Hand hygiene and gloves
- Perform hand hygiene (i.e., hand washing with soap and water or use of an alcohol-based hand rub) before preparing and administering an injection, before and after donning gloves for performing blood sampling, after inadvertent blood contamination, and between patients.
- Wear gloves for procedures that might involve contact with blood and change gloves between patients.

Patient-care equipment
- Handle patient-care equipment that might be contaminated with blood in a way that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and surfaces.
- Evaluate equipment and devices for potential cross-contamination of blood.
- Establish procedures for safe handling during and after use, including cleaning and disinfection or sterilization as indicated.


Source: Centers for Disease Control and Prevention, Reprinted with permission.
RECOMMENDED INFECTION-CONTROL AND SAFE INJECTION PRACTICES TO PREVENT PATIENT-TO-PATIENT TRANSMISSION OF BLOODBORNE PATHOGENS

Diabetes Care Procedures & Techniques

- Prepare medications such as insulin in a centralized medication area; multiple dose insulin vials should be assigned to individual patients and labeled appropriately.
- Never reuse needles, syringes, or lancets.
- Restrict use of fingerstick capillary blood sampling devices to individual patients. Consider selecting single-use lancets that permanently retract upon puncture.
- Dispose of used fingerstick devices and lancets at the point of use in an approved sharps container.
- Environmental surfaces such as glucometers should be decontaminated regularly and anytime contamination with blood or body fluids occurs or is suspected.
- Glucometers should be assigned to individual patients. If a glucometer that has been used for one patient must be reused for another patient, the device must be cleaned and disinfected.
- Maintain supplies and equipment such as fingerstick devices and glucometers within individual patient rooms if possible.
- Any trays or carts used to deliver medications or supplies to individual patients should remain outside patient rooms. Do not carry supplies and medications in pockets.
- Because of possible inadvertent contamination, unused supplies and medications taken to a patient’s bedside during fingerstick monitoring or insulin administration should not be used for another patient.

Hand hygiene and gloves

- Wear gloves during fingerstick glucose monitoring and during any other procedure that involves potential exposure to blood or body fluids.
- Change gloves between patient contacts. Change gloves that have touched potentially blood-contaminated objects or fingerstick wounds before touching clean surfaces.
- Remove and discard gloves in appropriate receptacles after every procedure that involves potential exposure to blood or body fluids, including fingerstick blood sampling.
- Perform hand hygiene (i.e., hand washing with soap and water or use of an alcohol-based hand rub) immediately after removal of gloves and before touching other medical supplies intended for use on other residents.

Medical management

- Review regularly the individual patients’ schedules for fingerstick blood glucose sampling and insulin administration and reduce the number of percutaneous procedures to the minimum necessary for appropriate medical management of diabetes and its complications.
- Assure that adequate staffing levels are maintained to perform all scheduled diabetes care procedures, including fingerstick blood glucose monitoring.
- Consider the diagnosis of acute viral hepatitis infection in LTC residents who develop an illness that includes hepatic dysfunction or elevated aminotransaminase levels (AST or ALT).

Training and oversight

- Provide a full hepatitis B vaccination series to all previously unvaccinated LTC staff persons whose activities involve contact with blood or body fluids. Check and document post-vaccination titers one to two months after completion of the vaccination series.
- Establish responsibility for oversight of infection control activities. Investigate and report any suspected case that may represent a newly acquired bloodborne infection.
- Have staff demonstrate knowledge of standard precautions guidelines and proficiency in application of these guidelines during procedures that involve possible blood or body fluid exposures.
- Provide staff members who assume responsibilities involving percutaneous procedures with infection control training that includes practical demonstration of aseptic techniques and instruction regarding reporting exposures or breaches. Direct annual retraining to all staff members who perform procedures that involve exposure to blood or body fluids.
- Assess compliance with infection control recommendations for fingerstick glucose monitoring (such as hand hygiene and glove changes between patients) by periodically observing personnel and tracking use of supplies.


Source: Centers for Disease Control and Prevention. Reprinted with permission.
Bloodborne Pathogens Resources

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<tr>
<th>Resource</th>
<th>Internet Site</th>
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<tr>
<td>Sharps Disposal Container Evaluations</td>
<td><a href="http://www.cdc.gov/niosh/docs/97-111">www.cdc.gov/niosh/docs/97-111</a></td>
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<td>Immunization of Healthcare Workers, 11/25/2011 and 08/23/2013</td>
<td><a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6007a1.htm">www.cdc.gov/mmwr/preview/mmwrhtml/rr6007a1.htm</a> (this reference includes a chart)</td>
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<td>Needlestick Injuries (NIOSH) Needlestick Information (OSHA)</td>
<td><a href="http://www.cdc.gov/niosh/topics/bbp">www.cdc.gov/niosh/topics/bbp</a></td>
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<td>Hepatitis Information</td>
<td><a href="http://www.cdc.gov/ncidod/diseases/hepatitis">www.cdc.gov/ncidod/diseases/hepatitis</a></td>
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<td>OSHA Healthcare Advisor</td>
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