



Bloodborne Pathogens

Participant Manual
Course # 19601-36 (CD-ROM)

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EMPLOYEE RESOURCE MANAGEMENT
EMPLOYEE DEVELOPMENT

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Bloodborne Pathogens

Participant Manual

United States Postal Service
Employee Resource Management
Employee Development
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A COMMITMENT TO DIVERSITY

The Postal Service is committed to fostering and achieving a work and learning environment that respects and values a diverse workforce. Valuing and managing diversity in the Postal Service means that we build an inclusive environment that respects the uniqueness of every individual and encourages the contributions, experiences and perspectives of all people.

It is essential that our work and learning environments be free from discrimination and harassment on any basis.

In our classrooms, on the workroom floor, in casual conversation and in formal meetings, employees and faculty are asked to encourage an open learning environment that is supportive to everyone.

Course materials and lectures, classroom debates and casual conversation should always reflect the commitment to safety and freedom from discrimination, sexual harassment and harassment on any prohibited basis.

EAS Staff has a professional obligation to provide a safe, discrimination free and sexual harassment free learning environment. Instructors are expected to support this commitment. Class participants are asked to support the goal of zero tolerance of behavior that violates these commitments.

If you find course material that is presented in the classroom or in self-instructional format that does not follow these guidelines, please point that out to the instructor as well.

If classroom discussions do not support these principles, please point that out to the instructor as well.

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The Postal Service's policy is to value the diversity of our employees, customers and suppliers; to do what is right for our employees and the communities we serve, thereby ensuring a competitive advantage in the global marketplace.

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Appendix A: Bloodborne Disease Exposure Control Plans, EL-810-2000-2

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Bloodborne Pathogens

Objective:

Upon completion of this course, the participant will be able to:

- Recognize and identify potentially infectious materials.
- Identify adequate means of protection against bloodborne pathogen exposure.
- Respond to a release of potentially infectious materials.
- Safely handle and dispose of contaminated materials.

Time Allocated for Module:

- 2 hours

Participant Material Used:

- Bloodborne Pathogens participant guide
- Facility Exposure Control Plan (ECP)

For Further Information

- Contact the Environmental Safety & Health team at (405) 366-4390 (National Center for Employee Development in Norman, Oklahoma).

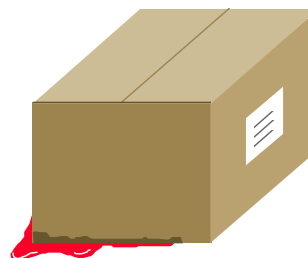
Bloodborne Pathogens

Introduction

The Occupational Safety and Health Administration (OSHA) has established a federal regulation to protect workers who are reasonably anticipated to come into contact with blood and/or other potentially infectious materials, such as the human immunodeficiency virus (HIV), and the Hepatitis B virus (HBV). Accordingly, the U.S. Postal Service has prepared a Management Instruction for bloodborne pathogens (MI EL-810-2000-2). This instruction provides policy guidance on compliance with 29 CFR 1910.1030, Occupational Exposure to Bloodborne Pathogens.

Exposure to bloodborne pathogens may occur in many ways. Although needlestick injuries are the most common means of exposure for health care workers, bloodborne pathogens also can be transmitted through direct contact with blood and other body fluids.

Postal workers may be exposed when packages containing blood or urine samples or other medical specimens are damaged in the mailstream. Accidents in the workplace are another source of exposure to potentially infectious body fluids.



Occupational Exposure

Occupational exposure means reasonably anticipated skin, eye, or mucous membrane contact with blood or other potentially infectious materials that may result from the performance of the employees duties. Exposure may also occur when the skin is punctured, such as by contaminated broken glass or needles.

Blood means human blood, blood products, or blood components. Other potentially infectious materials include the following:

- Human body fluids: semen, vaginal secretions, any body fluid visibly contaminated with blood, and body fluids in situations where it is difficult or impossible to differentiate between body fluids
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead)
- HIV or HBV-containing culture medium or other solutions as well as blood, organs, or other tissues from infected experimental animals

The terms “etiologic agent,” “clinical specimen,” and “biological product,” contained in the Domestic Mail Manual, 124, and Publication 52, Acceptance of Hazardous, Restricted, or Perishable Matter refer to pathogenic (disease causing) biological hazards or “biohazards.”

Exposure Control Plan

The Postal division manager of safety and health services must prepare a written exposure control plan that covers all facilities in the field divisions. Individual plans must also be prepared for processing and distribution centers (P&DCs), bulk mail centers (BMCs), and large offices. Smaller offices with a significant flow of biological materials (ex., specimens mailed to a nearby lab) may also require a written plan.

- Exposure determinations (who has potential for occupational exposure)
- Procedures for evaluating the circumstances surrounding an exposure incident
- Schedule and method for implementing the plan
- Hepatitis B vaccinations and post-exposure medical follow-up
- Communication of hazards to employees
- Recordkeeping

The plan must be reviewed and updated annually (at a minimum) or whenever new tasks or procedures affect occupational exposure. The plan must also be made accessible to employees.

Exposure Determination:

The exposure control plan must address exposure determination. Not identifying individuals who are occupationally exposed to bloodborne pathogens may reduce their protection, while falsely identifying employees as exposed results in unnecessary cost and administrative burden.

All persons reasonably anticipated to be occupationally exposed, even if they are not listed as examples, must be included on one of the two lists described below. During annual reviews, these lists should be adjusted as necessary. Lists should be prepared as follows:

List A (Exposed Personnel). This list includes job classifications in which all employees routinely perform tasks that involve exposure to blood or other infectious material, and may include:

- Medical personnel and trained first aid persons
- Inspectors, security personnel, and crime laboratory personnel (including administrative support)
- Persons designated to clean up spills and leaks of mailed hazardous materials that include blood and other infectious materials

List B (Possibly Exposed Personnel). This list includes job classifications in which some employees may have occupational exposure. The list must be further broken down to tasks and procedures that may cause occupational exposure. The frequency of exposure (handling of mailed medical wastes or biological specimens) must be estimated (based on mail flow or exposure history) for each individual who performs the listed tasks or procedures. This frequency of exposure is used to determine if these employees should be included in the program. Job classifications must be determined locally, but may include:

- Mail handlers, clerks, and other personnel who routinely handle mailed blood specimens or other items potentially containing blood or other potentially infectious material
- Mail handlers, clerks, and other personnel who routinely handle mailed, or internally generated, medical wastes

All List A and List B personnel are to be included in the facility exposure control plan. Job classifications and tasks on List B with less frequent exposure must continue to be identified and listed. The exposure determination process should allow for inclusion of employees in the program in the future, as needed.

Information and Training

Occupationally exposed employees will be given information and training on bloodborne pathogens. Information and training will be provided during working hours at no cost to the employee at the time of initial assignment, and at least once a year thereafter.

Additional training is needed when existing tasks are modified or new tasks that involve occupational exposure to bloodborne pathogens affect the employees' exposure. Persons conducting training must be knowledgeable about the subject matter.

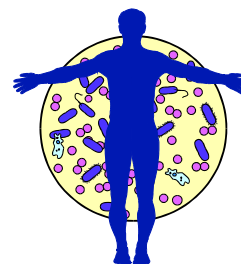
Bloodborne Diseases

The bacteria and viruses that cause disease are called pathogens. They can enter the human body by various modes of transmission. Some diseases, like tuberculosis, are caused by airborne pathogens that enter the lungs when we breathe. Some, like salmonella food poisoning, are caused by pathogens that enter the digestive tract when we eat.

Other diseases are caused by bloodborne pathogens. These pathogens are carried in the blood and certain other body fluids of an infected person. They can be transmitted by blood or other potentially infectious fluids. This transmission can occur when a contaminated sharp object, like a used hypodermic needle, punctures the skin and injects the pathogen into the bloodstream of another person. It may also happen when infected blood gets onto the skin of a healthy person and the pathogen enters through a cut, scratch or wound in the skin.

Depending upon the disease, bloodborne pathogens can also be transmitted through sexual contact, and through direct contact with the eyes or the mucous membranes of the nose and mouth.

There are many diseases that are caused by bloodborne pathogens - for example, malaria, syphilis, and some types of hepatitis. Two of the pathogens of greatest concern are the Hepatitis B virus (HBV) and human immunodeficiency virus (HIV).



Viral Hepatitis

	A	B	C	D	E
Source of virus	Feces	Blood/blood derived body fluids	Blood/blood derived body fluids	Blood/blood derived body fluids	Feces
Route of transmission	Fecal-oral	Percutaneous permucosal	Percutaneous permucosal	Percutaneous permucosal	Fecal-oral
Chronic infection	No	Yes	Yes	Yes	No
Prevention	Pre/post exposure immunization	Pre/post exposure immunization	Blood donor screening; risk behavior modification	Pre/post exposure immunization; risk behavior modification	Ensure safe drinking water

Hepatitis A

Hepatitis is a disease that attacks the liver. In fact, the word means “inflammation of the liver.” There are several strains of the disease. It is transmitted from person-to-person through the fecal/oral route. Hepatitis A can be present in contaminated water or food. It may be found in raw or undercooked mollusks harvested from contaminated waters. The virus may also be found in contaminated produce.

Acute Hepatitis A is most common. Symptoms include fever, malaise, anorexia, nausea, or abdominal discomfort. Chronic cases of the virus are very rare. The severity of the illness increases with age.

Hepatitis B

Hepatitis B presents the greatest risk for infection in the workplace. Hepatitis B is caused by the hepatitis B virus, or HBV. This pathogen can be present in blood as well as in other body fluids such as those surrounding the brain, the spinal column, the lungs, and the internal organs.

It is also present in saliva, semen, and vaginal secretions, in much lower concentrations. Urine and feces contain only small quantities of the virus, unless they are visibly contaminated with blood.

Modes of Transmission

HBV is a sturdy virus, and highly infectious. It can remain alive on contaminated surfaces for up to a week.

Since blood and blood-derived fluids contain the highest concentrations of the virus, they are the most likely vehicles for HBV transmission. Some health care workers have developed the disease when infectious fluids have contacted open cuts, or through small breaks in the skin that result from dermatitis or chapped skin.

It has also been demonstrated that HBV can be transmitted when infectious fluids come into contact with the eyes or the mucous membranes of the nose and the mouth.

HBV is easily transmitted through sexual and non-sexual contact. Various studies have found that 40 to 60 percent of the family members of HBV carriers developed the disease through non-sexual contact.

Symptoms and Outcomes

The body can respond to hepatitis B infection in two ways. The most frequent response in healthy adults is development of a self-limited acute hepatitis, and the formation of antibodies in the blood that may make the person immune for life.

About one-third of infected individuals have no symptoms when infected with the virus, and about one-third experience mild flu-like symptoms, which are often not diagnosed as hepatitis. The remainder may experience more severe symptoms. As the body rids itself of the virus, liver cells are destroyed, which may lead to the development of one or more symptoms including jaundice (yellowing of the skin and eyes), dark urine, extreme fatigue, anorexia, nausea, abdominal pain, and sometimes joint pain, rash, and fever. These symptoms require hospitalization in some cases, and often result in several weeks or months of work loss. A small percentage of acute hepatitis B cases result in death.

The second type of response - development of chronic HBV infection - has more severe long-term consequences. About 6 to 10 percent of newly infected adults cannot clear the virus from their liver cells and become chronic HBV carriers. About one-quarter of these carriers develop a relatively mild form of chronic liver disease. But one-quarter develop chronic active hepatitis, a progressive disease that often leads to cirrhosis of the liver after 5 to 10 years. It can also lead to a form of liver cancer.

Treatment

Pre-exposure vaccination against hepatitis B is the most effective way to prevent infection from an exposure to the disease. However, after exposure to HBV there are effective methods of treatment to prevent the disease from developing, including immunoglobulin injections and the hepatitis B vaccination series.

Hepatitis C

Acute symptoms of Hepatitis C include anorexia, nausea, vague abdominal discomfort, vomiting, and jaundice. Approximately 50% of individuals with Acute Hepatitis develop chronic hepatitis. Hepatitis C in its chronic stage may cause cirrhosis of the liver. The virus can be transmitted through blood transfusions, which is very rare due to the screening that is performed on donor blood. Transmission may also occur due to injection from contaminated needles or syringes, or through sexual contact with an infected partner.

Hepatitis D

All people are susceptible to Hepatitis D. Acute cases are similar to the Hepatitis B virus; symptoms include anorexia, nausea, vague abdominal discomfort, vomiting, and jaundice. In its chronic stage, Hepatitis D causes liver disease and cirrhosis of the liver. The modes of transmission are similar to Hepatitis B. The HBV vaccine is believed to prevent infection from Hepatitis D also as well as Hepatitis B.

Hepatitis E

Most outbreaks of Hepatitis E are associated with fecally contaminated drinking water. There is minimal risk for person-to-person transmission. Most cases in the United States result from individuals travelling to HEV endemic areas of the world. Preventive measures while travelling include avoid drinking water and beverages with ice of unknown purity and eating uncooked shellfish or fruits and vegetables not peeled or prepared correctly.

Human Immunodeficiency Virus

Acquired Immune Deficiency Syndrome (AIDS) is a disease that destroys the body's ability to defend itself against infection by attacking the immune system.

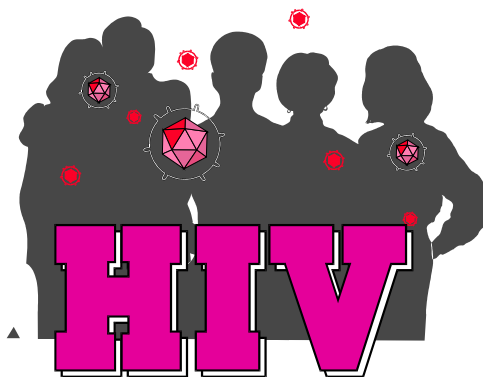
It is caused by the human immunodeficiency virus, or HIV. The virus has been found in human blood, semen, vaginal secretions, breast milk, saliva, tears, urine, cerebrospinal fluid, and amniotic fluid.

Modes of Transmission

Blood, semen, vaginal secretions, and breast milk have been implicated in the spread of HIV. It can be transmitted from mother to child around the time of birth, and it can be transmitted through blood transfusions and tissue transplants when the material has come from an infected donor.

HIV is transmitted most frequently through sexual contact or through direct blood to blood contact - for example when a healthy person uses a hypodermic needle that has been contaminated by the blood of an infected person, or when contaminated blood comes into contact with the broken skin of a healthy person.

HIV is not transmitted by casual contact. Studies of the families of people with aids have shown that AIDS is not spread through normal family activities, even when other family members were unaware of the infected person's HIV status and had taken no precautions. HIV infection did not result from shaking hands; talking; sharing food, eating utensils, plates, drinking glasses, towels; sharing the same household facilities; and engaging in non-sexual hugging and kissing.



Symptoms and Outcomes

After contracting HIV, an individual may not develop any symptoms except a swelling and discomfort in the lymph nodes that lasts more than 3 months. More often, within a month of infection the individual may experience symptoms that can include: fever, swollen or tender lymph nodes, diarrhea, fatigue, and rash. These symptoms will usually disappear after six to twelve weeks, and the person will show no further symptoms for months or years. However, the person can transmit the virus to others throughout this time.

Data indicate that most people infected with HIV will eventually develop AIDS. The symptoms of AIDS can vary extensively. Some patients may experience severe weight loss, chronic diarrhea, constant or intermittent weakness, and fever for 30 days or longer. These, by themselves, may result in death. The disease can also cause brain and neural disorders. Usually the impairment of the immune system allows infections to develop that a person with a normal immune system would rarely develop, for example, rare types of pneumonia. This infection is the most common cause of death in AIDS patients.

Treatment

There are certain drugs available that may prolong the life of some people with AIDS, but there is currently no treatment that is known to cure the disease or prevent its development. Ultimately, AIDS is always fatal.

Preventive Measures

Hepatitis B Vaccination

The hepatitis B vaccine and vaccination series are available to all employees who have occupational exposure. The vaccine and vaccinations, as well as all medical evaluations and follow-up, are available at no cost to the employee. This treatment must be provided at a reasonable time and place, and performed by or under the supervision of a licensed physician or health care professional (such as a nurse practitioner).

Vaccinations must be administered according to current recommendations of the US Public Health Service. Employees who decline the vaccination must sign a declination form. The employee may request and obtain the vaccination at a later date if he/she continues to have occupational exposure.

All employees on List A and those employees on List B who are considered “occupationally exposed” will be offered the vaccination. The Postal Service division medical officer will develop a vaccination program that ensures that employees are offered vaccination after receiving training and within 10 days of their initial assignments.

Universal Precautions

There is no way to tell by looking at a person whether or not that person is carrying a bloodborne pathogen. Anyone of any age, race or sex can be infected with hepatitis B, HIV, or other bloodborne disease and still appear perfectly healthy.

As a result, all exposure control plans are based upon the concept of Universal Precautions. Staying healthy depends upon always following safe work practices whenever there is a potential to contract blood or other potentially infected material.

Applying Universal Precautions Means You Must Always Assume That Blood Or Other Potentially Infectious Material Is Carrying A Disease, And Always Take The Necessary Measures To Protect Yourself. To Avoid Infection With Bloodborne Disease, You Must Maintain An Attitude of Continual Self-Protection.

The specific procedures you must follow may vary, depending upon your particular job, training or the particular situation you face. But applying Universal Precautions will always involve the same basic safe work practices. All leakage from mailed biological materials, until further identified, must be treated as potentially infectious materials. All first aid assistance involving blood requires universal precautions.

Methods of Control

Engineering and work practice controls are the primary methods used to prevent occupational exposure to bloodborne pathogens. Engineering controls reduce employee exposure in the workplace by either removing or isolating the hazard or isolating the worker from exposure, such as using a container to avoid puncture by sharp contaminated objects. Work practice controls are used at all times in work areas where a reasonable likelihood of occupational exposure exists. Washing hands when gloves are removed and as soon as possible after skin contact with blood or other potentially infectious materials is a very important work practice.

Personal Protective Equipment

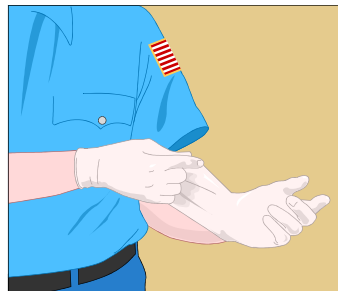
The use of personal protective equipment helps prevent occupational exposure to infectious materials. Such equipment includes, but is not limited to, gloves, medical coats, face shields or masks, and eye protection. Proper personal protective equipment will prevent blood or other potentially infectious materials to pass through or reach employees' work clothes, street clothes, undergarments, skin/eyes/mouth, or other mucous membranes under normal conditions of use.

Personal protective equipment will be supplied to Postal personnel who frequently handle potentially infectious mailed materials. Personnel assigned to the cleanup of leaking items must be provided full protection (gloves, aprons, splash shields). Protective equipment must be properly used, cleaned, and repaired or replaced, as needed.

Gloves

Gloves are required whenever hands may come into contact with potentially infectious material or with contaminated surfaces. They must be made of latex, nitrile or some other impermeable material that will not allow fluids to pass through.

In medical or first aid situations, surgical or disposal (single use) type gloves are normally used. Where exposure to a large quantity of blood is likely, or where gloves might be damaged during a procedure, wearing two pairs (doublegloving) is recommended. These gloves may not be decontaminated for re-use. They must always be discarded as soon as possible.



When removing disposable gloves, care must be taken not to allow the outside surfaces to come into contact with bare skin.

A good procedure to follow is:

1. Grasp the top or wrist of one glove, being careful not to touch anything but the glove. Pull the glove off, turning it inside out. Continue holding the glove.
2. Insert a finger into the top of the other glove, being careful not to touch its outside surface (you can expose yourself at this point if you are not careful).
3. Pull the glove off, turning it inside out and pulling it over the first glove. Both gloves should now be inside out, one inside the other. Discard both gloves into an approved waste container.

For some tasks, like cleaning up and decontaminating after a blood spill, household type utility gloves are acceptable. These gloves may be decontaminated and reused, if they are not cracked, peeling, torn, punctured, discolored or deteriorating in any way. If they are not in perfect condition, they should be discarded. When removing these gloves, make certain that their outside surfaces do not come into contact with bare skin.

To Avoid Infection, Never Touch Your Face Or Rub Your Eyes With Contaminated Gloves!

Eye Protection, Masks & Face Shields

Whenever blood or other potentially infectious material can splash, spray, or spatter and might contaminate the eyes, nose or mouth, additional protection is required. A mask may be used in combination with goggles or glasses that have solid side shields.

CPR Masks

Transmission of a bloodborne pathogen or other potentially infectious material is another route of potential exposure. Performing CPR may present a risk, especially if blood is present in the victim's mouth. A one-way CPR mask should be placed over the victim's nose and mouth to avoid coming into contact with body fluids.

Housekeeping

Housekeeping refers to the practice of maintaining a clean and sanitary workplace.

The following housekeeping procedures must be followed:

- Decontaminate work surfaces with an appropriate disinfectant, after any spill of blood or other potentially infectious materials.
- Always use mechanical means such as tongs, forceps, or a brush and a dust pan to pick up contaminated broken glassware; never pick up with hands even if gloves are worn.
- When discarding contaminated sharps, place them in containers that are closable, puncture-resistant, appropriately labeled or color-coded, and leakproof on the sides and bottom.
- Discard all regulated waste according to federal, state, and local regulations (check with your facility environmental coordinator).

Local Precautions

Local handling procedures must be established to minimize hands-on contact with mailed medical waste and similar items. Certain facilities in urban areas may experience problems with loose syringes dropped in collection boxes and elsewhere. Where this is determined to be an ongoing situation, local exposure control plans should address minimizing the hazard to employees who may be exposed during the course of duty. These persons may be included on List B as necessary.

Medical Unit Precautions

Medical units must ensure that procedures and precautions required in the standard for health care personnel are implemented. Additionally, medical personnel must ensure that first aid supplies include gloves, CPR mouthpieces, and other equipment as appropriate. Medical wastes generated in medical or health units (sharps, bandages, etc.) must be properly managed within the facility and disposed of properly.

Safe Handling and Disposal

Applying universal precautions involves following safe work practices at all times. Potentially infectious materials and any contaminated materials must always be handled safely and disposed of correctly.

The Biohazard Symbol

Everyone should be able to recognize the biohazard warning symbol and know that it indicates contaminated or potentially infectious material.

Red bags or red containers may be substituted for biohazard warning labels, and all employees must be aware that the color red indicates material that is a biohazard.

The biohazard symbol should also be used as a warning on any contaminated equipment until the equipment can be disinfected.



Contaminated Sharp Objects

A sharp object that has been contaminated with blood or other potentially infectious material is extremely hazardous. A puncture can introduce bloodborne pathogens directly into the bloodstream.

Medical personnel must be especially careful with hypodermic needles. Except under very special circumstances, needles should never be recapped or deliberately bent or broken. They must be discarded as soon as possible into an approved container.

The same procedure must be followed with any other sharp object that has contacted blood, like a lancet or needle used to remove a splinter or sliver of metal.

At an accident scene, first aid providers must be careful to avoid glass, pieces of metal, or any other contaminated sharp objects that might cause a cut or puncture wound.

Remember That Rubber Or Latex Gloves Will Not Provide Adequate Protection Against A Puncture Wound.

Cleanup crews should not handle contaminated sharp objects unnecessarily. Use a broom and dustpan or pieces of cardboard to sweep up glass or metal. Very small fragments can be picked up with a thick dampened cloth or with several layers of paper towels. Brooms, dustpans, or any other equipment used in cleanup must either be discarded or decontaminated as soon as possible.

Employees who perform housekeeping and custodial services should be aware of the potential for sharp objects in washroom facilities. Hypodermic needles are sometimes carelessly discarded by people taking medication or by drug abusers. To avoid being stuck, **NEVER** compress the contents of a trash receptacle with your hands or feet.

Sharps Containers

All contaminated sharp objects must be placed in an approved container immediately or as soon as feasible.

The container must be:

- Red or labeled with the biohazard symbol
- Leakproof on the sides and bottom
- Puncture resistant - sharp objects must not be able to pierce the container
- Closable - the top must fit securely

Containers for sharp objects must be held in an upright position throughout use. They should not be overfilled to the point that capping them becomes hazardous. Most containers are disposed of along with their contents. If leakage is possible, the container must be placed inside another, leakproof container.

Other Contaminated Materials

Anything that has come into contact with blood or other potentially infectious material has become contaminated. This can include work surfaces, machinery, materials used during first aid procedures, clothing, and personal protective equipment. To avoid infection and to keep from spreading contamination further, safe work practices are essential. Avoid letting your gloves or any other contaminated material come into contact with uncontaminated surfaces.

Never Handle Contaminated Materials Without Wearing Gloves And Any Other Appropriate Personal Protective Equipment.

Disposal

Contaminated waste materials must be placed in an approved container. The container must be:

- Red or labeled with the biohazard symbol
- Leakproof
- Able to be sealed to prevent leakage or spilling

The container must be sealed before it is moved. If the outside surface becomes contaminated, then it must be placed inside a second, similar container.

To make certain that the outside surface of a container is not contaminated, the following “double bag” procedure is recommended:

1. Place two approved plastic bags, one inside the other, into a rigid trash receptacle, and fold their tops down over the top rim of the receptacle.
2. After placing all contaminated materials into the bags, seal the inner plastic bag, being careful not to touch the outside surface of the outer bag.
3. Remove your disposable gloves and drop them onto the sealed inner bag. (They will become sealed into the outer bag). Then, touching only the outside surface, seal the outer bag.



If water, hydraulic oil, or any other liquid at an accident scene contains visible blood or other potentially infected material it must be treated as contaminated material. You can use absorbent material or granules to soak up the liquid, and dispose of them in an approved container. Any reusable equipment used in cleanup must be decontaminated, as well as the surfaces that were in contact with the liquid. If decontamination is not possible, items must be discarded.

Regulated Waste

Waste that is contaminated with blood or other potentially infectious material is considered regulated waste and must be disposed of at an approved waste disposal facility. Exactly what material is regulated may vary according to state or local laws. However, regulated waste will always include: contaminated sharp objects; liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials if compressed; and items that are caked with dried blood that could flake off and be released during handling. Feminine hygiene products are not considered regulated waste.

Make certain you know the procedures in effect at your facility for waste disposal and for final disposal of waste containers. The facility environmental coordinator will assist you in matters of waste disposal.

Decontamination/Disinfection

When blood or other potentially infectious material has come into contact with a work surface, machinery or the surfaces of sinks and other restroom fixtures, use an approved disinfectant to decontaminate the affected areas.

A number of commercial disinfectants are available. For most cleanup expectations, a one to ten dilution of ordinary household bleach and water is recommended. Combine approximately 1 1/2 cups of bleach with 1 gallon of water.



If possible, begin by covering the contaminated area with paper towels (or an absorbent cloth). Pour the bleach solution over the paper towels, allow it to soak through and stand for the recommended decontamination time, then wipe the area. Finally, pour more bleach solution over the area and use fresh paper towels to wipe it clean and dry.

Maintenance staff should always take precautions around contaminated areas.

- Plumbers who notice evidence of blood on drains or other fixtures should flush pipes and traps with bleach solution, use gloves or other appropriate personal protective equipment, and avoid coming into contact with material that may be contaminated.
- Anyone called upon to repair or adjust equipment that has been exposed to blood or other potentially infected material in an accident should make certain that it has been properly decontaminated. Wear the appropriate personal protective equipment at all times (Universal Precautions).

Personal Hygiene

Hand washing after handling possibly infectious or contaminated materials is a very important part of universal precautions. Even if you have been wearing gloves, washing your hands vigorously and thoroughly with soap and warm water is a vital part of avoiding infection. You should not eat, smoke, or touch your face or eyes with your hands until they've been washed.

At an emergency first aid scene, where soap and water may not be available, use sterile wipes or any other available cleaning agent until a washing facility can be reached.

Always Wash Your Hands Thoroughly After Handling Any Potentially Infectious Material!

If you are directly exposed to blood or other potentially infectious material, wash the affected area with soap and warm water as soon as possible. Washing should be very thorough, including, for example, under the fingernails if hands have been exposed.

If material has splashed into your eyes, immediately use an emergency eyewash or another source of clean running water to flush them for at least 15 minutes. Hold the eyes open and roll them around to make certain that water reaches the entire surface of the eyes.



Exposure Incident Evaluation

Each exposure incident must be evaluated (regardless of reporting status) and steps taken to prevent future occurrences where possible.

As Soon As Possible After Washing, Seek Medical Attention. Always Report Any Exposure To Your Supervisor Or Medical Personnel.

Incident Report. Form 1770, Mail Piece Spill or Leak Incident Report, must be used to document incidents involving blood or other potentially infectious materials in the mail. Installation heads must follow-up with the mailer to prevent future incidents. Document the routes of exposure and how exposure occurred.

Investigations. Form 1769, Accident Report, must be completed if an injury or exposure (ex., needlestick, cut, or splash) related to blood or other potentially infectious materials occurs. OSHA considers an exposure to be an occupational injury if the incident results in the recommendation of medical treatment beyond first aid. All exposure information must be transmitted to the health care professional treating the individual.

Post-Exposure Treatment & Follow-Up

After any unprotected exposure to blood or other potentially infectious materials, a confidential medical evaluation and counseling will be made available to the employee at no cost. Examples include needlestick incidents and unprotected skin or mucuous membrane contact with BBP materials.

If the exposure has created a risk of bloodborne disease:

- The person whose blood you contacted will be tested for HBV and HIV (with legal consent).
- You will be tested (if you consent) and a physician will provide a written opinion concerning your exposure.
- If tests indicate the need, a post-exposure vaccination series for HBV will be made available to you at no cost.
- Your test results and medical records will be available to you, but otherwise they will be kept strictly confidential.

The Postal Service will provide to the health care professional evaluating the employee after an exposure incident: a description of the employee's job duties relevant to the exposure incident, documentation of the route(s) of exposure, circumstances of exposure, results of the source individual's blood tests, if available, and all relevant employee medical records, including vaccination status. These medical records will be kept strictly confidential.



Recordkeeping

The Postal Service will preserve and maintain for each employee an accurate record of occupational exposure to bloodborne pathogens.

Medical records will include the following information:

- Employee's name and social security number
- Employee's hepatitis B vaccination status (including vaccination dates)
- Results of examinations, medical testing, and post-exposure follow-up procedures
- Health care professional's written opinion
- A copy of the information provided to the health care professional

Medical records must be kept confidential and maintained for at least the duration of employment plus 30 years.

The Postal Service will maintain accurate training records for 3 years. Records will include the following:

- Training dates
- Content or a summary of the training
- Names and qualifications of trainer(s)
- Names and job titles of trainees

Conclusion

Avoiding occupational exposure to bloodborne pathogens is not difficult.

Apply universal precautions whenever you might be exposed to blood or other potentially infectious materials:

- Always wear the appropriate personal protective equipment
- Always handle and dispose of any contaminated materials safely
- And afterwards, always wash your hands, even if you have been wearing gloves

Protect Yourself And Always Follow Safe Work Practices.

Simulated Biohazard Spill Exercise

Exercise Description

This exercise is designed to enable the student to apply the practical knowledge needed to cleanup simple spills. A sample scenario is included.

Spill Simulation

Equipment/Supplies

- Barricade tape/cones
- 1 gallon container of water
- Small container of water labeled “BLEACH”
- Measuring cup
- Mixing pail/bottle
- Absorbent material (paper towels)
- Latex gloves, goggles, mask, apron (as required)
- Tongs or cardboard pieces
- Biohazard disposal bags (2)
- Biohazard sharps container
- Hand wipes (anti-bacterial)

SCENARIO #1

The remains of a cardboard box include clear liquid and broken glass. A label on a piece of glass reads “Laboratory Specimen – Human”. Based on information presented in this course, what procedures should be followed to clean up this incident and bring the situation to a close?

Procedures

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

Management Instruction

Bloodborne Disease Exposure Control Plans

This instruction provides policy guidance on compliance with 29 *Code of Regulations* (CFR) 1910.1030, Occupational Exposure to Bloodborne Pathogens (BBP). The Occupational Safety and Health Administration (OSHA) has promulgated this regulation to protect workers who are reasonably anticipated to come in contact with blood and/or other potentially infectious materials.

Scope

It is the policy of the Postal Service to protect the safety and health of all its employees and comply with OSHA regulations. Employees who are occupationally exposed to bloodborne pathogens, however, require special identification and protection under this OSHA standard. This instruction includes procedures to assist safety and health personnel in identifying such employees.

A small number of employees, such as medical personnel, routinely perform tasks that may involve exposure to blood or infectious materials, for example during first aid treatment. These employees are clearly within the scope of the standard.

Also within the scope of the standard are other employees “reasonably anticipated to come in contact with blood or infectious materials.” They must be identified as “occupationally exposed” if an exposure determination finds that occupational exposure is likely.


Definitions

OSHA Definitions

The following OSHA definitions apply:

1. *Blood* — human blood, human blood components, and products made from human blood.

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 Vice President
 Employee Resource Management

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2. *Bloodborne pathogens* — pathogenic organisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
3. *Contaminated* — the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
4. *Contaminated sharps* — any contaminated objects that can penetrate the skin, such as needles, scalpels, or broken glass.
5. *Engineering controls* — controls such as containerization or mechanical handling that isolate or remove the hazard of bloodborne pathogens from the workplace.
6. *Exposure incident* — a specific eye, mouth, other mucous membrane, nonintact skin, or parenteral (i.e., needlestick) contact with blood or other potentially infectious materials.
7. *Occupational exposure* — reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other infectious materials.
8. *Other potentially infectious materials* —
 - a. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
 - b. Unfixed tissues or organs from humans.
 - c. HIV or HBV cultures and blood, organs, and other tissues from experimental animals infected with HIV or HBV.
9. *Regulated waste* — contaminated sharps, liquid or semi-liquid blood or other potentially infectious materials, contaminated items that would release liquids or semi-liquids if compressed, items caked with dried blood, or other potentially infectious materials that may release them during handling, and pathological or microbiological wastes containing blood or other potentially infectious materials.

Other Definitions

Additional definitions are contained in the standard, paragraph (b) (29 CFR 1910.1030). Persons responsible for administering this instruction should also be familiar with definitions for *infectious substance* (etiologic agent), *clinical specimen*, and *biological product* contained in *Domestic Mail Manual CO23* and *Publication 52, Acceptance of Hazardous, Restricted, and Perishable Mail*.

Responsibilities

Headquarters

Employee Resource Management (ERM)

ERM establishes policy and procedure on compliance with the blood-borne pathogen (BBP) standard and, through Safety Performance Management and Health and Resource Management, provides oversight and technical assistance.

Areas

Area Human Resources Managers

The area Human Resources manager is responsible for monitoring and evaluating BBP programs.

Area Medical Director

The area medical director provides expert guidance.

Districts and Plants

Facility Managers

Facility managers are responsible for compliance with this policy.

Nurse Administrators and Contracted Medical Providers

Nurse administrators and contracted medical providers are responsible for elements of the exposure control plan, methods of compliance, post-exposure evaluation and follow-up, training, and recordkeeping as delineated in this instruction.

Safety Staff and Health Professionals

Safety staff and health professionals are responsible for developing exposure control plans, identifying employees who are occupationally exposed, and implementing methods of compliance as described in this instruction.

Exposure Control Plan

Administrative Requirements

Consult the *BBP Program Guide* (located in the Safety Toolkit or on the Safety and Health home page) for technical program guidance.

Written Plan

Safety and health professionals prepare a written exposure control plan that covers plants, bulk mail centers (BMCs), and large offices with exposed employees. Smaller facilities with exposed employees and/or a significant flow of biological materials (e.g., specimens mailed to a nearby lab) may also require a written plan.

Plan Review

The plans must be reviewed and updated annually. This must be accomplished at the beginning of each calendar year. The plans must be reviewed annually or whenever necessary to reflect new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Employee Accessibility

The plan must be accessible to employees and their representatives in accordance with 29 CFR 1910.20, Access to Employee Exposure and Medical Records.

Exposure Determination

Lists of Employees Potentially Exposed

The exposure control plan must establish procedures and responsibilities for exposure determination. This process is a critical element of the plan. Omitting individuals who are occupationally exposed to BBPs may reduce their protection, while falsely identifying employees as exposed results in unnecessary costs and administrative burdens. All persons reasonably anticipated to be occupationally exposed, even if they are not listed as examples, must be included on one of the two lists described below. *During annual reviews these lists should be adjusted as necessary.*

List A includes all employees in job classifications covered by the standard, and no further analysis is necessary. List B is used to determine which employees with occupational exposure need to be included in the plan. Lists should be prepared as follows:

List A — This list includes *job classifications* in which *all employees are assumed to have occupational exposure* (based on OSHA's definitions):

1. All medical personnel and trained first aid persons.
2. All inspectors, security personnel, and crime laboratory personnel (including administrative support).

3. All persons designated and trained to clean up spills and leaks of mailed hazardous materials that include blood and other infectious materials.

List B — This list includes all *job classifications* in which *some employees may have occupational exposure*. The list must be further broken down to tasks and procedures that cause occupational exposure within the classifications listed. Some employees in these occupation codes or job classifications could be exposed, and they must be individually identified. A facility and employee survey is a useful tool for identifying potentially exposed employees. See the *BBP Program Guide* provided with the Safety Toolkit for guidance on identifying potential exposures and occupationally exposed personnel. This potential for exposure is used to determine if these employees should be included in the program. Job classifications must be determined locally, but *may* include:

1. Mail handlers, clerks, and other personnel who routinely handle mailed blood specimens or other items potentially containing blood or other body fluids containing BBPs.
2. Mail handlers, clerks, and other personnel who routinely handle mailed, or internally generated, medical wastes (sharps).

Determining Exposure

All List A personnel are to be included in the plan. List B personnel with documented “reasonably anticipated” exposure are also to be included. Job classifications and tasks on List B with no “reasonably anticipated” exposure must continue to be identified and listed to document the process and to allow for possible inclusion in the program in the future. This exposure determination is to be made without regard to the use of personal protective equipment.

Methods of Compliance

The exposure control plan must include the methods of compliance discussed in the following six sections:

Universal Precautions

All leakage from mailed biological materials, until further identified, and all body fluids must be treated as potentially infectious materials.

Local Precautions

Local handling procedures must be established to minimize hands-on contact with mailed medical wastes and similar items. Training (see Information and Training) must stress awareness and proper handling of these materials.

Personal Protective Equipment

Gloves, aprons, and other personal protective equipment as appropriate must be supplied to personnel frequently handling potentially infectious mailed materials. Personnel assigned to the cleanup of leaking items must be provided full protection, e.g., gloves, aprons, and splash shields. The spill and leak standard operating procedure (SOP) must be updated as necessary to ensure that these personnel use the latest safe cleanup and decontamination procedures.

Hand Washing Facilities

Hand washing must be stressed and handwashing facilities must be made available for persons frequently handling mailed potentially infectious materials.

Medical Precautions

Nurse administrators, staff nurses, and/or contracted medical providers must ensure that procedures and precautions required in the standard for health care personnel are implemented. Additionally, medical personnel must ensure that first aid supplies include gloves, cardiopulmonary resuscitation (CPR) mouthpieces, and other equipment as appropriate. Medical wastes generated in medical or health units (sharps, bandages, etc.) must be properly managed within the facility and disposed of in accordance with local, state, and federal regulations.

Local Contingency Plans

Certain facilities in urban areas may experience problems with loose syringes dropped in collection boxes and elsewhere. Where this is determined to be an ongoing situation, local contingency plans should be developed to minimize the hazard to employees who may come in contact with loose syringes during the course of duty.

Vaccination Program

All employees on List A and those employees on List B who are considered occupationally exposed must be offered HBV vaccination in accordance with the latest guidance from the Public Health Service. The nurse administrator, staff nurse, and/or servicing medical personnel must develop a program that meets the requirements of the standard and ensures that employees are offered vaccination after receiving the required training and within 10 days of initial assignment. Employees who decline must complete the form in Appendix A of the OSHA standard.

Exposure Incident Evaluation

Incident Report

Form 1770, *Hazardous Materials Incident Report*, must be used to document incidents involving potentially infectious materials in the mails. Installation heads must follow up with the mailer to prevent future incidents.

Investigation

Form 1769, *Accident Report*, must be completed if an injury or exposure (e.g., needlestick, laceration, or splash) related to potentially infectious materials occurs. For reporting purposes, OSHA considers such exposures occupational injuries if the incident results in the recommendation of medical treatment beyond first aid. Each exposure incident must be evaluated (regardless of reporting status), and steps must be taken to prevent future occurrences where possible. All exposure information must be transmitted to the health care professional treating the individual.

Medical Procedures

Postexposure Evaluation and Follow-Up

Procedures must be established in the written exposure control plan that ensure required medical postexposure evaluation and follow-up. They must include:

1. Documenting the route of exposure.
2. Identifying and documenting the source of the potential BBP (individual if possible).
3. Testing employee's blood for HBV and HIV.
4. Providing postexposure prophylaxis as recommended by the Public Health Service.
5. Counseling.
6. Evaluating reported illnesses.

Professional Information

All medical personnel responsible for implementing this instruction (having occupationally exposed employees) must have on hand a copy of the OSHA standard.

Written Opinion on Exposure

Medical personnel must ensure that the treating physician provides a written opinion to the Postal Service and that the employee receives a copy within 15 days that includes whether or not HBV vaccination is indicated, whether or not it was given, and other elements required in the standard.

Medical Records

Nurse administrators must maintain records on all occupationally exposed employees (see Recordkeeping).

Hazard Communication

Medical Personnel

Medical personnel must ensure that applicable portions of paragraph (g) of the standard are implemented as necessary, e.g., warning labels are put on regulated medical wastes generated in the medical unit.

Management

Management at all levels must stress the importance of awareness during acceptance and handling of biological materials. Acceptance employees must be familiar with labeling and packaging requirements.

Information and Training

All Postal Employees

The Postal Service is committed to providing periodic “awareness” training to all postal employees as part of governmentwide efforts to protect the public. Safety talks, bloodborne pathogen awareness videos (see references) sponsored by the Postal Service, and other methods may be used.

Occupationally Exposed Employees

Training of occupationally exposed employees is required upon initial assignment and annually thereafter. The BBP training provided by the Postal Service (NCED Course EHS09-13 meets the subject matter requirements below.

A knowledgeable person must give the training. This could be a trained physician, nurse, or safety and health professional familiar with the subject matter:

1. The text of the standard.
2. Methods of bloodborne disease transmission.
3. Overview of the exposure control plan and the means by which the employee can obtain a copy of the written plan.

4. Methods of compliance.
5. Use of personal protective equipment.
6. Vaccinations and employee rights.
7. Spill and leak response plans.
8. Exposure incident procedures — first aid, hand washing, and evaluations.
9. Medical follow-up procedures and counseling.
10. Methods for recognizing tasks and activities that may involve exposure to blood or other infectious materials.

Recordkeeping

Medical

Each employee considered occupationally exposed to BBPs must have a section in the employee medical folder dedicated to the records required by paragraph (h) of the standard, including:

1. HBV vaccination status and dates of vaccinations.
2. Copies of all follow-up examination reports.
3. Health care professionals' written opinions, if needed.
4. All exposure incident information as required.

Training

The nurse administrator must record all required training records for occupationally exposed employees by using Form 2548, *Individual Training Record — Supplemental Sheet*. Training records must be retained for 3 years. Other provisions of the standard regarding availability, records transfer, and confidentiality must be followed.

Records must include:

1. Dates of sessions.
2. Summary of the content.
3. Names and qualifications of trainers.
4. Names and job titles of all employees attending.

REFERENCES

1. 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens," www.osha.gov.
2. NIOSH Publication No. 89-108, *A Curriculum Guide for Public Safety and Emergency-Response Workers*, USHHS, Public Health Service, Centers for Disease Control. Available from:

NIOSH PUBLICATIONS
4676 COLUMBIA PARKWAY
CINCINNATI OH 45226
3. OSHA Instruction CPL 2.244D, "Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens." 11/5/99.
http://www.osha-slc.gov/OshDoc/Directive_data/CPL_2-2_44D.html.
4. OSHA Technical Note #3, Bloodborne Fact Sheets, "Reporting Exposure Incidents; Protect Yourself When Handling Sharps; Hepatitis B Vaccination — Protection for You, Personal Protective Equipment Cuts Risk; Holding the Line on Contamination." www.osha.gov.
5. OSHA Publication 3127 (revised), *Occupational Exposure to Bloodborne Pathogens*, 1996. www.osha.gov.
6. OSHA Publication 3130 (revised), *Bloodborne Pathogens and Emergency Responders*, 1998. www.osha.gov.
7. Summit Training Video, "USPS Bloodborne Pathogen Awareness." Available from:

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