

# **NORTHEAST COMMUNITY COLLEGE**



# **BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN**

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**NORTHEAST COMMUNITY COLLEGE**

**BLOODBORNE PATHOGENS PLAN**

Per Administration Policy Code 2070, Environmental Safety and Health, protection of the health and safety of the employees and students of Northeast Community College is an important goal of the Administration. Furthermore, Northeast Community College is committed to achieving compliance with OSHA 29 CFR 1910.1030 regarding Bloodborne Pathogens.

A Bloodborne Pathogens Plan has been implemented to accomplish the objectives stated above. The plan was developed under the guidance of the Safety Sub-Committee. Each employee shall be responsible for compliance with the plan.

\_\_\_\_\_  
Dr. Bill Path, President

\_\_\_\_\_  
Date

**NORTHEAST COMMUNITY COLLEGE  
BLOODBORNE PATHOGENS PLAN  
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# NORTHEAST COMMUNITY COLLEGE BLOODBORNE PATHOGENS PLAN

## 1.0 General

One of the goals of Northeast Community College is to promote safe work practices in an effort to minimize the incidence of injury and illness experienced by employees. Relative to this goal, Northeast Community College has adopted the OSHA Bloodborne Pathogens Standard, codified as 29 CFR 1910.1030. The purpose of the Bloodborne Pathogens standard is to reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne pathogens that employees may encounter in the workplace. This plan defines special precautions that need to be taken by NECC personnel whose work involves potential contact with human blood and certain other body fluids or tissues.

The plan will be reviewed and maintained/updated on an annual basis to ensure effectiveness.

## 1.1 Definitions

***Bloodborne Pathogens*** means pathogenic microorganisms 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).

***Regulated Waste*** means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

***Other Potential Infectious Materials*** means 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; any unfixed tissue or organ (other than intact skin) from a human (living or dead); and HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

## 1.2 Exposure Determination

OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e., employees are considered to be exposed even if they wear personal protective equipment). This exposure determination lists all job classifications

in which all employees may be expected to incur such occupational exposure, regardless of frequency. *Refer to Appendix A for this list.*

## **2.0 Training and Information**

Having well informed and educated employees is extremely important when attempting to eliminate or minimize NECC employees' exposure to bloodborne pathogens. Employees identified in *Appendix A, Categories I & II* will be trained initially and annually to keep their knowledge current.

### **2.1 Training Topics**

The topics covered in NECC's training program include, but are not limited to the following:

Access to a copy of OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030 and an explanation of its contents.

- A general explanation of the epidemiology and symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.
- An explanation of NECC's Exposure Control Plan and the means by which the employee can obtain a copy of the written plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices, and personal protective equipment.
- Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
- An explanation of the basis for selection of personal protective equipment.
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge to those individuals identified as high risk or to those individuals who have experienced an exposure incident.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- Information on the post-exposure evaluation and follow-up that NECC is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color coding required.
- An opportunity for interactive questions and answers with the person conducting the training session.

## **2.2 Training Methods**

NECC's training presentations make use of several training techniques including, but not limited to:

- Classroom type atmosphere with personal instruction.
- Videotape programs.
- Training manuals/employee handouts. *(See Training Packet materials at the end of this plan.)*
- Employee review sessions.

## **2.3 Recordkeeping**

To facilitate the training of employees, as well as to document the training process, NECC maintains training records containing the following information:

- Dates of all training sessions.
- Contents or a summary of the training sessions.
- Names and qualifications of the instructors.
- Names and job titles of employees attending the training sessions.

Employee training records shall be provided upon request for examination and copying to employees, to employee representatives, as well as OSHA and its representatives. All training records shall be maintained for 3 years from the date on which the training occurred.

### **3.0 Labels and Signs**

For NECC employees, one of the most obvious warnings of possible exposure to bloodborne pathogens is biohazard labels. Because of this, NECC has implemented a comprehensive biohazard warning label program using labels of the type shown below. Red bags or containers may be used as a substitute for labels. Labels must be placed as close to the container as possible on all packages of regulated waste, refrigerators/freezers containing blood or other potentially infectious material, and other containers used for shipping or storing blood and body fluids.

#### **BIOHAZARD LABELS**



## 4.0 Methods of Compliance

### 4.1 Universal Precautions

- Universal precautions will be observed by all employees at NECC to prevent contact with blood, body fluids, or other potentially infectious materials. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual. Universal precautions are as follows:
  - a. All health care workers will use appropriate barrier precautions to prevent skin and mucous-membrane exposure when contact with blood or body fluids of any patient is anticipated.
  - b. Gloves will be worn when touching blood and body fluids, mucous membranes, or non-intact skin of all patients, for fluids, and for performing venipuncture and other vascular access procedures. Gloves will be changed after contact with each patient.
  - c. Hands and other skin surfaces will be washed immediately and thoroughly if contaminated with blood or other body fluids. Hands will be washed immediately after gloves are removed.
  - d. Masks and protective eyewear or face shields will be worn during procedures that are likely to generate droplets of blood or other body fluids.
  - e. Gowns or aprons will be worn during procedures that are likely to generate splashes of blood or other body fluids.
  - f. Needles will not be recapped, purposely bent or broken by hand, removed from disposable syringes, or otherwise manipulated by hand. After use, disposable syringes and needles, scalpel blades, and other sharp items will be placed in puncture-resistant containers for disposal; the containers will be located as close as practical to the use area. Large-bore reusable needles will be placed in a puncture-resistant container for transport to the reprocessing area.
  - g. Although saliva has not been implicated in HIV transmission, mouthpieces, resuscitation bags, or other ventilation devices will be available for use in areas which the need for resuscitation is predictable.
  - h. Health-care workers who have exudative lesions or weeping dermatitis will refrain from all direct patient care and from handling patient-care equipment until the condition resolves.
  - i. Pregnant healthcare workers are not known to be at greater risk of contracting HIV infection than non-pregnant workers; however, if a pregnant worker develops HIV infection, the infant is at risk from perinatal transmission. Pregnant health care workers will strictly adhere to precautions.
  - j. Invasive procedures (surgical entry into tissues, cavities, or organs) or repair of major traumatic injury's carry a risk of splattering of blood and fluids and require the use of gloves, masks, protective eyewear or face shield and gowns or aprons made of material that provide an effective fluid barrier..
  - k. During an invasive procedure, if a glove is torn or a needle-stick or other injury occurs, the glove will be removed and a new glove used as promptly as patient safety permits; the needles or instrument involved in the incident will be removed from the sterile field.

## 4.2 Engineering Controls

- Engineering controls will be utilized to eliminate or minimize exposure to employees at NECC. As a result, employees will use cleaning, maintenance and other equipment designed to prevent contact with blood or other potentially infectious materials, such as hand washing, prevention of needle sticks and minimization of the splashing or spraying of blood.
- Maintaining NECC in a clean and sanitary condition is an important part of the Bloodborne Pathogens Compliance Program. NECC's custodial staff will employ the following practices:
  - a. All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials.
  - b. Protective coverings (such as plastic trash bags or wrap, aluminum foil or absorbent paper) are removed and replaced as soon as it is feasible when overtly contaminated.
  - c. All trash containers, pails, bins and other receptacles intended for use routinely are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.
  - d. Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.)
- NECC is careful in handling potentially contaminated waste (including used bandages, feminine hygiene products and other potentially infectious materials). They are discarded or "bagged" in containers that are:
  - a. Closeable.
  - b. Puncture-resistant if the discarded materials have the potential to penetrate the container.
  - c. Leak-proof if the potential for fluid spill or leakage exists.

Sharps containers are maintained upright, routinely replaced and not allowed to overfill. Containers are collected and stored in the physical plant building until picked up by a contracted medical waste facility.

Whenever employees move containers of potentially contaminated waste from one area to another, the containers are immediately closed and placed inside an appropriate secondary container if leakage is possible from the first container.

The custodians are responsible for the collection and handling of NECC's potentially contaminated waste.

### 4.3 Work Practice Controls

- In addition to engineering controls, NECC uses a number of Work Practice Controls to help eliminate or minimize employee exposure to bloodborne pathogens. NECC has adopted the following Work Practice Controls as part of our Bloodborne Pathogens Compliance Program:
  - a. Employees must wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal protective equipment.
  - b. Following any contact of body areas with blood or any other infectious materials, employees must wash their hands and any other exposed skin with soap and water as soon as possible. They must also flush any exposed mucous membranes with water.
  - c. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to bloodborne pathogens.

### 4.4 Personal Protective Equipment

- Personal Protective Equipment (PPE) is the employees' "last line of defense" against bloodborne pathogens. Because of this, NECC provides (at no cost to our employees) the PPE that they need to protect themselves against such exposure. This equipment includes, but is not limited to:
  - a. Gloves
  - b. Safety Glasses/Goggles
  - c. Masks

To ensure that PPE is not contaminated and is in the appropriate condition to protect employees from potential exposure, NECC adheres to the following practices:

- a. All PPE is inspected periodically and repaired or replaced as needed to maintain its effectiveness.
- b. Reusable PPE is cleaned, laundered and decontaminated as needed.
- c. Single-use PPE (or equipment that cannot, for whatever reason, be decontaminated) is disposed of by the double bagging method and placed in a waste container.

To make sure that this equipment is used as effectively as possible, NECC employees adhere to the following practices when using their PPE:

- a. Any garments penetrated by blood or other infectious materials are removed immediately, or as soon as feasible.
- b. All potentially contaminated PPE is removed prior to leaving a work area.
- c. Gloves are worn in the following circumstances:
  - \*Whenever employees anticipate hand contact with potentially infectious materials.
  - \*When handling or touching contaminated items or surfaces.

- d. Disposable gloves are replaced as soon as practicable after contamination or if they are torn, punctured or otherwise lose their ability to function as an “exposure barrier”.
- e. Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.

## **5.0 Hepatitis B Vaccination, Post Exposure Evaluation and Follow-Up**

NECC recognizes that even with good adherence to exposure prevention practices, exposure incidents can occur. As a result, a Hepatitis B Vaccination Program has been established. In addition, procedures for post-exposure evaluation and follow-up procedures should exposure to bloodborne pathogens occur have been developed.

An exposure incident will be reported to their Supervisor, Director of Physical Plant/Safety Director and/or Executive Director of Human Resources and General Counsel no later than the end of the work day, including weekends.

### **5.1 Vaccination Program**

To protect employees from the possibility of Hepatitis B infection, NECC has implemented a vaccination program. This program is available, at no cost, to Category I and II employees listed in *Appendix A*. The vaccination program is also available to those employees who have had an occupational exposure to bloodborne pathogens.

The vaccination program consists of a series of three inoculations over a six-month period. Each inoculation requires the employee to sign an Employee Consent to Hepatitis B Vaccine. (*See Appendix B*) As part of their bloodborne pathogens training, employees have received information regarding Hepatitis Vaccination, including its safety and effectiveness. Should the employee decline the vaccination, they will be required to sign a Vaccination Declination Form. (*See Appendix C*) After the series of inoculations, employees must have a Hepatitis B titer (blood test) done one (1) month after the series to insure that they have developed antibodies. This cost will be the responsibility of the employer.

### **5.2 Post-Exposure Evaluation and Follow-Up**

If an NECC employee is involved in an incident where exposure to bloodborne pathogens may have occurred, there are two things that are immediately focused on:

- a. Investigation of the circumstances surrounding the exposure incident.
- b. Making sure that employees receive medical consultation and treatment (if required).

The investigation is initiated within 24 hours after the incident occurs and involves gathering the following information:

- a. When the incident occurred (date and time).
- b. Where the incident occurred (location within NECC).
- c. What potentially infectious materials were involved in the incident (type of

- material, blood, etc.).
- d. Source of the material.
- e. Under what circumstances the incident occurred (type of work being performed).
- f. How the incident was caused (accident, unusual circumstances such as equipment malfunction, power outages, etc.).
- g. Personal protective equipment being used at the time of the incident.
- h. Actions taken as a result of the incident (employee decontamination, cleanup, notifications made).

After information is gathered, it is evaluated from a written summary of the incident and its cause. Recommendations are made for avoiding similar incidents in the future. Refer to the "Incident Investigation Form". (See *Appendix D*)

In order to make sure that employees receive the best and most timely treatment if an exposure to bloodborne pathogens should occur, NECC has set up a comprehensive post-exposure evaluation and follow-up process. A "checklist" is used to verify that all the steps in the process have been taken correctly. (See *Appendix E*)

It is recognized that much of the information involved in this process must remain confidential to protect the privacy of the personnel involved.

The first step in this process is to provide an exposed employee with the following confidential information:

- a. Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.
- b. Identification of the source individual (unless not feasible or prohibited by law).

Next, if possible, the source individual's blood will be tested by a health care professional to determine HBV and HIV infectivity. This information will also be made available to the exposed employee. At that time, the employee will be made aware of any applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Finally, the blood of the exposed employee will be collected and tested for HBV and HIV status.

Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified health care professional to discuss the employee's medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

### **5.3 Information Provided to the Health Care Professional**

To assist the health care professional, a number of documents are forwarded to them, including the following:

- a. A copy of the Bloodborne Pathogens Standard.
- b. A description of the exposure incident.

- c. The exposed employee's relevant medical records.
- d. Other pertinent information.

#### **5.4 Health Care Professionals Written Opinion**

After the consultation, the health care professional provides NECC with a written opinion evaluating the exposed employee's situation. NECC, in turn, furnishes a copy of this opinion to the exposed employee.

In keeping with this process' emphasis on confidentiality, the written opinion will contain only the following information:

- a. Whether Hepatitis B Vaccination is indicated for the employee.
- b. Whether the employee has received the Hepatitis B Vaccination.
- c. Confirmation that the employee has been informed of the results of the evaluation.
- d. Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which could require further evaluation or treatment.

All other findings or diagnosis will remain confidential and will not be included in the written report.

#### **5.5 Medical Recordkeeping**

To make sure that NECC has as much medical information available to the participating health care professional as possible, NECC maintains comprehensive medical records on all full-time employees. The following information is included:

- a. Name of employee.
- b. Social security number of the employee.
- c. A copy of the employee's Hepatitis B Vaccination status.
  - \*Dates of any vaccinations.
  - \*Medical records relative to the employee's ability to receive vaccination.
- d. Copies of the results of the examinations, medical testing and follow-up procedures which took place as a result of an employee's exposure to bloodborne pathogens.
- e. A copy of the information provided to the consulting health care professional as a result of any exposure to bloodborne pathogens.

As with all information in these areas, NECC recognizes that it is important to keep the information in these medical records confidential. NECC will not disclose or report this information to anyone without the employee's written consent (except as required by law).

**NORTHEAST COMMUNITY COLLEGE  
BLOODBORNE PATHOGENS  
EXPOSURE DETERMINATION EMPLOYEES**

<b>Job Classifications</b>	<b>Tasks/Procedures</b>
<b>Category I</b>	<b><i>Exposure anticipated in normal routine of job.</i></b>
<b>Nursing Instructors</b>	These instructors teach in the health care field where there is a high-risk exposure to bloodborne pathogens.
<b>Child Care Providers</b>	These individuals care for the children of NECC students and staff. Possible exposures include: changing diapers, illness or injury.
<b>Category II</b>	<b><i>Only occasional exposure anticipated in normal routine of job.</i></b>
<b>Custodians</b>	Duties include cleaning restrooms and classrooms. They are called upon to clean and disinfect an area when someone has been injured or gotten sick.
<b>Athletic Personnel</b>	These instructors/coaches are responsible for providing care to students injured during athletic activities.
<b>Biology Department</b>	Exposed to human blood during laboratory activity.
<b>Category III</b>	<b><i>No exposure anticipated in normal routine of job. However, exposure may occur if emergency is encountered.</i></b>
<b>All Other Employees</b>	

NORTHEAST COMMUNITY COLLEGE

EMPLOYEE CONSENT TO HEPATITIS B VACCINE

On \_\_\_\_\_, I \_\_\_\_\_ received information concerning the risk of occupational exposure to blood or other potentially infectious materials in the position of \_\_\_\_\_, which has been determined as job classification exposure Category \_\_\_\_\_. I have received a copy of the Hepatitis B information packet which has been explained to me and I understand this information.

I have been informed and understand (1) that Hepatitis B vaccination may reduce the potential risk of occupationally contracted viral hepatitis infection, and (2) the risks of the Hepatitis B vaccination which may include pain, itching, bruising at the injection site, sweating, weakness, chills, flushing and tingling, and (3) to obtain adequate immunity to viral Hepatitis B, it will be necessary to receive all three vaccinations of the vaccine series which are administered one month and six months after the initial vaccination, and (4) that the vaccination will be provided to me free of charge by Northeast Community College. If at such future time the U.S. Public Health Service recommends a booster dose(s) of Hepatitis B vaccine, such booster dose(s) shall also be provided to me at no cost if I am employed by the facility in a job classification that involves some risk of an occupational exposure to blood or other potentially infectious materials.

If I leave the employment of this facility before the series is completed, it is my responsibility to contact my own medical provider to complete the vaccine series.

YOU MAY WISH TO CONSULT WITH YOUR PHYSICIAN BEFORE TAKING THE VACCINE.

_____	_____	_____
Employee Name	Social Security #	Date
_____		_____
Witness		Date

(PLACE IN EMPLOYEE MEDICAL FILE)

\*\*\*\*\*

**NORTHEAST COMMUNITY COLLEGE**

**VACCINATION DECLINATION FORM**

Date: \_\_\_\_\_

Employee Name: \_\_\_\_\_

Employee Social Security #: \_\_\_\_\_

I understand that due to my occupational exposure to blood or other potential infectious materials, I may be at risk of acquiring Hepatitis B viral (HB) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself.

However, I decline the Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease.

If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with Hepatitis B vaccine, I can receive the vaccination series at no charge to me, at that time.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Facility Representative Signature

\_\_\_\_\_  
Date

\_\_\_\_\_ I am declining the vaccination as I have already received the series of shots.

**NORTHEAST COMMUNITY COLLEGE  
BLOODBORNE PATHOGENS  
EXPOSURE INCIDENT INVESTIGATION FORM**

Date of Incident: \_\_\_\_\_ Time of incident: \_\_\_\_\_

Location: \_\_\_\_\_

Potentially Infectious Materials Involved:

Type: \_\_\_\_\_ Source: \_\_\_\_\_

\_\_\_\_\_

Circumstances (work being performed, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How Incident Was Caused (accident, equipment malfunctions, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Personal Protective Equipment Being Used: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Actions Taken (decontamination, clean up, reporting, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Recommendations for Avoiding Repetition: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Investigation Completed By: \_\_\_\_\_ Date: \_\_\_\_\_

**NORTHEAST COMMUNITY COLLEGE  
BLOODBORNE PATHOGENS  
POST-EXPOSURE EVALUATION and FOLLOW-UP CHECKLIST**

The following steps must be taken, and information transmitted to healthcare professional, in the event of an employee's exposure to Bloodborne Pathogens.

<u>Activity</u>	<u>Completion Date</u>	<u>By</u>
<ul style="list-style-type: none"> <li>▪ Employee furnished with documentation regarding exposure incident.</li> </ul>	_____	_____
<ul style="list-style-type: none"> <li>▪ Source individual identified.</li> </ul>	_____	_____
_____ (Source Individual)		
<ul style="list-style-type: none"> <li>▪ Source individuals' blood collected and results given to exposed employee.</li> </ul>	_____	_____
_____ Consent has not been able to be obtained.		
<ul style="list-style-type: none"> <li>▪ Exposed employees' blood collected and tested. If refused, employee must sign below.</li> </ul>	_____	_____
_____ (Employee's Signature)	_____	_____
<ul style="list-style-type: none"> <li>▪ Appointment arranged for employee with health care professional.</li> </ul>	_____	_____
_____ (Professional's Name)		
<ul style="list-style-type: none"> <li>▪ If refused, employee must sign below.</li> </ul>	_____	_____
_____ (Employee's Signature)		
Documentation forwarded to Health Care Professional:	_____	_____
_____ Bloodborne Pathogens Standard.		
_____ Description of exposed employee's duties.		
_____ Description of exposure incident, including routes of exposure.		
_____ Result of source individuals' blood testing.		
_____ Employee's medical records.		

# BLOODBORNE PATHOGENS



# TRAINING PACKET

# Hepatitis B Vaccination – Protection For You

U.S. Department of Labor  
Occupational Safety and Health Administration

## **WHAT IS HBV?**

Hepatitis B virus (HBV) is a potentially life-threatening bloodborne pathogen. Centers for Disease Control estimates there are approximately 280,000 HBV infections each year in the U.S.

Approximately 8,700 health care workers each year contract hepatitis B, and about 200 will die as a result. In addition, some who contract HBV will become carriers, passing the disease on to others. Carriers also face a significantly higher risk for other liver ailments which can be fatal, including cirrhosis of the liver and primary liver cancer.

HBV infection is transmitted through exposure to blood and other infectious body fluids and tissues. Anyone with occupational exposure to blood is at risk of contracting the infection.

Employers must provide engineering controls; workers must use work practices and protective clothing and equipment to prevent exposure to potentially infectious materials. However, the best defense against hepatitis B is vaccination.

## **WHO NEEDS VACCINATION?**

The new OSHA standard covering bloodborne pathogens requires employers to offer the three-injection vaccination series free to all employees who are exposed to blood or other potentially infectious materials as part of their job duties. This includes health care workers, emergency responders, morticians, first-aid personnel, law enforcement officers, correctional facilities staff, launderers, as well as others.

The vaccination must be offered within 10 days of initial assignment to a job where exposure to blood or other potentially infectious materials can be “reasonably anticipated.” The requirements for vaccinations of those already on the job take effect July 6, 1992.

## **WHAT DOES VACCINATION INVOLVE?**

The hepatitis B vaccination is a noninfectious, yeast-based vaccine given in three injections in the arm. It is prepared from recombinant yeast cultures, rather than human blood or plasma. Thus, there is no risk of contamination from other bloodborne pathogens nor is there any chance of developing HBV from the vaccine.

The second injection should be given one month after the first, and the third injection six months after the initial dose. More than 90 percent of those vaccinated will develop immunity to the hepatitis B virus. To ensure immunity, it is important for individuals to receive all three injections. At this point it is unclear how long the immunity lasts, so booster shots may be required at some point in the future.

The vaccine causes no harm to those who are already immune or to those who may be HBV carriers. Although employees may opt to have their blood tested for antibodies to determine need for the vaccine, employers may not make such screening a condition of receiving vaccination nor are employers required to provide prescreening.

Each employee should receive counseling from a health care professional when vaccination is offered. This discussion will help an employee determine whether inoculation is necessary.

## **WHAT IF I DECLINE VACCINATION?**

Workers who decide to decline vaccination must complete a declination form. Employers must keep these forms on file so that they know the vaccination status of everyone who is exposed to blood. At any time after a worker initially declines to receive the vaccine, he or she may opt to take it.

## **WHAT IF I AM EXPOSED BUT HAVE NOT YET BEEN VACCINATED?**

If a worker experiences an exposure incident, such as a needlestick or a blood splash in the eye, he or she must receive confidential medical evaluation from a licensed health care professional with appropriate follow-up. To the extent possible by law, the employer is to determine the source individual for HBV as well as human immunodeficiency virus (HIV) infectivity. The worker's blood will also be screened if he or she agrees.

The health care professional is to follow the guidelines of the U.S. Public Health Service in providing treatment. This would include hepatitis B vaccination. The health care professional must give a written opinion on whether or not vaccination is recommended and whether the employee received it. Only this information is reported to the employer. Employee medical records must remain confidential. HIV or HBV status must NOT be reported to the employer.

## Facts

OSHA'S new bloodborne pathogens standard includes provisions for medical follow-up for workers who have an exposure incident. The most obvious exposure incident is a needlestick. But any specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials is considered an exposure incident and should be reported to the employer.

Exposure incidents can lead to infection from hepatitis B virus (HBV) or human immunodeficiency virus (HIV) which causes AIDS. Although few cases of AIDS are directly traceable to workplace exposure, every year about 8,700 health care workers contract hepatitis B from occupational exposures. Approximately 200 will die from this bloodborne infection. Some will become carriers, passing the infection on to others.

**WHY REPORT?**

Reporting an exposure incident right away permits immediate medical follow-up. Early action is crucial. Immediate intervention can forestall the development of hepatitis B or enable the affected worker to track potential HIV infection. Prompt reporting also can help the worker avoid spreading bloodborne infection to others. Further, it enables the employer to evaluate the circumstances surrounding the exposure incident to try to find ways to prevent such a situation from occurring again.

Reporting is also important because part of the follow-up includes testing the blood of the source individual to determine HBV and HIV infectivity if this is unknown and if permission for testing can be obtained. The exposed employee must be informed of the results of these tests.

Employers must tell the employee what to do if an exposure incident occurs.

**MEDICAL EVALUATION AND FOLLOW-UP**

Employers must provide free medical evaluation and treatment to employees who experience an exposure incident. They are to refer exposed employees to a licensed health care provider who will counsel the individual about what happened and how to prevent further spread of any potential infection. He or she will prescribe appropriate treatment in line with current U.S. Public Health Service recommendations. The licensed health care provider also will evaluate any reported illness to determine if the symptoms may be related to HIV or HBV development.

The first step is to test the blood of the exposed employee. Any employee who wants to participate in the medical evaluation program must agree to have blood drawn. However, the employee has the option to give the blood sample but refuse permission for HIV testing at that time. The employer must maintain the employee's blood sample for 90 days in case the employee changes his or her mind about testing—should symptoms develop that might relate to HIV or HBV infection.

The health care provider will counsel the employee based on the test results. If the source individual was HBV positive or in a high risk category, the exposed employee may be given hepatitis B immune globulin and vaccination, as necessary. If there is no information on the source individual or the test is negative, and the employee has not been vaccinated or does not have immunity based on his or her test, he or she may receive the vaccine. Further, the health care provider will discuss any other findings from the tests.

The standard requires that the employer make the hepatitis B vaccine available, at no cost to the employee, to all employees who have occupational exposure to blood and other potentially infectious materials. This requirement is in addition to post exposure testing and treatment responsibilities.

**WRITTEN OPINION**

In addition to counseling the employee, the health care provider will provide a written report to the employer. This report simply identifies whether hepatitis B vaccination was recommended for the exposed employee and whether or not the employee received vaccination. The health care provider also must note that the employee has been informed of the results of the evaluation and told of any medical conditions resulting from exposure to blood which require further evaluation or treatment. Any added findings must be kept confidential.

**CONFIDENTIALITY**

Medical records must remain confidential. They are not available to the employer. The employee must give specific written consent for anyone to see the records. Records must be maintained for the duration of employment plus 30 years in accordance with OSHA's standard on access to employee exposure and medical records.

# Holding the Line on Contamination

U.S. Department of Labor  
Occupational Safety and Health Administration

Keeping work areas in a clean and sanitary condition reduces employees' risk of exposure to bloodborne pathogens. Each year about 8,700 health care workers are infected with hepatitis B virus, and 200 die from contracting hepatitis B through their work. The chance of contracting human immunodeficiency virus (HIV), the bloodborne pathogen which causes AIDS, from occupational exposure is small, yet a good housekeeping program can minimize this risk as well.

## DECONTAMINATION

Every employer whose employees are exposed to blood or other potentially infectious materials must develop a written schedule for cleaning each area where exposures occur. The methods of decontaminating different surfaces must be specified, determined by the type of surface to be cleaned, the soil present and the tasks or procedures that occur in that area.

For example, different cleaning and decontamination measures would be used for a surgical operatory and a patient room. Similarly, hard surfaced flooring and carpeting require separate cleaning methods. More extensive efforts will be necessary for gross contamination than for minor spattering. Likewise, such varied tasks as laboratory analyses and normal patient care would require different techniques for clean-up.

Employees must decontaminate working surfaces and equipment with an appropriate disinfectant after completing procedures involving exposure to blood. Many laboratory procedures are performed on a continual basis throughout a shift. Except as discussed below, it is not necessary to clean and decontaminate between procedures. However, if the employee leaves the area for a period of time, for a break or lunch, then contaminated work surfaces must be cleaned.

Employees also must clean (1) when surfaces become obviously contaminated; (2) after any spill of blood or other potentially infectious materials; and (3) at the end of the work shift if contamination might have occurred. Thus, employees need not decontaminate the work area after each patient care procedure, but only after those that actually result in contamination.

If surfaces or equipment are draped with protective coverings such as plastic wrap or aluminum foil, these coverings should be removed or replaced if they become obviously contaminated. Reusable receptacles such as bins, pails and cans that are likely to become contaminated must be inspected and decontaminated on a regular basis. If contamination is visible, workers must clean and decontaminate the item immediately, or as soon as feasible.

Should glassware that may be potentially contaminated break, workers need to use mechanical

means such as a brush and dustpan or tongs or forceps to pick up the broken glass—never by hand, even when wearing gloves.

Before any equipment is serviced or shipped for repairing or cleaning, it must be decontaminated to the extent possible. The equipment must be labeled, indicating which portions are still contaminated. This enables employees and those who service the equipment to take appropriate precautions to prevent exposure.

## REGULATED WASTE

In addition to effective decontamination of work areas, proper handling of regulated waste is essential to prevent unnecessary exposure to blood and other potentially infectious materials. Regulated waste must be handled with great care—i.e., liquid or semi liquid blood and other potentially infectious materials, items caked with these materials, items that would release blood or other potentially infected materials if compressed, pathological or microbiological wastes containing them and contaminated sharps.

Containers used to store regulated waste must be closable and suitable to contain the contents and prevent leakage of fluids. Containers designed for sharps also must be puncture resistant. They must be labeled or color coded to ensure that employees are aware of the potential hazards. Such containers must be closed before removal to prevent the contents from spilling. If the outside of a container becomes contaminated, it must be placed within a second suitable container.

Regulated waste must be disposed of in accordance with applicable state and local laws.

## LAUNDRY

Laundry workers must wear gloves and handle contaminated laundry as little as possible, with a minimum of agitation. Contaminated laundry should be bagged or placed in containers at the location where it is used, but not sorted or rinsed there.

Laundry must be transported within the establishment or to outside laundries in labeled or red color-coded bags. If the facility uses Universal Precautions for handling all soiled laundry, then alternate labeling or color coding that can be recognized by the employees may be used. If laundry is wet and it might soak through laundry bags, then workers must use bags that prevent leakage to transport it.

## RESEARCH FACILITIES

More stringent decontamination requirements apply to research laboratories and production facilities that work with concentrated strains of HIV and HBV.

# Personal Protective Equipment Cuts Risk

Wearing gloves, gowns, masks and eye protection can significantly reduce health risks for workers exposed to blood and other potentially infectious materials. The new OSHA standard covering bloodborne disease requires employers to provide appropriate personal protective equipment (PPE) and clothing free of charge to employees.

Workers who have direct exposure to blood and other potentially infectious materials on their jobs run the risk of contracting bloodborne infections from hepatitis B virus (HBV), human immunodeficiency virus (HIV) which causes AIDS, and other pathogens. About 8,700 health care workers each year are infected with HBV, and 200 die from the infection. Although the risk of contracting AIDS through occupational exposure is much lower, wearing proper personal protective equipment can greatly reduce potential exposure to all bloodborne infections.

## SELECTING PPE

Personal protective clothing and equipment must be suitable. This means the level of protection must fit the expected exposure. For example, gloves would be sufficient for a laboratory technician who is drawing blood, whereas a pathologist conducting an autopsy would need considerably more protective clothing.

PPE may include gloves, gowns, laboratory coats, face shields or masks, eye protection, pocket masks, and other protective gear. The gear must be readily accessible to employees and available in appropriate sizes.

If an employee is expected to have hand contact with blood or other potentially infectious materials or contaminated surfaces, he or she must wear gloves. Single use gloves cannot be washed or decontaminated for reuse. Utility gloves may be decontaminated if they are not compromised. They should be replaced when they show signs of cracking, peeling, tearing, puncturing or deteriorating. If employees are allergic to standard gloves, the employer must provide hypoallergenic gloves or similar alternatives.

Routine gloving is not required for phlebotomy in voluntary blood donation centers, though it is necessary for all other phlebotomies. In any case, gloves must be available in voluntary blood donation centers for employees who want to use them. Workers in voluntary blood donation centers must use gloves (1) when they have cuts, scratches or other breaks in their skin, (2) while they are in training; and (3) when they believe contamination might occur.

Employees should wear eye and mouth protection such as goggles and masks, glasses with solid side shields, and masks or chin-length face shields when splashes, sprays, splatters, or droplets of potentially infectious materials pose a hazard through the eyes, nose or mouth. More extensive coverings such as gowns,

aprons, surgical caps and hoods, and shoe covers or boots are needed when gross contamination is expected. This often occurs, for example, during orthopedic surgery or autopsies.

Employees must provide the PPE and ensure that their workers wear it. This means that if a lab coat is considered PPE, it must be supplied by the employer rather than the employee. The employer also must clean or launder clothing and equipment and repair or replace it as necessary.

Additional protective measures such as using PPE in animal rooms and decontaminating PPE before laundering are essential in facilities that conduct research on HIV or HBV.

## EXCEPTION

There is one exception to the requirement for protective gear. An employee may choose, temporarily and briefly, under rare and extraordinary circumstances, to forego the equipment. It must be the employee's professional judgment that using the protective equipment would prevent the delivery of health care or public safety services or would pose an increased hazard to the safety of the worker or co-worker. When one of these excepted situations occurs, employers are to investigate and document the circumstances to determine if there are ways to avoid it in the future. For example, if a firefighter's resuscitation device is damaged, perhaps another type of device should be used or the device should be carried in a different manner. Exceptions must be limited—this is not a blanket exemption.

## DECONTAMINATING AND DISPOSING OF PPE

Employees must remove personal protective clothing and equipment before leaving the work area or when the PPE becomes contaminated. If a garment is penetrated, workers must remove it immediately or as soon as feasible. Used protective clothing and equipment must be placed in designated containers for storage, decontamination, or disposal.

## OTHER PROTECTIVE PRACTICES

If an employee's skin or mucous membranes come into contact with blood, he or she is to wash with soap and water and flush eyes with water as soon as feasible. In addition, workers must wash their hands immediately or as soon as feasible after removing protective equipment. If soap and water are not immediately available, employers may provide other handwashing measures such as moist towelettes. Employees still must wash with soap and water as soon as possible.

Employees must refrain from eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses in areas where they may be exposed to blood or other potentially infectious materials.

A needlestick or a cut from a contaminated scalpel can lead to infection from hepatitis B virus (HBV) or human immunodeficiency virus (HIV) which causes AIDS. Although few cases of AIDS have been documented from occupational exposure, approximately 8,700 health care workers each year contract hepatitis B. About 200 will die as a result. The new OSHA standard covering bloodborne pathogens specifies measures to reduce these risks of infection.

### **PROMPT DISPOSAL**

The best way to prevent cuts and sticks is to minimize contact with sharps. That means disposing of them immediately after use. Puncture-resistant containers must be available nearby to hold contaminated sharps—either for disposal or, for reusable sharps, later decontamination for re-use. When reprocessing contaminated reusable sharps, employees must not reach by hand into the holding container. Contaminated sharps must never be sheared or broken.

Recapping, bending, or removing needles is permissible only if there is no feasible alternative or if required for a specific medical procedure such as blood gas analysis. If recapping, bending, or removal is necessary, workers must use either a mechanical device or a one-handed technique. If recapping is essential—for example, between multiple injections for the same patient—employees must avoid using both hands to recap. Employees might recap with a one-handed “scoop” technique, using the needle itself to pick up the cap, pushing cap and sharp together against a hard surface to ensure a tight fit. Or they might hold the cap with tongs or forceps to place it on the needle.

### **SHARPS CONTAINERS**

Containers for used sharps must be puncture resistant. The sides and the bottom must be leakproof. They must be labeled or color coded red to ensure that everyone knows the contents are hazardous. Containers for disposable sharps must have a lid, and they must be maintained upright to keep liquids and the sharps inside.

Employees must never reach by hand into containers of contaminated sharps. Containers for reusable sharps could be equipped with wire basket liner for easy removal during reprocessing, or employees could use tongs or forceps to withdraw the contents. Reusable sharps disposal containers may not be opened, emptied, or cleaned manually.

Containers need to be located as near to as feasible the area of use. In some cases, they may be placed on carts to prevent access to mentally disturbed or pediatric patients. Containers also should be available wherever sharps may be found, such as in laundries. The containers must be replaced routinely and not be overfilled, which can increase the risk of needlesticks or cuts.

### **HANDLING CONTAINERS**

When employees are ready to discard containers they should first close the lids. If there is a chance of leakage from the primary container, the employees should use a secondary container that is closable, labeled, or color coded and leak resistant.

Careful handling of sharps can prevent injury and reduce the risk of infection. By following these work practices, employees can decrease their chances of contracting bloodborne illness.