



**NORTHEAST
STATE**

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EXPOSURE CONTROL PLAN

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Office of Police and Safety
423.323.0255

Exposure Control Plan

Introduction

Purpose of Plan

One of the major goals of the Occupational Safety and Health Administration (OSHA) is to “regulate facilities where work is carried out ... to promote safe work practices in an effort to minimize the incidence of illness and injury experienced by employees.” Relative to this goal, OSHA has enacted the 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 their workplace.

Northeast State Community College believes that there are a number of “good general principles” that should be followed when working with bloodborne pathogens. These should include:

1. It is prudent to minimize all exposure to bloodborne pathogens.
2. Risk of exposure to bloodborne pathogens should never be underestimated.
3. The College should institute as many engineering and work practice controls as possible to eliminate or minimize employee exposure to bloodborne pathogens.

This *Exposure Control Plan* has been implemented to meet the letter and intent of the OSHA Bloodborne Pathogens Standard. The objective of this plan is twofold:

1. To protect employees from the health hazards associated with bloodborne pathogens; and
2. To provide appropriate treatment and counseling should an employee be exposed to bloodborne pathogens

GENERAL PROGRAM MANAGEMENT

Responsible Persons

There are five major “Categories of Responsibility” that are central to the effective implementation of the Exposure Control Plan. These are:

1. The Exposure Control Officer (director of Police and Safety)
2. Department Managers and Supervisors
3. Education Training Coordinator (College Nurse)
4. Director of Human Resources and Affirmative Action Officer
5. Employees

The following sections define the roles of each of these groups in carrying out the plan. Throughout this written plan, employees with specific responsibilities are identified. If a new employee is assigned any of these responsibilities, the director of Human Resources and Affirmative Action Officer and the College Nurse are to be notified of the change.

Exposure Control Officer

The Exposure Control Officer will be responsible for the overall management and support of the College's Bloodborne Pathogens Compliance Program. Activities which are delegated to the Exposure Control Officer typically include, but are not limited to:

1. Overall responsibility for implementing the *Exposure Control Plan* for the entire College.
2. Working with administrators and other employees to develop and administer any additional bloodborne pathogen related policies and practices needed to support the effective implementation of this plan.
3. Looking for ways to improve the *Exposure Control Plan*, as well as to revise and update the plan when necessary.
4. Assist the College Nurse in collecting and maintaining a suitable reference library on the Bloodborne Pathogens Standard and bloodborne pathogens safety and health information.
5. Knowing current legal requirements concerning bloodborne pathogens.
6. Acting as the College liaison during related OSHA inspections.
7. Conducting annual College audits to maintain an up-to-date *Exposure Control Plan*.

Health and Safety Committee

The Exposure Control Officer will require assistance in fulfilling his/her responsibilities. To assist the Exposure Control Officer in carrying out his/her duties, the College has created a Health and Safety Committee. The Health and Safety Committee has overall responsibility to review the *Exposure Control Plan* and make changes on an annual basis to meet college, state and federal requirements.

Department Managers and Supervisors

Department Managers and Supervisors are responsible for exposure control in their respective areas. They work directly with the Exposure Control Officer, the Education Training Coordinator, and employees to ensure that proper exposure control procedures are followed.

Education Training Coordinator

The Education Training Coordinator will work with department managers and supervisors and is responsible for providing information and training to all employees who have the potential for exposure to bloodborne pathogens. Activities falling under the direction of the Coordinator include:

1. Maintaining an up-to-date list of College personnel requiring training
2. Developing suitable education/training programs
3. Scheduling periodic training seminars for employees
4. Maintaining appropriate training documentation.
5. Periodically reviewing the training programs with the Exposure Control Officer, department managers, and supervisors to include appropriate new information.

The College Nurse has been selected to be the College's Education Training Coordinator for the *Exposure Control Plan*. The Director of Human Resources and Affirmative Action Officer must provide the names of individuals, both new employees and employees whose job classification requires training, to the College Nurse for the appropriate training required.

Employees

As with all College activities, employees have the most important role in the bloodborne pathogens compliance program. Employees must:

1. Know what tasks they perform that have occupational exposure;
2. Attend the bloodborne pathogens training sessions;
3. Plan and conduct all operations in accordance with College work practice controls; and
4. Maintain good personal hygiene habits

Availability of the Exposure Control Plan to Employees

To assist employees with their compliance efforts, the College's *Exposure Control Plan* is available to them at any time. New employees are advised of this availability during their new employee orientation session by the director of Human Resources and Affirmative Action Officer.

Review and Update

It is important to keep the Exposure Control Plan up-to-date in accordance with applicable laws and regulations. To ensure this, the plan will be reviewed and updated under the following circumstances:

1. Annually, on or before October 30th of each year;
2. Whenever new or modified tasks and procedures are implemented which affect occupational exposure of employees;
3. Whenever employees job descriptions are revised such that new instances or occupational exposure may occur; or
4. Whenever new functional positions are established within the College that may involve exposure to bloodborne pathogens

EXPOSURE DETERMINATION

Potential Exposure Lists

One of the keys to implementing a successful *Exposure Control Plan* is to identify exposure situations employees may encounter. To facilitate this at the College, the following lists have been prepared:

1. Job classifications in which all employees have occupational exposure to bloodborne pathogens

2. Job classifications in which some employees have occupational exposure to bloodborne pathogens
3. Tasks and procedures in which occupational exposure to bloodborne pathogens occur (i.e., tasks and procedures performed by employees in the job classifications listed above).

The director of Human Resources and Affirmative Action Officer will work with department managers and supervisors to revise and update these lists as tasks, procedures, and classifications change. The lists are maintained in the office of Human Resources (Appendices A-D).

METHODS OF COMPLIANCE

General

There are a number of areas that must be addressed in order to effectively eliminate or minimize exposure to bloodborne pathogens at the College. These areas include, but are not limited to:

1. The use of Universal Precautions;
2. Establishing appropriate engineering controls;
3. Implementing appropriate work practice controls;
4. Using necessary personal protective controls; and
5. Implementing appropriate housekeeping procedures.

Each of these areas is reviewed with employees during bloodborne pathogens related training. By rigorously following the requirements of OSHA's Bloodborne Pathogens Standard in these five areas, it is felt that the College will eliminate or minimize employee occupational exposure to bloodborne pathogens.

Universal Precautions

At Northeast State the practice of Universal Precautions is observed to prevent contact with blood and other potentially infectious materials. As a result, all human blood and the following body fluids are treated as if they are known to be infectious for HBV, HIV, and other bloodborne pathogens:

1. Semen;
2. Vaginal secretions;
3. Cerebrospinal fluid;
4. Synovial fluid;

5. Pleural fluid;
6. Pericardial fluid;
7. Peritoneal fluid;
8. Amniotic fluid;
9. Saliva (dental procedures); and
10. Any body fluid visibly contaminated with blood.

In circumstances where it is difficult or impossible to differentiate between body fluid types, all body fluids are assumed to be potentially infectious.

Engineering Controls

One of the key aspects to the *Exposure Control Plan* is the use of engineering controls to eliminate or minimize employee exposure to bloodborne pathogens. As a result, Northeast State utilizes equipment such as sharps disposal containers, self-sheathing needles and ventilating laboratory hoods as appropriate.

The Education Training Coordinator periodically works with department managers and supervisors to review tasks and procedures performed at Northeast State where engineering controls can be implemented or updated. As a part of this effort, the following factors are considered:

1. Areas where engineering controls are currently employed
2. Areas where engineering controls can be updated
3. Areas currently not employing engineering controls, but where engineering controls could be beneficial

The results of this survey formed the basis to develop the Engineering Control Equipment Log (Appendix E). The log is maintained by the College Nurse.

The log is re-examined during the annual *Exposure Control Plan* review and opportunities for new or improved engineering controls are identified. Existing engineering controls are also reviewed annually in conjunction with the appropriate department manager or supervisor to identify proper functioning and needed repairs or replacement of equipment.

In addition to the engineering controls identified in the log, the following engineering controls are used throughout Northeast State:

1. Hand washing facilities (i.e., sinks and soap and water or when in the field, antiseptic hand cleansers and towels or antiseptic towelettes) which are readily accessible to all employees who have the potential for exposure.

2. Self-sheathing needles.
3. Containers for contaminated reusable sharps having the following characteristics:
 - a. Puncture-resistant
 - b. Color-coded or labeled with a biohazard warning label
 - c. Leak-proof on the sides and bottom
4. Specimen containers which are:
 - a. Leak-proof
 - b. Color coded or labeled with a biohazard warning label
 - c. Puncture-resistant, if necessary

Work Practice Controls

In addition to engineering controls, Northeast State uses a number of work practice controls to help eliminate or minimize employee exposure to bloodborne pathogens. Many of these work practice controls have been in effect for some time.

The employees at Northeast State who are responsible for overseeing the implementation of these work practice controls are the director of Police and Safety and the College Nurse. Department managers and supervisors are responsible for implementing work practice controls in their organization.

Northeast State has adopted the following work practice controls as part of the Bloodborne Pathogens Compliance Program:

1. Employees wash their hands immediately, or as soon as feasible, after removal of gloves or other personal protective equipment.
2. Following any contact of body areas with blood or any other infectious materials after an exposure incident, employees wash their hands and any other exposed skin with soap and water as soon as possible. They also flush exposed mucous membrane with water.
3. Contaminated needles and other contaminated sharps are immediately disposed of in sharps containers.
4. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work area where there is potential for exposure to bloodborne pathogens.

5. Food and drink are not kept in refrigerator, freezers, on counter tops or in other storage areas where blood or other potentially infectious materials are present.
6. Mouth pipetting/suctioning of blood or other infectious materials is prohibited.
7. All procedures involving blood or other infectious materials should minimize splashing, spraying, or other actions generating droplets of these materials.
8. Specimens of blood or other materials are placed in designated leak-proof containers and the containers are appropriately labeled for handling and storage.
9. If outside contamination of primary specimen container occurs, that container is placed within a second leak-proof container and the container is appropriately labeled for handling and storage. If the specimen can puncture the primary container, the secondary container must be puncture resistant as well.
10. Equipment which becomes contaminated is examined prior to servicing or shipping and decontaminated as necessary. An appropriate biohazard warning label is attached to any contaminated equipment identifying the contaminated portions. Information regarding the remaining contamination is conveyed to all affected employees, the equipment manufacturer, and the equipment service representative prior to handling, servicing, or shipping.

When a new employee is hired at Northeast State, or an employee changes jobs within the College, the following process takes place to ensure that they are trained in the appropriate work practice controls:

1. The employee's job classification and the tasks and procedures that he/she will perform are checked against the Job Classifications and Task Lists which have been identified in the Exposure Control Plan as those in which occupational exposure occurs.
2. If the employee is transferring from one job to another within the College, the job classifications and tasks/procedures pertaining to their previous position are also checked against these lists.
3. Based on this "cross-checking" the new job classifications and/or tasks and procedures which will bring the employee into occupational exposure situations are identified.
4. The director of Human Resources and Affirmative Action Officer will provide the names of employees to the Education Training Coordinator for the appropriate training.
5. The College Nurse will notify departmental managers and supervisors the names of employees who need training.

6. Departmental managers and supervisors will insure identified employees receive the proper training and forward all training records to the College Nurse.

Personal Protective Equipment

Personal protective equipment is the employees' "last line of defense" against bloodborne pathogens. Because of this, Northeast State provides (at no cost to the employees) the personal protective equipment that they need to protect themselves against such exposure. This equipment includes, but is not limited to:

1. Gloves
2. Gowns
3. Face shield/masks
4. Goggles
5. Mouthpieces
6. Resuscitation bags
7. Pocket masks
8. Hand washing material

Hypo-allergenic gloves, glove liners, and similar alternatives are readily available to employees who are allergic to the gloves Northeast State normally provides.

Department managers and supervisors are responsible for ensuring that all departments and work areas have appropriate personal protective equipment available to employees.

Employees are trained regarding the use of the appropriate personal protective equipment for their job classifications and tasks/procedures they perform by department managers and supervisors. Additional training is provided, when necessary, if an employee takes a new position or new job functions are added to his/her current position.

To determine whether additional training is needed, the employee's previous job classification and tasks are compared to those for any new job or function that they undertake. Any needed training is provided by their department manager or supervisor working with the Education Training Coordinator.

To ensure that personal protective equipment is not contaminated and is in the appropriate condition to protect employees from potential exposure, Northeast State adheres to the following practices:

1. All personal protective equipment is inspected by department managers and supervisors periodically and repaired or replaced as needed to maintain its effectiveness.
2. Reusable personal protective equipment is cleaned, laundered, and decontaminated as needed. In those instances when off-campus cleaning is required, arrangements must be made through the Business Office and appropriate safe handling of contaminated personal protective equipment must be exercised (use of bio-hazard bags and labeling).
3. Single-use personal protective equipment (equipment that cannot, for whatever reason, be decontaminated) must be disposed of in Biohazard bags.

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

1. Any garments penetrated by blood or other infectious materials are removed immediately, or as soon as is feasible, and the garments must be cleaned, laundered, and decontaminated as outlined in paragraph 2 immediately above.
2. All personal protective equipment is removed prior to leaving a work area.
3. Gloves are worn in the following circumstances:
 - a. Whenever employees anticipate hand contact with potentially infectious materials
 - b. When performing vascular access procedures
 - c. When handling or touching contaminated items or surfaces
4. Disposal gloves are replaced as soon as practical after contamination or if they are torn, punctured, or otherwise lose their ability to function as an "exposure barrier."
5. Utility gloves are decontaminated for reuse unless they are cracked, peeling, torn or exhibit other signs of deterioration, at which time they are disposed of.
6. Masks and eye protection (goggles and face shields) are used whenever splashes or sprays may generate droplets of infectious materials.
7. Protective clothing (gowns) is worn whenever potential exposure to the body is anticipated.
8. Surgical caps/hoods and/or shoe covers/boots are used in any instance where "gross contamination" is anticipated.

Housekeeping

Maintaining facilities in a clean and sanitary condition is an important part of the Bloodborne Pathogens Compliance Program. To facilitate this, a written schedule has been set up for cleaning and decontamination of the various areas of the College. The cleaning schedule (Appendix E) provides the following information:

1. The area to be cleaned/decontaminated
2. Day and time of scheduled work
3. Cleansers and disinfectants to be used as specified on the following departmental cleaning schedules
4. Any special instructions that are appropriate

Using this schedule, housekeeping staff employs the following practices:

1. All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials:
 - a. After completion of medical procedures
 - b. Immediately (or as soon as feasible) when surfaces are overtly contaminated
 - c. After any spill of blood or infectious materials
 - d. At the end of the work shift if the surface may have been contaminated during that shift
2. Protective coverings (plastic wrap, aluminum foil, or absorbent paper) is removed and replaced:
 - a. As soon as it is feasible when overtly contaminated
 - b. At the end of the work shift if they may have been contaminated during the shift
3. All pails, bins, cans, and other receptacles intended for use are routinely inspected, cleaned, and decontaminated as soon as possible if visibly contaminated.
4. Potentially contaminated broken glassware is picked up using mechanical means (dustpan and brush, tongs, and forceps).
5. Contaminated reusable sharps are stored in containers that do not require "hand processing."

The director of Plant Operations and Maintenance is responsible for setting up the cleaning and decontamination schedule and making sure it is carried out within the College. The schedule is maintained in the Plant Operations Office.

Care is exercised in handling regulated waste, including contaminated sharps, laundry, used bandages, and other potentially infectious materials. The following procedures are used with all of these types of wastes:

1. They are discarded or “bagged” in containers that are:
 - a. Closeable
 - b. Puncture-resistant
 - c. Leak-proof, if the potential for fluid spill or leakage exists
 - d. Red in color or labeled with the appropriate biohazard warning label
2. Containers for this regulated waste are located in the Health Science Labs and the Emergency Medical Technology Lab, within easy access of employees and as a central location to the sources of the waste.
3. Waste containers are maintained upright, routinely replaced and not allowed to overflow. Northeast State utilizes Commodore Inc. for waste disposal.
4. Contaminated laundry is disposed of by the above-mentioned company.
5. Whenever employees move containers of regulated 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 custodial staff, with oversight from the director of Plant Operations and Maintenance and the director of Police and Safety, are responsible for the collection and handling of College contaminated waste.

HIV AND HBV RESEARCH LABORATORIES AND PRODUCTION FACILITIES

General

This Institution recognizes that there are special requirements for HIV and HBV research laboratories and production facilities in the areas of construction, engineering controls, work practice, the use of contaminated equipment, as well as employee education and training. However, since the laboratories at Northeast State are clinical in nature, these special requirements do not apply. Therefore, the College's Exposure Control Plan does not address these requirements.

HEPATITIS B VACCINATION, POST-EXPOSURE EVALUATION AND FOLLOW-UP

General

Employees at Northeast State recognize that even with good adherence to all of the College's exposure prevention practices, exposure incidents can occur. As a result, the College has implemented a Hepatitis B Vaccination Program and procedures have been established for post-exposure evaluation and follow-up should exposure to bloodborne pathogens occur.

Vaccination Program

To protect employees as much as possible from Hepatitis B infection, Northeast State has implemented a vaccination program. This program is available, at no cost, to all employees who have occupational exposure to bloodborne pathogens.

This vaccination program consists of a series of a three-dose vaccination series. Anyone with ongoing risk of percutaneous injury will be offered the titer for anti-Hepatitis B antigen 1-2 months after completion of the three-dose vaccination series. Persons who do not respond to an initial three-dose series have a 30% - 50% chance of responding to a second three-dose series. Persons who do not respond to the primary vaccination series should complete a second three-dose vaccination series or be evaluated to determine if they are Hepatitis B surface antigen-positive (infected). Revaccinated persons should have another titer run at the completion of the second series. Non-responders must be medically evaluated. Periodic titers to monitor antibody concentrations after completion of the vaccine series are not recommended. As part of their bloodborne pathogens training, employees have received information regarding Hepatitis vaccination, its safety and effectiveness.

The College Nurse and the director of Police and Safety, in conjunction with the County Health Department Nurse, are responsible for setting up and operating the vaccination program. Titers and any needed medical evaluation for non-responders currently will be arranged with Med Works of Mountain States Health Alliance.

Vaccinations are performed under the supervision of a licensed physician or other healthcare professional. Prior to being vaccinated, the employee must have written approval from a physician stating that the employee can receive the vaccine. Details of employees taking part in the vaccination program are listed on a Hepatitis B Vaccine Log

(see Appendix G), which is maintained by the Director of Human Resources. Employees who have declined to take part in the program are listed as well, and have signed the "Vaccination Declination Form" (see Appendix H).

Hepatitis B vaccine, when given in the deltoid, produces protective antibody (anti-HBs) in > 90% of healthy persons. Testing for immunity after vaccination is not recommended routinely, but is advised for persons whose subsequent management depends on knowing their immune status (such as dialysis patients and staff). At this Institution, all Hepatitis B vaccine is given in the deltoid and does not necessitate routine post-vaccination testing for serologic response.

To ensure that all employees are aware of the vaccination program, it is thoroughly discussed in bloodborne pathogens training. "Vaccination Notices" (see Appendix H) have also been given to division supervisors. Employees are given appointments for the vaccination and memos are sent as reminders.

Post-Exposure Evaluation and Follow-Up

If an employee is involved in an incident where exposure to bloodborne pathogens may have occurred, there are two areas where efforts are immediately focused:

1. Investigating the circumstances surrounding the exposure incident
2. Making sure that Northeast State employees receive medical consultation and treatment (if required) as expeditiously as possible

The immediate supervisor, director of Police and Safety, and the Director of Human Resources investigate every exposure incident that occurs at Northeast State. This investigation is initiated within 24 hours after the incident occurs and involves gathering the following information:

1. When the incident occurred
 - a. Date and time
2. Where the incident occurred
 - a. Campus center, building, and room number
3. What potentially infectious materials were involved in the incident
 - a. Type of material (blood and amniotic fluid)
4. Source of the material
5. Under what circumstances the incident occurred
 - a. Type of work being performed
6. How the incident was caused

- a. Accident
 - b. Unusual circumstances (equipment malfunction and power outage)
7. Personal protective equipment being used at the time of the incident
8. Actions taken as a result of the incident
- a. Employee decontamination
 - b. Cleanup
 - c. Notifications made

After this information is gathered and evaluated, a written summary of the incident and its causes is prepared and recommendations are made for avoiding similar incidents in the future. To assist in this effort, the Incident Investigation Form (see Appendix I) is completed.

In order to make sure that employees receive the best and most timely treatment if an exposure to bloodborne pathogens should occur; Northeast State has set up a comprehensive post-exposure evaluation and follow-up process. The checklist (see Appendix J) is used to verify that all the steps in the process have been followed correctly. This process was implemented on or before April 1, 1998, and is overseen by the following individuals:

1. Director of Police and Safety
2. College Nurse
3. Supervisor or employee involved
4. Director of Human Resources

The College recognizes that much of the information involved in this process must remain confidential and every effort will be made to protect the privacy of those involved.

As the first step in this process, an exposed employee will be provided with the following confidential information:

1. Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.
2. Identification of the source individual (unless infeasible or prohibited by law)

Next, if possible, a recommendation will be made to the source individual to have his/her blood tested to determine HBV and HIV infectivity. This information will also be made available to the exposed employee if it is obtained. At that time, the employee will be

made aware of any applicable laws, and regulations concerning disclosure of the identity and infectious status of a source individual.

Once these procedures have been completed, an appointment is arranged for the exposed employee to see a qualified healthcare professional for testing of blood and to discuss the employee's medical status. This includes an evaluation of any reported illness, as well as any recommended treatment.

Information Provided to the Healthcare Professional

To assist the healthcare professionals, the College will forward a number of documents to them including the following:

1. A copy of the Bloodborne Pathogens Standard
2. A description of the exposure incident
3. The exposed employee's relevant medical records (subject to completion of the Release of Information Authorization Form shown in Appendix K)
4. Other pertinent information

Healthcare Professionals Written Opinion

After the consultation, the healthcare professionals provide Northeast State with a written opinion evaluating the exposed employee's situation. The College, in turn, will furnish a copy of this opinion to the exposed employee.

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

1. Whether Hepatitis B Vaccination is indicated for the employee
2. Whether the employee has received the Hepatitis B Vaccination
3. Confirmation that the employee has been informed of the results of the evaluation
4. Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment

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

Medical Recordkeeping

The Director of Human Resources is responsible for setting up and maintaining these records, which include the following information:

1. Name of the employee
2. Social Security number of the employee
3. A copy of the employee's Hepatitis B Vaccination status
 - a. Dates of any vaccination
 - b. Medical records relative to the employee's ability to receive vaccination
4. 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
5. A copy of the information provided to the consulting healthcare professional as a result of any exposure to bloodborne pathogens

As with all information in these areas, the College recognizes that it is important to keep the information in these medical records confidential. The College will not disclose or report this information to anyone without the employee's written consent (except as required by law). The records will be maintained for at least the duration of employment plus 30 years.

LABELS AND SIGNS

General

For employees, the most obvious warnings of possible exposure to bloodborne pathogens are biohazard labels. A comprehensive biohazard warning labeling program has been implemented using labels of the type shown in Appendix L, or when appropriate, using red "color-coded" containers. The Director of Plant Operations and Maintenance is responsible for setting up and maintaining this program at Northeast State.

The following items at Northeast State have been labeled:

1. Containers of regulated waste
2. Refrigerators/freezers containing blood or other potentially infectious materials
3. Sharps disposal containers
4. Other containers used to store, transport, or ship blood and other infectious materials
5. Laundry bags and containers
6. Contaminated equipment

On labels affixed to contaminated equipment, those portions of the equipment that are contaminated are also labeled.

The College recognizes that biohazard signs must be posted at entrances to HIV and HBV research laboratories and production facilities. However, the laboratories at Northeast State perform only clinical work, which is not covered by these special signage requirements.

HIV and HBV Research Laboratories and Production

This provision is not considered to be applicable to this Institution.

INFORMATION AND TRAINING

General

Having well informed and educated employees is extremely important when attempting to eliminate or minimize employee's exposure to bloodborne pathogens. All employees who have the potential for exposure to bloodborne pathogens are put through a comprehensive training program and furnished with as much information as possible on this issue.

This program was established to provide employees with the required training. Employees will be retrained at least annually to keep their knowledge current. All new employees, as well as employees changing jobs or job functions, will be given any additional training their new position requires at the time of the new job assignment.

The College Nurse is responsible for seeing that all employees who have potential exposure to bloodborne pathogens receive this training. The College Nurse will be assisted by the following:

1. Director of Police and Safety
2. Department supervisors and managers
3. Director of Human Resources

Training Topics

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

1. The Bloodborne Pathogens Standard itself
2. The epidemiology and symptoms of bloodborne diseases
3. The modes of transmission of bloodborne pathogens
4. Exposure Control Plan for Northeast State Community College and where employees can obtain a copy
5. Appropriate methods for recognizing tasks and other activities that may be involved for exposure to blood and other potentially infectious materials
6. A review of the use and limitation of methods that will prevent or reduce exposure, including:
 - a. Engineering controls
 - b. Work practice controls
 - c. Personal protective equipment
7. Selection and use of personal protective equipment including:

- a. Types available
 - b. Proper use
 - c. Location within the College
 - d. Removal
 - e. Handling
 - f. Decontamination
 - g. Disposal
8. Visual warnings of biohazard within the College including labels, signs, and color-coded containers,
 9. Information on the Hepatitis B Vaccine, including its:
 - a. Efficacy
 - b. Safety
 - c. Method of administration
 - d. Benefits of vaccination
 - e. The College's free vaccination program
 10. Plan of action and persons to contact in an emergency involving blood or other potentially infectious materials
 11. The procedures to follow if an exposure incident occurs, including incident reporting
 12. Information on the post-exposure evaluation and follow-up, including medical consultation that the College will provide.

Training Methods

The College will use training presentations to make use of several training techniques including, but not limited to, those below:

- a. Classroom type atmosphere with personal instruction
- b. Videotape programs
- c. Training manuals/employee handouts
- d. Employee review sessions
- e. Personalized copy of OSHA's Bloodborne Pathogens Standard Handbook

Employees need an opportunity to ask questions and interact with their instructors, and time is specifically allocated for these activities in each training session.

Recordkeeping

To facilitate the training of employees and to document the training process, the College maintains training records containing the following information:

1. Dates of all training sessions
2. Contents/summary of the training sessions
3. Names and qualifications of the instructors
4. Names and job titles of employees attending the training sessions

The forms shown in Appendix M have been used to facilitate this recordkeeping.

These training records are available to employees and OSHA representatives for examination and copying.

EMPLOYEE FACT SHEET

Hepatitis - Hepatitis is a liver disease, initially resulting in possible inflammation of the liver, and frequently leading to more serious conditions including cirrhosis and liver cancer. In the United States there are approximately 300,000 new cases of Hepatitis B Virus (HBV), the most prevalent form of Hepatitis, every year.

Healthcare workers are 20 times more likely to contract Hepatitis B than the normal population. It is estimated that there are as many as 18,000 new cases of HBV each year among healthcare workers, resulting in 200-300 deaths. While there is no cure for Hepatitis B, a vaccine does exist that can prevent infection.

In healthcare settings HBV is most often transmitted through breaks in the skin or mucous membranes. This usually occurs through needlesticks, human bites, or having infectious material (such as blood or other body fluids) get into existing cuts or abrasions.

The symptoms of HBV infection are very much like a mild "flu." Initially, there is a sense of fatigue, possible stomach pain, loss of appetite, and even nausea. As the disease continues to develop, jaundice (a distinct yellowing of the skin) and darkened urine will often occur. However, people who are infected with HBV will often show no symptoms for some time.

After exposure it can take 2-6 months for Hepatitis B to develop. This is extremely important since vaccinations begun immediately after exposure to the virus can often prevent infection.

Human Immunodeficiency Virus - Human Immunodeficiency Virus (HIV) is the "newest" of the major bloodborne diseases. Healthcare workers appear to have a slightly higher risk of contracting the virus than the general population.

Symptoms of HIV infection can vary, but often include:

Weakness	Headaches
Fever	Diarrhea
Sore Throat	Other "flu-like" symptoms
Nausea	

However, many people with the HIV virus can show no apparent symptoms for years after their infection.

In most cases, contracting the HIV virus ultimately leads to the development of Acquired Immunodeficiency Syndrome (AIDS). This results in the breakdown of the immune system so the body does not have the ability to fight off other diseases. Currently no vaccination exists to prevent infection of HIV and there is no known cure.

EMPLOYEE QUIZ

BLOODBORNE PATHOGENS

1. The two bloodborne diseases most prevalent in the United States are:
 - a. Hepatitis B (HBV)
 - b. HIV (Human Immunodeficiency Virus)
 - c. Malaria
 - d. Both a and b

2. The most common health threat from bloodborne pathogens is:
 - a. Hepatitis B
 - b. Lymph node inflammation
 - c. Human Immunodeficiency Virus (HIV)
 - d. All of the above

3. Hepatitis B vaccination must be available to a worker:
 - a. Once a year
 - b. If he/she has an occupational exposure risk
 - c. At time of hire
 - d. It's not necessary to have a vaccination

4. Using "universal precautions" means:
 - a. Treating all blood and body fluids as though they were infectious
 - b. That all workers who are exposed to bloodborne pathogens follow the same set of work procedures
 - c. Using gloves and masks whenever you deal with blood or body fluids
 - d. Careful hand washing along with the use of gloves and mask

5. Personal protective equipment must be used:
 - a. When the possibility of exposure to blood or body fluids exist
 - b. At all times
 - c. At the worker's discretion
 - d. Whenever certain substances are present

6. If I am stuck with a needle or broken glass while emptying the wastebasket or performing a procedure I should:
 - a. Wash the injured area immediately with soap and water
 - b. Notify my supervisor immediately and complete the required paperwork
 - c. See a healthcare provider within 2 hours of the incident
 - d. All of the above

7. Disposable gloves must be replaced when:
 - a. They have been used for at least a day
 - b. Whenever their effectiveness is compromised
 - c. When the expiration date passes
 - d. If they're left out in the sun for more than one hour

8. What color must be used for Biohazard Warning Labels?
- a. Fluorescent yellow
 - b. Fluorescent green
 - c. Fluorescent orange or orange red
 - d. None of the above

GLOSSARY OF TERMS

A

Assistant Secretary The Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

B

Biohazard Label A label affixed to containers of regulated waste, refrigerator/freezers and other containers used to store, transport or ship blood and other potentially infectious materials. The label must be fluorescent orange-red in color with the biohazard symbol and the word biohazard on the lower part of the label.

Blood Human blood, human blood components, and products made from human blood.

Bloodborne Pathogens 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).

C

Clinical Laboratory A workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated The presence or the reasonable anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry Laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps Contaminated objects that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

D

Decontamination The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

E

Employee An individual employed in a healthcare, industrial, or other facility or operation who may be exposed to bloodborne pathogens in the course of their assignment.

Engineering Control Controls (sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne hazard from the workplace.

Exposure Control Officer An employee who is designated by the employer, and who is qualified by training or experience, to provide technical guidance in the development and implementation of the facility's Exposure Control Plan.

Exposure Incident A specific eye, mouth, other mucous membrane, non-intact skin, or other potentially infectious materials that results from the performance of an employee's duties.

H

Hand washing water, Facilities A facility providing an adequate supply of running portable soap and single use towels or hot air drying machines.

HBV Hepatitis B Virus.

HIV Human Immunodeficiency Virus.

L

Licensed Healthcare Professional A person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) "Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up" of OSHA's Bloodborne Pathogens Standard.

M

Medical Consultation A consultation which takes place between an employee and a licensed medical professional for the purpose of determining the employee's medical condition resulting from exposure to blood or other potentially infectious materials, as well as any further evaluation or treatment that is required.

N

NIOSH National Institute for Occupational Safety and Health of the Public Health Service of the U.S. Department of Health and Human Services; the Federal agency which assists OSHA in occupational safety and health investigations and research.

O

Occupational Exposure

Reasonable anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

OSHA

Occupational Safety and Health Administration of the U.S. Department of Labor; the Federal agency with safety and health regulatory and enforcement authorities for most U.S. industry and business.

Other Potentially Infectious Materials

(1) The following human body fluids; semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural 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;

(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead);

(3) HIV-Containing cell or tissue cultures, organ cultures, and HIV- or HBV- containing culture medium or other solutions; and blood, organs, or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV.

P

Parenteral

Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment

Specialized clothing or equivalent worn by an employee for protection against a hazard. General work clothes (uniform, pants, shirts, or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility

A facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

R

Regulated

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 micro-

biological waste containing blood or other potentially infectious materials.

**Research
Laboratory**

A laboratory producing or using research laboratory scale mounts amounts of HIV and HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

S

**Source
Individual**

Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients, clients in institutions for the developmentally disabled, trauma victims, clients of drug and alcohol treatment facilities, residents of hospices and nursing homes, human remains, and individuals who donate or sell blood components.

Sterilize

The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

U

**Universal
Precautions**

An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

W

**Work
Practice
Controls**

Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (prohibiting recapping of needles by a two-handed technique).

**JOB CLASSIFICATIONS IN WHICH ALL EMPLOYEES
HAVE EXPOSURE TO BLOODBORNE PATHOGENS**

Listed below are the job classifications at the College where all employees handle human blood and other potentially infectious materials which may result in possible exposure to bloodborne pathogens:

<u>JOB TITLE/PROGRAM</u>	<u>LOCATION</u>
Dean, Health-Related Professions	Regional Center for Health Related Professions
Dean, Nursing	Regional Center for Health Related Professions/Job Sites
EMT Faculty/Adjunct Faculty	Regional Center for Health Related Professions
Faculty/Adjunct Faculty	Anatomy/Physiology Blountville/Elizabethton/Kingsport
Biology Faculty/Adjunct Faculty	Powers Building/Northeast State at Elizabethton
Cardiovascular Technology	Regional Center for Health Professions
Physical Education Faculty/Adjunct Faculty	Blountville
Surgical Technology	Regional Center for Health Professions

Appendix A

JOB CLASSIFICATIONS IN WHICH ALL EMPLOYEES HAVE EXPOSURE TO BLOODBORNE PATHOGENS

Listed below are the job classifications at the College where some employees handle human blood and other potentially infectious materials which may result in possible exposure to bloodborne pathogens:

JOB TITLE/DEPARTMENT

LOCATION

Police/Security Personnel

Campus and satellite campus property

Custodial Staff

Campus and satellite campus property

Appendix B

**JOB CLASSIFICATIONS IN WHICH SOME CONTRACT EMPLOYEES
MAY HAVE EXPOSURE TO BLOODBORNE PATHOGENS**

JOB TITLE

DEPARTMENT/LOCATION

Food Services - Subway

Student Services Building

Appendix C

WORK ACTIVITIES INVOLVING POTENTIAL EXPOSURE TO BLOODBORNE PATHOGENS

Listed below are the tasks and procedures at the College in which human blood and other potentially infectious materials are handled and which may result in exposure to bloodborne pathogens:

<u>TASKS/PROCEDURES DEPARTMENT/LOCATION</u>	<u>JOB CLASSIFICATION</u>
Anatomy/Physiology laboratory instruction B209, B211, B213	Math/Science Division Faculty
Biology laboratory instruction B209, B211, B213	Math/Science Division Faculty
College cleaning/maintenance duties Plant Operations	Custodial/Maintenance Staff
EMT clinical/laboratory instruction Classroom Building, T101	EMT Faculty
Physical Education instruction Humanities and Automotive Buildings	Humanities Division Faculty
Dental Assistant Laboratory instruction Regional Center for Health Professions	Health-Related Professions Faculty
Dental Laboratory instruction Regional Center for Health Professions	Health-Related Professions Faculty
Medical Laboratory Technology	Health-Related Professions Faculty
Nursing clinical/laboratory instruction	Nursing Faculty

Appendix D

ENGINEERING CONTROL EQUIPMENT LOG

The following areas have or should have, Engineering Control Equipment to eliminate or minimize employees' exposure to bloodborne pathogens. If equipment is needed but not yet installed "None" is indicated in the "Control Equipment" column.

<u>DEPARTMENT/LOCATION</u>	<u>CONTROL EQUIPMENT</u>
Anatomy/Physiology Labs B209, B211, B213	Sharps container Hand washing facilities Biohazard waste disposal container
Biology Labs B209, B211, B213 & B215	Sharps container Hand washing facilities
Northeast State at Elizabethton E103	Biohazard waste disposal container
Regional Center for Health Professions (multiple locations)	Biohazard waste disposal container
Emergency Medical Technology C2106, T101 container	Sharps container Hand washing facilities Biohazard waste disposal
Physical Education Fine Arts Building	Sharps container Hand washing facilities Biohazard waste disposal container
Plant Operations	Sharps container Hand washing facilities Biohazard waste disposal container
College Nurse's Office C2113 container	Sharps container Biohazard waste disposal
Regional Center for Health Professions	Sharps Container Hand washing facilities Biohazard Waste disposal container

Appendix F

**OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS
Northeast State Community College**

HEPATITIS B VACCINE - ACCEPTANCE (Yes, I do want the vaccine)

I want to receive the Hepatitis B Vaccine and I understand it is my responsibility to contact the _____ for information on receiving this vaccine.

Name (Print) Social Security Number Signature

Department Date Witness

HEPATITIS B VACCINE - DECLINATION (No, I do not want the vaccine)

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring Hepatitis B Virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B Vaccine at no charge to myself, however, I decline 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.

Name (Print) Social Security Number Signature

Department Date Witness

IMMUNIZATION/DISEASE STATUS

History of Hepatitis B: Yes _____ No _____ Date _____
(If yes, please submit documentation to the _____ as soon as possible).

History of Hepatitis B Vaccination:
HBV Date #1 _____
HBV Date #2 _____
HBV Date #3 _____
Titer Date _____
Booster Date _____

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Appendix G

**EXPOSURE INCIDENT INVESTIGATION FORM
Northeast State Community College**

Name: _____ Social Security #: _____

Date of Incident: _____ Time of Incident: _____

Location: _____

Potentially Infectious Materials Involved:

Type: _____ Source: _____

Circumstances (work being performed, etc.) _____

How Incident Was Caused (accident, equipment malfunction, etc.): _____

Personal Protective Equipment Being Used: _____

Actions Taken (decontamination, clean-up, reporting, etc.) _____

Recommendations for Avoiding Repetition: _____

Appendix H

**POST - EXPOSURE EVALUATION AND FOLLOW - UP CHECKLIST
Northeast State Community College**

The following steps must be followed in the case of any employee's exposure to bloodborne pathogens. Information obtained should be transmitted to the appropriate individual as noted on this form.

<u>Activity</u>	<u>Completion Date</u>
Employee furnished with documentation regarding exposure incident.	_____
Source individual identified (_____) Source Individual	_____
Source individual's blood tested and results given to exposed employee. _____ Consent not obtained.	_____
Exposed employee's blood collected and tested.	_____
Appointment arranged for employee with healthcare professional. (_____) Professional's Name	_____
Documentation forwarded to healthcare professional.	_____
_____ Bloodborne Pathogens Standard	
_____ Description of exposed employee's duties.	
_____ Description of exposure incident including routes of exposure.	
_____ Result of source individual's blood testing.	
_____ Employee's medical records.	

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Appendix I

**AUTHORIZATION LETTER FOR THE RELEASE OF
EMPLOYEE MEDICAL RECORDS INFORMATION
Northeast State Community College**

I, _____, hereby authorize _____
(full name of employee/patient) (individual or
_____ to release to
organization holding the medical records)

_____ (individual or organization authorized to receive the medical information)

the following medical information from my personal medical records: _____

_____ (Describe generally the information desired to be released)

I give my permission for this medical information to be used _____
for the following purpose: Yes No

but I do not give my permission for any other use or re-disclosure of this information.

_____ Full name of Employee or Legal Representative

_____ Signature of Employee or Legal Representative

_____ Date of Signature

_____ Witness _____ Date

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Appendix J

BIOHAZARD WARNING LABEL

RED OR ORANGE IN COLOR

