

GREAT PLAINS

Technology Center



EXPOSURE CONTROL PLAN

FOR BLOODBORNE PATHOGENS
AND TUBERCULOSIS
2023-2024

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Section 1

Purpose of the Plan

SECTION 1

PURPOSE OF THE PLAN

One of the goals of the Public Employee Occupational Safety and Health (PEOSH) division is to regulate the safety and health of Oklahoma Public employees. PEOSH regulates city, county, state, schools, & municipal trusts. These entities are not included within the jurisdiction of federal OSHA, although they have adopted most OSHA regulations. Relative to *CFR § 1910.1030 (d)*. The purpose of the Bloodborne Pathogens Standard, codified as OSHA's 29 occupational exposure to the Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne pathogens" that employees may encounter in their workplace. Hepatitis C (HCV) is also recognized as a widespread disease. In addition, OSHA has issued a proposed rule on Occupational Exposure to Tuberculosis, an airborne transmitted bacterial disease.

Great Plains Technology Center (GPTC) believes that there are several "good general principles" that should be followed when working with potential exposure to bloodborne pathogens and tuberculosis. These include the following:

1. It is prudent to minimize all exposure.
2. Risk of exposure should never be underestimated
3. Our school should institute as many engineering and work practice controls as possible to eliminate or minimize employee/*student exposure.

We have implemented this Exposure Control Plan to meet the letter and intent of the OSHA Standard. The objective of this plan is two-fold:

1. To protect our employees / *students from the health hazards associated with these diseases.
2. To provide appropriate treatment and counseling should an employee be exposed to these diseases.

Sections 2 through 8 of this plan address Bloodborne Pathogens. Tuberculosis is addressed in Section 9.

**NOTE: It is not the intent of the school that students be considered as "employees", nor do they fall under the requirements of this Exposure Control Plan. Great Plains Technology Center does, however, train students concerning the dangers of bloodborne pathogens and tuberculosis, as well as provide the appropriate engineering controls and approved work practice procedures to minimize / eliminate the dangers.*

Section 2

General Program Management

SECTION 2

GENERAL PROGRAM MANAGEMENT

A. Responsible Persons

There are four (4) major “Categories of Responsibility” that are central to the effective implementation of our Exposure Control Plan. The following sections define the roles played by each of these groups in carrying out our plan.

Throughout this written plan, employees with specific responsibilities are identified. If, because of promotion or other reasons, a new employee is assigned any of these responsibilities, the Deputy Superintendent is to be notified of the change, so that he / she can update the records.

1. Exposure Control Officer

The “Exposure Control Officer” will be responsible for overall management and support of our school’s Bloodborne Pathogens Compliance Program. Activities that are delegated to the Exposure Control Officer typically include, but are not limited to:

- a. Overall responsibility for implementing the Exposure Control Plan for the entire facility.
- b. Working with administrators and other employees to develop and administer any additional bloodborne pathogens related policies and practices needed to support the effective implementation of plan.
- c. Looking for ways to improve the Exposure Control Plan, as well as revise and update the plan when necessary.
- d. Knowing and implementing current legal requirements concerning bloodborne pathogens.
- e. Investigating every reported exposure incident within 24 hours of occurrence.
- f. Acting as facility liaison during PEOSH inspections.
- g. Conducting periodic school audits to maintain an up-to-date Exposure Control Plan.

The Director of Purchasing and Maintenance has been appointed as the schools Exposure Control Officer for the Lawton Campus.

The Kiowa/Tillman Campus Director is the Exposure Control Officer for the Frederick Campus.

The following personnel assisted in updating the Exposure Control Plan:

Deputy Superintendent
LPN Coordinator
Campus Principal
ACD Coordinator

The Safety Coordinator
School Nurse
ACD Director
ACE Evening Coordinator

2. Building Administrators

Building administrators are responsible for exposure control in their respective areas. They work directly with the Exposure Control Officer and our employees to ensure that proper exposure control procedures are followed.

3. Education / Training Coordinator

Our Education / Training Coordinator will be 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:

- a. Maintaining an up-to-date list of facility personnel requiring training (in conjunction with facility management). Listed on pages 11-13
- b. Identify suitable education / training needed for employees.
- c. Scheduling periodic seminars for employees.
- d. Periodically reviewing the training programs with the Exposure Control Officer and Building Administrators to include appropriate new information.

4. Employees

As with all our school's activities, our employees have the most important role in our Exposure Control plan as explained in this book, because the ultimate executing of this plan rests in their hands.

In this role, employees will be expected to:

- a. Identify tasks performed that have occupational exposure risks.
- b. Attend the bloodborne pathogens training sessions.
- c. Plan and conduct all operations in accordance with our work practice controls.
- d. Develop good personal hygiene habits.

B. Availability Of The Exposure Control Plan To Employees

To help them with their efforts. Our school's Exposure Control Plan is available to our employees at any time. Employees are advised of this availability during their education / training sessions. The building administrators keep copies of the Exposure Control Plan. This document is also available on-line on the school's intranet.

C. Review And Update Of The Plan

We recognize that it is important to keep our Exposure Control Plan up to date. To ensure this, the plan will be reviewed and updated under the following circumstances.

1. Annually, on or before June 30th of each year.
2. Whenever new or modified tasks and procedures are implemented which affect occupational exposure of our employees.
3. Whenever we establish new functional positions within our facility that may involve exposure to bloodborne pathogens.

Section 3

Exposure Potential Determination

SECTION 3

EXPOSURE POTENTIAL DETERMINATION

A. Introduction

One of the elements necessary for a successful Exposure Control Plan is to identify exposure situations employees may encounter. To facilitate this in our school, we have prepared the following lists:

1. Job classifications in which **ALL** employees have potential occupational exposure to blood and other potentially infectious materials.
2. Job classifications in which **SOME** employees have potential occupational exposure to blood and other potentially infectious materials.
3. Tasks and procedures in which occupational exposure to blood and other potentially infectious materials occur in these job classifications.

NOTES: Individuals who are paid wage or salary are considered employees.

Job classifications, which include occupational exposure would include, but are not limited to health careers, teachers who have been trained in first aid, custodians, and teachers of childcare programs.

B. Hepatitis B Vaccination Program

To protect our employees as much as possible from the potential of Hepatitis B infection, our facility has implemented a vaccination program. This program is available, at no cost, to all employees who have occupational exposure to bloodborne pathogens. However, because the Energix-B vaccination causes adverse reactions for some people with immune system abnormalities or problems for women who are pregnant or nursing their child, we provide information on the contraindications and require the person's physician's approval (see forms/reports list, page 30).

The vaccination program consists of a series of three inoculations over a six-month period. As part of their bloodborne pathogens training, our employees have received information regarding the Hepatitis vaccination, including its safety and effectiveness.

The Licensed Practical Nurse Coordinator is responsible for setting up and operating our vaccination program.

Vaccinations are performed under the supervision of a healthcare professional. All employees with potential occupational exposure are offered the opportunity to participate in the vaccination program. The vaccination will be made available after training. Employees may decline to take part in the program by signing the Hepatitis B Vaccination Declination form (see forms/reports list, page 30), but may later accept vaccination after initial declination. HBV antibody titer testing is also available, if 10 years or more have elapsed since last vaccination.

C. Job Classifications: All Employees

Listed below are the job classifications in our school where **ALL** employees handle the human body, blood, and other potentially infectious materials, which may result in possible exposure to bloodborne pathogens.

FULL TIME PROGRAMS/FULL TIME POSITIONS	
Job Title	Location
Licensed Practical Nurse Coordinator/Instructor	Comanche County Campus Tillman/Kiowa Campus
Radiologic Technology Director / Instructor	Comanche County Campus
Advanced Respiratory Therapist Director/Instructor	Comanche County Campus
Surgical Technologist Director/Instructor	Comanche County Campus
Health Careers Technology Instructor	Comanche County Campus Tillman / Kiowa Campus
Long Term Care Assistant Instructor	Comanche County Campus
Firefighter / EMT Instructor	Comanche County Campus
Law Enforcement / Criminal Justice	Comanche County Campus
School Nurse	Comanche County Campus
Custodians	Comanche County Campus Tillman / Kiowa Campus

SHORT-TERM PROGRAMS	
Job Title	Location
Long Term Care Assistant Instructor	Comanche County Campus Tillman/Kiowa Campus
Firefighter/EMT/Paramedic Instructor	Comanche County Campus Tillman/Kiowa Campus
Phlebotomy Instructor	Comanche County Campus
Certified Medication Aide Instructor	Comanche County Campus
Plumbing Instructor	Comanche County Campus
Law Enforcement / Criminal Justice Instructor	Comanche County Campus Tillman/Kiowa Campus
Medication Administration Training Instructor	Comanche County Campus Tillman/Kiowa Campus
Other Health Careers Instructor	Comanche County Campus Tillman/Kiowa Campus

D. Job Classifications: Some Employees

Listed below are the job classifications in our school where **SOME** employees may handle the human body, blood, and other potentially infectious materials, which can result in possible exposure to bloodborne pathogens.

FULL TIME POSITIONS	
Job Title	Location
All Employees	Comanche County Campus Tillman/Kiowa Campus
Administrators	Comanche County Campus Tillman/Kiowa Campus
Building and Grounds	Comanche County Campus Tillman/Kiowa Campus
Maintenance	Comanche County Campus Tillman/Kiowa Campus

E. Tasks And Procedures

Listed below are the Tasks and Procedures in our school in which the human body, blood and other potentially infectious materials are handled, which may result in exposure to bloodborne pathogens.

TASK / PROCEDURE	JOB CLASSIFICATION	LOCATION
RADIOLOGIC TECHNOLOGY		
Radiologic Exam Procedures	Instructors	Various Health Care Facilities
ADVANCED RESPIRATORY THERAPIST		
Respiratory Therapist Procedures	Instructors	Various Health Care Facilities
SURGICAL TECHNOLOGIST		
Surgical Procedures	Instructors	Various Health Care Facilities
LICENSED PRACTICAL NURSE & LONG-TERM CARE ASSISTANT		
Patient Care and Procedures	Instructors	Various Health Care Facilities
HEALTH CAREERS TECHNOLOGY		
Patient Care and Procedures	Instructors	Various Health Care Facilities

TASK / PROCEDURE	JOB CLASSIFICATION	LOCATION
FIREFIGHTER / EMT / PARAMEDIC		
Rescue, First Aid & CPR Operations	Instructors	Ambulance Service, Emergency Room and Fire Department
BIO-MEDICAL		
Labs and Observations	Instructors	ICU, CCU, Pharmacy, Radiology, Nursery, Cath Lab, ER, PT, OT, Speech Therapy, Lab, O.R., all other clinical sites
LAW ENFORCEMENT		
Rescue, First Aid & CPR Operations	Instructors	Police OJT, Internship
PLUMBING		
Working with Open Sewer Lines or Toilet Repair	Instructors	On Site
CUSTODIANS		
Cleaning up from an Accident / Illness (Vomit) Scene	Custodians	On location of incident
Cleaning of the Restrooms	Custodians	Various Buildings & Locations
ALL OTHER EMPLOYEES		
Responding to an Accident / Victim / Student	Employees	Various Locations
Separating Students that have Engaged in a Fight	Employees	Various Locations
Students that have Become ill in the Classroom (Vomit)	Employees	Various Locations
BUILDING & GROUNDS / MAINTENANCE		
Working on Open Sewer Lines or Toilet Repair	Maintenance	Various Locations

Section 4

Methods of Compliance

SECTION 4

METHODS OF COMPLIANCE

One of the critical elements of an effective Exposure Control Plan is the method of compliance. Numerous areas of preventive measures can minimize or even eliminate exposure to bloodborne pathogens in our work sites. We pattern this section after OSHA's 29 CFR § 1910.1030 (d).

A. Universal or Standard Precautions

Great Plains Technology Center observes the practice of "UNIVERSAL PRECAUTIONS" (also known as STANDARD PRECAUTIONS) to prevent contact with blood and other fluids as if they were known to be infectious for HBV, HCV, HIV, and other bloodborne pathogens:

- | | |
|----------------------|---|
| -Semen | -Vaginal Secretions |
| -Cerebrospinal Fluid | -Synovial Fluid |
| -Pleural Fluid | -Pericardial Fluid |
| -Peritoneal Fluid | -Amniotic Fluid |
| -Saliva | -Any body fluid that is visibly contaminated with blood |

In circumstances where it is difficult or impossible to differentiate between body fluid types, such as vomit or feces, we assume all body fluids to be potentially infectious.

B. Engineering Controls And Work Practice Controls

Great Plains Technology Center solicits input from students and non-managerial employees responsible for direct patient care, who are potentially exposed to injuries from contaminated sharps, in identifications, evaluation, and selection of effective engineering and work practice controls.

1. Engineering Controls

A key element in the success of this plan is the use of engineering controls to reduce the risk of exposure. Some of the engineering controls include:

- a. Sharps disposal containers
- b. Safer needle devices and needleless systems to reduce exposure by percutaneous contact including, but not limited to:
 - (1) Syringes with a sliding sheath that shields the attached needle after use
 - (2) Needles that retract into a syringe after use
 - (3) Intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a blunt cannula or other non-needle connection.

- c. Hand washing facilities (which are readily accessible to employees)
- d. If hand washing facilities are not available, the school will provide an appropriate antiseptic hand cleanser with clean cloth / paper towels or antiseptic towelettes. (Even if hand cleansers and towelettes are used, the employee shall wash their hands with soap and running water as soon as feasible. Most hand cleansers and towelettes do not protect against viruses.)
- e. Biohazard trash bags / buckets

Engineering Controls need to be inspected, reviewed, maintained, replaced, updated, and implemented by departmental staff as needed. Currently the following areas have equipment.

CONTROL EQUIPMENT	LOCATION
Hand Washing Stations	Every shop and all restrooms. Medical labs.
Sharp Containers	Nursing Lab, Respiratory Lab, Radiology Lab. Firefighter / EMT, Biomedical, and Medical Library
Biohazard Clean-Up Kits	Custodial Closets
Personal Equipment Kits	In all First Aid Kits in classrooms, labs, and offices.

2. Work Practice Controls

In addition to the engineering controls, our facility uses several Work Practice Controls to help eliminate or minimize employee exposure to bloodborne pathogens. The Exposure Control Officer will work with the various building administrators and training coordinators to affect this implementation. Some of the work practice controls include but are not limited to:

- a. Ensuring that employees are instructed to wash their hands immediately or as soon as feasible after removal of gloves and /or other personal protective equipment.
- b. Ensuring that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.
- c. Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed. Shearing or breaking of contaminated needles is prohibited. The law does allow for the following exclusions if:
 - (1) It can be demonstrated that there is no feasible alternative
 - (2) The action is required by specific medical procedures
 - (3) In the two situations above, the recapping or needle removal is accomplished using medical (or mechanical) device or one-handed technique.

- d. Placing contaminated needles or sharps into appropriate containers immediately after use, or as soon as possible. The containers shall be:
 - (1) Puncture-resistant
 - (2) Color-coded or labeled with a biohazard warning label
 - (3) Leak-proof on the sides and bottom
- e. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.
- f. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets, on counter-tops or bench-tops where blood or other potentially infectious materials are present.
- g. All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.
- h. Mouth pipetting / suctioning of blood or other infectious material is prohibited.
- i. Specimens of blood or other potentially infectious materials shall be placed in container, which prevents leakage during collections, handling, processing, storing, transporting, or shipping.
 - (1) The container shall be color labeled or color-coded
 - (2) The container must be closed prior to being stored, transported, or shipped.
- j. If outside contamination of a primary specimen container occurs, that container is placed within a second leak-proof container, which prevents leakage during handling, processing, storing, transporting, or shipping and is labeled or color-coded, (if the specimen can puncture the primary container, the secondary container must be puncture-resistant as well).
- k. Equipment, which becomes contaminated is examined prior to servicing or shipping, and decontaminated as necessary (unless it can be demonstrated that decontamination is not feasible).
 - (1) An appropriate biohazard-warning label is attached to any contaminated equipment identifying the contaminated portions
 - (2) Information regarding the remaining contamination is conveyed to all affected employees and the equipment service representative prior to handling, serving, or shipping.

C. Personal Protective Equipment

Personal Protective Equipment (PPE) is the employee's "last line of defense" against bloodborne pathogens. Because of this, our facility provides (at NO cost to the employee) the PPE that they might need to protect themselves against such exposure. This equipment includes, but is not limited to gloves, gowns, face shields / masks, safety glasses, resuscitation bags, pocket CPR masks, hoods, and shoe covers.

NOTE: Some of the PPE is provided by the Clinical Site Departments (nursing homes, hospitals, ambulance services, etc.)

Personal Protective Equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Hypoallergenic gloves, glove liners, and similar alternatives are readily available to employees who are allergic to the gloves our facility normally uses.

The Exposure Control Officer, working with the building administrators, is responsible for ensuring that all departments and work areas have appropriate PPE available to employees.

Our employees are trained regarding the use of the appropriate PPE for their job classifications and tasks / procedures they perform. Additional training is provided, when necessary, if an employee takes a new position or new job functions are added to their 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 the department head / coordinator working with our school's Training Coordinator.

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

1. All PPE is inspected periodically and repaired or replaced as needed to maintain its effectiveness.
2. Reusable PPE is cleaned, laundered, and decontaminated as needed.
3. Single-use PPE is disposed of by forwarding that equipment to an approved BBP container then disposed by an approved disposal contractor.

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

1. Any garments penetrated by blood or other infectious materials are removed as soon as practical and placed in biohazard container.
2. All personal protective equipment is removed prior to leaving a work area.

3. Gloves are worn when employees anticipate hand contact with potentially infectious materials.
4. Disposable 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.
6. Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.
7. Protective clothing (such as gowns and aprons) is worn whenever potential exposure to the body is anticipated.
8. Surgical caps / hoods and / or shoe covers / boots are used in any instances where “gross contamination” is anticipated (such as with autopsies or orthopedic surgery).

D. Housekeeping

Maintaining our facility in a clean and sanitary condition is an important part of our Exposure Control Plan.

1. The following areas are cleaned, as needed, with germicidal solution. Appropriate PPE is worn when cleaning infectious materials.
 - a. Radiologic Technology Lab / Classroom
 - b. Advanced Respiratory Therapist Lab / Classroom
 - c. Surgical Technologist Lab / Classroom
 - d. LPN / LTCA Lab / Classroom
 - e. Health Careers Lab / Classroom
 - f. EMT / Paramedic Lab / Classroom
 - g. EMT / Firefighter Classroom
 - h. Restrooms
2. Our housekeeping / environmental services staff is trained annually on exposure clean up, and employs the following practices:
 - a. All equipment and surfaces are to be cleaned and decontaminated after contact with blood or other potentially infectious materials:
 - (1) After the completion of procedures
 - (2) Immediately (or as soon as feasible) when surfaces are overtly contaminated
 - (3) After any spill of blood or infectious materials

- (4) At the end of the work shift if the surface may have been contaminated during the shift

NOTE: Be sure to use the proper disinfectant solution (1 part bleach to 10 parts water) or other approved germicidal disinfectant.

- b. Protective coverings (such as plastic wrap, aluminum foil, or absorbent paper) are removed and replaced:
 - (1) As soon as it is feasible when overtly contaminated.
 - (2) At the end of the work shift if they may have been contaminated during the shift.
 - c. All pails, bins, cans, 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 a dustpan and a brush, tongs, forceps, etc.).
 - e. Contaminated reusable sharps are stored in containers that do not require "hand processing".
3. We are also very careful in handling regulated waste, including contaminated sharps, used bandages, and other potentially infectious material.
 - a. Sharps are discarded in containers that are:
 - (1) Capable of being closed
 - (2) Puncture resistant
 - (3) Red in color and labeled with the appropriate biohazard warning label
 - b. Used bandages and other potentially infectious materials are discarded in red bags, labeled with the appropriate biohazard warning label.
 - c. Containers for this regulated waste are located throughout our facility within easy access of our employees and as close as possible to the sources of the waste.
 - d. Waste containers are maintained upright, routinely replaced, and not allowed to overfill.
 - e. When our 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.

Sharps containers and biohazard waste are stored in Building 700, Room 756.

Great Plains Technology Center contracts with an approved disposal company for the collection and handling of our facility's contaminated waste.

E. Contaminated Laundry / Clothing

Clothing such as smocks, clinic jackets, lab coats and similar outer garments such as work uniforms are not considered to be personal protective equipment (PPE). Such garments could become soiled with blood and / or other potentially infectious materials during the performance of the employee's duties.

1. In such case, the employee shall remove the garment(s) immediately or as soon as possible.
 - a. Contaminated laundry shall be handled as little as possible with a minimum of agitation and shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.
 - b. Contaminated laundry shall be placed and transported in red biohazard bags or containers available from the building custodian.
 - c. Alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.
 - d. Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and / or leakage of fluids to the exteriors.
2. Contaminated PPE is to be given to the Exposure Control Officer who arranges for it to be laundered in a specially designed washing machine located in Building 800 that is used primarily to clean PPE worn in our Firefighter / EMT training program. The building 800 custodian is trained on use of this machine and is the designated person to perform laundering of contaminated PPE for the entire campus.
 - a. We ensure through training and instruction that employees who have contact with contaminated laundry know to wear protective gloves and other appropriate personal protective equipment.
 - b. When we ship contaminated laundry off-site to a second facility that does not utilize Universal Precautions in the handling of all laundry, we place such laundry in bags or containers that are labeled or color-coded. The Exposure Control Officer is responsible for making these arrangements.

Section 5

HIV and HBV Research Lab and Production Facilities

SECTION 5

HIV AND HBV RESEARCH LABORATORIES AND PRODUCTION FACILITIES

We realize that there are special requirements for HIV and HBV research laboratories and production facilities in the areas of construction, engineering controls, work practices, the use of containment equipment, as well as employee education and training.

However, since the laboratories in our facility are clinical and diagnostic in nature, these special requirements do not apply.

Therefore, our Exposure Control Plan does not address these requirements.

Section 6

Exposure Incident Procedures

SECTION 6

EXPOSURE INCIDENT PROCEDURES

Everyone in our facility recognized that, even with good adherence to all our exposure prevention practices, exposure incidents can occur. As a result, we have implemented procedures should an exposure to blood or other potentially infectious materials occur.

A. Steps To Take If An Exposure Incident Occurs

1. What Is Considered An Exposure Incident?

The OSHA standard describes exposures to bloodborne pathogens that take place in the workplace as Occupational Exposures. We have detailed instructions for employees to follow if an accident or contaminated substance is present.

Question: Two students were engaged in a fight on school property. Blood got on me as a result of trying to separate them. Was this an Exposure incident?

Answer: Yes. If you got blood on you because of your actions, then you could have been exposed.

Question: A student was injured in my shop. I put on gloves to treat the injury. I called the custodian to decontaminate the area and remove the biohazard waste. Was this an Exposure Incident?

Answer: No. If you kept a barrier (gloves) between you and the blood and none got on your person, then you were not exposed.

Question: If a student vomited in the office in which I work and I did not come in contact with the vomit, would this be an Exposure Incident?

Answer: No. Universal Precautions tell us that any body fluid could be a source of contamination, but in a case of no exposure it is not considered an Exposure Incident.

If an incident occurs, we are required to fill out an Accident / Incident Report form, which is available on **page 31** of this book, or for additional copies, on the intranet in the Policies and Procedures section. Instructions are in the Emergency Management Plan.

If an employee comes in contact with another person's blood, report it immediately. We have supplied personal protective equipment and procedures to protect our employees. If you do not have the barriers in place, you could be exposed, also, it is conceivable that gloves could tear, and blood could splatter. We need to treat those situations as serious and follow the Universal Precaution Procedures when the need develops. If you have been exposed, wash the affected area thoroughly with soap and water and **immediately** contact the **School Nurse** at **5571**, so that the proper follow-up investigation can take place. Concerns about the exposure should be directed to the **Exposure Control officer** at **5697**.

B. Employee Instructions For Exposure To Blood And Other Potentially Infectious Bodily Materials

Employees may be exposed to another person's blood or bodily materials in many different circumstances. Direct contact with another person could include, but is not limited to, assisting an injured student or employee; participating in a nursing activity, or breaking up a fight between student's indirect contact could result from janitorial duties but also from touching blood or other substance left behind that you accidentally encounter.

In such instances, time is of the essence to perform the following steps:

Step #1 – Wash the affected area thoroughly with soap and water and immediately report your exposure to the School Nurse, #5571.

Step #2 – The School Nurse notifies the Exposure Control Officer immediately, but no later than the morning after the incident, to enable an investigation to be initiated within 24 hours of occurrence.

Step #3 – You will be asked questions by the Exposure Control Officer that will help verify and substantiate the facts about your exposure.

Step #4 – You then will receive medical consultation and treatment, to include Post Exposure Prophylaxis (at no cost to employee), if required, as expeditiously as possible, and you will be offered the Hepatitis B vaccination within 24 hours. The Exposure Control Officer and School Nurse are responsible to ensure you receive this step, at a reasonable time and place following your exposure occurrence. The identity of the sources /individuals remains confidential.

C. Post-Exposure Evaluation

If one of our employees is involved in an incident where exposure to blood or other potentially infectious materials may have occurred, we immediately focus our efforts on making sure that our employees receive medical consultation and treatment (if required) as expeditiously as possible and investigate the circumstances surrounding the exposure incident.

1. Incident Investigation

- a. The Exposure Control Officer investigates every exposure incident that occurs in our facility when notified by the School Nurse. This investigation is initiated within 24 hours after the incident occurs and involves gathering the following information (see Accident / Incident Report, page 31).
- b. After this information is gathered and evaluated, a written summary of the incident and its causes is prepared. Recommendations are made for avoiding similar incidents in the future using the "Exposure Incident Investigation Form".

- c. The Business Manager records employee injuries on the OSHA 300 Log of Work-Related Injuries and Illnesses and the OSHA 301 Injury and Illness Incident Report, which identifies the individual who has been injured. If the employee is injured by medial sharp, the injury is separately recorded on the Sharps Injury Log used only for recording the type and brand of device involved in the incident, the department or work area where the exposure occurred, and an explanation of how the incident occurred. (This separate log enables the employer to keep track of where problem equipment or areas are. This information is recoded in a way that segregates sharps injuries from other types of work-related injuries and illness or allows sharps injuries to be easily separated. This information must be maintained in such a manner to protect the confidentiality of the injured employee).

2. Post-Exposure Follow-Up

To make sure that our employees receive the best and most timely treatment if any exposure to bloodborne pathogens should occur, our facility has set up a comprehensive post-exposure evaluation and follow-up process.

- a. The School Nurse completes the Post-Exposure Nurse's Report (see forms / reports) to verify that all the steps in the process have been taken. This process shall be implemented and overseen by the Exposure Control Officer, the School Nurse, and the respective Building Administrator(s).

We recognize that much of the information involved in this process must remain confidential and will do everything possible to protect the privacy of the people involved.

The School Nurse documents all medical sharps injuries.

- b. Next, if the Consent for Test form is signed (see forms / reports). We contract for the collection and testing of the source / individual's blood to determine HBV or HIV infectivity. This information will also be made available to the exposed employee if it is obtained. The identity of the sources / individuals remains confidential.
- c. Finally, we contract for the collection and testing of the blood of the exposed employee for HBV and HIV status.
- d. Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee's medical status. This includes an evaluation of any reported illness, as well as any recommended treatment.

D. Information Provided To The Healthcare Professional

To assist the healthcare professional, we forward a copy of the Accident / Incident Report, with medical referral.

E. Healthcare Professional/s Written Opinion

After the consultation, the healthcare professional provides our facility with a written opinion evaluation the exposed employee's situation. We, in turn, furnish a copy of this opinion to the exposed employee.

In keeping with this process's 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 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 diagnosis will remain confidential and will not be included in this written report.

LIST OF FORMS

Title	Page
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Post-Exposure Nurse's Report	35
Consent for Test	37



Hepatitis B Fact Sheet	39
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GREAT PLAINS Technology Center Accident/Incident Form

Student Employee Visitor BDC Tenant

Is this an Accident Incident?

To be filled in at the time of the accident / incident by the person caring for the injured person or by the person who is reporting the accident / incident.

Name: _____ Phone: _____

Address: _____ Gender: _____

High School or Adult _____ Date: _____ Time: _____

Program: _____ Teacher: _____

If high school student, were the parents notified? Yes _____ No _____

Person Notified: _____ Time: _____

Location of Accident / Incident: _____

Person(s) in Attendance: _____

How Accident / Incident occurred and description of injury if applicable: _____

Treatment / Disposition: _____

(Signature)

Statement: " _____ (refused or accepted) to have treatment provided by the school nurse." **Circle One**

Signature: _____

Date: _____

Routing Information: Initial and route to Campus Director

____ Program Supervisor

____ Building Administrator

____ Campus Director

If the injured person is an employee, the Building Administrator will notify the Business Office.

EXPOSURE INCIDENT INVESTIGATION FORM

Name of Exposed Individual: _____

Date of Incident: _____ Time of Incident: _____

Location: _____

Potentially Infectious Materials Involved:

Type: _____ Source: _____

Circumstances (work being performed, etc.): _____

Cause of Incident (accident, equipment malfunction, etc.):

Personal Protective Equipment Being Used: _____

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

Recommendations for Avoiding Recurrence: _____

POST-EXPOSURE NURSE'S REPORT

The following steps must be taken by the School Nurse in the case of an employee's exposure to Bloodborne Pathogens:

Name of Exposed Individual: _____

Date of Incident: _____ Time of Incident: _____

Location: _____

ACTIVITY

COMPLETION DATE

Exposure Control Officer notified within 24 hours _____

GPTC Business Office Accountant notified _____

Employee furnished with copy of incident report _____

Source individual identified
(_____)

Source Individual

Source individual's blood tested and _____

Results given to exposed employee _____

_____ Consent has not been
Able to be obtained

Exposed employee's blood collected _____

And tested, follow-up date _____

Appointment for employee with healthcare _____

Professional, follow-up date
(_____)

Professional's Name

Documentation forwarded to healthcare
Professional _____

_____ Description of exposed employee's duties

_____ Description of exposure incident, including routes of exposure

_____ Result of source individual's blood testing

_____ Employee's safety and training records for BBP and TB Exposure

Hepatitis B Vaccination was offered _____

Hepatitis B vaccination decline or given (specify) _____

BACK OF FORM

NOTES: _____

[Lined area for notes]

CONSENT FOR TEST

I have been informed about the possibility of infection for HBV / HIV / Hepatitis and the test for the antibodies. I give my consent to have a blood test for the antibodies. I understand that my test results shall be made available to the exposed employee who shall be informed of applicable laws and regulations concerning disclosure of my identity and infectious status.

Signature

Date

Witness

Date

Great Plains Technology Center does not discriminate based on race, color, national origin, religion, gender, gender expression, sexual orientation, gender identity, or qualified disability or veteran's status in admission to its programs, services, activities, or access to them, in treatment of individuals, or in any aspect of the Technology Center's operations.

HEPATITIS B VACCINE FACT SHEET

1. Trade names: Recombivax, Heptavax, Engerix – B.
2. Indicated for immunization against infection caused by Hepatitis B (only).
3. Contraindicated in individuals hypersensitive to yeast or any component of the vaccine.
4. Individuals who develop symptoms suggestive of hypersensitivity after an injection should not receive further injections.
5. Individuals are not to receive the vaccine if pregnant, breastfeeding, or ill with any serious active infection.
6. Adverse reactions reported (not commonly):
 - *Local reaction (injection site)*
 - *Fatigue / weakness; headache; fever; malaise*
 - *Nausea; diarrhea*
 - *Pharyngitis; upper respiratory infection*
7. Vaccine is given intramuscularly. The deltoid muscle is the preferred site.
8. The immunization regime consists of 3 doses of vaccine on occasion as follows: initial, 1 month, 6 months.
9. Re-vaccination may be necessary after ten years.
10. All three doses must be received to maximally benefit immunogenically from the vaccine (approximately 85-97% seroconversion).

HEPATITIS B VACCINE WARNINGS

PHYSICIAN'S APPROVAL

Information on the Disease

Hepatitis means inflammation of the liver. Several hepatitis viruses are known to cause a systemic infection resulting in major pathologic changes in the liver (e.g., A, B, C, D, E). Most people with Hepatitis B recover completely, but approximately 7% of adults who are infected today in the U.S. will become chronic carriers. CDC estimates that there are approximately 1.17 million chronic carriers of Hepatitis B virus in the U.S. today. Many of these chronic carriers have no symptoms and appear well yet can transmit the virus to others. Those patients who become chronic carriers are at risk of developing primary Hepatocellular Carcinoma. Among other factors, infection with Hepatitis B may be the single most important factor for the development of the carcinoma.

Hepatitis B virus can be transmitted by contact with blood and body fluids (including contaminated needles), semen, tears, saliva, urine, breast milk, and vaginal secretions. Health workers are high risk of acquiring Hepatitis B because of frequent contact with blood or potentially contaminated body fluids and, therefore, the vaccine is recommended to prevent illness.

The Vaccine

'Engerix-B' (Hepatitis B Vaccine [Recombinant]) is a noninfectious Recombinant DNA Hepatitis B Vaccine. Clinical studies have shown that after three doses, 85-97% of healthy adults have been seroprotected.

Dosing Schedules & Administration

'Engerix-B' should be administered by IM injection. The injection should be given in the deltoid region. 'Engerix-B' should not be given in the glutei region; such injections may result in suboptimal response.

Adverse Reactions

'Engerix-B (Hepatitis B Vaccine [Recombinant]) is generally well tolerated. During clinical studies involving over 10,000 individuals distributed over all age groups, no serious adverse reactions attributable to vaccine administration were reported. As with any vaccine, however, it is possible that expanded commercial use of the vaccine could reveal rare adverse reactions not observed in clinical studies. The most frequently reported adverse reactions (1% - 10%) include injection –site soreness, induration, erythema, swelling, fever, headache, and dizziness. Other more serious adverse reactions have occurred infrequently. Please see your regular physician if you have severe adverse reactions.

Contraindications

Hypersensitivity to yeast or any other component of the vaccine is a contraindication for use of the vaccine.

Warnings

Patients experiencing hypersensitivity after an 'Engerix-B' (Hepatitis B Vaccine [Recombinant]) injection should not receive further injections of 'Engerix-B' (See Contraindications).

Pregnancy

Pregnancy Category C: Animal reproduction studies have not been conducted with 'Engerix-B'. It is also not known whether 'Engerix-B' can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. 'Engerix-B' should be given to a pregnant woman only if clearly needed.

Nursing Mothers

It is not known whether 'Engerix-B' is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when 'Engerix-B' is administered to a nursing woman.

Approval from Physician

Yes _____ No _____ Approved for Vaccination

Physician's Signature

Date

Physician approval is required only if you have immune system abnormalities or immune deficiency problems.

HEPATITIS B VACCINE DECLINATION

Name: _____ SS#: _____
Please Print

I hereby acknowledge that I have read their Hepatitis B vaccine fact sheet. All my questions regarding this disease, vaccine, and procedure have been satisfactorily answered. (Please sign and date the statement below that applies to your decision).

I have previously taken the Hepatitis B Vaccine series.

Signature

Date

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 the Hepatitis B Vaccine, at no charge to myself. However, I decline the Hepatitis B vaccination currently.** 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.**

I do not wish to have the Hepatitis B vaccine series.

Signature

Date

Section 7

Labels and Signs

Below are some samples of biohazard warning labels:



HAZARDOUS WASTE	
STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL	
IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.	
GENERATOR INFORMATION:	
NAME _____	PHONE _____
ADDRESS _____	STATE _____ ZIP _____
CITY _____	
EPA IDENTIFICATION NO. / MANIFEST TRACKING NO. _____	
EPA WASTE NO. _____	ACCUMULATION START DATE _____
CONTENTS, COMPOSITION: _____	
PHYSICAL STATE: <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID	
HAZARDOUS PROPERTIES: <input type="checkbox"/> FLAMMABLE <input type="checkbox"/> TOXIC <input type="checkbox"/> CORROSIVE <input type="checkbox"/> REACTIVITY <input type="checkbox"/> OTHER _____	
D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX _____	
HANDLE WITH CARE!	

SECTION 7 LABELS AND SIGNS

For our employees, the most obvious warnings of possible exposure to bloodborne pathogens are biohazard labels and signs. Because of this, we have implemented a comprehensive biohazard-warning program in our facility using labels of the type shown on the previous page, or when appropriate, using red “color-coded” containers. The Exposure Control Officer is responsible for setting up and maintaining this program in our facility.

The following items in our facility will be labeled when needed:

- Containers of regulated waste
- Refrigerators / freezers containing blood or other potentially infectious material
- Sharps disposal containers
- Other containers used to store, transport, or ship blood and other infectious materials.
- Laundry bags and containers
- Contaminated equipment

The types of labels that are needed for identification purposes shall provide easy recognition to potential biohazard exposures. Labels must meet the following criteria:

- They must be fluorescent orange or orange-red, or predominantly so, with lettering or symbols in a contrasting color.
- Labels shall be attached as close as feasible to the container by string, wire, adhesive, or other methods that prevent their loss or unintentional removal.
- Red bags or red containers may be substituted for labels.
- Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment, or disposal are exempted from the labeling requirement.

Section 8

Information and Training

SECTION 8

INFORMATION AND TRAINING

Having well informed and educated employees is extremely important when attempting to eliminate or minimize an employee's exposure to bloodborne pathogens. The LPN Coordinator and the School Nurse are responsible for annual Exposure Control training.

A. Training Topics

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

1. The OSHA Bloodborne Pathogens Standard itself
2. The epidemiology and symptoms of bloodborne diseases obtained from the Centers For Disease Control (CDC)
3. The modes of transmission of bloodborne pathogens
4. Our facility's Exposure Control Plan (and where employees can access a copy)
5. Appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials
6. A review of the use and limitations 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 facility
 - d. Removal
 - e. Handling
 - f. Decontamination
 - g. Disposal
8. Visual warnings of biohazards within our facility 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. Our Facility's Free Vaccination Program
 - f. Actions to take and persons to contact in an emergency involving blood or other potentially infectious materials
10. The procedures to follow if an exposure incident occurs, including incident reporting.
11. Information on the post-exposure evaluation and follow-up, including medical consultation that our facility will provide.

B. Training Methods

Our facility's training presentations make use of several training techniques including, but are not limited to, those below:

1. In-service computer-based training (CBT) and test
2. Classroom type atmosphere with personal instruction as needed
3. Videotape programs available on request
4. Training manuals / employee handouts
5. CBT review sessions annually

C. Recordkeeping

To facilitate the training of our employees, as well as to document the training process, we maintain records containing the following information:

1. Dates of all training sessions
2. Contents / summary of the training sessions
3. Names and job titles of employees attending the training sessions
4. Each employee is required to achieve a passing score on the BBP test to complete the training program

The secretary for the Professional Development Council, under supervision of the Director of Instruction, keeps the records.

We use forms and computer systems to facilitate this recordkeeping.

These training records are available for examination and copying to our employees and their representatives, as well as OSHA and its representatives.

Section 9

Tuberculosis Control

SECTION 9

TUBERCULOSIS CONTROL

A. Epidemiology

According to the CDC, Tuberculosis continues to be a public health problem in the United States with 8,300 cases reported in 2022. TB incidence also increased slightly in 2022. Reported TB cases and TB incidence in the United States are returning to pre-pandemic levels, following a substantial decline in 2020, likely due to factors associated with the COVID-19 pandemic including missed or delayed diagnoses.

Persons at particularly high risk of developing tuberculosis include:

1. Close contacts of infectious tuberculosis cases
2. Foreign-born persons from high prevalence countries (i.e., those from Asia, Africa, and Latin America)
3. Low-income populations, including high-risk minorities, especially African Americans, Hispanics, and Native Americans.
4. Alcoholics and intravenous drug users
5. Persons with medical risk factors known to substantially increase the risk of tuberculosis once infection has occurred
6. Residents of long-term care facilities, including prisons and nursing homes
7. Persons with HIV infection

B. Transmissions

Tuberculosis is a disease caused by bacterial infection with a tiny germ. *Mycobacterium tuberculosis*. These germs are carried through the air in infectious airborne droplets (“droplet nuclei”), which are produced when persons with tuberculosis of the lung or larynx sneeze, cough, sing, or speak forcefully. These small airborne particles are less than 5 microns in size. Infectiousness varies considerably from case to case.

When persons repeatedly breathe air contaminated by an infectious person, they may become infected with the tubercle bacillus. Persons at highest risk of acquiring infection with tubercle bacilli are close contacts who daily breathe in potentially infectious air from a person with undiagnosed or untreated pulmonary tuberculosis.

In an occupational setting, persons with the close contact (repeated or prolonged) with high-risk groups, identified above, or exposed to high hazard procedures are seen to be at increased risk and in need of protections.

Tuberculosis is not spread by dishes, drinking glasses, bedclothes, dust, etc., there is no need to boil dishes or clothes or wash walls as was done in years past.

After exposure, some individual's exposed to tuberculosis will have tubercle bacilli enter the alveoli of the lungs and establish an infection. The lungs are the most common sites for clinical tuberculosis. However, tubercle bacilli are spread through the lymphatic channels to regional lymph nodes and then through the blood stream to more distant tissues and organ sites. Tuberculosis can also occur as a pleural effusion, miliary disease (disseminated tuberculosis), in the lymphatic or genitourinary systems, or in any other body organ or tissue.

After the tubercle germs enter the body (originally through the lung), multiply there, and then reach other organs early in the infection through the bloodstream, they remain in a dormant state for years or decades.

The tuberculin skin test is used to identify persons who have been infected with tubercle bacilli.

The best way to stop transmission is to start effective anti-tuberculosis therapy, which quickly eliminates many bacilli and renders the person non-infectious.

C. Signs And Symptoms

Pulmonary tuberculosis should be suspected in persons with:

- A productive prolonged cough (over 3 weeks duration)
- Fever
- Chills
- Night sweats
- Loss of appetite
- Weight loss
- Hemoptysis
- Fatigue

D. Occupational Risks

1. Employees / Environments

The risk of exposure to tuberculosis by healthcare workers or employees in high-risk environments is substantial. High-risk environments are setting in which persons with infectious tuberculosis are more likely to live, the environmental characteristics (e.g., size of room, type of ventilation) are conducive to transmission, and large numbers of susceptible persons may be located. Hazardous environments where employees of Great Plains Technology Center may be exposed include:

- a. Nursing homes / facilities and other long-term facilities for the elderly
- b. Healthcare facilities (including residential mental health facilities)

2. High-risk medical / high hazard procedures

These are procedures, which stimulate coughing and are often performed on persons who are considered in the high-risk group for tuberculosis. Great Plains Technology Center's employees in the schools of nursing, respiratory care, and physical therapy are at risk when performing these procedures:

- a. Sputum induction
- b. Aerosolized pentamidine (AP treatments)
- c. Bronchoscopy
- d. Autopsies
- e. Sputum collection
- f. Suctioning
- g. Performing health care

Such procedures should be carried out in rooms or booths with negative air pressure in relation to adjacent rooms or hallways, with air exhausted directly to the outside and away from intake sources.

If sputum collection is required in facilities where negative air pressure is not available, the sputum collection should be done outside the building when possible.

E. Medical Screening

1. Mantoux Tuberculin Skin Test

Screening is recommended for staff that work in high-risk environments, perform high hazard medical procedures, or work with high-risk groups. All “at risk” employees who work in the facilities where there are occupational risks must be given the Mantoux tuberculin skin test, free of charge (see Appendix A).

2. Frequency of Testing

Mantoux tuberculin skin tests are repeated every six (6) months for staff with frequent exposure to patients / residents with tuberculosis or are involved with high hazard procedures. Annual testing is done for other staff that do not have frequent exposure.

3. Testing After Exposure

When an employee has been exposed to a potentially infectious TB patient, for whom infection control procedures have not been taken, tuberculin skin testing should be performed after exposure if they last skin test was longer than three (3) months. If the skin test is negative, the skin test will be repeated ten (10) to twelve (12) weeks after exposure.

4. Exemption From Skin Testing

Employee with documented positive TB skin test.

5. Positive Skin Tests

An employee who develops a positive skin test is referred to the local health department of a physician for assessment and appropriate prophylactic treatment (see Appendix B).

An employee with a positive skin test is evaluated on an annual basis for symptoms of tuberculosis. Any positive symptoms will result in further clinical evaluation following the Centers for Disease Control Guidelines for Tuberculosis Control.

Evaluation should include chest x-ray; sputum smears for Acid Fast Bacilli (AFB), and sputum cultures and sensitivity testing. The employee and school should use respiratory precautions until infectious status of the teacher is known.

Program Directors who have staff working in high-risk environments are responsible to monitor TB skin test results for their staff.

F. Training And Education

Having well informed and educated employees is extremely important when attempting to minimize the exposure to tuberculosis. Retraining will be done on an annual basis to keep the employee's knowledge current. The Education / Training Coordinators are responsible for training employees.

Training Topics:

1. Cause and transmission of tuberculosis
2. Definition of "infectious"
3. Distinction between Tuberculosis disease and TB infection
4. Purpose and interpretation of TB skin testing including the significance of a skin test conversion
5. Signs / symptoms of tuberculosis
6. Reporting mechanism of the signs / symptoms
7. Preventive therapy
8. Risk factors for tuberculosis disease development
9. Treatment of tuberculosis and the origin and prognosis of multi-drug resistant TB
10. Purpose of surveillance
11. Recommended follow-up of positive skin tests
12. Site specific protocols
13. Purpose, proper selection, fit, use, and limitations of personal protective equipment
14. Engineering controls
15. Critical role that (DOT) directly observed therapy plays in preventing the emergency of MDR-TB

Refer to the US Department of Health and Human Services Core Curriculum on Tuberculosis by CDC.

G. Personal Protective Equipment

OSHA requires that employees must be provided with and wear NIOSH certified dust, mist, and fume (DMF) respirators or respirators affording greater protection. These are provided by the Department of Correction or clinical facilities.

Employees will follow clinical facility policy and equipment guidelines; Respirators must be worn in the following situations listed below.

1. When entering a pulmonary isolation room occupied by a known or expected infectious tuberculosis patient
2. While performing certain high hazard medical procedures such as aerosol administration of medication (pentamidine), bronchoscopy, and diagnostic sputum induction
3. When transporting infectious TB patients who are unable to wear a respirator for medical reason, or declines to wear one

H. Engineering Controls

The following engineering controls are for employees who are at risk in clinical facilities. If the facility does not comply with these engineering controls, the school can request the facility use Portable High Efficiency Particulate Air (HEPA) filters when it is not possible to change the ventilation.

Techniques that reduce the number of airborne droplet nuclei are effective in preventing the transmission of tuberculosis.

These techniques include:

1. Adequate fresh air and five (5) or six (6) air changes per hour are desirable
2. Ultraviolet irradiation of air in the upper part of the room
3. Covering the infected person's nose and mouth with tissue when coughing or sneezing
4. Negative air pressure rooms or booths in relation to adjacent rooms or hallways, with air exhausted directly to the outside and away from intake sources

I. Recordkeeping And Work Removal

When an employee is found to have current pulmonary or larynged TB, he or she must be excluded from work until adequate treatment is instituted, their cough is resolved, and a physician certifies that the person is no longer infectious.

Their removal requirement does not include employees infected with TB as sites other than lung or larynx who are otherwise healthy and undergoing preventive therapy.

An employee who must be removed from the workplace because of TB should receive pay and benefits according to worker's compensation, disability, or school policy.

Tuberculosis infection (positive skin test) and tuberculosis disease are both recordable on the OSHA 300 and 301 logs.

A positive skin test, except pre-employment screening, is recordable on the OSHA 300 / 301 logs because there is a presumption of work-relatedness in these settings, unless there is clear documentation that an outside exposure occurred. The health department will provide forms and documentation.

Appendix A

Tuberculin Skin Testing

APPENDIX A TUBERCULIN SKIN TESTING

A. Administration Of The Tuberculin Test

1. Tuberculin skin testing is the standard method of identifying persons infected with tuberculosis. The intradermal Mantoux test – not a multiple puncture test – should be used to determine if tuberculosis infection has occurred.
2. The Mantoux test is performed by the intradermal injection of 0/1 ml of PPD tuberculin containing 5TU (tuberculin units) into either the volar or ventral surface of the forearm. The injection should be made with a disposable tuberculin syringe. The injection should be made just beneath the surface of the skin, with the needle bevel facing upward to produce a discreet, pale elevating of the skin (a wheal) 6mm to 10 mm in diameter.
3. To prevent needle stick injuries, needles should not be recapped, purposely bent, or broken by hand, removed from disposable syringes, or otherwise manipulated by hand. After they used, disposable needles and syringes should be laces puncture –resistant containers for disposal.
4. The Mantoux test should be read 48 to 72 hours after the injection. However, if the patient fails to show up for the scheduled reading, positive reactions may still be measure up to one week after testing. The reading should be based on measurement of induration, not erythema. The diameter of induration should be measured transversely to the long axis of the forearm and recorded in millimeters.

B. Classification Of The Tuberculin Reaction

1. A tuberculin reaction of 5mm or more is classified as positive in the following groups:
 - a. Persons who have had close, recent contact with a patient with infectious tuberculosis
 - b. Persons who have chest radiographs with fibrotic lesions likely to represent old, healed tuberculosis
 - c. Person with known or suspected HIV infection
2. A tuberculin reaction of 10mm or more is classified as positive in persons who do not meet the above criteria but who have other risk factors for tuberculosis. This would include:
 - a. Persons with other medical risk factors known to substantially increase the risk of tuberculosis once infection has occurred

- b. Foreign-born persons from high prevalence countries (e.g., those from Asia, Africa, and Latin America)
 - c. Medically under-served, low-income populations, including high-risk minorities, especially African Americans, Hispanics, and Native Americans.
 - d. Intravenous drug users
 - e. Residents of long-term care facilities, such as correctional institutions and nursing homes
 - f. Other populations which have been identified as having an increased prevalence of tuberculosis
3. A tuberculin reaction of 15mm or more is classified as positive in all other persons.
4. Absence of a reaction to the tuberculin test does not exclude the diagnosis of tuberculosis or tuberculosis infection. Cell-mediated responses such as tuberculin reactions may decrease or disappear during any severe or febrile illness, measles or other exanthemas, HIV infection, live-in virus vaccination, Hodgkin's disease, sarcoidosis, overwhelming miliary or pulmonary tuberculosis, and after administration of corticosteroids or immunosuppressive drugs up to 30% of patients without HIV infections and 60% of patients with AIDS may have skin test reactions less than 5mm even though they are infected with tubercle bacilli. In addition, persons who have been infected very recently may not yet have a reaction to the tuberculin skin test.

Appendix B

Preventative Therapy

APPENDIX B PREVENTATIVE THERAPY

Preventive therapy is recommended for people who have positive skin tests. Preventative therapy substantially reduces the risk of developing clinically active or infectious tuberculosis in infected persons. Certain groups identified within the infected population are at greater risk of developing tuberculosis than others. Persons in these groups should be considered candidates for preventive therapy, regardless of age.

Candidates for Preventative Therapy:

A. Skin-test positive persons in the following high-risk groups, regardless of age:

1. Persons with known or suspected HIV infection
2. Close contacts of infectious tuberculosis cases
3. Recent tuberculin skin-test converters
4. Previously untreated or inadequately treated persons with abnormal chest radiographs
5. Intravenous drug users
6. Persons with medical conditions which increase the risk of tuberculosis

B. Skin-test positive persons in the following high-risk groups who are less than 35 years of age:

1. Foreign-born persons from high prevalence countries
2. Low-income populations, including high-risk minorities
3. Residents of long-term care facilities (including prisons)

C. Persons who need special precautions when receiving isoniazid Therapy include those with following conditions:

1. Age greater than 35 years
2. Concurrent use of any other medication on a long-term basis
3. Alcohol abuse
4. History of previous discontinuation of isoniazid because of side effects
5. Chronic liver disease
6. Peripheral neuropathy
7. Pregnancy