

University of North Carolina at Chapel Hill

PUBLIC SAFETY DEPARTMENT

EXPOSURE CONTROL PLAN

as Required by

OSHA Bloodborne Pathogens Standard

Revised July 2014

University of North Carolina at Chapel Hill

EXPOSURE CONTROL PLAN

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EXPOSURE CONTROL PLAN

as Required by OSHA Bloodborne Pathogens Standard

Introduction

On December 6, 1991, OSHA published its regulation pertaining to bloodborne pathogens, "Occupational Exposure to Bloodborne Pathogens", (29 CFR Part 1910.1030). A summary of the Bloodborne Pathogens Standard is attached (Appendix F). The Bloodborne Pathogens Standard represents OSHA's first regulation of occupational exposure to biological hazards. The standard requires that each employer develop a written **Exposure Control Plan** designed to eliminate or minimize exposures to employees. This document is UNC's Public Safety Department Exposure Control Plan. It is made available to each employee identified as having occupational exposures to blood or other potentially infectious materials. Compliance with the Exposure Control Plan is a condition of employment for all employees with occupational exposures.

Law enforcement personnel may have occupational exposure to human blood or other potentially infectious materials as a result of their job duties. The potential for exposure exists when law-enforcement officers are involved in assisting with automobile accident victims; working a crime scene; processing suspects or assisting with body removal. In these situations they may encounter blood-contaminated hypodermic needles or weapons. Officers may also be required to search suspects, or subdue violent and combative people.

There is an extremely diverse range of potential situations, which may occur in the control of persons with unpredictable, violent, or psychotic behavior. Therefore, informed judgement of the individual officer is paramount when unusual circumstances or events arise. These recommendations should serve as an aid to rational decision making in those situations where specific guidelines do not exist, particularly where immediate action is required to preserve life or to prevent significant injury.

Epidemiology

The Bloodborne Pathogens Standard covers the two most significant bloodborne pathogens, hepatitis B virus (HBV), and human immunodeficiency virus (HIV), as well as other bloodborne pathogens including non-A, non-B hepatitis (HCV), delta hepatitis (HDV), *Treponema pallidum* (syphilis), several species of parasites of the *Plasmodium* genus (malaria), members of the genus *Brucella* (brucellosis), *Leptospira interrogans* (leptospirosis), arboviruses, pathogenic *Borreliae* (relapsing fever), Creutzfeldt-Jakob disease agent, HTLV-I (adult t-cell leukemia/lymphoma and myelopathy), and viruses associated with hemorrhagic fever. These pathogens can be transmitted via exposure to contaminated human blood.

Tuberculosis and meningitis are not bloodborne pathogens however; they are of special concern to law enforcement officials. The portal of entry for tuberculosis is the lung; the pathogens are carried as airborne particles (droplet nuclei); exposure to airborne bacilli from sputum of infected persons; direct invasion of mucous membranes or breaks in skin. Meningitis is transmitted by direct contact, including droplets and discharges from the nose and throat of infected persons.

Hepatitis B virus. Between two thirds and three fourths of all hepatitis B infections result in either no symptoms of infection or a relatively mild flu-like illness. Between 25% and 33% of the infections, however, take a much more severe clinical course. The symptoms include jaundice, dark urine, extreme fatigue, anorexia, nausea, abdominal pain, and sometimes joint pain, rash, and fever. Hospitalization is required in about 20% of the more severe clinical cases.

A safe, immunogenic, and effective vaccine to prevent hepatitis B has been available since 1982 and is recommended for employees with the potential for occupational exposure to blood and other body fluids.

Hepatitis C virus is the most frequently occurring bloodborne pathogen infection. At least 85% of persons with hepatitis C Virus (HCV) infection become chronically infected, and chronic liver disease develops in an average of 67%. HCV is most efficiently transmitted by large or repeated percutaneous exposures to blood, such as through the transfusion of blood or blood products from infected donors and sharing of contaminated needles among injection drug users. Other bloodborne viruses, such as HBV, are transmitted not only by percutaneous exposures, but also by mucous membrane and apparent parenteral exposures.

One case of transmission of HCV from a blood splash to the conjunctiva was reported for a health care worker. A second case of transmission of HCV from a blood splash to the conjunctiva was reported for a law enforcement officer involved in a physical altercation with an inmate that was anti-HCV positive.

Human immunodeficiency virus. HIV adversely affects the immune system rendering the infected individual vulnerable to a wide range of clinical disorders. These conditions, some of which tend to recur, can be aggressive, rapidly progressive, difficult to treat, and less responsive to traditional modes of treatment. They usually lead to the death of the HIV infected patient. The CDC has divided disease progression into four stages, grouped according to infections or symptoms reported.

Group I: Within a month after exposure, an individual may experience acute retroviral syndrome, the first clinical evidence of HIV infection. This is a mononucleosis-like syndrome with signs and symptoms that can include fever, lymphadenopathy, myalgia, arthralgia, diarrhea, fatigue, and rash. Acute retroviral syndrome is usually self-limiting and followed by the development of antibodies.

Group II: Although most persons infected with HIV develop antibodies to the virus with 6-12 weeks after exposure, most of these individuals are asymptomatic for months to years following infection. However, they can transmit the virus to others throughout this time.

Group III: Although no other signs or symptoms are experienced, some HIV-infected patients will develop a persistent, generalized lymphadenopathy that lasts more than 3 months.

Group IV: Epidemiologic data indicates that most persons who are infected with HIV will eventually develop AIDS. AIDS can result in severe opportunistic infections that an individual with a normal immune system would only rarely experience, as well as a wide range of neurologic and oncogenic or neoplastic processes. Some patients may experience "constitutional disease" also known as HIV "wasting syndrome," which may be characterized by severe, involuntary weight loss, chronic diarrhea, constant or intermittent weakness, and fever for 30 days or longer. This syndrome may result in death. Individuals with AIDS may also develop HIV encephalopathy, dementia, myelopathy or peripheral neuropathy. In addition, the virus is capable of affecting the peripheral nervous system causing severe pain and weakness or numbness in the limbs. There are specific diseases considered indicators of AIDS. Among these are parasitic diseases such as *Pneumocystis carinii* pneumonia; fungal diseases

such as candidiasis of esophagus, trachea, bronchi or lungs; viral diseases such as cytomegalovirus disease of an organ other than the liver, spleen or lymph nodes; cancer/neoplastic diseases such as Kaposi's sarcoma; and bacterial infections such as *Mycobacterium avium* complex.

Reports dealing with HIV infection indicate that the risk of bloodborne transmission from inadvertent exposure is considerably less for HIV than for HBV infection. Data provided by prospective surveillance studies indicate that the occupational risk of acquiring HIV is low and is most often associated with percutaneous inoculation of blood from a person with HIV infection. These studies indicate that the risk of seroconversion following needlestick exposures to blood from HIV-infected patients is less than 0.5%, compared with 23% to 43% for HBV.

HBV and HIV have been isolated from blood, semen, saliva, urine, and cerebrospinal fluid of infected humans. These viruses are likely to be present in other body fluids and secretions. Percutaneous or parenteral inoculation and direct contact of cuts, scratches, abrasions, or mucosal surfaces with blood or body fluids containing virus are considered potential routes of infection. Possible transmission of infection via the parenteral route can occur through self-inoculation with needles, broken glass, or other sharp objects that contain HBV or HIV. Spillage is a possible means of exposure and infection. Spills accompanied by spraying or splashing of potentially infectious materials that may come into direct contact with abraded skin or mucous membranes of the eyes, nose or mouth present the greatest risk for exposures. Inhalation has not been documented as a mode of transmission for either HBV or HIV.

Mycobacterium Tuberculosis is a disease that is spread from person to person by airborne droplets. Initial infection is usually unnoticed. TB affects the lungs, but can also affect other parts of the body, such as the brain the kidneys or the spine. TB bacteria become airborne when a person coughs or sneezes. The infectious dose for TB is less than 10 bacilli. Symptoms of TB include the following: coughing, weight loss, fever, fatigue, chest pain and night sweats.

TB is sensitive to a combination of antimicrobial drugs – isoniazid, rifampin, streptomycin, ethambutol, and pyrazinamide.

Meningitis is an illness in which there is inflammation of the tissues that cover the brain and spinal cord.

Viral (Aseptic) Meningitis: Viral or aseptic meningitis, which is the most common type, is caused by an infection with one of several types of viruses. Meningitis can also be caused by infections with several types of bacteria or fungi.

The symptoms of meningitis may not be the same for every person. The more common symptoms are fever, severe headache, stiff neck, bright lights hurt the eyes, drowsiness or confusion, and nausea and vomiting.

Viral (aseptic) meningitis is serious but rarely fatal in persons with normal immune systems. Usually, the symptoms last from 7 to 10 days and the person recovers completely.

No specific treatment for viral meningitis exists at this time. Most patients recover completely on their own, and doctors often will recommend bed rest, plenty of fluids,

and medicine to relieve fever and headache. The viruses that cause viral meningitis are contagious however, less than 1 of every 1000 persons infected actually develop meningitis.

Bacterial Meningitis An acute disease characterized by sudden onset with fever, intense headache, nausea and often vomiting, stiff neck, and frequently a petechial rash with pink macules; delirium and coma; early diagnosis and modern therapy have reduced case fatality rate from 50% to less than 10%; may be asymptomatic or with only local symptoms, 10% of patients who recover have permanent neurologic disability, limb loss, and hearing loss; invasive with septicemia or meningitis; death rate is high in fulminating meningococemia; infection usually causes sub-clinical mucosal infections.

Recognition of Tasks with Occupational Exposures

An "occupational exposure" is defined by the Bloodborne Pathogen Standard as follows:

Occupational Exposure: reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious body fluids such as semen, vaginal secretions, or any body fluid with visible blood.

Fights and assaults. Law enforcement officers are exposed to a range of assaultive and disruptive behavior through which they may potentially become exposed to blood or other body fluids containing blood. Behaviors of particular concern are biting, attacks resulting in blood exposure, and attacks with sharp objects. Such behaviors may occur in a range of law-enforcement situations including arrests, routine interrogations, domestic disputes, and lockup operations. Hand-to-hand combat may result in bleeding and may thus incur a greater chance for blood-to-blood exposure, which increases the chances for bloodborne disease transmission.

Searches and evidence handling. Criminal justice personnel have potential risks of acquiring HBV or HIV infection through exposures which occur during searches and evidence handling. Penetrating injuries are known to occur, and puncture wounds or needle sticks in particular pose a hazard during searches of persons, vehicles, or cells, and during evidence handling.

Law Enforcement Tasks with Occupational Exposures

- Arrests
- Routine Interrogations
- Domestic Disputes
- Lock-up Operations
- Assaults
- Disruptive Behavior
- Searches
- Evidence Collection
- Body Removal
- Transportation of Prisoners
- Crime Scene Processing
- First Aid

Emergency Medical Response

Job Classifications with Occupational Exposures

Administrative Sworn Personnel
Police Officer
Detective
Security Guard

Preventing Employee Exposures

"Universal precautions" is an approach to infection control, in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. In general, under the OSHA Bloodborne Pathogens Standard, universal precautions are to be observed to prevent contact with blood or "other potentially infectious materials". Specific precautions are described below.

Fights and Assaults. Whenever there is the possibility for exposure to blood or potentially infectious body fluids, the appropriate personal protection should be worn, if feasible under the circumstances. In all cases, extreme caution must be used in dealing with the suspect if there is any indication of assaultive or combative behavior. When blood is present and a suspect is combative or threatening to staff, gloves should always be put on as soon as conditions permit. In case of blood contamination of uniforms, an extra uniform should be available at all times.

Searches and Evidence Handling. The following precautionary measures will help to reduce the risk of infection during searches and evidence handling.

1. An officer should use great caution in searching the clothing of suspects. Individual discretion, based on the circumstances at hand, should determine if a suspect should empty his own pockets or if the officer should use his own skills in determining the contents of a suspect's clothing.
2. A safe distance should always be maintained between the officer and the suspect.
3. Wear protective gloves if exposure to blood is likely to be encountered.
4. Wear protective gloves for all body cavity searches.
5. If cotton gloves are to be worn when working with evidence of potential latent fingerprint value at the crime scene, they can be worn over protective disposable gloves when exposure to blood may occur.
6. Always carry a flashlight, even during daylight shifts, to search hidden areas. Whenever possible, use long-handled mirrors and flashlights to search areas (e.g., under car seats).
7. If searching a purse, carefully empty contents directly from purse, by turning it upside down over a table.

8. Use puncture-proof containers to store sharp instruments and clearly marked plastic bags to store other possibly contaminated items.
9. To avoid tearing gloves, use evidence tape instead of metal staples to seal evidence.

Handling deceased persons and body removal. For detectives, investigators, evidence technicians, and others who may have to touch or remove a body, the response should be the same as for situations requiring CPR or first aid: wear gloves and Tyvek coveralls, cover all cuts and abrasions to create a barrier and carefully wash all exposed areas after any contact with blood. The precautions to be used with blood and deceased persons should also be used when handling amputated limbs, hands, or other body parts. Such procedures should be followed after contact with the blood of **anyone**, regardless of whether they are known or suspected to be infected with HIV or HBV.

Needles and sharps safety. While processing the crime scene, personnel should be alert for the presence of sharp objects such as hypodermic needles, knives, razors, broken glass, nails, or other sharp objects. Needles and other sharp objects recovered as evidence, should be manipulated as little as possible and should be stored and transported in a puncture-proof container. After use, disposable blades and other sharp items should be placed in puncture-resistant containers for disposal. Contaminated disposable needles are to be placed in red plastic sharps containers (available from General Storeroom) after use.

Handwashing. Hands must be washed immediately after each contact with a potentially contaminated person or articles. Use a utility or restroom sink for handwashing. Food preparation areas should not be used for decontamination or handwashing. If handwashing facilities are not available use antiseptic hand cleanser and/or disposable wipes, which are available on police vehicles.

Decontamination and disposal. Suitable disinfectants include those that are tuberculocidal and is approved by the Environmental Protection Agency for hospital use, including Lysol spray or a solution of 5.25% sodium hypochlorite (household bleach) diluted to 1:10 or 1:100 with water. Carefully read the disinfectant labels and package inserts with germicidal products and follow instructions for use and safety. Surfaces in the environment such as floors, vehicle seats, countertops, woodwork, etc. that have become soiled should be cleaned and disinfected with cleaners or disinfectant agents intended for environmental use (Lysol spray). Contaminated equipment including non-disposable personal protective equipment should be cleaned and disinfected following use. Following clean-up, soiled towels and gloves should be disposed of properly.

Clean-up of blood spills and OPIM. Spills may occur when an injured person drips blood on the floor. Employees who are exposed to blood or OPIM should be thoroughly familiar with emergency and decontamination procedures so that the contamination is contained and exposure of individuals is minimized. The following procedure is suggested for clean-up of blood spills:

1. Limit access to the affected area, closing the door and warning others not to enter the contaminated area.

2. Notify the person responsible for the area and the Environment Health and Safety Office (962-5507).
3. A "Spill Kit" should be available and should include bucket, plastic bags, forceps, paper towels, disinfectant, protective clothing, shoe covers, and rubber gloves.
4. Protective clothing should be worn when entering the spill area. This includes rubber gloves, disposable footwear, and a lab coat, or disposable coveralls. For spills on the floor, a gown that may trail the floor when bending down should not be worn.
5. Remove and containerize contaminated items and garments.
6. Paper towels soaked with the germicide may be used to cover the area. Suitable disinfectants include those that are tuberculocidal (e.g. OMNI II Disinfectant) or a solution of 5.25% sodium hypochlorite (household bleach) diluted to 1:10 to 1:100 with water. Pour a germicidal solution around the spill and allow to flow into the spill.
7. Let stand 20 minutes to allow adequate disinfectant contact time. Absorb the spill and disinfectant in paper towels or other absorbent material.
8. Using a dust pan and squeegee or broom, transfer contaminated materials (paper towels, glass, liquid, etc.) into a bucket lined with a plastic bag.
9. Remove gloves, shoe coverings, and other contaminated clothing and place in plastic bag.
10. Dispose of waste material in dumpster.

Laundry. Although soiled clothing or uniforms may contain organisms that cause disease, the risk of actual disease transmission is negligible. Therefore, simple hygienic measures for handling and washing linens are recommended.

1. Handle uniforms soiled with blood as little as possible, using gloves and appropriate protective clothing.
2. Place uniforms soiled with blood in bags that prevent leakage.
3. Contaminated uniforms cannot be taken home for cleaning. Contact the Quartermaster Manager so that arrangements can be made for laundering.

Personal protective equipment. Personal protective equipment should be present in each patrol car for use in emergency and criminal response situations. Replacement supplies and disinfectants are kept at the Public Safety Department. Listed below are protective equipment kept in each patrol car.

- gloves
- masks
- eyewear
- Tyvek coveralls
- shoe covers
- plastic bags for waste
- antiseptic hand cleanser
- unbreakable waste container with lid

Not all types of gloves are suitable for all situations. Vinyl or latex rubber gloves provide little protection against sharp instruments, and they are not puncture-proof. There is a direct trade-off between level of protection and manipulability. In other words, the thicker the gloves, the more protection they provide, but the less effective they are in locating objects. Thus, there is no single type or thickness of glove appropriate for protection in all situations. Officers should select the type and thickness of glove, which provides the best balance of protection and search efficiency.

Officers may confront unusual hazards, especially when the crime scene involves violent behavior, such as a homicide where large amounts of blood are present. Protective gloves should be available and worn in this setting. In addition, for very large spills, consideration should be given to other protective clothing, such as overalls, aprons, boots, or protective shoe covers. Gloves should be changed if torn or soiled and always removed prior to leaving the scene. While wearing gloves, avoid handling personal items, such as combs and pens that could become soiled or contaminated. Face masks and eye protection or a face shield are required for situations which could lead to potential exposures to blood via a splash to the face, mouth, nose, or eyes.

Food and Drink. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work area where there is reasonable likelihood of occupational exposure. Storage of food and drink is prohibited in refrigerators, freezers, shelves, cabinets or on countertops or bench tops where blood or other potentially infectious materials are present.

Splash. All procedures involving blood or other potentially infectious materials must be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

Specimen Containers. Specimens of blood or other potentially infectious materials are to be placed in a labeled container which prevents leakage during collection, handling, processing, storage, transport or shipping. If the specimen could puncture or if outside contamination of the primary container occurs, the primary container is to be placed within a second labeled, leak-proof container.

Labels. Warning labels must be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials. Labels must include the following legend: Universal Biohazard Symbol, and be fluorescent orange or orange-red with lettering or symbols in a contrasting color. Labels must be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their

loss or unintentional removal. Red bags or red containers may be substituted for labels.

Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up

Hepatitis B Vaccination. Hepatitis B vaccination must be made available after the employee has received information and training regarding the vaccine (Appendix B) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons. Employees who decline to accept hepatitis B vaccination must sign the statement in Appendix D. The HBV vaccination involves a series of three injections, the second administered one month following the first, and the third administered six months following the second injection. If an employee terminates his/her employment before finishing all three injections, the University is **not** responsible for providing the remaining injections. The employee is responsible for completing the series, if desired.

Procedures for Requesting a Vaccination

Employees who have occupational exposures are to obtain their vaccine through the UNC Employee Occupational Health Clinic at 145 North Medical Drive.

1. The employee is to call the UNC Employee Occupational Health Clinic (966-9119) to schedule the first appointment.
2. The UNC Employee Occupational Health Clinic will schedule subsequent appointments to complete the vaccination series.
3. UNC Employee Occupational Health Clinic requires the employee to bring an Appendix A completed.

Medical Evaluation and Follow-up

To ensure prompt attention, University employees are to call:

During daytime hours (8:30 a.m. -4:30 p.m., M-F): University Employee Occupational Health Clinic, 966-9119, for consultation and assessment.

After-hours: Healthlink, 966-7890, for consultation and assessment.

Any University employee who has a job-related exposure to blood or body fluids is to be taken immediately to UNC Employee Occupational Health Clinic (966-9119), calling ahead to alert them that a patient is being brought in for care for medical evaluation and follow-up. Exposed skin is to be washed and sites of parenteral exposure are to be washed thoroughly with soap and water. Eyes are to be flushed with water at the eyewash station for 15 minutes. If exposed, the mouth is to be flushed with clean water.

Healthlink has nurses on duty 24 hours per day, 7 days per week. The Department of Medicine provides medical supervision with attending physicians on-call at all times. The University's protocol for management of occupational exposures to HIV was developed by

infectious disease specialists in the Department of Medicine and is identical to the protocol followed by the UNC Hospitals Employees Health Clinic. When calling UEOHC or Healthlink, be sure to identify yourself as a UNC-CH employee.

Current protocols for HIV post-exposure prophylaxis necessitate immediate reporting of occupational exposures, so that administration of antiretroviral prophylaxis can be promptly initiated. The employee's supervisor must complete a Form 19, "Employer's Report of Injury to Employee" directly following the incident. This form can be found at www.ehs.unc.edu. OSHA regulations require that this form be filed with the Environment Health and Safety Office within 48 hours of the incident. The Environment Health and Safety Office will investigate the circumstances of the exposure incident. A report (Appendix E) will be made regarding the incident, and recommendations will be made to avoid further exposure incidents.

Billing: Charges for these services will be billed to the Environment Health and Safety Office and paid from the University's workers' compensation account. Workers' compensation will also pay for any necessary follow-up.

Medical Records Medical records will be kept in confidentiality at the UNC Employees Occupational Health Clinic. Records are not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as may be required by law. Employee medical records are to be kept for at least the duration of employment plus 30 years.

Training The Standard requires that annual training be provided to all employees with occupational exposures. The required training is a condition for employment for all employees with occupational exposures. The Public Safety Department conducts yearly training sessions which includes: an explanation of the requirements of the Bloodborne Pathogens Standard, an explanation of the epidemiology and symptoms of bloodborne diseases; and an explanation of Public Safety's exposure control plan.

Documentation is kept at the Public Safety Office. Training records are to be maintained for 3 years from the date on which the training occurred.

Appendix B: Information Sheet

I understand that viral hepatitis B (also called serum hepatitis) is a severe liver disease of adults and children and accounts for about one-half of all hepatitis cases in the United States. It is spread between human beings by contaminated needles, by intimate contact with an infected person, and by blood transfusions. Public Safety professionals, like myself, are at increased risk for acquiring this infection. Acute hepatitis B is characterized by fever, loss of appetite, nausea, vomiting, abdominal pain, enlargement of the liver, jaundice (yellow skin) and occasionally by rash and pain in the joints. About 0.1% of persons die with the acute disease. About 10% of people do not recover from their infection but become carriers of the virus throughout their lifetime. This carrier state is associated closely with the development of cirrhosis of the liver, which can be fatal, and the development of liver cancer. I understand that no specific treatment of hepatitis B is available.

Immunization for hepatitis B is now available for high-risk personnel. The vaccine will be administered by the UNC Employees Occupational Health Clinic. The vaccine will be given at no cost to the employees and without routine pre-vaccination screening for hepatitis B virus serological markers

Female personnel who are pregnant or who are nursing mothers are to consult their health care providers, who must give written authorization prior to the vaccine being administered.

Personnel who have any known cardio-pulmonary compromise are to consult their health care providers, who must give written consent prior to the vaccine being administered. Individuals who have well documented allergic reactions to formalin (formaldehyde) or thimerosal (mercury derivative) or yeast are to receive special consultation from Employees Occupational Health Clinic personnel prior to the administration of the vaccine.

There is one type of vaccine available. This is synthetic. The vaccine is generally well tolerated. No serious adverse reactions attributable to the vaccination have been reported for the vaccine. As with any vaccine, there is the possibility that broad use of the vaccine could reveal rare adverse reactions not observed in the clinical trials. Of the reported reactions, approximately half of them were injection site soreness. Low grade fever, less than 101 F, occurs occasionally and is usually confined to the 48 hour period following vaccination. Systemic complaints including malaise, fatigue, headache, nausea, dizziness, myalgia, and arthralgia are infrequent and have been limited to the first few days following vaccination.

Adult individuals who are not dialysis patients or immunocompromised are to receive 3 one ml doses of the vaccine intramuscularly in the deltoid muscle of the arm. The first dose is given at the elected date, the second dose is given one month later and the third dose is given six months after the first dose. The duration of the protective effect of the vaccine is unknown a present.

ALTHOUGH THE VACCINE PROTECTS AGAINST HEPATITIS B, IT DOES NOT PROTECT ONE FROM OTHER INFECTIONS (SUCH AS HEPATITIS A OR C) WHICH CAN BE TRANSMITTED BY BLOOD AND OTHER BODY FLUIDS. FOR THIS REASON, TECHNIQUES FOR CAREFUL HANDLING OF THESE FLUIDS CANNOT BE RELAXED.

Appendix C
UNC Employee Occupational Health Clinic

HEPATITIS B VACCINE
Consent to Vaccination

The Disease:

Hepatitis B is a dangerous viral infection of the liver that can cause fever, jaundice, nausea, abdominal pain, tiredness, chronic liver disease, liver cancer, and death. It is possible for anyone to get hepatitis B, but those at greatest risk are intravenous drug users, homosexual and bisexual men, recipients of certain blood products obtained from multiple donors, residents of and immigrants from areas where hepatitis is common and household and male or female sexual partners or any of the aforementioned groups. At moderate risk are heterosexually active persons with multiple partners or recent sexually transmitted disease, and health care workers who have frequent contact with blood. Tourists who do not belong to any of these groups are at slightly higher risk if they travel to areas where hepatitis is common. There is no specific treatment for hepatitis B infection. However, persons significantly exposed to hepatitis patients or their body fluids can benefit from post-exposure treatment with hepatitis immune globulin to decrease the risk of their becoming ill.

The Vaccine:

One dose of hepatitis B vaccine is given initially followed by the second dose a month later. The final dose is administered 6 months later. This series is 80 to 95 percent effective in preventing hepatitis B infection. Genetically engineered hepatitis vaccine is not derived from animal blood. It does not cause hepatitis or human immunodeficiency virus (HIV or AIDS) infection. Vaccination is recommended for those at moderate or high risk of hepatitis as described above. No countries require Hepatitis B vaccine for admission into their territory.

Possible Side Effects:

Adverse reactions are infrequent and mild. Swelling, itching, pain, or tenderness may occur at the injection site in 15 to 20 percent of persons. Headache, tiredness, or fever occurs occasionally. Anaphylactic, or allergic, reactions may rarely occur. These may range from the mild (hives) to the severe (death), but the risk of their occurrence is much less than the risk of sickness or death from hepatitis. Indeed, no studies have so far shown that any life threatening reactions to Hepatitis B vaccine have occurred.

Statement of Consent:

I have read the above. I have had the opportunity to ask questions and to understand the risks of this vaccine. I understand, as with all medical treatment, there is no guarantee that I will become immune or that I will not have an adverse side effect from the vaccine. I request that the vaccine be given to me.

Patient's Signature

Witness to Consent

Date of Consent

Appendix D

Name: _

Soc Sec No: _

Department: _

Campus Phone: _

Hepatitis B Vaccine Declination

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.

Employee signature

date

**Appendix E
UNC Public Safety Office
EXPOSURE INCIDENT REPORT
FOR BLOOD OR OTHER POTENTIALLY INFECTIOUS MATERIALS**

Employee _____ Department _____

Supervisor _____ Date of Incident _____ Time of Incident _____

Description of incident & procedures being performed:

Nature of exposure (parenteral, non-intact skin, mucous membrane):

Engineering controls in place at time of incident:

Work practice controls in use:

PPE being used:

Policy or exposure control failures involved in incident:

Employee/department response to incident:

Recommendations for corrective measures:

Public Safety Office Date

Appendix F

THE OSHA BLOODBORNE PATHOGENS STANDARD: SUMMARY

The OSHA "Occupational Exposure to Bloodborne Pathogens" (29 CFR Part 1910.1030) is applicable to employees with exposures to blood and other potentially infectious materials. The standard defines an "occupational exposure" as reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. "Other potentially infectious materials" include semen, vaginal secretions, cerebrospinal fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, unfixed human tissue or organs, and cell cultures containing HIV or HBV. The standard is summarized below.

- Employers must write an "Exposure Control Plan" designed to eliminate or minimize employee exposures and must provide a copy to covered employees.
- Employers must identify job classifications in which employees have occupational exposures.
- "Universal Precautions" are to be utilized in the handling of all specimens.
- Engineering and work practice controls and personal protective equipment are to be used to eliminate or minimize employee exposures.
- Hepatitis B vaccine is to be offered to all employees with occupational exposures.
- Post-exposure medical evaluation and follow-up is to be provided for employees with occupational exposures;
- Annual training must be provided for all employees with occupational exposures.
- HBV and HIV research laboratories and production facilities are to provide additional training and engineering controls and work practices.

Questions regarding the Bloodborne Pathogens Standard can be directed to EHS (962-5507).