

SPEARFISH FIRE DEPARTMENT POLICIES AND PROCEDURES		Page 1 of 9
Volume: Medical/EMS	Section: 40.00	Number: 40.01
Subject: Blood Borne Pathogens and Infection Control		
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I. PURPOSE

This policy informs department personnel of the possibility for occupational exposure to Hepatitis B (HBV) or Human Immunodeficiency Virus (HIV) and other potentially infectious material (OPIM). It provides information necessary to help prevent the spread of infectious disease in the workplace. In addition, this policy addresses how to manage an exposure. This information includes, but is not limited to, principles of infection control, the infectious disease process and the use of personal protective equipment (PPE) and supplies as they relate to the prevention of occupationally acquired infectious disease.

II. SCOPE

This policy applies to all personnel.

III. BACKGROUND

During firefighting, rescue or EMS operations, as well as day to day work; personnel may come in contact with human blood or body fluids that may have HBV, HIV or OPIM. It is not always possible to identify a person who may be a carrier of infectious material, or when an infectious material is present, and therefore personnel must be trained in methods of exposure prevention and control.

IV. POLICY

General

The Spearfish Fire Department (SFD) is committed to providing a safe and healthful work environment for all personnel. In pursuit of this endeavor, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to blood borne pathogens in accordance with OSHA standard 29 CFR 1910.1030, *Occupational Exposure to Blood Borne Pathogens*. All personnel are identified as having the risk for an occupational exposure to blood, body fluid, or OPIM.

The ECP is a key document to assist our organization in implementing and ensuring compliance with the standard, thereby protecting our personnel. This ECP includes:

- Administration and Responsibility
- Communication of Hazards and Training for ALL Personnel
- Exposure Determination
- Levels of Exposure
- Methods of Implementation, Compliance and Control

- Hepatitis B vaccination
- Levels of Exposure and Post-exposure Evaluation with Follow-up
- Evaluation of an Exposure Incident for Improvement

Administration and Responsibility

All Personnel:

It is the responsibility of each individual to comply with this ECP, to be aware of the types of infectious diseases that can be transmitted by blood or body fluid, to complete training provided by the Department and to use the appropriate level of PPE, based on circumstances.

Supervisors:

Supervisors are responsible for monitoring the activity of personnel, determined to be at risk, and for ensuring that these individuals comply with the provisions of this policy.

Any supervisor observing an infraction of this policy, or potentially hazardous condition involving body fluid or OPIM, shall take appropriate action to prevent exposure, document the situation and advise the Assistant Chief.

Supervisors shall ensure that appropriate level of PPE is available and in use, based on the situation.

Department Administration:

Department administrators shall:

- Provide PPE to those members with occupational exposure.
- Review the exposure control plan annually and post the plan in a conspicuous location.
- Ensure that each significant exposure is evaluated to determine if it could have been avoided. An evaluation of the circumstances will be conducted to determine if policies, procedures, or protective equipment should be amended or changed to avoid future significant exposure incidents.
- Ensure that initial and annual training is provided for all personnel with potential for occupational exposure.
- Maintain medical and training records in accordance with legal requirements.

The Assistant Chief shall ensure implementation and compliance with the ECP. When appropriate, he/she may delegate this responsibility to an approved Department Exposure Control Officer or Health and Safety Officer.

Communication of Hazards and Training

All personnel shall receive initial and annual training on the epidemiology, symptoms, and transmission of blood borne pathogen diseases.

Training Records to Include:

- Date of training
- Names and qualifications of individuals providing training
- Names and job title of each person receiving the training
- Content or summary of each training session

Training to Include:

- OSHA standard
- Department ECP
- Methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure
- The use and limitations of engineering controls, work practices, and PPE
- Types, uses, location, removal, handling, decontamination, and disposal of PPE
- Basis for PPE selection
- Information on the Hepatitis B vaccine, including information on its efficacy, safety, method of administration, benefits of being vaccinated, and that the vaccine is offered free of charge
- Appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- Procedure to follow if an exposure incident occurs, including the method of reporting and medical follow-up that will be made available
- Post exposure evaluation and follow-up the Department is required to provide for personnel following an exposure incident
- Opportunity for interactive questions and answers with the person conducting the training
- Location of training materials and the ECP

Exposure Determination

- a. All Department personnel have been determined to be at risk of exposure to infectious diseases transmitted through blood, body fluids or OPIM.
- b. Groups of people who pose an increased risk for the transmission of infectious diseases:
 - i. Bleeding accident victims.
 - ii. Alcohol abusers.
 - iii. Illegal drug users.
 - iv. Sexually promiscuous individuals.
 - v. Hemophiliacs.

- vi. Persons with open or infected wounds.
- vii. Persons who state they have Hepatitis B, HIV or AIDS.
- c. Situations where there is an increased risk for transmission of infectious disease are:
 - i. Any time body fluids or OPIM are present.
 - ii. Unsanitary conditions.
 - iii. Death scenes, especially those situations where body fluids may be oozing from the corpse.
 - iv. Trauma situations, especially where bleeding occurs.
 - v. Extrication at auto accidents or other situations where sharp objects may exist.
 - vi. Other situations, not listed above, where there is the potential for exposure to body fluids or OPIM.

Levels of Exposure

Assessing the severity of the exposure utilizing the Center for Disease Control (CDC) guideline for determining severity levels:

Significant exposure occurs whenever a patient's blood or body fluids that are visibly contaminated with blood contact an employee through percutaneous inoculation, an open wound, non-intact (chapped, abraded, weeping or other dermatic condition) skin or mucous membrane. The single most common example is a needle stick.

Moderate exposure occurs whenever a patient's blood or body fluids contact an employee's mucous membranes. (Performing mouth-to-mouth resuscitation or a patient sneezing/coughing on a firefighter are two examples.) However, a patient with active tuberculosis, not on medication, who is coughing, represents a significant risk of exposure to any caregiver in the same room.

Minimal exposure occurs whenever a patient's blood or body fluids contact an employee's intact skin, or a patient's intact skin contacts the employee's mucous membranes. For example, a rescuer arrives on scene without gloves and a child covered with blood is handed to them, or a combative patient with soft tissue injury grabs a rescuer's mouth.

Probable - none occurs whenever a patient's intact skin contacts an employee's intact skin; this represents a low risk of exposure to infectious disease. Most EMS calls can be considered probable - none exposures and need not be documented.

Exceptions to the rating: One example is measles. Simply entering a room, which an infectious measles patient has vacated within one hour, represents a significant risk of infection. When in doubt, consultation with a physician or medical authority, such as the CDC, should provide guidance for making an informed decision on the severity of a particular exposure.

Methods of Implementation, Compliance and Control

1. Universal Precautions. Universal precautions will be observed when personnel have the potential for exposure to blood or other OPIM. Any bodily fluid may contain infectious diseases if it contains traces of blood and personnel are directed to treat all blood and body fluids as infectious substances.
2. Hand Washing. Hands and other skin surfaces must be washed thoroughly as soon as possible if contaminated with blood or OPIM.

Hands should always be washed after gloves are removed even if the gloves appear intact. Hand washing should be completed using appropriate facilities such as utility or rest room sinks. DO NOT wash hands in sinks where food preparation occurs.

Hand washing should be done with warm soap and water. The application of hand lotion after hands are dried is advisable. Waterless antiseptic hand cleaner should be provided to personnel when hand washing facilities are not available. Personnel are advised to wash their hands at the earliest opportunity after using the waterless antiseptic cleaner.

3. Firefighting turnout gear (including structural firefighting gloves, boots, head and face protection) must be worn when working in areas of containing sharp glass or other debris which can puncture or lacerate the skin.
4. Personnel must use personal protective equipment except in rare and extraordinary circumstances. Such circumstances occur when, in the rescue provider's professional judgment, the use of personal protective equipment would have prevented the delivery of health care or public safety services, or would have posed an increased hazard to the safety of other rescuers. **NOTE:** Should an individual make this decision, an investigation shall be conducted documenting the circumstances to determine how to prevent a future occurrence.
5. Contaminated disposable items must be discarded in a leak proof plastic bag that is red in color or marked with the international bio-hazard symbol. The bag(s) shall be taken to the appropriate location for disposal.
6. During firefighting operations normal protective clothing should offer sufficient protection. Rescue and EMS operations will require different PPE which may include disposable gloves, gowns, filter masks and protective eye wear or face shields. For any resuscitation efforts, a pocket mask or bag-valve-mask should be used.

Location of protective gear:

All apparatus will have PPE for rescue personnel onboard. Personnel shall become familiar with the specific location on each vehicle during training sessions. The amount of equipment stored on each vehicle shall be sufficient to supply numerous rescuers for multiple casualties.

Contaminated Equipment:

Items that are reusable shall be bagged and marked reusable. Needles and Sharp Objects shall be properly contained and disposed of. Personnel shall take precautions to prevent injuries caused by needles, knives, broken glass, razor blades or other sharp instruments, devices or debris which can puncture or lacerate the skin.

Laundering of Clothing and Cleaning of Equipment.

1. Uniforms issued to firefighters and non-uniform clothing worn by other personnel are not considered protective clothing. Contaminated uniform and non-uniform items should be handled by personnel wearing gloves and bagged in a leak proof plastic bag that is red in color or marked with the international bio-hazard symbol. Soiled uniform items may be decontaminated by laundering according to the manufacturer's instructions.
2. Boots and leather items may be scrub brushed with soap and hot water to remove contamination.
3. Personnel whose uniform or other clothing is soiled by blood or other potentially infectious materials shall change from the contaminated uniform or clothing to a clean uniform or clothing as soon as possible.
4. Personnel are directed to avoid handling personal items, such as combs and pens, while wearing contaminated gloves. Contaminated gloves should be removed as soon as possible and discarded in a leak proof plastic bag that is red in color or marked with the international bio-hazard symbol.
5. Resuscitation Equipment. Rescuers are discouraged from giving direct mouth to mouth resuscitation to a non-breathing victim. Pocket masks with one-way valves, disposable airways or resuscitation equipment are the preferred methods of treatment.
6. Durable equipment, such as face masks and resuscitation equipment, must be thoroughly washed and cleaned with an approved disinfectant after each use.

A bleach solution, of at a minimum 4 parts water and 1 part bleach, or other approved cleaning solution shall be used to clean reusable equipment as appropriate. Appropriate PPE will be worn by personnel during cleaning.

Housekeeping.

1. All equipment and work areas shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.
2. The work area shall be cleaned with an appropriate disinfectant as soon as possible after a spill of blood or any other potentially infectious materials.
3. Wastebaskets and receptacles that are visibly contaminated shall be cleaned immediately.
4. 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.
5. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops where blood or other potentially infectious materials may be present.

Laundry.

Contaminated laundry, such as blankets and towels, shall be handled as little as possible. Contaminated laundry shall be placed in a leak proof plastic bag that is red in color or marked with the international bio-hazard symbol.

Hepatitis B Vaccinations

1. Hepatitis B vaccination will be made available to all personnel who have occupational exposure. The offer of vaccination will be made after an individual has received training regarding Hepatitis B. Vaccination is encouraged unless: 1) Documentation exists showing that the individual has previously received the vaccination series, 2) Antibody testing reveals that the individual is immune, or 3) Medical evaluation indicates that the vaccination is contraindicated. **NOTE:** An individual may decline the Hepatitis B vaccination by signing a declination form, which includes acknowledgement of the risks associated with contracting Hepatitis B.
2. An individual, who initially declines the Hepatitis B vaccination, may consent in the future, and will be vaccinated at that time.

Post Exposure Evaluation and Follow-up

Should an exposure incident occur, or is likely to have occurred, PROVIDE IMMEDIATE FIRST AID (clean the wound, flush eyes or other mucous membrane, etc.) and then follow-up with IMMEDIATELY AVAILABLE medical evaluation in accordance with the following protocol:

- Notify supervisor and Assistant Chief, designated Exposure Control Officer or department Health and Safety Officer.
- Document (using the **Exposure Report Form**) the route(s) of exposure and provide additional information on how the exposure occurred. Also **First Report of Injury Report** must be completed.
- Identify and document the source individual (unless it is established that identification is not feasible or is prohibited by law).
- Exposed individual will report to Spearfish Hospital and advise the staff of the exposure or potential exposure and the need for testing and medical treatment.
- Obtain consent and make arrangements to have the source individual tested as soon as possible to determine if he/she has an HIV, HCV, or HBV infection; document that the source individual's test results conveyed to the exposed individual's medical provider. Some source individual refuse to provide consent and it may not be possible to determine if they carry an infectious disease.
- If the source individual is already known to be HIV, HCV, or HBV positive, new testing need not be performed.
- Assure that the medical provider for the exposed individual is provided with the source individual's test results in accordance with legal requirements for confidentiality.
- Upon consent, exposed individual's blood will be tested as soon as possible. If the individual does not give consent for HIV serological testing during collection of blood for baseline testing, preserve blood sample for at least 90 days. During this this waiting period, if the exposed individual elects to have baseline sample tested, perform the test as soon as possible.

Evaluation of Exposure Incident for Improvement

Assistant Chief and designated Exposure Control Officer or Department Health and Safety Officer will review all exposure incidents and provide recommendations for improvement to the Fire Chief. Changes in operations, ECP and/or SOPs will be based on these recommendations.

Items to be reviewed:

- Engineering controls in use at the time
- Work practices followed
- Description of device or equipment in use, including but not limited to: needle or catheter (type & brand), other medical equipment
- PPE or clothing (gloves, eye wear, etc.)
- Location and type of incident (Highway/vehicle accident, residence/assault etc.)
- Action taken or attempted when incident occurred (extrication, control bleeding, self-defense, etc.)
- Individual or department level of training (related to action taken or attempted)

- Record keeping in compliance with OSHA record keeping requirements (29 CFR 1904)