

MOSIER FIRE DISTRICT

POLICIES AND PROCEDURES

Section: ADMINISTRATION	Title: HEALTH AND SAFETY subgroup: INFECTION CONTROL	Policy Number: 2006-1
Approved by: _____ Jim Appleton; _____ Darin Molesworth		Date: DRAFT
Written by: Clayton McCrea, Jim Appleton, Charles Young		Date: DRAFT
Reviewed by:		Date:
Revised by:		Date:

PURPOSE

This policy ensures the minimization of risk to responders, patients, and members of the general public who may come in contact with blood, bodily fluids, or other potentially infectious material, by identifying exposure risks and establishing procedures for control of infectious and communicable disease hazards and exposures in the fire department work environment.

PERSONS AFFECTED

All Mosier Fire District personnel.

REFERENCES

NFPA 1500, 1521, 1581, 1582, 1720, 1851, 1852, 1951, 1971, 1999
 OAR 437-002-0182; OAR 437-002-0182 §1910.156 (and §1910.156 Appendices A and C)
 29 Code of Federal Regulations, Chapter XVII, §1910.1030
 Hood River District EMS Procedures 2011
Emergency Care, 12th Edition, (Brady) by Daniel Limmer and Michael O'Keefe, 2012

DEFINITIONS

Biohazard: Any object or substance which is a potential source of exposure. See “regulated waste” below.

Biohazard disposal: Depositing potentially infectious material in biohazard waste containers, and routing safely to the proper disposal site, usually Providence Hood River Hospital.

Biohazard waste container: A container that is clearly marked, and color coded, and labeled with the universal biohazard symbol.

Double-bagged: A waste-disposal procedure in which potentially infectious materials are deposited in two approved biohazard disposal bags. See double bagging procedure.

Exposure: A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood, bodily fluids, or other potentially infectious materials; inhalation of airborne pathogens; or ingestion of foodborne pathogens or toxins. Risk of exposure extends to patients and members of the general public as well as Fire District personnel not on scene at an emergency.

Health and Safety Officer: The Fire District member assigned and authorized by the Fire Chief as the manager of the safety and health program. When no health and safety officer is assigned, this responsibility devolves to the Fire Chief.

Pathogen: Microorganisms such as bacteria, virus, or fungus that is capable of causing disease, whether after inhalation (“airborne”), or exposure to human blood (“bloodborne”), or following ingestion in food or water (“foodborne”).

Personal protective equipment (“PPE”): Multiple elements of compliant protective clothing and accessories that when worn together provide protection from some risks, but not all risks, of emergency incident operations.

Potentially infectious material: Any object or substance potentially contaminated by bodily fluids or secretions, including blood, respiratory and gastric aerosols, liquids, and solids, and any unfixed tissue or organ from a living or dead human.

Procedure: The series of actions, conducted in an approved manner and sequence, designed to achieve an intended outcome.

Qualification: A): meeting minimum requirements for training and certification under Mosier Fire District Policy #2007, and B): approval by the Fire Chief to answer emergency calls or other alarms.

Regulated waste: Liquid or semi-liquid blood, bodily fluids, or other potentially infectious materials; contaminated items which could release blood, bodily fluids, or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood, bodily fluids or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; contaminated packaging and non-approved waste containers; and other wastes which may have come in contact with pathogens, such as N90 protective masks and resuscitation equipment, and which could release pathogens during handling.

Responder: A Fire District member who is qualified to answer an emergency call or other alarm.

Resuscitation equipment: Respiratory assist devices such as bag-valve masks, continuous positive-airway pressure masks, pocket masks, and other ventilation devices that are designed or used to provide artificial respiration or assist with ventilation of a patient.

Shall: Indicates a mandatory requirement.

Sharps: Any object contaminated with potentially infectious material which is capable of penetrating the skin, clothing, PPE or exposed tissue of a responder, patient, or member of the general public. These typically include, but are not limited to, used hypodermic needles and intravenous catheters, used blood glucose lancets and epi-pens, used intraosseous needles, and needle decompression kits.

Source individual: Any human, living or dead, whose blood, bodily fluids, or other potentially infectious material has been the origin of occupational exposure to District personnel, a patient, or a member of the general public.

Splash-resistant eyewear: Safety glasses, prescription or corrective eyewear with protective side shields, goggles, or chin-length face shields that, when properly worn provide limited protection against splashes, spray, spatters, or droplets of blood, bodily fluids, and other potentially infectious material.

Sterilization: Use of a physical or chemical procedure to destroy all microbial life, including all highly resistant bacterial endospores.

Supervisor: A member who has been granted title and authority under policy and by the Fire Chief:

- to give instruction and/or orders to certain subordinates in the chain of command, and
- to be held responsible for the work and actions of other members.

Universal precautions: An approach to infection control in which human blood and certain human bodily fluids are treated as if known to be infectious for bloodborne pathogens.

POLICY

The Fire District's policy is to identify and limit the risk of exposure to pathogens within the Fire District working environment.

The Fire District's policy is to prevent exposures to responders and other Fire District personnel, patients, and members of the general public by adhering to infection control procedures.

RESPONSIBILITIES

Infection control is a joint responsibility, relying on proper awareness, training, and adherence to procedures by all Fire District personnel.

The Fire District shall provide and maintain at no cost to responders all equipment and PPE necessary for safe performance of duties.

The Fire District shall provide for the cleaning and disinfection of PPE, fire fighting tools and other equipment, work uniforms or other clothing worn on calls, other protective equipment, emergency medical equipment, and fire apparatus and other Fire District vehicles.

The Fire District shall conduct initial and annual training and education programs for all responders in accordance with state and federal regulations. The training program shall include use of PPE, standard operating procedures for safe work practices in infection control, methods of disposal of biohazards, cleaning and decontamination of PPE and equipment, exposure management, and medical follow-up to potential or confirmed exposure.

The Fire Chief, or a designated infection control officer, shall be responsible for maintaining a liaison with the Fire District's medical director, the health and safety officer, the infection control officer at health care facilities, and health care regulatory agencies.

When notified of an infectious exposure, the Fire Chief or designated infection control officer shall ensure immediate notification, medical evaluation and verification, treatment, and medical follow-up of affected responders, and documentation in writing of the infectious exposure including description of tasks being performed when the exposure occurred, source of transmission including any relevant medical and social history of the source individual, route of exposure, PPE utilized, and disposition of medical management. The record of exposure shall become part of the responder's confidential health file, a copy of which shall be provided to the responder upon request.

The Fire District shall, at no cost to responders, provide screenings and /or immunizations as follows:

- Influenza vaccinations offered to all responders annually;
- Varicella vaccination offered to all nonimmune responders, ongoing;
- Measles, mumps, rubella vaccination offered to all responders, ongoing;
- Tetanus/diphtheria vaccination and/or booster every ten years, offered to all responders ongoing;
- HIV baseline screening following suspected occupational exposure, and if requested by an occupational physician;
- Hepatitis C virus baseline screen following suspected occupational exposure, and if requested by an occupational physician;
- Hepatitis B vaccinations and titers as specified in Centers for Disease Control (CDC) guidelines, offered initially and ongoing to all Emergency Medical Technicians (EMT's);
- Baseline tuberculosis screening program offered initially and ongoing to all EMT's consisting either of a two-step skin test according to CDC guidelines, or a blood test for mycobacterium tuberculosis, followed by subsequent tuberculin testing at a frequency determined by annual CDC risk assessment.

Fire District personnel who decline screenings and immunizations shall be required to sign a written declination. Personnel shall be allowed to recant such a declination at any time and to request

screenings or immunizations at Fire District expense.

All responders and support personnel are responsible for training and participating in the infection control program, as any one of us may at any time find him- or herself performing tasks for which proper infection control is required. **Personnel who do not maintain current training in infection control may be forbidden from emergency scenes and contact with Fire District property.**

Responders are responsible for reporting on-the-job exposure immediately to a supervisor, the Health and Safety Officer, or to the Fire Chief.

Supervisors are responsible for passing exposure reports to the Health and Safety Officer or Fire Chief.

Responders are responsible for preventing contamination of their own personal property, including vehicles, by adhering to procedures set out in the infection control policy. Responders shall be responsible for cleaning and disinfecting their own personal property, including vehicles, if exposed or potentially exposed.

- **Exception:** Responders' personal clothing and eyewear worn during the performance of assigned duties and which becomes exposed or potentially exposed shall be cleaned and disinfected as if the items were Fire District PPE. EMT's and other emergency medical responders are encouraged to have at hand a spare set of clothing and outer wear in the event they need to disrobe and decontaminate personal clothing at the scene of an emergency.

PROCEDURES

Risk assessment by job classification

Tasks during which EMT's, fire fighters and support personnel may risk exposure to potentially infectious material include:

- Basic and advanced life support procedures,
- Cleaning of contaminated surfaces and reusable equipment,
- Contact with such surfaces and equipment both pre- and post-cleaning, and
- Handling and disposal of biohazard waste containers and contaminated materials.

Each of these tasks involves risk for contact with blood, bodily fluids, or other potentially infectious material, especially the risk of sharps stick.

Because of call frequency and scope of practice, EMT's routinely encounter a higher level of risk than non-EMT's and therefore are expected to train to a higher level in both awareness, skills, and precautions such as immunizations and screenings, with respect to infection control. Even so, non-EMT's may be assigned duties which bring them into proximity with potentially infectious materials, especially secondary sources such as contaminated apparatus and waste containers. This is in addition to tasks such as first aid and CPR.

Infectious exposures

If a responder sustains an infectious exposure, the exposed area shall be immediately and thoroughly washed using running water on mucosal surfaces and soap and running water on skin surfaces.

If soap and running water are not available, eye wash or saline solution shall be used on mucosal surfaces and, on skin, waterless cleansers, antiseptic wipes, alcohol, or other skin cleaning agents that do not need running water shall be used until soap and running water are obtained.

As soon as possible, an exposed responder shall be transported at Fire District expense to qualified medical care for evaluation and, if appropriate, post-exposure prophylaxis and confidential counseling and subsequent testing.

If a patient or member of the general public sustains an exposure as a result of Fire District activities, the incident must be reported as soon as possible to a supervisor or to the Fire Chief, and to online medical control for treatment instruction. The exposure shall be documented as if the person exposed is a responder.

Storage of equipment and supplies

Unused emergency medical supplies and equipment stored in Fire District facilities, other than those stored on vehicles, shall be stored in a dedicated enclosed area to protect them from room temperature degradation, contamination, and other physical damage.

When stored or transported by Fire District personnel in their homes, personal vehicles, or other locations away from Fire District facilities or vehicles, EMS equipment and supplies shall be protected from direct sunlight, extremes of heat and cold, water and dampness, pests, domestic and wild animals, excessive vibration, rough handling, and other forms of potential contamination or damage.

On Fire District vehicles, EMS equipment and supplies shall be stored in designated locations. EMS equipment shall be properly stowed prior to vehicle operation.

Protection for emergency medical operations

Prior to any contact with patients, responders who have areas of abraded, chapped, irritated, or otherwise damaged skin shall cover those areas with adhesive dressings.

Even though medical equipment bags, defibrillators and so on are cleaned and disinfected, they should be presumed to be possible sources of infection and all Fire District personnel should use medical gloves whenever handling them, and wash hands with running water or using sanitizing wipes after handling.

Responders shall not eat, drink, smoke or use other tobacco products, apply cosmetics or lip balm, manually clean teeth, or handle contact lenses during or after emergency medical operations or handling of medical equipment, unless and until hands have been washed under running water according to Fire District procedure.

- **Exception:** In order to remain hydrated, a responder may drink from a cup or opened bottle which is handed to him/her by someone who has not otherwise been in contact with the emergency scene. Such cup or bottle will then be handled and disposed of as if presumed to be potentially infectious.

Medical gloves and personal protective equipment (PPE) must be worn during all patient care as appropriate to the anticipated situation. PPE shall be kept readily accessible for responders' use.

It is imperative that employees wear appropriate protective body coverings such as gowns, gloves, coats, pants and boots when occupational exposure is possible. The type and characteristics will depend upon the task and degree of exposure anticipated.

Medical gloves shall be removed as soon as possible after termination of patient care, taking care to avoid skin contact with the glove's exterior surface, and shall be disposed of in accordance with Fire District procedure.

Hands shall be washed, or cleaned with antiseptic wipes or waterless hand cleaner, as soon as possible after removing medical gloves.

Whenever possible, at least one Fire District personnel on each emergency scene shall remain “clean”, meaning properly protected as with gloves and protective eyewear, but not in contact with patients or potentially infectious material. This facilitates note taking, radio communication, and liaison with outside resources.

Masks shall be worn when placing any airway devices and whenever there is the possibility of airway infection or vomiting.

N90 masks shall be worn when responding to patients who are confirmed to have active tuberculosis infection. N90 masks are advised when responding to any patient with a productive cough.

Masks, splash-resistant eyewear, and fluid-resistant clothing or gowns shall be used by responders providing treatment during situations involving spurting blood, trauma, childbirth, or other situations where gross contamination is anticipated or possible.

In addition, the number of responders entering a scene where gross contamination is anticipated or possible shall be kept to a minimum.

Resuscitation equipment shall be used during CPR, insertion of King Airways, and other circumstances during which a patient's breathing is supported.

Structural fire fighting PPE meeting the requirements of NFPA 1971 shall be worn by responders in any situation where sharp or rough surfaces or a potentially high heat exposure is anticipated or possible, such as patient extrication.

Fire District personnel shall not handle unpackaged medical equipment which is outside their scope of practice, especially sharps such as needles and I.V. catheters. Under no circumstances shall any sharps be manually recapped, bent, or broken.

Fire District personnel may receive and handle sharps in original packaging or approved sharps waste containers.

Cleaning, disinfecting, and disposal

Hands shall be washed as follows:

- After each emergency medical incident, or training where medical equipment is used
- Immediately or as soon as possible after removal of gloves or other PPE
- After cleaning and disinfecting emergency medical equipment
- After cleaning PPE
- Before and after using the bathroom on Fire District property or during a medical emergency
- Before and after handling food or cooking and food utensils on Fire District property.

Hands and potentially contaminated skin surfaces shall be washed with nonabrasive soap and water by lathering the skin and vigorously rubbing all lathered surfaces for at least ten seconds, followed by thoroughly rinsing under running water.

If hand washing facilities are unavailable, appropriate antiseptic hand cleansers in conjunction with clean cloth or paper towels, or antiseptic wipes shall be used, followed by washing with soap and running water as soon as possible.

Any item or surface which has come in contact with the exterior of medical gloves on an emergency scene, or with any other substance or object which may be a source of infection, shall be thoroughly cleaned and disinfected using sanitizing wipes, alcohol, or dilute bleach solution, prior to being returned to service. In practice this includes the insides and outsides of medical bags, as well as any item handled by a person in contact with potentially infectious material, or any item otherwise exposed to potentially infectious material.

Whenever possible, cleaning and disinfection shall be done after leaving the “hot zone” but prior to leaving the overall location of an emergency scene. Medical bags must be cleaned prior to loading into apparatus or personal vehicles.

Used cleaning and disinfecting materials shall be disposed of as if they are biohazards.

Sharps containers shall be closed and sealed prior to being deposited in an approved biohazard disposal bag, for disposal or transport.

Waste containers for biohazards shall be double-bagged and either left with the responding ambulance, or transported by Fire District apparatus or personal vehicle separated from occupants, and deposited in designated biohazard waste storage receptacles prior to transport to the appropriate facility, usually Hood River Hospital. At all times biohazard waste containers shall be protected from crushing, abrasion, or impact.

Steering wheels and door handles, inside and out, of vehicles taken to medical emergencies shall be cleaned and disinfected after returning to quarters.

Personal property belonging to patients or members of the general public shall not be cleaned or disinfected by Fire District personnel.

Clothing and other reusable PPE which comes in contact with potentially infectious material shall be removed outside the “hot zone” but prior to leaving the scene of a medical emergency. The dirty items shall be double-bagged and transported separate from occupants to a cleaning service or other location equipped to handle contaminated clothing. In practice this will usually be Hood River Fire Department.

Under no circumstances shall Fire Department personnel clean or disinfect contaminated clothing or PPE at their homes.

If necessary, vehicle interiors may be protected using impermeable plastic sheets.

Double bagging

Deposit material into an approved biohazard disposal bag and seal it.

Remove gloves and place in second bag.

Wash or sanitize hands and put on new gloves.

Deposit the first bag into the second bag with both sets of gloves and seal.