SUBJECT:	INFECTION CONTROL	**SECTION:**	302.19
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POLICY

Recognizing the potential exposure of its members to communicable diseases in the routine performance of their duties, the Reading Fire Department seeks to reduce the risks by implementing an infection control program.

It is the policy of the Reading Fire Department:

A. To provide fire, rescue, and emergency medical services to the public without regard to known or suspected diagnoses of communicable disease in any patient.
B. To regard all patient contacts as potentially infectious. *Universal Precautions** will be observed at all times and will be expanded to include all body fluids and other potentially infectious material.
C. To provide all members with necessary training, immunizations, and personal protective equipment (PPE) needed for the protection from communicable diseases.
D. To recognize the need for work restrictions based on infection control concerns.
E. To encourage participation in member assistance and CISM programs.
F. To prohibit discrimination of any member for health reasons, including infection and/or seroconversion with HIV or HBV virus.
G. To regard all medical information as strictly confidential. No member health information will be released without the signed written consent of the member. Personal health records will be maintained during the duration of the employment plus thirty (30) years.
H. Exposure to communicable disease shall be considered an occupational hazard, and any communicable disease contracted as a result of a documented workplace exposure shall be considered occupationally related.
I. To consider the following diseases of principal concern:
   1. Airborne Pathogens: chicken pox, rubella, measles, influenza, meningococcal meningitis, mononucleosis, mumps, tuberculosis, and whooping cough.
   2. Bloodborne Pathogens: human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV), other non-A/non-B hepatitis viruses, and syphilis.
J. To have this plan accessible to all employees who are at risk for exposure to the above diseases in the course of their employment with the Reading Fire Department, by maintaining an up-to-date copy of this

plan and applicable department SOG in the Alarm Room of the Valley Station (1000 Market Street).

K. To review the Infection Control Plan annually.

**Universal Precautions:* Body substance isolation; a form of infection control based on the presumption that all body fluids are infectious. Body substance isolation calls for always using appropriate barriers to infection at the emergency scene, such as gloves, masks, gowns and protective eyewear.*

EXPOSURE DETERMINATION

A. All job classifications within the fire department present risk of exposure in the course of their employment. The following tasks are reasonably anticipated to involve exposure to blood, body fluids, or other potentially infectious materials:

1. Provisions of emergency medical care to injured or ill patients.

    a. Airway management procedures such as artificial ventilation, endotracheal intubation, airway suctioning, etc.
    b. Trauma patient care, including bleeding control, relief of tension pneumothorax, needle cricothyrotomy, etc.
    c. Obstetric patient care including delivery and miscarriage management, etc.
    d. Venous access procedures including establishment of I.V. lifelines, phlebotomy, and blood specimen transfer, etc.

2. Rescue of victims from hostile environments, including burning structures or vehicles, water-contaminated atmospheres, or oxygen deficient atmospheres.

3. Extrication of persons from vehicles, machinery, or collapsed excavations or structures.

4. Recovery and/or removal of bodies from any situation cited above.

5. Response to hazardous materials emergencies, both transportation and fixed-site, involving potentially infectious substances.

B. An exposure shall be any specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood or other potentially infectious body fluid or material.

PROCEDURE

A. Prevention

1. Hepatitis Prevention

   a. All members, within ten (10) days of their initial appointment, shall be offered the choice of receiving vaccination against infection by Hepatitis B by way of Recombivax or equivalent vaccine. Members declining to receive the vaccine shall execute a waiver that they may rescind at any time and the vaccine program entered. Members who have received the vaccine through another source shall furnish documentation of immunization to the department.

   b. The fire department will facilitate the new employee receiving the Hepatitis B vaccine from the Hamilton County General Health District.

   c. Booster programs that may become recommended by the Centers for Disease Control (CDC) in the future will be provided to all immunized employees accordingly, at city expense.

   d. The consent/waiver form shall be maintained within the employee's exposure folder, located in the Fire Chief's office. In addition, dates regarding any immunization will also be maintained in exposure folder/database.

2. General Preventative Measures

   a. Hand-washing with soap and water after each patient contact and as soon as possible after contact with body fluids is recommended to reduce the risk of exposure to infectious diseases encountered in the workplace. Mucous membrane contact with suspected contaminants should be flushed immediately or as soon as feasible.

   b. Gloves, eye shields, masks and gowns shall be provided in each EMS vehicle for use by members in preventing exposure to body fluids during the course of patient care.

c. Employees with pre-existing cuts, scratches or other breaks in the skin are cautioned to exercise appropriate extra precautions.

d. Inadvertent soaking of uniforms with blood or other body fluids should be cause for showering/changing as soon as is practicable. Extra work uniforms should be maintained at the station. No contaminated work uniforms shall be taken home for washing—<u>under any circumstances.</u>

3. Equipment

a. The fire department shall use a needle system for IV's that blunts on removal from the catheter.

b. It shall be the policy of this department to continuously evaluate systems that decrease the risk of needle sticks.

B. Daily Procedures

1. Employees should appropriately use gloves, face masks, gowns and eye protection whenever splashes or sprays of blood or other potential infectious materials may be generated and contamination can be reasonably anticipated. The type and characteristic of protection will depend upon the task and degree of exposure anticipated.

2. Sprays, splashes, spatters and drips or other means of contamination of equipment and vehicle interiors shall be cleaned using disinfecting/cleaning solutions provided at the station. Cleaning method (wiping/soaking) should be appropriate for the equipment. When the possibility of contact with blood, body fluids and infectious wastes or materials is encountered, proper protection should be used during cleaning operations.

Cleaning Solutions:

a. *CAVICIDE:* located with general cleaning supplies and for the specific use of cleaning equipment. One ounce of Cavicide per liter of water. Instructions provided with each spray bottle.

b. Diluted household bleach using 1:100 solution.

3. Medical wastes should be appropriately handled: contaminated sharps should be disposed of in marked containers provided for

this purpose. Non-sharp medical wastes should be transported to the hospital with the patient whenever possible and discarded in the appropriate medical waste container. When this is not possible, the materials should be disposed of in the specially marked waste container at the station.

Whenever any employee becomes aware of the fact that sharps disposal container is full or otherwise cannot be used as intended to provide protection from sharps injury, said employee should notify the on-duty supervisor who should then replace the sharps container with a new one and arrange for proper disposal of the full or unstable container.

Medical waste containers should be emptied as needed but not less than weekly. Collection containers should be decontaminated with each emptying.

4. Needles shall not be recapped, broken, or bent by hand, or removed from disposable syringes. The needle and syringe should be disposed of as one intact unit into an appropriate sharps container. Recapping a needle using a one-handed technique or a mechanical device is allowed only if the action is required for a specific procedure.

5. Contaminated laundry should be left at the receiving hospital whenever possible, in special containers at the hospital for the reception of such contaminated linens.

6. Contaminated clothing should be removed and washed as soon as possible or placed into a biohazard bag for future washing. Under no circumstances are contaminated uniforms to be taken home for laundering.

7. Work surfaces contaminated with blood or other body fluids should be cleaned and decontaminated with decontamination/cleaning solutions provided as soon as practicable.

8. Each of the department transport vehicles shall be cleaned on a monthly basis with decontamination/cleaning solution provided.

C. Mitigation after suspected or known exposure.

1. Needle Stick Procedure:

a. The Infection Control Officer, or designate, shall be contacted and the incident reported to the Charge Nurse at the receiving hospital and an exposure report form completed. Requirements of receiving hospital for examination, request for testing, etc. should be completed at that time. Employees are advised that hospital requirements will vary but should include: permission to test patient, signed by patient, permission to test the employee, exposure report form for hospital infection control follow-up and a “feedback” form.

b. Employee shall complete a City Incident Report and an Occupational Exposure Report upon returning to the station.

c. Employee immune status will be checked:

   1. If tetanus immunization status is not current, appropriate tetanus prophylaxis should be received.
   2. If hepatitis immunization status is questionable, a blood test for immunity should be conducted.
   3. Confidential HIV serologic testing shall be offered to the employee.

d. Patient status will be checked: Infectious disease procedure for involved institution will be used to determine patient’s infectious disease status.

e. If source individual is transported to the morgue, a verbal request for testing should be made with delivery of corpse if transported by Reading Fire Department or by phone it transported otherwise.

f. Employee’s physician will prescribe appropriate therapy based on analysis of information accumulated in a, c, and d above.

2. Non-Invasive Exposures

   a. The Infection Control Officer, or designate, shall be notified and the incident reported to the Charge Nurse at the receiving hospital and exposure report form completed. Requirements of receiving hospital for examination, request for testing, etc. should be completed at that time. Employees are advised that hospital requirements will vary.

b. Incident shall be documented on City Incident Report form and an Occupational Exposure Report. Those members on the run shall be documented on the EMS run report.

c. Patient status shall be checked utilizing protocol established by the receiving hospital.

d. If source individual is transported to morgue, a verbal request for testing should be made with delivery of the corpse if transported by the Reading Fire Department or by phone if transported otherwise.

e. Employee's physician will prescribe appropriate therapy after reviewing information received in a and c above. [see attachments of mitigation algorithms]

3. Refer to MMWR Recommendations and Reports, Vol. 50, No. RR-11 - Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis and attached mitigation algorithms for additional information.

RECORD KEEPING

A. A record shall be maintained on vaccination dates and immune status against Hepatitis B for each employee, according to applicable government regulations. These records shall be confidential, except as provided for by law.

B. A record shall be maintained documenting any occupational exposure for each employee and maintained for a period applicable by government regulation (duration of employment plus thirty (30) years). These records shall be confidential except as provided for by law.

C. A record shall be maintained of employee training with regard to infection control as required by law.

COMPLIANCE MONITORING

A. All shift officers and acting officers shouldl monitor the compliance of department personnel with daily and special infection control procedures, assuring that they are followed and promptly correct any deviations from department SOP or other accepted infection control practice.

PLAN REVIEW

A. These Infection Control Procedures shall be reviewed annually to insure their timeliness and applicability to the pre-hospital care environment and the risk exposure it presents to members.

TRAINING

A. All members, prior to assignment and annually thereafter, shall be instructed on protective measures to be taken to minimize the risk of occupational exposure to infectious disease. The topics should include but not limited to:

1. Education on infectious diseases and modes of transmission.
2. Symptoms of infectious diseases.
3. Review of Department's Infections Control Plan.
4. Recognition of fire service tasks that may create injury or potential for exposure.
5. Explanation of types, location, use and limitation of personal protective equipment (PPE).
6. Explanation of the Hepatitis B vaccine, including information on efficacy, safety, methods of administration and benefits of being vaccinated.
7. Information on post exposure follow up if a sharp injury occurs.

PERSONNEL PROTECTIVE EQUIPMENT

A. All EMS vehicles shall have closable sharp containers which are puncture resistant and leakproof. Sharp containers should be colored red, labeled as biohazard and shall be used as the situation dictates.

B. All first aid kits and airway bags should be equipped with pocket masks with one-way valves to minimize the need for mouth-to-mouth resuscitation. Mouth-to-mouth resuscitation should be performed only as a last resort.

C. Members shall select PPE appropriate to the potential exposure. No standard operating procedure or PPE ensemble can cover all situations. Common sense has to be used, but when in doubt, select maximal rather than minimal PPE.

D. Facial protection shall be used in any situation where splash contact with the face is possible. Facial protection may be afforded by using both a facemask and eye protection, or a full-face shield. When treating a patient with a known airborne transmissible disease, facemask protection shall be used. Each unit is equipped with approved masks, with various sizes. The first choice is to mask the patient; if this is not feasible, mask yourself. Personnel masks sizes are recorded in the EMS reference manual in each unit. These sizes are logged from the annual fit testing. Face shields on helmets are not to be considered a protection for infectious disease control.

E. Firefighting gloves shall be worn in situations where sharp or rough edges are likely to be encountered. If gloves are exposed to infectious disease they shall be cleaned the same as station uniforms.

F. Disposable latex gloves should be worn during any patient contact. Proper latex-free gloves are also provided for any contacts where allergies to latex are a concern.

G. Where possible, latex gloves shouldl be changed between patients in multiple casualty situations. Disposable gloves shall not be reused or washed and disinfected for reuse.

IMMUNIZATIONS AND HISTORY

A. Hepatitis B

1. One series of three inoculations, the first within 10 days of beginning employment.

2. Booster shots shall be provided in accordance with CDC recommendations.

B. Tetanus-Diphtheria

1. Inoculation required every ten years.

2. If puncture wound occurs, a booster is required if it has been seven years or more since last inoculation.

C. Measles, Mumps and Rubella

1. Inoculation not recommended if you were born prior to 1957.

2. Immunization not recommended if you are pregnant or anticipate becoming pregnant within three (3) months.

D. Influenza

1. Influenza vaccine shall be available between October and February each year.

2. The influenza vaccine changes from year to year, so the vaccine must be re-administered annually.

3. Influenza inoculations are recommended annually and should be provided to members on a voluntary basis.

E. Tuberculosis

1. Members shall be provided with TB screening.

RESPONSIBILITY

A. The Fire Chief retains ultimate responsibility for the health and welfare of all members. The Fire Chief is responsible for assuring the availability of resources required for the program to function effectively, including funding for training, equipment and supplies, and health maintenance activities. He/she must also assure sufficient personnel to accomplish program requirements. Finally, after delineating the authority and responsibilities of each position in the program, the Fire Chief must hold each person accountable for assigned functions.

B. The designated Safety Officer of the department must be actively involved in the Infection control program. Coordination between the Safety Officer and the Infection Control Officer is critical.

C. The Infection Control Officer (designated officer) is to serve as a liaison between the department and the area hospitals for coordination of information with regard to exposures/suspected exposures and follow-up action. The Infection Control Officer shall be a member of the Safety Committee. In addition to coordinating exposure-related requirements, the designated officer has the primary responsibility for assuring availability of appropriate PPE, monitoring compliance and quality assurance throughout the department, and maintaining required infection control records.

D. The Safety Committee is responsible for periodic review of the program. The committee must keep abreast of changing conditions and new information in order to keep the program up to date.

E. The Training Officer is responsible for ensuring that all members posses the necessary knowledge and skills required to perform their tasks safely and to meet the standards of program.

F. The department physician(s) serves as a resource to the designated officer, particularly in assessing potential exposure incidents. The physician(s) should be available for consultation and counseling following member exposures in order to provide objective information regarding risk of disease.

G. Supervisors are responsible for supporting the infection control plan and for assuring compliance by each member.

H. All department members bear responsibility for their own health and safety. Each is responsible for complying with all established guidelines and procedures, including safe work practices.