

**CITY OF AUSTIN  
FIRE DEPARTMENT**

**INFECTION CONTROL PROGRAM**

**Purpose:** To provide a comprehensive infection control system that maximizes protection against communicable diseases for employees, and for the public that they serve. To provide guidelines for reporting needle sticks and other sharps injuries to the Texas Department of Health (TDH).

**Scope:** This program applies to all employees, particularly those in high risk exposure positions.

**Background:** The City of Austin Fire Department recognizes that communicable disease exposure is an occupational health hazard. Communicable disease transmission is possible during any aspect of emergency response, including in-station operations, as well as support functions involving the transport, storage, and cleaning of contaminated equipment. The health and welfare of each employee is a joint concern of the employee, the chain of command, and this department. While each employee is responsible for his or her own health, the department recognizes a responsibility to provide as safe a workplace as possible. The goal of this program is to provide all employees with the best available protection from occupationally acquired communicable diseases.

The Austin Fire Department will:

provide emergency medical services to the public without regard to known or suspected diagnoses of communicable disease in any patient.

regard all patient contacts as potentially infectious. Universal/Standard Precautions will be observed at all times and are expanded to include all body fluids and other potentially infectious materials (body substance isolation).

provide all employees with the necessary immunizations, training, and personal protective equipment (PPE) needed for protection from communicable diseases.

initiate appropriate post exposure follow-up reporting, medical assessment, counseling, and further assessment and/or treatment for all employees or as required by law.

recognize the need for work restrictions based on infection control concerns.

not discriminate against any employee due to disability or infection, and/or seroconversion with HIV, HBV, or HCV in accordance with applicable law, including the Americans with Disabilities Act.

maintain all medical information as strictly confidential. No employee or patient health information will be released without the signed written consent of the employee or patient or in accordance with applicable law.

## **EXPOSURE CONTROL PLAN**

**Purpose:** To identify those tasks and corresponding job classifications for which it can be reasonably anticipated that an exposure to blood, other body fluids, or other potentially infectious materials may occur; to identify the procedure for the evaluation of exposure incidents and follow-up to exposure incidents.

### **EXPOSURE DETERMINATION**

The following tasks are reasonably anticipated to involve exposure to blood, body fluids, or other potentially infectious materials:

Provision of emergency medical care to injured or ill patients;

Rescue of patients from hostile environments, including burning structures or vehicles, water, contaminated atmospheres, or oxygen deficient atmospheres;

Extrication of persons from vehicles, machinery, or collapsed excavations or structures;

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

Response to hazardous materials emergencies, both transportation and fixed-site, involving biohazards containing potentially infectious substances; and

The cleaning and disinfecting of patient care and training equipment.

The following job classifications are reasonably anticipated to involve exposure to blood, body fluids, or other potentially infectious substances in the performance of their duties:

Firefighter

Fire Specialist

Fire Lieutenant

Fire Captain

other emergency response personnel not otherwise classified, but who may be assigned to field operation duties that place them in contact with at risk tasks.

Complete job descriptions may be found in the City of Austin Human Resources Department.

## **IMPLEMENTATION**

The infection control program is applicable to all Austin Fire Department employees providing rescue, emergency medical services, or cleaning and disinfecting patient care and training equipment. The Exposure control plan has been edited to comply with the TDH Blood Borne Pathogen Standard promulgated to be effective September 1, 2000. The Department's Infection Control Policy and Exposure Control Plan will be reviewed annually and updated as necessary.

The infection control program consists of a policy statement, identification of roles and responsibilities, Standard Operating Procedures (SOPs), training, and recordkeeping. SOPs identify specific procedural guidelines for all aspects of response, station environments, and cleaning where disease transmission can be reasonably anticipated, as well as training and administrative aspects of the program, and post-exposure evaluation/investigation.

## **EVALUATION OF EXPOSURE INCIDENTS**

The procedure for the evaluation/investigation of circumstances surrounding incidents of exposure to blood, other body fluids, or other potentially infectious materials is detailed in Guide for Employees and Supervisors in the Management of Exposures of Employee protocols. Medical follow-up, documentation, recordkeeping, and confidentiality requirements are also defined in the same document.

## INFECTION CONTROL

### ROLES AND RESPONSIBILITIES

#### **DEPARTMENT DIRECTOR (Fire Chief)**

The tasks of managing the Department Infection Control program are delegated to the appropriate staff as noted below. The ultimate responsibility for the implementation of this program is that of the Department Director.

#### **MEDICAL OPERATIONS OFFICER**

In addition to existing duties, the Medical Operations Officer is responsible for the development and delivery of a comprehensive infection control educational program which complies with OSHA Regulation 29 CFR Part 1910.1030, The TDH Blood Borne Pathogen Standards and other applicable laws. The Infection Control Officer will provide technical assistance.

The Medical Operations Officer, in conjunction with the Infection Control Officer will:

- Develop and implement an immunization program.

- Develop and implement a post-exposure program.

- Provide technical assistance and guidance in the development of appropriate infection control training.

- Oversees policies regarding confidentiality of medical and exposure records.

- Evaluate possible employee exposures to communicable diseases and coordinate communications between the department, area hospitals, and the City of Austin, Travis County Health Authority.

- Monitor follow-up on all occupational exposures involving department personnel to help ensure the appropriateness and consistency of follow-up procedures.

- Establish standards for the cleaning and disinfecting of equipment.

- Coordinate the disposal of biohazardous waste in accordance with EPA and state and local regulations and help insure that such disposal is performed by an approved licensed contractor designated by the department.

- Establish policies regarding and monitor the proper trade-in and cleaning/decontamination of contaminated turnout gear and/or station uniforms.

- Collect quality assurance data on the department infection control program and present these data to the Department Director.

**Notify the Department Director if quality assurance data indicate a safety hazard requiring immediate attention.**

Conduct spot inspections of on-scene and station operations to monitor  compliance with department infection control policy.

Receive exposure reports from supervisors, obtain all pertinent patient and employee information, and complete an initial report form.



## **DEPARTMENT INFECTION CONTROL OFFICER**

The Department Infection Control Officer, or his designee, will be appointed by the Department Director. The candidate should be well versed in communicable disease transmission and prevention and maintain current knowledge of applicable federal, state, and local laws and regulations regarding infection control.

The Infection Control Officer will:

Serve as the Department "designated officer" as required by the Ryan White Comprehensive AIDS Resources Act of 1990 (PL 101-381). Provide exposure reports to TDH as prescribed in the Texas Blood Borne Pathogen Act.

Develop criteria for the purchase of infection control personal protective equipment and determine adequate stocking levels for each station and response vehicle.

Coordinate the immunization program with the Medical Operations Officer and maintain immunization records in the appropriate location.

Confer with the Medical Operations Officer on all exposure incidents.

Maintain a confidential database of exposures and treatment given, in conjunction with the Medical Operations Officer.

Provide technical expertise to the Medical Operations Officer in the development of the infection control curriculum.

Keep abreast of new technologies and developments in the area of patient care, infection control, and cleaning equipment so as to ensure the products used are highly effective in preventing transmission of communicable diseases and make appropriate recommendations to the Fire Chief.

## **ALL SUPERVISORS**

All Supervisors will:

Support and enforce compliance with the Infection Control Program.

Be responsible for the adherence by all personnel of utilizing appropriate safety and PPE procedures for the activity for which the employee is involved.

Correct unsafe acts, and refer employees for remedial infection control training if appropriate.

Mandate safe operating practices both on-scene and in-station.

Initiate investigations of suspected occupational exposures to employees and refer for appropriate medical assessment in accordance with this policy.

Review and determine if the listed actions have been initiated by the employee after a potential exposure. If the actions have not been taken by the employee, have the employee initiate the steps.

Notify the Medical Operations Officer of the potential exposure incident immediately. If the patient is unknown or refuses testing, or if the employee chooses to follow-up with a private physician, the Medical Operations Officer must also be informed.

Complete Workers' Compensation reports as defined in the Departmental "Procedures for On or Off-the -Job Injury/ Illness" and deliver to the Departmental Workers' Compensation Representative.

If the employee requests follow-up by a private physician rather than in-house, both forms must still be completed and sent to the Medical Operations Officer.

## **EMPLOYEES**

All employees will:

Assume ultimate responsibility for their own health and safety.

Always use appropriate PPE.

Report any suspected occupational exposure to communicable diseases to their immediate supervisor as soon as possible, but within 24 hours.

Take appropriate initial self-care steps and cleanse the wound (or irrigate the membranes) with the appropriate solution immediately after any exposure to a patient's body fluids.

Report exposure to immediate supervisor, or if not available, another supervisor as soon as possible. If supervisors are not available, the Medical Operations Officer may be contacted directly, followed by notification of the supervisor as soon as possible.

May choose to have testing and treatment done by his/her private physician. The employee should contact the Departmental Workers' Compensation Representative to obtain the proper worker compensation forms for the physician e

Complete the appropriate affidavit, provided by the Infection Control Officer or his designee, within seventy-two (72) hours of the possible exposure in order for the Health Department to pursue requested source patient testing.

In order to facilitate the Workers' Compensation claims process, an employee claiming possible work-related exposure to a reportable disease, including HIV, must:

Provide the appropriate Departmental Workers' Compensation Representative a Workers' Compensation report within 72 hours of the incident (employees are strongly recommended to report the exposure within 24 hours of the incident), and

Provide the Austin Travis County Health Department with a copy of the sworn affidavit used to request source patient testing. (The affidavit, prepared by the Texas Department of Health, documents the date and circumstances of the exposure and documentation that, within ten [10] days after the exposure, the employee was tested and had a test result that indicated an absence of HIV.)

### **STORES SUPERVISOR II**

The Stores Supervisor II will:

Coordinate with the Infection Control Officer the development of product specifications and inventory levels for cleaning and disinfecting equipment.

Facilitate the changeout of contaminated turnout gear and help ensure the proper cleaning/disinfecting of same.

### **CITY ATTORNEY**

The City Attorney, or designee, will review the Infection Control Program, and each subsequent revision. The City Attorney will inform the Medical Operations Officer and Infection Control Officer of any new regulations (local, state, or federal) that may impact the Infection Control Program.

## PREVENTION

Infection with a communicable disease will not automatically preclude an employee from being assigned patient care responsibilities. Such determination will be made by the Director on a case-by-case basis, after consultation with the System's Medical Director, Travis County Health Authority or his/her designee, and any other appropriate medical professional, if the employee consents to such communication with the physician. The Department will comply with the Americans with Disabilities Act.

Employees with extensive weeping dermatitis and/or open skin lesions on exposed areas shall be restricted from providing direct patient care or handling and/or decontaminating patient care equipment and devices.

All employees will be offered immunizations against hepatitis B, influenza, measles, mumps, rubella, tetanus, diphtheria, and any other immunization, which are deemed appropriate to prevent disease per the Centers for Disease Control and Prevention. Recommendations shall adhere to the most current version of the update on *adult immunization: recommendations of the Immunization Practices Advisory Committee (ACIP)*. Information regarding the risks and benefits of each immunization will be provided to all employees, and in writing. Informed consent will be obtained in writing prior to immunization. Immunizations will be available through AFD Medical Operations and EMS Clinical Practices.

Those employees who have received Hepatitis B immunizations may receive serologic testing to Hepatitis B immunization to determine if immunity exists.

Employees may refuse immunizations, or may submit written proof of previous immunization. Employees who refuse immunization will be counseled on the occupational risks for that communicable disease, and required to sign a refusal of immunization form. Employees who initially refuse immunizations may later receive such immunizations upon request.

Unless otherwise specified, all intramuscular injections will be administered into the deltoid muscle.

All employees will be offered initial and yearly screening for tuberculosis exposure.

Any employee returning to work following treatment for an injury or a communicable disease must complete the appropriate Return to Duty Status process which is outlined in Departmental "Procedures for On or Off-the-Job Injury/Illness" to be cleared to resume emergency response duties.

The Medical Operations Officer will maintain records in accordance with OSHA's CFR 29, Part 1910.103 and the TDH Blood Borne Pathogen rules. Employee participation in the Infection Control Program will be documented, including:

- Name and Social Security Number
- Immunization records
- Circumstances of exposure to communicable diseases
- Post-exposure medical evaluation, treatment, and follow-up.

## **MAINTENANCE OF RECORDS**

Medical records are strictly confidential. Medical records of employees will be maintained in the office of the Medical Operations Officer, in a separate, secured, and locked file. Medical records will not be released without the signed written consent of the employee or the employee's legally authorized representative, or as required by law. Infection control records of employees with an occupational exposure will become a part of the employee's employment medical file and will be maintained for duration of employment and as long thereafter as is required by applicable law.

Employees may examine their own medical records in the presence of the Medical Operations Officer, or designee. Release of copies of medical records to the employee's personal physician will be made only with the signed written consent of the employee or the employee's legally authorized representative.

The department may make abstracts of medical records without personal identifiers for quality assurance, compliance monitoring, or program evaluation purposes, as long as the identity of individual employees cannot be determined from the abstract.

Employees' medical files will contain the following:  
employee application, designation of duty status form, release to return to work form, any memos referring to medical conditions, leave adjustment forms if forms contain medical comments, and medical history form (if any).

## EDUCATION

All employees will receive basic information about HIV and the workplace, the City of Austin HIV Workplace Guidelines, HIV/AIDS anti-discrimination ordinance, the Americans with Disabilities Act, and other applicable laws and regulations.

Employees providing emergency patient care and those responsible for cleaning and disinfecting equipment will be required to complete:

Initial infection control training at the time of assignment.

Refresher infection control training at least annually thereafter.

All infection control-training materials will be appropriate in content and vocabulary to the educational level, literacy, and language of employees being trained.

Training will be in compliance with OSHA Regulation 29 CFR Part 1910.1030 and shall include:

An accessible copy of 29 CFR Part 1910.1030 and an explanation of its contents.

A general explanation of the epidemiology and symptoms of bloodborne diseases.

An explanation of the modes of transmission of bloodborne pathogens.

An explanation and a copy of the Department Exposure Control Plan.

An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

Information on the types, proper uses, location, removal, handling, decontamination, and disposal of personal protective equipment.

An explanation of the basis for individual selection of personal protective equipment.

Written information on the hepatitis B vaccine, including information on its efficacy, safety, and the benefits and risks of being immunized; notification that the vaccine and immunization will be provided at no charge.

Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

An explanation of the procedure and forms to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.

Information on the post-exposure evaluation and follow-up that the department is required to provide

An explanation of the signs and labels and/or color coding required for biohazardous materials; information on the proper storage and disposal of biohazardous materials.

Opportunity for interactive questions and answers.

Infection control trainers shall be knowledgeable in all of the program elements listed above, particularly as they relate to emergency services provided by this department.

Written records of all training sessions will be maintained for all departmental training and continuing education activities and such records shall, at a minimum satisfy applicable federal and state law requirements. These records will be maintained by Medical Operations and retained as part of the employee's continuing medical education file.

## **GENERAL SANITATION**

All stations will be maintained in a clean and orderly fashion. All stations will have designated separate areas for the storage of clean patient care equipment and infection control personal protective equipment.

Every attempt should be made to defer from using kitchens, bathrooms, or living areas for cleaning, decontamination, or storage of patient care equipment or infectious waste. For those stations that are not equipped with the appropriate cleaning and disinfecting facilities, stations shall use existing EMS Department facilities. In the interim, you may clean the contaminated equipment at a properly equipped facility for appropriate cleaning and disinfection.

All future Fire Department stations will be constructed with appropriate cleaning and disinfecting facilities. A plan is being developed to address the retrofit of existing station facilities.

All employees will maintain additional clean uniforms in the station so that potentially contaminated uniforms can be exchanged upon return to quarters.

## PERSONAL PROTECTIVE EQUIPMENT

Standards for personal protective equipment (PPE) will be developed by the Medical Operations Officer and Infection Control Officer and updated or modified as needed.

**Failure by employees to use PPEs according to developed standards will result in disciplinary action up to and including termination.**

The Department is responsible for the supply, repair, replacement, and safe disposal of infection control PPE. The Medical Operations Officer after consultation with the Infection Control Officer, shall determine proper stock supply levels of PPE for both stations and for response vehicles.

The station officer shall ensure that station stock of PPE is adequate and that supplies nearing expiration dates are used first.

The amount and type of PPE will be standardized on all response vehicles.

Available PPE (in addition to PPE for fire and hazardous rescues) may include disposable gloves, rubber gloves for cleaning and disinfection purposes, face masks, particulate respirators, eye protectors, fluid-impervious aprons, and leakproof disposable bags.

### SELECTION AND USE OF PERSONAL PROTECTIVE EQUIPMENT

Emergency responses are often unpredictable and uncontrollable. While blood is the single most important source of HIV and HBV infection in the workplace, in the field it is safest to assume that all body fluids are infectious.

In general, employees should select PPE appropriate to the potential for spill, splash, or exposure to body fluids. No standard operating procedure or PPE ensemble can cover all situations. When in doubt, select maximal rather than minimal PPE.

Disposable latex patient care gloves shall be worn during any patient contact. All employees will carry extra pairs of disposable gloves in their Personal Protective Equipment Response Pack (PPERP), on their uniforms, or turnout gear.

Those employees exhibiting signs of allergic dermatitis or other signs of latex sensitivity may request to be issued non-latex patient care gloves.

Gloves shall be replaced as soon as possible when soiled, torn, or punctured. Hands shall be washed after glove removal.

Disposable gloves will not be reused or washed and disinfected for reuse.

For the purposes of a multi-patient mass casualty incident, providers should attempt to adhere to the basic principles of infection control, prevent contamination and exposure of the provider to the body fluids of the patient(s) and prevent contamination and cross exposure to other patients.

Providers should consider NOT changing gloves between patients unless there is gross, liquefied bodily fluids evident on their gloves as they move to the next patient. Remember “**THE GREATEST GOOD FOR THE GREATEST NUMBER**”

There are several steps that providers can undertake to assist in the rapid change of gloves to decrease time concerns:

Knowing that you are responding to a multi-patient event, place additional spare gloves into your PPERPack and pants pockets.

Apply 3 to 4 pairs of gloves and utilize a shedding process of removing the top layer as it becomes overly soiled with liquefied body fluids or the structural integrity of the glove(s) is compromised.

Use a 4x4 gauze to wipe the accumulated fluid from the glove(s) so as to prevent cross contamination to the next patient.

Should a provider expend their personal inventory of gloves, continue assessment and/or treatment until the gloves are overly soiled or torn and remove yourself from patient contact duties.

Leather firefighting gloves will be worn over patient care gloves in situations where sharp or rough edges are likely to be encountered.

Heavy-duty rubber gloves may be used for the handling, cleaning, decontamination, or disinfection of potentially contaminated patient care equipment.

The CDC has approved the following levels of precautions:

Standard Precautions – this level of protection will be used in every patient care situation. Standard precautions assume that all patients are infective and seek to isolate the health care worker from the patient’s body fluids. It includes:

- Protection of the mucous membranes of the face (eyes, nose, and mouth) shall be used in any situation where splash contact with the face is possible. Mucous membrane protection may be afforded by using the combination eye shield and mask apparatus or respirator mask and department issued or approved eyewear.
- The use of gowns
- The use of gowns when there may be splashing of body fluids.

Airborne Precautions – **this level of protection is used when there is the potential for small particles that may stay airborne for extended periods of time and maybe inhaled. Diseases that are included in this category are TB, measles, and varicella.** It is expected that care providers will utilize all aspects of standard precautions and the use of a particulate respirator mask (N95) prior to making patient contact or entering an enclosed area that the patient may have contaminated. When examining or treating potentially high-risk respiratory patients, employees will use full respiratory protection (particulate respirator mask, eye protection, and gloves). All three items must be worn as an ensemble in order to qualify as full respiratory protection

The incidence of TB is higher in homeless shelters, long-term care facilities, correctional institutions, and substance abuse treatment centers, and employees should always suspect the possibility of TB when responding to these facilities and take appropriate precautions.

**Droplet Precautions – this level of protection is designed to reduce the risk of transmission of infectious agents that have large droplets, usually  $\geq 10$  microns in size. These are particles that do not tend to stay airborne for long periods of time and tend to fall to the ground shortly after leaving the source patient. Diseases in this category include meningitis, pneumonia, pertussis, and streptococcal pharyngitis.** In addition to standard and airborne precautions will be worn anytime the employee is within five (5) feet of the patient.

In addition, a patient in any setting who exhibits one or more of the following signs and symptoms shall be treated using full airborne precautions:

- Productive cough with/without blood
- Fever and chills with coughing
- Night sweats
- Weight loss (dramatic - greater than 10%; unexplained)
- Fatigue (in the presence of other symptoms)
- Hemoptysis (coughing up blood)
- Nuchal rigidity (stiff neck)
- Chest and upper torso rash

Full respiratory protection should also be used when performing high-risk procedures that may cause reflexive coughing, sneezing or vomiting. These procedures include:

- Suctioning or airway insertion of any kind
- Examinations of the mouth or nares
- Assisting with the administration of aerosolized medications
- Treating patients who are actively bleeding into or around the airway

Every effort should be made to contain aerosolized particles exhaled from patients. Patients exhibiting acute respiratory distress should be administered oxygen via a non-rebreather facemask. For those not in severe distress, the N95 particulate respirator may be placed on the patient. A white valveless particulate respirator mask or HEPA mask should never be used for patients, since they require stronger respiratory effort, and may aggravate the patient's condition.

Face shields on rescue helmets should not be used routinely for infection control purposes since they do not protect against materials which splash up underneath the face shield.

Contact Precautions – **this level of protection is used for patients that are infected with a disease spread by direct contact with the patient or items in their environment. Diseases in this category include all multi-drug resistant organisms (Methicillin resistant staphylococci, Vancomycin resistant enterococci). In addition, enteric infections such as Clostridium difficile, Hepatitis A, and Respiratory Syncytial Virus.** In addition to standard and airborne precautions, a gown is worn during all phases of patient care.

Fluid-resistant gowns are designed to protect clothing from splashes. Turnout gear also protects clothing from splashes and is preferable in fire, rescue, or vehicle extrication circumstances. Turnout gear will always be worn when on scene of fires and extrication activities.

Turnout boots may be worn under certain circumstances to protect shoes from potential contamination.

## **SCENE OPERATIONS**

**THE BLOOD, BODY FLUIDS, AND TISSUES OF ALL PATIENTS ARE CONSIDERED POTENTIALLY INFECTIOUS, AND THE USE OF STANDARD/UNIVERSAL PRECAUTION PROCEDURES MUST BE USED FOR ALL PATIENT CONTACT.**

The choice of personal protective equipment is specified in the preceding section. Employees shall use maximal rather than minimal PPE for each event. See the Table #4 “Examples of Recommended Personal Protective Equipment for Worker Protection Against HIV and HBV Transmission in Prehospital Settings”, CDC, Guidelines for Prevention of Transmission of HIV and HBV to Health Care and Public-Safety Workers, page 28.

While complete control of the emergency scene is not possible, scene operations as much as possible will attempt to limit splashing, spraying, or aerosolization of body fluids. This will be particularly important during the transfer of blood into test tubes or on to glucometer test strips.

### **HANDWASHING IS THE MOST IMPORTANT INFECTION CONTROL PROCEDURE!**

Employees will wash their hands:

- After removing PPE(s).
- After each patient contact.
- After handling potentially infectious materials.
- After cleaning or decontaminating equipment.
- After using the bathroom.
- Before eating.
- Before and after handling or preparing food.

Handwashing with soap and water will be performed for a minimum of twenty (20) seconds, using a vigorous rubbing together of all surfaces of lathered hands, and followed by thorough rinsing under a stream of water. If soap and water are not

available at the scene, a waterless handwash/wipe shall be used before boarding the apparatus. Upon return to the station, all members shall wash their hands with soap and water wash.

Used needles and other sharps shall be disposed of in approved sharps containers. Needles that have contact with human tissue will not be recapped, resheathed, bent, broken, or separated from disposable syringes. The most common occupational blood exposure occurs when needles are recapped.

All AFD apparatus will be equipped with a sharp shuttle.

When patient care needs require the use of a lancet for blood access, the contaminated lancet(s) will be placed into the sharp shuttle.

Upon the arrival of the EMS transporting crew, the AFD crew will trade out the sharp shuttle containing the contaminated lancet(s) with a clean shuttle contained in the EMS equipment.

The EMS crew will transfer the contents of the sharp shuttle into the larger sharps container found in the transport vehicle.

If the AFD crew does not achieve the transfer of the contaminated sharps to EMS, arrangements will be made after their return to the station or during the next EMS response.

Sharps containers shall be easily accessible on-scene through EMS.

Blood, suctioned fluids, or other liquid waste may be poured carefully into a drain connected to a sanitary sewer system. Self-contained suction canisters will be recapped and placed in a sealable plastic bag to prevent leakage of the contained items.

At the conclusion of the on-scene operations, all potentially contaminated patient care equipment should be removed, cleaned, and decontaminated for reuse unless its removal will hamper an ongoing criminal investigation.

There is no epidemiological evidence to suggest that most emergency medical response waste is any more infective than residential waste. Moreover, there is no epidemiological evidence that emergency medical response waste disposal practices have caused disease in the community. Therefore, identifying wastes for which special precautions are indicated is largely a matter of judgment about the relative risk of disease transmission. Aesthetic and emotional considerations may override the actual risk of disease transmission.

Since a precise definition of infective waste that is based on the quantity and type of etiologic agents present is virtually impossible, the most practical approach to infective waste management is to identify those wastes that represent a sufficient potential risk of causing infection during handling and disposal and for which some special precautions appear prudent.

While any item that has had contact with blood, exudates, or secretions may be potentially infective, it is not normally considered practical or necessary to treat all such

waste as infective. Unless grossly contaminated with non-dried blood, such articles can be disposed of in the regular station waste management system.

Members will consider any materials that contain cultures and stocks of infectious agents and associated microbiologicals, pathologic waste (e.g., human tissues, organs, and body parts), non-dried blood and blood products, sharps, and animal waste as infected medical waste. Such waste will be placed in biological hazard bags and sealed. The sealed bag will be delivered to an EMS station or EMS supply office for proper removal and disposal.

## POST-RESPONSE

Upon the completion of all responses, contaminated equipment will be removed and replaced with clean equipment. Supplies of PPE on response vehicles will be replenished.

Contaminated equipment will be placed in a leakproof bag and segregated from clean equipment. Cleaning and decontamination will be performed as soon as practical.

Disposable equipment not traded out on the scene with EMS and other waste generated during on-scene operations will be discarded into an appropriate waste container. No contaminated needles or sharps containers are to be placed in trash bins, dumpsters, or in plastic waste bags in the patient compartments of the ambulances.

Gloves will be worn for all contact with contaminated equipment or materials. Other PPE will be used depending on splash or spill potential. Heavy-duty rubber gloves may be used for cleaning, disinfecting, or decontamination of equipment.

Disinfection will be performed with a department-approved disinfectant or with a 1:100 dilution of bleach and tap water or 1/4 cup of bleach to 1 gallon of water. All disinfectants will be tuberculocidal and EPA approved and registered.

Any damaged equipment will be cleaned and disinfected before being sent out for repair.

The manufacturer's guidelines will be used for the cleaning and decontamination of all equipment, unless otherwise specified in writing.

The rationale for cleaning, disinfecting, or sterilizing patient care equipment can be understood more readily if medical devices, equipment, and surgical materials are divided into three general categories: critical items, semi-critical items, and noncritical items, based on the potential risk of infection involved in their use.

The Department uses the Spaulding classification system to determine what level of cleaning and disinfection will be used for equipment.

Critical items are instruments such as needles, surgical instruments, cardiac catheters, or implants that are introduced directly into the bloodstream or into other normally sterile areas of the body. These items should be sterile at the time of use. Most all such items are used by the EMS Department and considered single use items and should not be cleaned or disinfected for reuse under any circumstances.

Semi-critical items are items such as bag valve masks and other items that may come in contact with mucous membranes but do not ordinarily penetrate body surfaces. Although sterilization is preferred for these instruments, a high-level disinfection procedure that destroys vegetative microorganisms, most fungal spores, tubercle bacilli, and small, nonlipid viruses may be used. Meticulous physical cleaning before sterilization or high-level disinfection is essential. The current system that is used to for disinfecting semi-critical items is Cidex™.

Noncritical items are those that either do not ordinarily touch the patient or touch only intact skin. Such items include splints, backboards, blood pressure cuffs, and various other medical accessories. These items usually do not transmit infection.

Decisions about decontamination processes should be based on the intended use of the item and not on the diagnosis of the patient for whom the item was used. Selection of chemical disinfectants depends on the intended use, the level of disinfection required, and the structure and material of the item to be disinfected.

Although microorganisms are normally found on walls, floors, and other surfaces, these environmental surfaces are rarely associated with transmission of infections to patients or health care personnel. This is particularly true with organisms such as tubercle bacilli, which generally require inhalation by the host for infection to occur. Therefore, extraordinary attempts to disinfect or sterilize environmental surfaces are rarely indicated. However, routine cleaning with a hospital grade EPA approved germicide/disinfectant is recommended.

Durable equipment will be washed with hot soapy water, rinsed with clean water, and disinfected with a department-approved disinfectant or with a 1:100 dilution of bleach and tap water or 1/4 cup of bleach to 1 gallon of water. Equipment will be allowed to air dry prior to next use.

Delicate equipment (radios, cardiac monitors, etc.) will be wiped clean of any debris using hot soapy water, wiped with clean water, then wiped with disinfectant or 1:100 bleach solution. Equipment will be allowed to air dry prior to next use.

Work surfaces will be decontaminated with an appropriate disinfectant after completion of procedures, and after spillage or contamination with blood or potentially infectious materials. Seats on response vehicles contaminated with body fluids from soiled PPE also will be disinfected as soon as practical.

Contaminated turnout gear and/or station uniforms shall be bagged and clearly labeled. The member will contact Administrative Services to arrange trade out and proper decontamination. Contaminated boots will be brush-scrubbed with a hot solution of soapy water, rinsed with clean water, and allowed to air dry.

The employee will shower if body fluids were in contact with the skin under work clothes. Employees are encouraged to shower at the end of their workshifts.

## **GUIDE FOR EMPLOYEES AND SUPERVISORS IN THE MANAGEMENT OF EXPOSURES OF EMPLOYEES**

All individuals who experience an exposure to any patient's blood (needle stick, mucous membrane, or nonintact skin) or airborne inhalation, require specific follow-up. It is the responsibility of the exposed employee to initiate certain actions and to report the incident as soon as possible to his/her supervisor and/or the infection control officer so these actions can be completed. It is the responsibility of the supervisor to ensure the appropriate steps are taken and to notify the Medical Operations Officer of the situation. Completion of Workers' Compensation "Supervisor's Investigation Report" is also the responsibility of the supervisor. The type of exposure an employee experiences determines the type of initial response that is necessary.

Contamination by blood to non-abraded skin requires prompt cleansing of the contaminated area with an appropriate cleansing agent. On-scene, the use of the waterless handwash should be used. Upon return to the station, a soap and water wash should be performed. The initiation of testing for hepatitis, syphilis, or HIV should not be done routinely. However, the Medical Operations Officer should be contacted to assess the need for further action if blood exposure to skin is excessive.

Exposure of blood to mucous membranes such as eyes, mouth, or nose requires prompt and adequate irrigation of the exposed membranes with water or an appropriate solution. Actions as outlined below will then be initiated.

The following actions will be taken in response to needle stick, percutaneous, and permucosal exposures. If the Infection Control Officer advises, these may also be used in the event of blood exposure to unabrased skin.

### **EMPLOYEE RESPONSE**

Cleanse the wound (or irrigate the membranes) with the appropriate solution immediately.

Report exposure to immediate supervisor, or if not available, another supervisor as soon as possible. If supervisors are not available, the Medical Operations Officer may be contacted directly via dispatch, followed by notification of the supervisor as soon as possible.

An employee may choose to have testing and treatment done by his/her private physician. The employee should contact the Departmental Workers' Compensation Representative to obtain the proper worker compensation forms for the physician evaluation.

If patient testing will be requested, the employee must complete the affidavit provided by the Infection Control Officer, or his designee, within seventy-two (72) hours of the possible exposure in order for the Health Department to pursue source patient testing.

**SUPERVISOR RESPONSE**

Review and determine if the employee has initiated the above listed actions. If the employee has not taken the actions, have the employee initiate the steps.

Notify the Medical Operations Officer of the incident immediately via dispatch. If the employee chooses to follow-up with a private physician, the Medical Operations Officer must also be informed.

Complete Workers Compensation reports and deliver to the Departmental Workers' Compensation Representative.

If the employee requests follow-up by a private physician rather than in-house, both forms must still be completed and sent to the Medical Operations Officer.

**MEDICAL OPERATIONS OFFICER RESPONSE**

Receive exposure reports from supervisors, obtain all pertinent patient and employee information, and complete an "Evaluation for Possible Disease Exposure" report form.

Review the necessary actions with the supervisor if not already initiated.

The most current version of the Department Infection Control Officer's Standards of Care (SOC) will form the basis for all follow-ups and post exposure care. A complete set of the SOC is attached to the exposure control plan.

## **COMPLIANCE AND QUALITY MONITORING / PROGRAM EVALUATION**

The Medical Operations Officer will collect compliance and quality monitoring data including:

- Inspections of station facilities.

- Observation of on-scene activities.

- Analysis of reported exposures to communicable diseases.

- A monthly quality and compliance report will be made by the Medical Officer.

The Infection Control Program will be re-evaluated at least annually to help assess that the program is both appropriate and effective.

In addition, the Infection Control Program will be re-evaluated as needed to reflect any significant changes in assigned tasks or procedures, in medical knowledge related to infection control, and/or in regulatory matters.

The Department Medical Operations Officer and Attorney will actively participate in program re-evaluations.

## ***The following COG's will form the basis of all Infection Control Officer follow-up and care.***

### **Infection Control Clinical Operating Guidelines**

The EMS/AFD infection control program has a comprehensive infection control policy. This document outlines what immunizations are available, when lab testing will be conducted, who will receive the lab results and how the records will be maintained. In addition it identifies the documentation sources that serve as the medical standing orders for the Infection Control Practitioner (ICP) or his/her designee.

#### **Immunizations/TB skin testing**

The infection control program will make available the following immunizations as recommended in the MMWR December 26, 1997/Vol.46/No. RR-18, *Immunization of Health Care Workers Recommendations of the Advisory Committee on Immunization Practices*:

Hepatitis A (HAV) [For special rescue team members]  
Hepatitis B (HBV)  
Tetanus/diphtheria toxoid (Td)  
Measles/mumps/rubella (MMR)  
Annual Influenza

Purified Protein Derivative (PPD Mantoux)

At this time the Department(s) do not administer Varicella

The ICP will maintain a roster of persons trained and approved by the Medical Director to administer immunizations and skin tests. The most current issue of the Austin/Travis County Health Department *Immunization Manual* will be used as the standing order for the administration of all immunizations.

#### **Blood and Other Potentially Infectious Body Fluids – Baseline/Post Exposure Testing and Follow-up**

Evaluation of exposure by Infection Control Practitioner. Does the exposure meet the CDC definition? If no educate employee regarding exposures and safety. If yes, does the employee wish to take the PEP medications? NO, routine follow-up through the ICP. Yes, employee seen at Brack and referred to infectious disease physician (IDP).

The following employee lab results will automatically result in referral to an (IDP):

- Positive HCV titer confirmed with RIBA
- Positive HIV test (post exposure)
- Personnel accepting HIV post exposure prophylaxis (PEP)
- Increased liver function test levels post exposure to hepatitis

- Positive HBV antigen

#### **Employees who accept PEP:**

- Evaluated and treated in Brack ED.
- Receive the first dose of the PEP medications in the ED and a prescription for an additional 3-4 days of medications.
- All lab testing for personnel accepting post exposure prophylaxis will be conducted by the treating emergency department (Brackenridge).
- Brack will forward lab results to the IDP for further evaluation.

#### **Referral to IDP and Clinic**

- The IDP will evaluate the need for continuing PEP.
- After release from the IDP (either after completion of PEP or at discontinuance of PEP) routine exposure follow-up will be conducted by the ICP
- Labs will include Baseline HIV, HBV surface ab, HCV, PRP on both employee and source patient. HBV ag on source patient
- Source patient draw will be conducted by the ICP. Results will be given to the IDP before employee's first appointment.
- The repeat routine labs drawn at 6 weeks, 3 months, and 6 months by the ICP on the employee. The tests drawn: HIV each time, HCV on the 6-month draw to confirm negativity
- Should any lab come back abnormal the ICP will consult the Medical Director and possibly result in a referral to the IDP

#### **Employees who decline PEP:**

- Employee and source patient testing is conducted in-house.
- ICP obtains lab samples for both employee and source patient.
- Baseline lab tests source and employee: HIV, HBV surface ab, HCV, RPR. HBV ag on source patient
- The repeat routine labs drawn at 6 weeks, 3 months, and 6 months by the ICP on the employee. The tests drawn: HIV each time, HCV on the 6-month draw to confirm negativity

#### **Hepatitis B surface antibody – Source patient and employee**

- Part of routine post exposure testing for source patient and employee.
- Positive results for employee who has received the HBV vaccine represent protection from HBV
  - Positive results for source patient represents a possible source of HBV risk and must be confirmed with HBsAg
  - The results will be documented on the "Evaluation for Possible Infectious Disease Exposure" form and placed into the employee's medical file. If a referral is made, a copy of the results will be sent to the IDP
  - The Medical Director will not routinely review normal results

- If there are positive results for source patient and no record of immunization and/or a failed response for employee – the employee should receive Hepatitis B Immune Globulin (HBIG) 0.06ml/kg intramuscularly (ICP, or his designee will administer). Medical Director is to be advised/consulted prior to HBIG administration. Appropriate documentation of the administration of HBIG will be entered on to the “Evaluation for Possible Infectious Disease Exposure” form and placed into the employee’s medical file.
- New employee baseline – The Hepatitis B surface antibody status of all new EMS/AFD employees will be made.
  - Newly hired employees entering either Departments with documentation of a completed HBV immunization series, will receive baseline testing quantitative – or
  - Provide proof of previous positive Hepatitis B surface antibody test.
  - For employees who do not develop antibodies after the primary vaccine series, it will be recommended for them to receive a booster dose of the vaccine or repeat the entire HBV series
  - The Medical Director will not routinely receive the results of baseline testing. He/she will be notified of cases of failed response to two HBV series
  - Results will be documented in the employee’s medical file

#### **Hepatitis B surface antigen - source patient**

- Part of routine post exposure testing
- Positive results communicated to Medical Director or IDP as appropriate
- The Medical Director will not routinely receive results unless requested
- The results will be documented on the “Evaluation for Possible Infectious Disease Exposure” form and placed into the employee’s medical file

#### **Hepatitis C antibody– Source patient and employee**

- Part of routine post exposure testing
- If referred the IDP will receive copy of results
- Repeat the employee testing at 6 months
- The Medical Director will be advised of positive results for either the source patient or the employee. All positives will be confirmed with a RIBA HCV test
- Automatic referral for positive results
- The results will be documented on the “Evaluation for Possible Infectious Disease Exposure” form and placed into the employee’s medical file

#### **HIV antibody– Source patient and employee**

- Part of routine baseline post exposure testing
- Repeat the employee testing at 6 weeks, 3 months, and 6 months.
- The Medical Director will be advised of positive results for either the source patient or the employee. Automatic referral for positive results
- The results will be documented on the “Evaluation for Possible Infectious Disease Exposure” form and placed into the employee’s medical file

**Hepatic function panel – Source patient and employee** (LabCorp® test panel includes: albumin serum, ALT, alkaline phosphatase serum, AST, bilirubin direct, bilirubin total)

- Post exposure testing for persons suspected of high risk for hepatitis in the absence of confirmatory Ab or Ag.
- Medical Director will receive a copy of lab results for employee follow-up or referral to infectious disease specialist
- Results will be documented on the “Evaluation for Possible Infectious Disease Exposure” form and placed into the employee’s medical file

#### **RPR– Source patient and employee**

- Part of baseline post exposure testing the referral physician will receive a copy of the results. Repeat the employee testing at 3 months
- The Medical Director will be advised of positive results for either the source patient or the employee
- The results will be documented on the “Evaluation for Possible Infectious Disease Exposure” form and placed into the employee’s medical file
- Positive results from source patient will result in prophylactic treatment of the exposed employee thru referral to an IDP

Other tests may be requested at the discretion of the Medical Director. The results of any tests requested by the Medical Director will be forwarded to him.

#### **TB skin testing**

- TB skin testing will be conducted annually for AFD personnel and every six months for EMS personnel. Testing will be done using the Mantoux method following the protocols outlined in the MMWR (Recommendation and Reports) October 28, 1994/Vol. 43/No. RR-13, *Guidelines for the Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities, 1994 (see exposure section for follow-up information).*
- Employees exposed to confirmed or suspected active TB source patients will receive:
  - Baseline PPD skin test if more than one (1) month has elapsed since their last PPD.
  - Repeat PPD at twelve weeks post exposure.
- Greater than 10mm of induration will be considered a positive skin test. All positive reactions will be referred to the Travis County Health Department for follow-up.

#### **Exposure Follow-up**

The infection control program will use the protocols outlined by the following: CDC, American Public Health Association, and Association of Professionals in Infection Control for post exposure treatment and follow-up. The ICP will complete the appropriate

exposure documentation, declination form (PRN), Health Department Affidavit and Health Department source patient release.

### **Meningitis**

- Positive exposures are related to droplet contamination of the oral/nasal mucosa.
  - High risk procedures such as intubation, suctioning, mouth-to-mouth, BVM without mask and eye protection.
  - PEP should be started with-in four (4) days.
  - ICP coordinates interaction with receiving hospital for source patient information.
  - Documentation of exposure on "Evaluation for Possible Infectious Disease Exposure" form and placed into the employee's medical file.
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- The ICP, or his designee, has prescriptive authority from the Medical Director to order post exposure prophylactic treatment of *N. meningitidis* exposures with Rifampin 600mg PO BID x two days or a single dose of Ciprofloxacin 500mg PO. The Medical Director will be consulted prior to calling in the prescription

### **Source Documents for EMS/AFD Infection Control Program**

- MMWR (Recommendations and Reports) December 27, 1996/Vol.45/No.RR-15, *Prevention of Hepatitis A Through Active or Passive Immunization - Recommendations of the Immunization Practice Advisory Committee (ACIP)*
- MMWR November 22, 1991/Vol. 40/No. RR-13, *Hepatitis B virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal Childhood Vaccination – Recommendations of the Immunization Practice Advisory Committee (ACIP)*
- MMWR (Recommendations and Reports) June 23, 1989/Vol.38/No. S-6, *Guidelines for the Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers*
- MMWR (Recommendations and Reports) October 16, 1998/Vol. 47/No. RR-19, *Recommendations for the Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease*
- MMWR (Recommendations and Reports) May 15, 1998/Vol.47/No. RR-7, *Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and recommendations for Post Exposure Prophylaxis*
- *Infection Control and Applied Epidemiology*, Association of Professionals in Infection Control, 2<sup>nd</sup> edition
- *Control of Communicable Diseases Manual*, American Public Health Association, 16<sup>th</sup> edition

Consultation for exposures not listed above will be obtained from an infectious disease specialist.

\_\_\_\_\_ Date \_\_\_\_\_

**AUSTIN FIRE DEPARTMENT**

**DECLINATION OF HEPATITIS B VACCINE IMMUNIZATION**

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 immunized with hepatitis B vaccine, at no charge to me. However, I decline hepatitis B immunization 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 want to be immunized with hepatitis B vaccine, I can receive the immunization series at no charge to me.

\_\_\_\_\_  
Employee Signature

Date \_\_\_\_\_

\_\_\_\_\_  
Employee's Printed Name

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Witness's Printed Name

**AUSTIN FIRE DEPARTMENT**

**DECLINATION OF IMMUNIZATION**

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring \_\_\_\_\_infection. I have been given the opportunity to be immunized with \_\_\_\_\_ vaccine, at no charge to me. However, I decline \_\_\_\_\_immunization at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring \_\_\_\_\_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 immunized with \_\_\_\_\_vaccine, I can receive the immunization series at no charge to me.

\_\_\_\_\_  
Employee Signature

Date \_\_\_\_\_

\_\_\_\_\_  
Employee's Printed Name

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Witness's Printed Name

## GLOSSARY OF COMMON TERMS

**AIDS** - Acquired Immune Deficiency Syndrome, a communicable disease caused by Human Immunodeficiency) Virus (HIV).

**ADVANCED LIFE SUPPORT (ALS)** - Emergency medical treatment at an advanced level, usually provided by paramedics, and including use of drugs, cardiac monitoring/intervention, and intravenous fluids.

**AIRBORNE PATHOGEN** - Pathologic microorganisms spread by droplets expelled into the air, typically through a productive cough or sneeze.

**ANTIBODY** - A component of the immune system which eliminates or counteracts a foreign substance (Antigen) in the body.

**ANTIGEN** - A foreign substance which stimulates the production of antibodies in the immune system.

**BACTERIA** - A type of living microorganism that can produce disease in a suitable host. Bacteria can self-reproduce, and some forms may produce toxins harmful to their host.

**BASIC LIFE SUPPORT (BLS)** - 'Emergency medical treatment at a level authorized to be performed by emergency medical technicians as defined by the medical authority having jurisdiction.' (NFPA 1500.) Generally refers to treatment provided at EMT-A level.

**BLOODBORNE PATHOGEN** - Pathologic microorganisms that are present in human blood and that can cause disease in humans. (OSHA.) Note: the term 'blood' includes blood, blood components, and products made from human blood.

**BODY FLUIDS** - 'Fluids that have been recognized by the CDC as directly linked to the transmission of HIV and/or HBV and/or to which Universal Precautions apply: blood, semen, blood products, vaginal secretions, cerebrospinal fluid, synovial fluid, pericardial fluid, amniotic fluid, and concentrated HIV or HBV viruses.' (OSHA.)

**BODY SUBSTANCE ISOLATION (BSI)** - An infection control strategy which considers all body substances potentially infectious. (See Universal Precautions.)

**CDC--CENTERS FOR DISEASE CONTROL AND PREVENTION** - A branch of the Public Health Service, Department of Health and Human Services concerned with communicable disease tracking and control.

**CHICKENPOX** - A highly communicable disease caused by a herpes virus. Commonly occurs in childhood.

**CLEANING** - The physical removal of dirt and debris.

**COMMUNICABLE DISEASE** - A disease that can be transmitted from one person to another. Also known as contagious disease.

**CONTAMINANT/CONTAMINATED** - 'A substance or process that poses a threat to life, health, or the environment." (NFPA 472.)

**DEBILITATING ILLNESS OR INJURY** - "A condition that temporarily or permanently prevents a member of the fire department from engaging in normal duties and activities as a result of illness or injury." (NFPA 1500.)

**DECONTAMINATION** - "The physical and/or chemical process of reducing and preventing the spread of contamination from persons and equipment." (NFPA 472.)

**DIRECT DISEASE TRANSMISSION** - When a communicable disease is transmitted from one person to another due to direct contact with infected blood, body fluids, or other infectious materials.

**DISEASE** - An alteration of health, with a characteristic set of symptoms, which may affect the entire body or specific organs. Diseases have a variety of causes and are known as Infectious diseases when due to a pathogenic microorganism such as a bacteria, virus, or fungus.

**DISINFECTION** - "A procedure which inactivates virtually all recognized pathogenic microorganisms, but not necessarily all microbial forms (ex. bacterial endospores) on inanimate objects." (OSHA.)

**ELISA** - Enzyme-linked immunosorbent assay, a test used to detect antibodies to the AIDS virus, indicating infection. For accuracy, a positive ELISA test is always repeated. If still positive, a western blot test is then performed to confirm the diagnosis. The sensitivity and specificity of a properly performed ELISA test twelve weeks after exposure is at least 99 percent (MMWR, 1987).

**ENTERIC PRECAUTIONS** - A system of precautions to prevent transmission of disease by the oral/fecal route.

**ETIOLOGIC AGENT** - A living organism that may cause human disease. (NFPA 472.)

**EXPOSURE** - Eye, mouth, other mucous membrane, nonintact skin, or parenteral contact with blood, other body fluids, or other potentially infectious material.

**FLUID RESISTANT CLOTHING** - Clothing designed and constructed to provide a barrier against accidental contact with body fluids.

**FUNGUS** - A group of microorganisms including molds and yeasts, similar to the cellular structure of plants. Some fungi are pathogenic (can cause disease).

**GERMAN MEASLES** - See Rubella.

**GONORRHEA** - A sexually transmitted disease caused by the bacteria *Neisseria gonorrhoea*.

**HBV** - Abbreviation for hepatitis B virus.

**HCV** - Abbreviation for hepatitis C virus.

**HEALTH HAZARD** - 'Any property of a material that either directly or indirectly can cause injury or incapacitation, either temporary or permanent, from exposure by contact, inhalation, or ingestion.' (NFPA 1501.)

**HEPATITIS** - Inflammation or swelling of the liver. Hepatitis can be caused by certain drugs, toxins, or infectious agents, including viruses. Hepatitis caused by viruses include hepatitis A, B, and D (Delta), and non-A, non-B. Non-A non-B hepatitis includes hepatitis C, hepatitis E, and other, as yet unclassified, types of hepatitis.

**HEPATITIS A** - ("Infectious Hepatitis") A viral form of hepatitis normally spread by fecal contamination and generally not a significant risk for emergency care providers.

**HEPATITIS B (HBV)** - ("Serum Hepatitis") A viral form of hepatitis spread through blood contact, and also as a sexually transmitted disease. Hepatitis B is a significant risk for emergency care workers. Infection may result in death, chronic hepatitis, liver cancer, or cirrhosis of the liver. A vaccine to prevent spread of hepatitis B is available.

**HEPATITIS C (HCV)** - A recently identified viral form of hepatitis, spread via blood contact.

**HEPATITIS D (DELTA, HDV)** - A viral infection occurring in people with present or past HBV infection. Delta hepatitis is a complication of HBV infection and can increase the severity of HBV infection.

**HEPATITIS, NON-A NON-B (NANB)** - Viral hepatitis caused by a virus other than hepatitis A or B. A disease of exclusion, there are probably several viruses responsible. NANB hepatitis is a bloodborne infection, and the cause of ninety percent of post-transfusion hepatitis cases.

**HERPES** - A family of similar viruses, which can cause different diseases, including chickenpox, zoster, "Cold sores," and genital herpes type II.

**HERPES ZOSTER** - A painful skin rash caused by recurrence of a past case of chickenpox. Herpes zoster is not typically spread person-to-person; however, persons who have not had chickenpox previously can contract chickenpox after exposure to a patient with zoster.

**HIV** - Abbreviation for Human Immunodeficiency Virus.

**HIV INFECTION (HIV positive)** - A person who has tested positive for HIV antibodies on two ELISA tests, confirmed with western blot testing. HIV infected patients may or may not develop AIDS, but can spread the virus through blood and bodily fluids.

**HOST** - A person that can harbor or nourish a disease-producing organism. The host is infected.

**HUMAN IMMUNODEFICIENCY VIRUS** - The causative agent of AIDS. HIV type 1 (HIV-1) causes most cases of AIDS. A second virus, HIV-2 is a less common cause of the disease.

**IATROGENIC** - 'Caused by the doctor,' a complication, injury, or disease state resulting from medical treatment.

**IMMUNIZATION** - The process of rendering a person immune, or highly resistant to a disease.

**INCUBATION PERIOD** - The time from exposure to the disease until the first appearance of symptoms.

**INDIRECT DISEASE TRANSMISSION** - When a communicable disease is transmitted from one person to another without direct contact.

**INFECTION** - Growth of pathogenic organisms in the tissues of a host, with or without detectable signs of injury.

**INFECTION CONTROL OFFICER** - A member of a department assigned specific responsibility for department infection control practices, including immunizations and post-exposure follow-up protocols. This officer fulfills the responsibilities for 'designated officer' listed in the Ryan White Act.

**INFECTIOUS WASTE** - 'Blood and blood products, pathological wastes, microbiological wastes, and contaminated sharps.' (MMWR.)

**INFECTIOUS DISEASE** - An illness or disease resulting from invasion of a host by disease-producing organisms such as bacteria, viruses, fungi, or parasites.

**INFECTIOUS** - Capable of causing infection in a suitable host.

**LEAKPROOF BAG** - A bag designed for disposal of potentially infectious substances, color coded, and labeled in accordance with applicable laws.

**MEASLES** - A vaccine-preventable viral communicable disease causing a skin rash. Usually occurs in childhood.

**MENINGITIS** - An infection of the meninges, the covering layers of the brain and spinal cord. May be caused by a bacteria or virus; considered a communicable disease.

**MICROORGANISM** - A living organism, usually visible only with a microscope, including bacteria, viruses, parasites, and fungi.

**MUCOUS MEMBRANE** - The lining of the nose, mouth, eyes, vagina, and rectum. Mucous membranes are not as durable as other skin; contact of infected body fluids with intact mucous membranes may transmit disease.

**MUMPS** - A vaccine-preventable communicable disease caused by a virus, usually occurring in children. May cause serious complications in adult cases.

**NEEDLE STICK** - A parenteral exposure with a needle contaminated from patient use.

**NOSOCOMIAL** - 'Originating in the hospital.' A disease spread by contact with the health-care system.

**OCCUPATIONAL EXPOSURE** - "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." (OSHA.) This definition excludes incidental exposures that may take place on the job, that are neither reasonably or routinely expected and that the worker is not required to incur in the normal course of employment."

**OCCUPATIONAL ILLNESS** - 'An illness or disease contracted through or aggravated by the performance of the duties, responsibilities, and functions of a fire department member.' (NFPA 1500.)

**OCCUPATIONAL INJURY** - "An injury sustained during the performance of the duties, responsibilities, and functions of a fire department member.' (NFPA 1500.)

**PARENTERAL EXPOSURE** - "Exposure which occurs through a break in the skin barrier." (OSHA.) This would include injections, needle sticks, human bites, and cuts contaminated with blood.

**PATHOGEN** - A microorganism that can cause disease. Pathogens can be bacteria, fungi, parasites, or viruses.

**PATHOGENIC** - Capable of causing disease.

**PNEUMOCYCTIS PNEUMONIA (PCP)** - A type of pneumonia caused by a parasite, seen in patients with impaired immune systems.

**POLIO, POLIOMYELITIS** - A vaccine-preventable viral disease uncommonly seen in the United States.

**PPD--PURIFIED PROTEIN DERIVATIVE** - A skin test for exposure to tuberculosis.

**PPE--PERSONAL PROTECTIVE EQUIPMENT** - "Specialized clothing or equipment worn by an employee for protection from a hazard. General work clothes (e.g., uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment." (OSHA.)

**PUNCTURE-RESISTANT CONTAINER** - A leakproof container designed to safely store and/or transport contaminated sharps for proper disposal.

**RECOMBINANT VACCINE** - A vaccine produced by genetic manipulation (gene splicing), usually in yeast.

**RESCUE INCIDENT** - "An emergency incident that primarily involves the rescue of persons subject to physical danger, and may include the provision of emergency medical services." (NFPA 1500.)

**RPR** - A blood test for syphilis.

**RUBELLA** - A vaccine-preventable viral disease. Rubella infection during pregnancy can cause birth defects.

**SAFER SEX PRACTICES** - Practices designed to reduce risk of sexually transmitted diseases, including use of barrier techniques,

**SEXUALLY TRANSMITTED DISEASE (STD)** - A disease spread through sexual contact or activities. HIV and HBV are both bloodborne and sexually transmitted diseases.

**SEROCONVERSION** - A change in the status of one's serum test. For example, someone initially tests negative for HIV, then tests positive at a later date,

**SHARPS** - 'Any object that can penetrate the skin including, but not limited to needles, lancets, scalpels, and broken capillary tubes.' (OSHA.)

**SHINGLES** - Common term for herpes zoster infection, resulting in painful rash.

**STERILIZATION** - 'The use of a physical or chemical procedure to destroy all microbial life, including highly resistant bacterial endospores.' (OSHA.)

**SYPHILIS** - A sexually transmitted infectious disease. Syphilis is uncommonly transmitted through blood exposure or transfusion.

**TUBERCULOCIDAL** - Capable of killing tuberculosis (TB) bacteria. Used as a guideline for effectiveness of disinfection or sterilization, because TB bacteria are difficult to kill.

**TUBERCULOSIS (TB)** - A communicable disease caused by the bacteria *Mycobacterium tuberculosis*, usually affecting the lungs. The incidence of TB has increased since the advent of AIDS.

**UNIVERSAL PRECAUTIONS** - "A system of infectious disease control which assumes that every direct contact with body fluids is infectious and requires every employee exposed to direct contact with body fluids to be protected as though such body fluids were HBV or HIV infected. Therefore, Universal Precautions are intended to prevent health-care workers from parenteral, mucous membrane, and nonintact skin exposures to bloodborne pathogens and should be used by emergency response personnel." (OSHA.)

Note: Universal Precautions differ from Body Substance Isolation (BSI) in that Universal Precautions pertains only to specific body fluids. BSI pertains to all body fluids.

**VACCINE-PREVENTABLE DISEASE** - A disease for which a vaccine is available to reduce the chances of contracting the disease.

**VENEREAL** - Due to or propagated by sexual contact.

**VIRULENCE** - The disease-evoking power of a microorganism in a given host.

**VIRUS** - A microorganism usually only visible with the electron microscope. Viruses normally reside within other living (host) cells, and cannot reproduce outside of a living cell.

**WESTERN BLOT** - A test for HIV, used to confirm a positive ELISA test. More expensive and time consuming to perform than ELISA, but more specific. Diagnosis of HIV infection requires two positive ELISA tests, confirmed with a positive Western blot test.

**WINDOW PHASE** - The time from exposure to the disease to positive testing.

**EVALUATION FOR POSSIBLE INFECTIOUS DISEASE EXPOSURE**

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

**PROVIDER INFORMATION**

Provider's Agency: \_\_\_\_\_

Emergency Response / Incident Identification Number: \_\_\_\_\_

Provider's Name: \_\_\_\_\_

Provider's Date of Birth: \_\_\_\_\_ Provider's Social Security Number: \_\_\_\_\_

Provider's Contact Number(s): (H): \_\_\_\_\_ (Pgr): \_\_\_\_\_

Designated Infection Control Officer: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Pager Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

**PATIENT INFORMATION**

Name \_\_\_\_\_ Age: \_\_\_\_\_ DoB: \_\_\_\_\_ Sex: \_\_\_\_\_

Incident Location: \_\_\_\_\_

Date of incident: \_\_\_\_\_ Date Transported: \_\_\_\_\_

Receiving Facility (if transported): \_\_\_\_\_ Time Received at Facility: \_\_\_\_\_

Description of Exposure Incident: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**EXPOSURE EVALUATION**

**BLOOD / OPIF**

Exposure took place per CDC guidelines: Unsure: \_\_\_\_\_ Yes: \_\_\_\_\_ No: \_\_\_\_\_

**AIRBORNE**

Exposure took place per CDC guidelines: Unsure: \_\_\_\_\_ Yes: \_\_\_\_\_ No: \_\_\_\_\_

No exposure took place per CDC guidelines.

Provider counseled: Yes \_\_\_\_\_ No \_\_\_\_\_

by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

**Exposure documented**

IOJ documentation completed: Yes \_\_\_\_\_ No \_\_\_\_\_

Affidavit completed: Yes \_\_\_\_\_ No \_\_\_\_\_

Affidavit routed to County Health Department: Yes \_\_\_\_\_ No \_\_\_\_\_

faxed (receipt attached) \_\_\_\_\_ hand carried \_\_\_\_\_

by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

\_\_\_\_\_ Source patient not identified and/or located. Explanation for lack of identification: \_\_\_\_\_

Source patient blood drawn: Yes \_\_\_\_\_ No \_\_\_\_\_

by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Source patient blood tested: Yes \_\_\_\_\_ No \_\_\_\_\_

by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

tests conducted: HIV \_\_\_ HBV \_\_\_ HCV \_\_\_ Liver Function \_\_\_ RPR \_\_\_

test results received: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

\_\_\_\_\_ Evaluation of source patient results reflected no available evidence of the type of infection in question.

Evaluation of source patient's results confirmed the presence of: \_\_\_\_\_.

Evaluation of source patient demonstrated signs and symptoms which may be compatible with \_\_\_\_\_, however, no laboratory data at this time with which to confirm a diagnosis.

Results reported to employee: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Employee immunization Status:

HBV \_\_\_\_\_ Tetanus \_\_\_\_\_ Other \_\_\_\_\_  
(dates) (dates) (dates)

Employee blood drawn:

by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

tests conducted: HIV \_\_\_ HBV \_\_\_ HCV \_\_\_ Liver Function \_\_\_ RPR \_\_\_ PPD \_\_\_

test results received: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Results reported to employee: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Follow-up procedure explained to employee: Yes \_\_\_\_\_ No \_\_\_\_\_  
by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_  
PEP: Recommended \_\_\_\_\_ Offered \_\_\_\_\_ Not Offered \_\_\_\_\_  
by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_  
Employee accepted \_\_\_\_\_ declined \_\_\_\_\_ PEP  
time: \_\_\_\_\_ date: \_\_\_\_\_

Follow-up with Infectious Disease Physician: Yes \_\_\_\_\_ No \_\_\_\_\_  
by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_  
Results reported to physician: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Follow-up 6 week testing completed: Yes \_\_\_\_\_ No \_\_\_\_\_  
by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_  
Results reported to employee: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Follow-up 3 month testing completed: Yes \_\_\_\_\_ No \_\_\_\_\_  
by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_  
Results reported to employee: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Follow-up 6 month testing completed: Yes \_\_\_\_\_ No \_\_\_\_\_  
by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_  
Results reported to employee: by whom: \_\_\_\_\_ time: \_\_\_\_\_ date: \_\_\_\_\_

Additional follow-up required: Yes \_\_\_\_\_ No \_\_\_\_\_

Case Closed: Yes \_\_\_\_\_ No \_\_\_\_\_

Date \_\_\_\_\_

Signature of agency official \_\_\_\_\_

## BLOODBORNE EXPOSURES

This form should be used to assist in assessing the type and level of exposure the provider has experienced. Providers and supervisors are encouraged to consult with the Infection Control Officer on all potential exposures.

Source of Exposure:	YES	NO
blood only		
vomit only		
saliva/oral secretions		
wound/sore exudate		
vomit with visible blood		
saliva/oral secretions with visible blood		
other material (list specific material _____ )		
approximate amount of material contaminating employee ( in cc's)		
Duration of exposure (hours/minutes)		

Determine if an actual exposure per CDC definition has actually occurred?

Needlestick	YES	NO
Deep injury		
device visibly contaminated with source patient's blood		
needle placed directly in a vein or artery		
used in IV line		
Endotracheal tube instillation		
chest decompression		
subcutaneous injection		
finger lancet		
glass penetration from broken blood vial		
terminal illness in the source patient		
<b>blood in eyes, nose, or mouth</b>		
examination of throat		
insertion of airway device		
suction of airway		
splatter or aerosol into eye, nose, mouth		
performed mouth-to-mouth resuscitation		
protective eyewear worn		
face shield/particulate respirator mask worn		
<b>blood on non-intact skin</b>		
skin abraded		
open wound without scab		
open wound with established scab		
dermatitis		
other skin damage		
wound covered with bandage		
gloves worn		

	<b>YES</b>	<b>NO</b>
experienced structural failure		
remained intact		
significant contamination of open wound		

If determined to be exposure, follow appropriate guidelines.

If no, educate the employee as to what constitutes an exposure versus contamination.

## AIRBORNE EXPOSURES

This form should be used to assist in assessing the type and level of exposure the provider has experienced. Providers and supervisors are encouraged to consult with the Infection Control Officer on all potential exposures.

<b>Source of Exposure:</b>	<b>YES</b>	<b>NO</b>
blood only		
vomit only		
saliva/oral secretions		
wound/sore exudate		
vomit with visible blood		
saliva/oral secretions with visible blood		
splatter or aerosol into eye, nose, mouth		
were in the same _____ as source patient		
room		
vehicle		
ambulance		
other enclosed space		
other material (list specific material _____ )		
approximate amount of material contaminating employee ( in cc's)		
Duration of Exposure (hours/minutes)		

<b>High risk patient</b>	<b>YES</b>	<b>NO</b>
productive cough with/without blood		
fever and chills with coughing		
night sweats		
weight loss		
fatigue		
hemoptysis		
nuchal rigidity		
chest and upper torso rash		

Determine if an actual exposure per CDC definition has actually occurred?

<b>Performed high-risk procedures that may cause reflexive:</b>	<b>YES</b>	<b>NO</b>
coughing		
sneezing		
vomiting		
use of full respiratory protection.		
protective eyewear worn		
face shield worn		
particulate respirator mask worn		
gloves worn		
experienced structural failure		
remained intact		

<b>Procedures performed:</b>	<b>YES</b>	<b>NO</b>
Suctioning or airway insertion of any kind		
Examinations of the mouth, nares, or throat		
Assisting with the administration of aerosolized medications		
performed mouth-to-mouth resuscitation		
Treating patients actively bleeding into or around the airway		

<b>Patient health status</b>	<b>YES</b>	<b>NO</b>
patient confirmed to have respiratory disease		
currently on medication		
adherent		
non-adherent		

If determined to be exposure, follow appropriate guidelines.

If no, educate the employee as to what constitutes an exposure versus contamination.

## OTHER EXPOSURES

This form should be used to assist in assessing the type and level of exposure the provider has experienced. Providers and supervisors are encouraged to consult with the Infection Control Officer on all potential exposures.

<b>Source of Exposure:</b>	<b>YES</b>	<b>NO</b>
blood only		
vomit only		
saliva/oral secretions		
wound/sore exudate		
vomit with visible blood		
saliva/oral secretions with visible blood		
fecal material		
other material (list specific material _____ )		
approximate amount of material contaminating employee ( in cc's)		
Duration of Exposure (hours/minutes)		

<b>Puncture wound</b>	<b>YES</b>	<b>NO</b>
Deep injury		
device visibly contaminated with material		
needle placed directly in a vein or artery		
used in IV line		
Endotracheal tube instillation		
chest decompression		
subcutaneous injection		
finger lancet		
other contaminated sharp object containing visible material		
terminal illness in the source patient		
<b>blood in eyes, nose, or mouth</b>		
examination of throat		
insertion of airway device		
suction of airway		
splatter or aerosol into eye, nose, mouth		
performed mouth-to-mouth resuscitation		
protective eyewear worn		
face shield/particulate respirator mask worn		
<b>blood on non-intact skin</b>		
skin abraded		
open wound without scab		
open wound with established scab		
dermatitis		
other skin damage		
wound covered with bandage		
gloves worn		
experienced structural failure		

	YES	NO
remained intact		
significant contamination of open wound		

If determined to be exposure, follow appropriate guidelines.

If no, educate the employee as to what constitutes an exposure versus contamination.