Occupational Exposure to Bloodborne Pathogens—Precautions for Emergency Responders

U.S. Department of Labor
Occupational Safety and Health Administration

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This informational booklet is intended to provide a generic, non-exhaustive overview of a particular standards-related topic. This publication does not itself alter or determine compliance responsibilities, which are set forth in OSHA standards themselves and the *Occupational Safety and Health (OSH) Act*. Moreover, because interpretations and enforcement policy may change over time, for additional guidance on OSHA compliance requirements, the reader should consult current administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the courts.

 The contents of this booklet provide an overview of OSHA's bloodborne pathogens standard as it applies to emergency responders, law enforcement, and corrections officers but is not a substitute for the standard's requirements or those of the *Occupational Safety and Health Act*. Please refer to the standard (Title 29 Code of Federal Regulations, Part 1919.1030) for the complete text and all requirements of occupational exposure to bloodborne pathogens.

This information is available to sensory impaired individuals upon request.

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Occupational Exposure to Bloodborne Pathogens—Precautions for Emergency Responders

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There are approximately 5.6 million workers in health care and other facilities who are at risk of exposure to bloodborne pathogens such as the human immunodeficiency virus (HIV) and the hepatitis B virus (HBV) and other potentially infectious materials. These workers include, but are not limited to, nurses, physicians, dentists and other dental workers, laboratory and blood bank technologists and technicians, medical examiners, morticians, phlebotomists, emergency room personnel, intensive care and operating room nurses and technicians, orderlies, housekeeping personnel, and laundry workers. Others also at risk include law enforcement personnel, firefighters, paramedics, emergency medical technicians, and anyone whose job might require providing first-response medical care in which there is a reasonable expectation of contact with blood or other potentially infectious materials.

The Occupational safety and Health Administration recognizes the need for a regulation that prescribes safeguards to protect workers against the health hazards from exposure to blood and certain body fluids containing bloodborne pathogens, and to reduce their risk to this exposure. This booklet will help employers and employees in emergency response settings understand and comply with OSHA's regulation on bloodborne pathogens, which was published on December 6, 1991, *Title 29 Code of Federal Regulations (CFR) Part 1910.1030*.

The following sections outline and summarize the requirements of the standard[1] and inform emergency responders and law enforcement and corrections employers and employees of the risks of occupational exposure to bloodborne pathogens and how to reduce these risks. Full implementation of the standard not only will prevent hepatitis B cases, but also will significantly reduce the risk of workers' contracting acquired immunodeficiency syndrome (AIDS) or other bloodborne diseases.

[1] The contents of this booklet are not a substitute for requirements of the standard. The complete regulatory text, appendix, and explanatory preamble of the Bloodborne Pathogens Standard, *Title 29 Code of Federal Regulations*, Part 1910.1030, was published in the *Federal Register* 56 (235): 64004-64182, December 6, 1991.

OSHA's bloodborne pathogens standard requires the employer to prepare a written exposure control program. The standard mandates that the program evaluate routine tasks and procedures in the workplaces that involve exposure to blood or other potentially infectious materials, identify workers performing such tasks, and use a variety of methods to reduce the risks.

OSHA requirements specify the need for engineering and work practice controls, personal protective equipment, housekeeping procedures, post-exposure evaluation and followup requirements, recordkeeping, and how to comply with the standard and communicate hazards to personnel.

The goal of the standard is to provide safe working conditions that protect employees from being unnecessarily exposed to health hazards. The following sections provide an overview of the standard on bloodborne pathogens and the ways emergency response and law enforcement employers and employees can reduce the risk of occupational exposure to blood and other potentially infectious materials.

OSHA's bloodborne pathogens standard applies to every employer with one or more employees who can reasonably be expected to come into contact with blood and other specified body fluids in carrying out or in performing their duties. The approximately 5.6 million workers covered by the rule include 4.4 million health care workers in facilities such as hospitals and physicians' and dentists' offices and 1.2 million non-health care workers in law enforcement, fire and rescue, correctional facilities, research laboratories, and the funeral industry.

Under the OSHA rule, blood means human blood, blood products, or blood components. Other potentially infectious materials include human body fluids such as saliva in dental procedures; semen; vaginal secretions; cerebrospinal, synovial, pleural, pericardial, peritoneal, and amniotic fluids; any body fluids visibly contaminated with blood; unfixed human tissues or organs; HIV-containing cell or tissue cultures; and HIV- or HBV-containing culture mediums or other solutions; and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

Occupational exposure means a "reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of employees' duties." Determining occupational exposure and instituting control methods and work practices appropriate for specific job assignments are key requirements of the standard. The required written control plan and methods of compliance show how employee exposure can be minimized or eliminated.

In general, OSHA authority extends to all private sector employers with one or more employees, as well as to civilian employees in federal agencies. States administering their own occupational safety and health programs through plans approved under section 18(b) of the *Occupational Safety and Health (OSH) Act of 1970*, however, must adopt standards and enforce requirements that are at least as effective as federal requirements within 6 months of the issuance date of the bloodborne pathogens standard. Of the 25 current state plan states, 23 cover the private and public (i.e., state and local governments) sectors, and 2 cover the public sector only. Public sector employees in non-state plan states have neither federal nor state coverage under the rule.

Thus, many firefighters, hospital workers, and other emergency responders in states are not covered by the bloodborne pathogens standard.

4 Is a Plan Required?

A written exposure control plan is necessary for the safety and health of workers. Employers must develop a plan that identifies and documents the tasks, procedures, and job classifications covering instances where there is exposure to blood or other potentially infectious materials.

As required under the standard, a written exposure control plan is required that provides documentation of the following key elements:

- Identification of job classifications and, in some cases, tasks where there is exposure to blood and other potentially infectious materials;
- A schedule of how and when the provisions of the standard will be implemented, including schedules and methods for communication of hazards to employees, hepatitis B vaccination and post-exposure evaluation and followup, recordkeeping and implementation of the methods of compliance, such as
  - — engineering and work practice controls,
  - — personal protective equipment,
  - — housekeeping, and

Procedures for evaluating the circumstances of an exposure incident.

The schedule of how and when the provisions of the standard will be implemented may be a calendar with brief notations describing the methods, or an annotated copy of the standard, or part of another document, such as the infection control plan.

The written exposure control plan must be accessible to employees and must be updated at least annually and when alterations in procedures create new occupational exposure. Planning begins with identifying employees who have occupational exposure.

For emergency responders such as firefighters, law enforcement agents, and other emergency response personnel, the potential sources of contamination from bloodborne pathogens are varied. Emergency responders assist at incidents frequently involving trauma, i.e., open wounds. Exposure and potential infection also can result from handling discarded emergency medical items such as needles, sharps, bandages, and gauze.

Today's firefighters and emergency responders play a greater role in emergency situations frequently as health care providers, often the first to arrive at the scene of an accident. For example, up to 80 percent of all field emergency medical care today is provided by fire service personnel.[2] As a result, fire and rescue personnel consistently are faced with the potential for exposure to blood, blood products, blood components, and body fluids.

Emergency responders frequently face unpredictable, uncontrollable, dangerous, and life-threatening circumstances. Anything can happen in an emergency, including exposure to blood and contaminated equipment. This is especially applicable to fire and rescue personnel and, in many instances, to law enforcement personnel who operate under hostile conditions. There is an extremely diverse range of potential situations that can put law enforcement officers at risk.

At crime scenes, when processing suspects, or as a result of fights and/or assaults, law enforcement officers may be at risk of exposure. The informed judgment and awareness of the individual officer are paramount when unusual circumstances or events arise that can jeopardize his/her safety or health. It is the responsibility of employers of emergency responders to ensure that their employees are properly informed and adequately protected at the work site and in emergency situations.

Exposure determination must be based on the definition of occupational exposure absent the use of personal protective clothing and equipment. The exposure determination is made by reviewing job classifications within the work setting and then making a list that may be divided into two groups. The first group includes job classifications

[2] Testimony of Clyde A. Bragdon Jr., September 14, 1989, before the Occupational Safety and Health Administration's hearings on the proposed bloodborne pathogens standard, Washington, D.C.

in which all of the employees have occupational exposure, such as pre-hospital care workers. This may include paramedics, emergency medical technicians, and advance life support personnel. Where all employees have occupational exposure, it is not necessary to list specific work tasks.

The second group includes those classifications in which some of the employees have occupational exposure. Where only some employees have exposure, specific tasks and procedures causing exposure must be listed. When employees with occupational exposure have been identified, the next step is to communicate the hazards to those employees.

All persons with a potential for exposure must be provided with adequate training and information including general explanations of the modes of transmission, symptoms, epidemiology, warning signs relating to possible exposure, and procedures to follow if exposure occurs. Training also must include appropriate methods for recognizing tasks that may involve exposure to blood or other potentially infectious materials and the use and limitations of methods that would reduce exposure. These include engineering controls, work practices, and personal protective equipment. There also must be information on the use, location, decontamination, and disposal of personal protective equipment and clothing, and information on what to do in an emergency.

Each occupationally exposed employee must be given free information and training at the time of initial assignment, during working hours, within 90 days after the effective date of the standard, and at least once a year thereafter. Additional training is needed when existing tasks are modified or new tasks are required which affect the employees' occupational exposure.

Training sessions must be comprehensive, including information on bloodborne pathogens as well as on OSHA's standard and the employer's exposure control plan. The person conducting the training must be knowledgeable in the subject matter, especially as it relates to emergency response personnel. An opportunity for a question and answer period must be part of the training session.

A training program shall consist, at a minimum, of the following elements:

- An accessible copy and explanation of the regulatory text;
- A general explanation of the epidemiology and symptoms of bloodborne diseases;
- An explanation of the modes of transmission of bloodborne pathogens;
- An explanation of the written exposure control plan and how to obtain a copy;
- An explanation of how to recognize events that may involve exposure to blood and other potentially infectious materials;
- An explanation of the basis for selecting personal protective equipment including information on the types,

selection, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment;

- An explanation of the use and limitations of safe work practices, engineering controls, and personal protective equipment;
- Information on hepatitis B vaccination such as safety, benefits, efficacy, and availability;
- An explanation of the procedures to follow if an exposure occurs, including methods of reporting and the medical followup that will be made available;
- Information on the post-exposure evaluation and followup required in the event of an exposure incident and information on emergencies that relate to blood or other potentially infectious materials, followup procedures, and medical counseling;
- An explanation of information on warning signs, labels, and color-coding.

For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, training need only be provided on provisions of the standard that were not included during the earlier training.

Hepatitis B Vaccination

Employers must make available, free of charge and at a reasonable time and place, the hepatitis B vaccine and vaccination series to all employees who are at risk of occupational exposure. Any booster doses recommended by the U.S. Public Health Service also must be provided.

Employers must offer free hepatitis B vaccine and vaccination series after initial training and within 10 working days of initial assignment to employees who have occupational exposure unless (1) the employee has previously received the complete hepatitis B vaccination series, (2) antibody testing reveals that the employee is immune or (3) medical reasons prevent the employee from being vaccinated.

The employee cannot be required to participate in an antibody prescreening program to receive the hepatitis B vaccination series. All medical evaluations and procedures must be performed by or under the supervision of a licensed physician or an appropriately trained and licensed health care professional and administered according to current recommendations of the U.S. Public Health Service. Vaccinations also must be provided even if the employee initially declines but later decides to accept the vaccination while covered by the standard. Employees who decline the vaccination must sign a declination form (See Appendix in this booklet).

The employer also shall ensure that all laboratory tests are provided at no cost to the employee and are conducted by an accredited lab. The employer must obtain and provide employees with a copy of the health care professional's written opinion as to whether the need for hepatitis B vaccination is indicated and if the employee has received it.

Universal Precautions

Universal precautions is a method of infection control in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. Universal precautions are to be observed in all situations where there is a potential for contact with blood or other potentially infectious material. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids are to be considered potentially infectious.

Engineering and Work Practice Controls

Engineering and work practice controls are the primary methods used to control the transmission of HBV and HIV. To the extent feasible, the employer must institute these controls to eliminate or minimize employee exposure to bloodborne diseases.

Engineering controls reduce employee exposure in the workplace by either removing the hazard or isolating the worker from exposure. Self-sheathing needles and special containers for contaminated sharp instruments are examples of engineering controls. Engineering controls must be examined and maintained, or replaced, on a scheduled basis. For example, disposable airway equipment or resuscitation bags and mechanical respiratory assist devices (e.g., oxygen demand valve resuscitators) should be available on all emergency vehicles and to all emergency response personnel who respond to medical emergencies or victim rescues. Pocket mouth-to-mouth resuscitation devices designed to isolate emergency response personnel from direct contact with fluids must be provided. Puncture-resistant sharps containers must be easily accessible and located in areas where needles, syringes, or other sharp instruments are commonly used.

Work practice controls alter the manner in which a task is performed. Correct work methods include properly handling and disposing of needles and sharps, used bandages and gauze, linens, and all other emergency items that come in contact with blood or other potentially infectious materials. All procedures involving blood or other potentially infectious materials must be performed in such a manner as to minimize spattering, generating droplets, splashing, and spraying. Shearing or breaking needles is prohibited. Needles must not be bent, removed, or recapped unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical procedure. Any recapping or removing of needles must be accomplished through the use of a mechanical device or one-handed technique. Immediately, or as soon as possible after use, contaminated reusable sharps must be placed in puncture resistant, leak-proof containers, labeled as a biohazard or color-coded red until properly reprocessed. Specimens of blood or other potentially infectious materials must be placed in leak-proof containers. Bags or receptacles containing articles or disposable items contaminated with

body fluids must be labeled or color-coded according to the standard. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

In work areas where there is a reasonable likelihood of occupational exposure, safe work practices include restricting eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses, and preventing the storage of food and/or drink in refrigerators or other locations where blood or potentially infectious materials are kept.

Employers must provide readily accessible hand washing facilities and ensure that personnel wash hands and any other exposed skin area with soap and water, and flush mucous membranes with water immediately or as soon as feasible following contact with blood or other potentially infectious materials or after removing personal protective equipment. If hand washing facilities are not available, personnel must be provided with antiseptic hand cleanser, clean cloth/paper towels or antiseptic towelettes and employees shall wash their hands with soap and running water as soon thereafter as feasible.

Equipment, such as defibrillation equipment, which during the course of operations could become contaminated with blood or other potentially infectious materials, shall be checked routinely and, prior to servicing or shipping, shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

For law enforcement officers, there is a potential for exposure during searches and evidence handling. In these instances, employees should use caution in searching clothing and in searching purses or other similar items. Where the contents cannot be determined easily, contents should be emptied by turning the bag upside down over a flat surface. Also, to avoid tearing gloves, one should use evidence tape instead of staples to seal evidence.

Personal Protective Equipment

In addition to instituting engineering and work practices controls, the standard requires that appropriate personal protective equipment also be used to reduce work risk of exposure. Personal protective

equipment is specialized clothing or equipment worn by employees for protection from exposure to blood or other potentially infectious materials. Employers must make readily available at no cost to employees appropriate personal protective equipment in the appropriate sizes to provide protection from blood or other potentially infectious materials. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious substances and contaminated materials to pass through to or reach an employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time the protective equipment is in use. Hypoallergenic alternatives (e.g., hypoallergenic or powderless gloves) must be available to employees who have an allergic sensitivity to protective equipment.

Personal protective equipment consists of, but is not limited to, gloves, face shields, masks, and eye protection, gowns, aprons, and similar items. Employers also must ensure that appropriate personal protective equipment is used and used correctly. Employers also must ensure that personal protective equipment is properly cleaned, laundered, repaired, replaced, or disposed of as needed, at no cost to the employee.

Disposable gloves should be a standard component of emergency-response equipment and should be donned by all personnel prior to initiating any emergency patient care tasks involving occupational exposure. Extra pairs should always be available. There is no single type or thickness of glove appropriate for all situations. Selection criteria should include dexterity, durability, fit, and the tasks that will be undertaken while the gloves are worn.

An employee may temporarily and briefly decline wearing personal protective equipment under rare and extraordinary circumstances and when, in the employee's professional judgment, it prevents the delivery of health care or public safety services or poses a greater hazard to workers. For example, in the case of emergency responders, this could occur when a firefighter rescues an individual who is not breathing from a burning building and discovers that the necessary resuscitation equipment is lost or damaged and the firefighter must administer cardiopulmonary resuscitation.

When the employee makes this judgment, the circumstances shall be investigated and documented to determine whether changes can be instituted to prevent such occurrences in the future. In general, appropriate personal protective equipment is to be used whenever occupational exposure may occur.

The employer also must ensure that employees observe the following precautions for handling and using personal protective equipment:

- Remove garments penetrated by blood or other infectious materials immediately, or as soon as feasible.
- Before leaving the work area contaminated protective equipment shall be placed in appropriately designated areas or containers for storing, washing, decontaminating or discarding.
- Wear appropriate gloves when there is a potential for hand contact with blood, other potentially infectious materials, mucous membranes, non-intact skin; when performing vascular access procedures;[3] and when handling or touching contaminated items or surfaces. Replace gloves if torn, punctured, contaminated, or if their ability to function as a barrier is compromised.
- Disposable (single use) gloves, such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. They shall not be washed or decontaminated for re-use.
- Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration, or when their ability to function as a barrier is compromised.

[3] Except when an employee in a volunteer blood donation center judges that routine gloving for phlebotomies is not necessary. For specific requirements see Section (d)(3)(ix)(D) of the standard.

- Wear appropriate face and eye protection such as goggles, glasses with solid side shields or chin-length face shields when splashes, sprays, spatters, or droplets of infectious materials pose a hazard to the eyes, nose, or mouth. These should be available on all emergency vehicles. Masks in combination with eye protection devices—such as goggles or glasses with solid side shields or chin-length face shields—shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated. These should be used in accordance with the level of exposure encountered. An extra change of work clothing should be available.

Housekeeping

Employers must ensure that emergency response vehicles and worksites are maintained in a clean and sanitary condition. Contaminated work surfaces must be decontaminated with a disinfectant upon completion of procedures or when contaminated by splashes, spills, or contact with blood or other potentially infectious materials. Employers shall determine and implement an appropriate written schedule for cleaning and methods of decontamination based upon the location within the facility, type of surface, types of contamination, if any, and tasks or procedures being performed.

All equipment and working surfaces that could have become contaminated shall be cleaned and checked routinely and shall be decontaminated as necessary. All coverings used for protecting working surfaces shall be removed and replaced as soon as possible after they have been contaminated.

All bins, pails, cans, and similar reusable receptacles must be decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as possible after visible contamination.

Broken glassware, which may be contaminated, must be picked up only by using mechanical means such as tongs, brush and dust pan, or forceps, and never with bare or gloved hands.

Contaminated reusable items, such as sharps, may not be stored or processed in a way that requires employees to reach into containers where the contents cannot be seen or safely handled.

Contaminated laundry shall be handled as little as possible with a minimum of agitation. Protective gloves and other appropriate personal protective equipment shall be used when handling contaminated laundry.

Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed where it was used. Contaminated laundry shall be placed and transported in bags or containers and properly labeled in accordance with the labeling requirements of the standard (see labeling section). When a facility exercises universal precautions when handling soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with universal precautions.

Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or of leakage from the bag or container, it shall be placed and transported in bags or containers that prevent soak-through and/or leakage. When contaminated laundry must be shipped offsite it must be placed in properly labeled (see labeling section), color-coded, leak-proof, and impervious bags.

Regulated waste must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting, or shipping and labeled appropriately (see labeling section). Regulated waste includes liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Labeling

Containers of regulated waste, refrigerators and freezers containing blood and other potentially infectious materials, and other containers used to store, transport, or ship blood or other potentially infectious materials must be labeled with fluorescent orange or orange-red biohazard warning labels (see Table 1). The warning label must contain the biohazard symbol and must have the word BIOHAZARD on it and be attached to each object by string, wire, adhesive, or another method to prevent loss or unintentional removal of the label.

Those labels are not required (1) when red bags or red containers are used; (2) on individual containers of blood, blood components, or blood products clearly marked as such and that have been released for transfusion or other clinical use; or (3) on individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment, or disposal.

Table 1—Labeling Requirements

Item	No Label Needed If Universal Precautions are Used and Specific Use of Container or Item is Known to All Employees	Biohazard Label		Red Container
Regulated waste container (e.g., contaminated sharps containers)		x	or	x
Reusable contaminated sharps containers (e.g., surgical instruments soaking in a tray)		x	or	x
Refrigerator/freezer holding blood or other potentially infectious material		x		
Containers used for storage, transport or shipping of blood		x	or	x
Blood/blood products for clinical use	**No labels required**			
Individual specimen containers of blood or other potentially infectious materials remaining in facility	x or	x	or	x
Contaminated equipment needing service (e.g., dialysis equipment, suction apparatus)		x **plus a label specifying where the contamination exists**		
Specimens and regulated waste shipped from the primary facility to another facility for service or disposal		x	or	x
Contaminated laundry	* or	x	or	x
Contaminated laundry sent to another facility that does not use universal precautions		x	or	x

*Alternative labeling or color coding is sufficient if it permits all employees to recognize the containers as requiring compliance with universal precautions.

An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties. An example of an exposure incident would be a puncture from a contaminated sharp.

Employees should immediately report exposure incidents. This allows for timely medical evaluations and followup by a health care professional as well as for timely tests of the source individual's blood for HIV and HBV. Reports must be treated by employers in the strictest confidence.

The employer is responsible for establishing the procedure for evaluating exposure incidents. When evaluating an exposure incident, thorough assessment and confidentiality are critical issues. Employees should immediately report exposure incidents to their employer to initiate a timely followup process by a health care professional. Such a report initiates the procedure for a prompt request for evaluation of the source individual's HBV and HIV status.

At the time of the exposure incident, the exposed employee must be directed to a health care professional as soon as possible after the exposure incident and preferably within 1 hour. This may require use of the nearest emergency room, depending on the time or location of the incident. It is useful to have available for telephone consultation a licensed physician experienced in the treatment of HIV and knowledgeable about the risks and benefits of post-exposure prophylaxis. The employer must provide the health care professional with a copy of the bloodborne pathogens standard, a description of the employee's job duties as they relate to the incident, a report of the specific exposure (incident report), including route of exposure, and relevant employee medical records, including hepatitis B vaccination status.

The medical evaluation and followup must at the very least:

- Document the routes of exposure and how exposure occurred.
- Identify and document the source individual if feasible and not prohibited by law.

- Obtain consent and test source individual's blood as soon as possible to determine infectivity and document the source's blood test results.[4]
- If the source is known to be infectious for HBV or HIV, testing need not be repeated to determine the known infectivity.
- Provide the exposed employee with the test results and information about applicable disclosure laws and regulations concerning the source identity and infection status.
- Obtain consent, collect, and test exposed employee's blood as soon as possible after the exposure incident.
- If the exposed employee consents to baseline blood collection but does not consent to HIV serologic testing, the employee's blood samples must be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee agrees to have the baseline sample tested, such testing shall be conducted as soon as feasible.
- Provide risk counseling and offer post-exposure prophylaxis, when medically indicated, according to the Centers for Disease Control recommendations.

Following the post-exposure evaluation, the health care professional will provide a written opinion to the employer. This opinion is limited to a statement that the employee has been informed of the results of the evaluation and told of the need, if any, for further evaluation or treatment. All other findings are confidential. The employer must provide a copy of the written opinion to the employee within 15 days of the evaluation.

[4] Testing cannot be done in most states without written consent. If consent is not obtained, the employer must show that legally required consent could not be obtained. Where consent is not required by law, the source individual's blood, if available, should be tested and the results documented.

20 What Type of Recordkeeping is Required?

There are two types of employee-related records required by the bloodborne pathogens standard: medical and training.

A confidential medical record for each employee with potential for exposure must be preserved and maintained by employers according to OSHA's rule governing access to employee exposure and medical records, Title 29 Part 1910.20(e).

In addition, under the bloodborne pathogens standard, medical records also must include the following information:

- Employee's name and social security number;
- Employee's hepatitis B vaccination status including dates of all hepatitis B vaccinations and any medical records related to the employee's ability to receive vaccinations;
- Results of examinations, medical testing, and post-exposure evaluation and followup procedures;
- The employer's copy of the health care professional's written opinion; and
- A copy of information provided to the health care professional.

Medical records must be kept confidential and maintained for at least the duration of employment plus 30 years. The bloodborne pathogens standard also requires employers to maintain and to keep accurate training records for 3 years and to include the following:

- Training dates,
- Content or a summary of the training,
- Names and qualifications of trainer(s), and
- Names and job titles of trainees.

Upon request, both medical and training records must be made available to the Director of the National Institute for Occupational Safety and Health (NIOSH) and to the Assistant Secretary of Labor for Occupational Safety and Health. Training records must be available to employees or employee representatives upon request. Medical records can be obtained by the employee or anyone having the employee's written consent. Also, if the employer ceases to do

business, medical and training records must be transferred to the successor employer. If there is no successor employer, the employer must notify the director of NIOSH for specific directions regarding disposition of the records at least 3 months prior to intended disposal.

Safety and Health Program Management Assistance

Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses and their related costs. To assist employers and employees in developing effective safety and health programs, OSHA published recommended *Safety and Health Program Management Guidelines* (*Federal Register* 54(18):3908-3916, January 26, 1989). These voluntary guidelines apply to all places of employment covered by OSHA.

The guidelines identify four general elements that are critical to the development of a successful safety and health management program:

- management commitment and employee involvement,
- worksite analysis,
- hazard prevention and control, and
- safety and health training.

The guidelines recommend specific actions under each of these general elements to achieve an effective safety and health program. A single, free copy of the guidelines can be obtained from the U.S. Department of Labor, OSHA/OICA Publications, P.O. Box 37535, Washington DC 20013-7535, by sending a self-addressed mailing label with your request or by visiting OSHA's Web site at www.OSHA.gov.

State Programs

The *OSH Act* encourages states to develop and operate their own job safety and health plans. States administering occupational safety and health programs through plans approved under section 18(b) of the *Act*, must adopt standards and enforce requirements that are "at least as effective" as federal requirements. There are currently 25 state plan states: 23 cover the private and public sector (state and local governments) and 2 cover the public sector only. For more information on state plans, see the list of states with approved plans at the end of this publication.

Free Onsite Consultation

Consultation assistance is available on request to employers who want help in establishing and maintaining a safe and healthful workplace. Largely funded by OSHA, the service is provided at no cost to the employer. Primarily developed for small employers with more hazardous operations, the consultation service is delivered by state government agencies or universities employing professional safety consultants and health consultants. Comprehensive assistance includes an appraisal of all work practices and environmental hazards of the workplace and all aspects of the employer's present job safety and health program.

The program is separate from OSHA's inspection efforts. No penalties are proposed or citations issued for any safety or healthy problems identified by the consultant. The service is confidential

For more information concerning consultation assistance, see the list of consultation projects at the end of this publication and visit OSHA's Web site.

Voluntary Protection Programs (VPPs)

Voluntary protection programs and onsite consultation services, when coupled with an effective enforcement program, expand worker protection to help meet the goals of the *OSH Act*. The three VPPs—Star, Merit, and Demonstration—are designed to recognize outstanding achievement by companies that have successfully incorporated comprehensive safety and health programs into their total management system. They motivate others to achieve excellent safety and health results in the same outstanding way and they establish a cooperative relationship among employers, employees, and OSHA.

For additional information on VPPs and how to apply, contact the OSHA national, regional, or area offices listed at the end of this publication.

Training and Education

OSHA's area offices offers a variety of information services, such a publications, audiovisual aids, technical advice, and speakers for special engagements. The OSHA Training Institute in Des Plaines, IL, provides basic and advanced courses in safety and health for federal and state compliance officers, state consultants, federal agency personnel, and private sector employers, employees, and their representatives.

OSHA also provides funds to nonprofit organizations, through grants, to conduct workplace training and education in subjects where OSHA believes there is a lack of workplace training. Grants are awarded annually and grant recipients are expected to contribute 20 percent of the total grant cost.

For more information on grants, training, and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, Il 60018, (847) 297-4810.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Electronic Information

Internet—OSHA standards, interpretations, directives, technical advisors, compliance assistance, and additional information are now on the World Wide Web at http://www.osha.gov.

CD-ROM—a wide variety of OSHA materials, including standards, interpretations, directives, and more, can be purchased on CD-ROM from the U.S. Government Printing Office. To order write to the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 or telephone (202) 5122-1800. Specify OSHA Regulations, Documents, and Technical Information on CD-ROM (ORDT), GPO Order No. S/N 729-013-00000-5. The price is $43 per year ($53.75 foreign); $17 per single copy ($21.25 foreign).

Emergencies

For life-threatening situations only, call (800) 321-OSHA. Complaints will go immediately to the nearest OSHA area or state office for help.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

For more information on hepatitis B and AIDS, contact the Centers for Disease Control National Clearinghouse between the hours of 9 a.m. and 7 p.m. Eastern Standard Time, 1-800-458-5231; or the National AIDS Information Clearinghouse, P.O. Box 6003, Rockville, MD., 20850, (301) 251-5160.

Copies of the Bloodborne Pathogens Standard, Title 29 CFR, Part 1910.130, is available from the Government Printing Office, Superintendent of Documents, Washington, DC 20402-9325. Request GPO Stock no. 069-001-00040-8; price $2.00. To order, call GPO at (202) 783-3228; GPO accepts MasterCard, Visa, check, or GPO Deposit Account.

Single free copies of the following publication(s) can be obtained from OSHA field offices or the U.S. Department of Labor, OSHA/OICA Publications, P.O. Box 37535, Washington, D.C. 20013-7535. Please send a self-addressed mailing label with your request.

Access to Medical and Exposure Records – 3110

All About OSHA – OSHA 2056

Bloodborne Pathogens and Acute Care Facilities – OSHA 3128

Bloodborne Pathogens and Long-Term Care – OSHA 3131

Chemical Hazard Communication – OSHA 3084

Consultation Services for the Employer – OSHA 3047

Controlling Occupational Exposure to Bloodborne Pathogens ***in Dentistry*** – OSHA 3129

How to Prepare for Workplace Emergencies – OSHA 3088

Occupational Exposure to Bloodborne Pathogens – OSHA 3127

In addition, the following publications on recordkeeping are available from the OSHA Office of Statistics, 200 Constitution Avenue, N.W., Room N3644, Washington, DC 20210.

Brief Guide to Recordkeeping Requirements for Occupational Injuries and Illnesses

Log and Summary of Occupational Injuries and Illnesses (Form OSHA 200)

Recordkeeping Guidelines for Occupational Injuries and Illnesses
Supplementary Record of Occupational Injuries and Illnesses (Form OSHA 101)

The following statement of declination of hepatitis B vaccination must be signed by an employee who chooses not to accept the vaccine. The statement can only be signed by the employee following appropriate training regarding hepatitis B, hepatitis B vaccination, the efficacy, safety, method of administration, and benefits of vaccination, and the availability of the vaccine and vaccination free of charge to the employee. The statement is not a waiver; employees can request and receive the hepatitis B vaccination at a later date if they remain occupationally at risk for hepatitis B.

Declination Statement

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to me. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature_____

Date _____

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