Compliance Assistance Guideline for the February 27, 1990, OSHA Instruction CPL 2-2.44B Enforcement Procedures for Occupational Exposure to Hepatitis B Virus and Human Immunodeficiency Virus
from the U.S. Department of Labor Occupational Safety and Health Administration

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Introduction
The intent of this guideline is to offer employers assistance in understanding the Occupational Safety and Health Administration's (OSHA) requirements for preventing occupational exposure to hepatitis B virus (HBV) and human Immunodeficiency virus (HIV). SEE: OSHA Instruction CPL 2-2.44B, February 27, 1990, Enforcement Procedures for Occupational Exposure to Hepatitis B Virus and Human Immunodeficiency Virus for the complete text.

OSHA Instruction CPL 2-2.44B sets forth the enforcement procedures and interpretations of OSHA requirements with respect to the protection of workers who are exposed to blood or other potentially infectious materials. The OSHA requirements currently being enforced include section 5(a) (1) of the Occupational Safety and Health Act of 1970, the general duty clause, and certain general OSHA standards. The instruction will be superseded after OSHA promulgates a standard on occupational exposure to blood borne pathogens.

Appropriate measures have been taken to ensure that the information contained in this pamphlet is current, reliable, and accurate. This document is published as a guide to assist in compliance with the Occupational Safety and Health Act of 1970 (OSH Act). It is not intended, however, to be a substitute for the OSH Act and OSHA standards. In the event of a conflict, the OSH Act and OSHA standards apply.

Workers at risk are those whose work may involve exposure to blood or other potentially infectious materials. They include but are not limited to:

- Physicians
- Nurses
- Pathologists
- Phlebotomists
- Medical technologists
- Paramedics
- Emergency medical technicians
- Some laundry workers
- Dentists and other dental workers
- Laboratory and blood bank technologists
- Research laboratory scientists
- Dialysis personnel
- Funeral service personnel
- Medical examiners
- Some maintenance personnel
- Some housekeepers
**Infection Control Program (ICP)**

Employees incur risk of infection and subsequent illness each time they are exposed to blood or other potentially infectious materials. Therefore, the infection control program (ICP) is the core element used to reduce worker risk by minimizing or eliminating employee exposure incidents to blood borne pathogens, such as HBV and HIV. An ICP is the establishment’s oral or written policy for implementation of procedures relating to the control of infectious disease hazards.

**ICP Components**

1. **Exposure Determination**
2. **Control Methods**
   A. Universal Precautions
   B. Engineering Controls
   C. Work Practice Controls
   D. Personal Protective Equipment
      • HBV Vaccination
      • Post-Exposure Evaluation and follow-up
      • Infectious Waste Disposal
      • Tags, Labels, and Bags
      • Housekeeping practices
      • Laundry Practices
      • Training and Education of Employees
      • Record keeping

1. **Exposure Determination**

   **Considerations:**
   The employer shall identify all employees who are directly exposed or whose jobs have the likelihood of exposure to blood or other potentially infectious materials.

   • Fluids that have been recognized by the Centers for Disease Control (CDC) as directly linked to the transmission of HBV and/or HIV are: blood, blood products, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, concentrated HIV and HBV viruses, and saliva in dental settings.
   • The employer shall make an exposure determination without regard to the use of personal protective equipment.

2. **Control Methods**

   **A. Universal Precautions**

   The term "universal precautions" refers to a method of infection control in which all human blood and other potentially infectious materials are treated as if known to be infectious for HIV and HBV.

   **Considerations:**
   • Universal precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine, or vomits unless they contain visible blood.
B. Engineering Controls
An engineering control is the use of available technology and devices to isolate or remove hazards from the worker.

Considerations:
• Engineering controls should be used in preference to other control methods to eliminate or minimize worker exposure to blood or other potentially infectious materials.
• Engineering controls must be examined and maintained or replaced on a regular scheduled basis to ensure their effectiveness.
• Examples or engineering controls include but are not limited to: puncture-resistant sharps containers, splashguards, mechanical pipefitting, and self-sheathing needles.

C. Work Practice, Controls
Work practice controls are alterations in the manner in which a task is performed in an effort to reduce the likelihood of a worker's exposure to blood or other potentially infectious materials.

Considerations:
• Hands shall be washed after removing gloves or as soon as possible after contact with body fluids.
• All personal protective equipment (PPE) should be moved immediately, or as soon as possible upon leaving the work area, and placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.
• Used needles and other sharps shall not be sheared, bent, broken, recapped, or re-sheathed by hand.
• All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing and spraying.

D. Personal Protective Equipment
Personal protective equipment is specialized clothing or equipment used by workers to protect themselves from direct exposure to blood or other potentially infectious materials.

Considerations:
• The employer shall provide and assure employee use of appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, fluid-resistant aprons, head and foot coverings; face shields or masks and eye protection; and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices when there is a potential for exposure to blood or other potentially infectious materials.
• The employer shall assure that appropriate personal protective equipment is available in a variety of sizes and, readily accessible.
• The employer shall provide for the cleaning, laundering, or disposal of personal protective equipment.
• The employer shall repair or replace required personal protective equipment as needed to maintain its effectiveness.
• Surgical or examination gloves shall be replaced when visibly soiled, torn, or punctured, or when their integrity is compromised. They shall not be washed or disinfected for re-use.
• Utility gloves may be cleaned and disinfected for re-use if they show no signs of deterioration.

HBV Vaccination

Considerations:
• The HBV vaccination shall be offered, at no cost, to all employees whose jobs involve the risk of directly contacting blood or other potentially infectious materials.
• Vaccinations shall be given according to recommendations for standard medical practice.
**Post-Exposure Evaluation and Follow-up**

*Considerations:*

- Following a report of an exposure incident, the employer shall make available to the employee a confidential medical evaluation and follow-up of the incident.
- The employer shall document the route of exposure, HBV and HIV status of the source patient(s), if known, and the circumstances under which the exposure occurred.
- The employer shall notify the source patient(s) of the incident and attempt to obtain consent to collect and test the source's blood to determine the presence of HIV and/or HBV infection.
- The employer shall offer to collect a blood sample from the exposed worker as soon as possible after the exposure incident for determination of HIV and/or HBV status.
- The employer shall offer repeat HIV testing to exposed employees six weeks post-exposure and on a periodic basis thereafter (12 weeks and 6 months after exposure).
- Follow-up of the exposed worker shall include counseling, medical evaluation of any acute febrile illness that occurs within 12 weeks post-exposure, and use of safe and effective post-exposure measures according to recommendations for standard medical practice.

**Infectious Waste Disposal**

*Considerations:*

- Disposal of all infectious waste shall be in accordance with applicable federal, state, and local regulations.
- All infectious waste shall be placed in closable, leak proof containers or bags that are color-coded, labeled, or tagged.
- Disposable syringes, needles, scalpel blades and other sharp items shall be placed in puncture-resistant containers for disposal.
- Puncture-resistant sharps containers shall be easily accessible to workers and located in areas where they are commonly used.
- Double-bagging prior to handling, storing, and/or transporting infectious waste is necessary if the outside of a bag is contaminated with blood or other potentially infectious materials.
- Lab specimens of body fluids shall be transported in a container that will prevent leaking and disposed of in accordance with institutional policies and regulatory requirements.

**Tags, Labels, and Bags**

*Considerations:*

- Tags that comply with 29CFR 1910.145(f) shall be used to identify the presence of an actual or potential biological hazard.
- Tags shall contain the word "BIOHAZARD" or the biological hazard symbol and state the specific hazardous condition or the instructions to be communicated to employees.
- The word and message must be understandable to all employees who may be exposed to the identified hazard.
- Labels/tags may be an integral part of the container or affixed as close as safely possible to their respective hazards by string, wire, or adhesive to prevent their loss or unintentional removal.
- Red bags or red containers may be substituted for labels on containers of infectious waste.
- All employees shall be informed of the meaning of various labels, tags, and color-coding system.
**Housekeeping Practices:**

*Considerations:*

- The employer shall assure that the worksite is maintained in a clean and sanitary condition.
- The employer shall determine and implement an appropriate cleaning schedule for rooms where body fluids are present. Schedules shall be as frequent as necessary depending on the area of the institution, the type of surface to be cleaned, and the amount and type of soil present.
- The employer shall ensure that housekeeping workers wear appropriate PPE including general-purpose utility gloves during all cleaning of blood or other potentially infectious materials and during decontaminating procedures.
- Initial clean-up of blood or other potentially infectious materials, shall be followed with the use of an approved hospital disinfectant chemical germicide that is tuberculocidal or a solution of 5.25 percent sodium hypochlorite (household bleach) diluted between 1:10 and 1:100 with water.
- Equipment contaminated with blood or other potentially infectious materials shall be checked routinely and decontaminated if possible prior to servicing or shipping.

**Laundry Practices**

*Considerations:*

- The employer shall ensure that laundry workers wear protective gloves and other appropriate personal protective equipment to prevent exposure to blood or other potentially infectious materials during handling and sorting of linen.
- Laundry that is contaminated with blood or other potentially infectious materials or that may contain contaminated needles or sharps shall be treated as if it were HBV/HIV infectious and handled as little as possible with a minimum of agitation.
- Contaminated, laundry shall be bagged at the locations where it was used and shall not be sorted or rinsed in-patient areas.

**Training and Education of Employees**

*Considerations:*

- The employer shall ensure that all employees with exposure to blood or other potentially infectious materials
  - Participate in a training and education program.
  - Material appropriate in content and vocabulary or educational level, literacy, and language background of employees shall be used.
- The training program shall contain the following elements:
  - A general explanation of the epidemiology and symptoms of HBV and HIV.
  - An explanation of the modes of transmission of HBV and HIV.
  - An explanation of the employer’s infections control program.
  - An explanation of the use and limitations of methods of control that may prevent or reduce exposure including universal precautions, engineering controls, work practices, and personal protective equipment.
  - An explanation of the basis for selection of personal protective equipment.
  - Information on the HBV vaccine, including its efficacy, safety, and the benefits of being vaccinated.
  - An explanation of the procedure to follow if an exposure incident occurs, method of reporting the incident, and the medical follow-up that will be made available.
  - An explanation of the signs, labels, tags, and/or color-coding used to denote biohazards.
**Record keeping**

- The employer shall track each worker’s reported exposure incident to blood or other potentially infectious materials.
- Needle stick injuries shall be included on the OSHA 200 occupational injury and illness log if medical treatment such as gamma globulin, hepatitis B immune globulin, or hepatitis B vaccine is prescribed and administered by licensed medical personnel.

HBV and HIV shall be recorded on the OSHA 200 log if the illnesses can be traced back to an injury or other exposure incident.

**Sources**


U.S. Department of Labor: "OSHA Instruction CPL 2-2.44B, Enforcement Procedures for Occupational Exposure to Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV)." February 27, 1990.

**Related OSHA Publications**

Single free copies of the following publications can be obtained from the OSHA Publications Office, U.S. Department of Labor, 200 Constitution Avenue, NW, Room N-3101, Washington, DC 20210. Send a self-addressed mailing label with your request.

OSHA - 2056 All About OSHA
OSHA - 2098 OSHA Inspections
OSHA - 3021 OSHA: Employee Workplace Rights
OSHA - 3000 Employer Rights and Responsibilities Following an OSHA Inspection

(The American College Health Association, P.O. Box 28937, Baltimore, MD 21240-8937 brings this information to you. ACHA also recommends the following publications to support these guidelines: "HIV Infection and AIDS: What Everyone Should Know" and "The ABC’s of Hepatitis."- These brochures are available from ACHA; for information contact ACHA, (410) 859-1500.)