

Bloodborne Pathogens: OSHA's Standard for General Industry

This paper addresses compliance with OSHA's bloodborne pathogen standard for employers in general industry. Healthcare employers and operators of certain research facilities have unique exposures (and associated regulations) which are not covered by the scope of this paper.

Since the late 1980s, biosafety and infection control experts have recognized the need for, and published recommendations for, prevention of communicable diseases that are spread by the blood (or other body fluids) of infected persons. Indeed, the severity of some of the diseases spread in this manner, notably the Human Immunodeficiency Virus (HIV) and the Hepatitis B Virus (HBV), make the prevention of infection urgent and important. The Occupational Safety and Health Administration (OSHA) published the final rule on Bloodborne Pathogens (29 CFR 1910.1030) on December 6, 1991, after more than five years of rulemaking. In response to the *Needlestick Safety and Prevention Act*, OSHA updated the standard in 2001. The revisions included requirements for the selection of safer needle devices, involving employees in selection of these devices, and require a log be maintained recording injuries from contaminated sharps. Sharp exposure from needlesticks is atypical for general industry and is not considered in this document. For sites with a sharp exposures, the revised standard must be considered. Help is available on the OSHA web site.

To Whom Does The Standard Apply?

The scope of the standard is very broad. The standard applies to all occupational exposures¹ to blood or Other Potentially Infectious Materials (OPIM).² This includes part-time, temporary and 'per-diem' employees, in addition to full time employees. Consequently, if any employees have a "reasonably anticipated" exposure to blood or OPIM, no matter how unlikely, then aspects of the standard apply. Interpretations of the standard indicate that first aid providers in industrial environments, even those rendering first aid or assistance to an injured worker merely as a collateral duty have a reasonably anticipated exposure, and are therefore covered by the standard. "Good Samaritans," whose actions are totally unanticipated by the employer, are not covered by the standard. However, dependence on "Good Samaritans" may not be prudent, as OSHA requires employers to provide first aid facilities consistent with the degree of risk. As is true for all OSHA standards, the responsibility for compliance generally rests with the employer.

LOSS CONTROL TIPS

Exposure Control Plan

Any OSHA-regulated employer who employs one or more potentially exposed employees, must develop a written Exposure Control Plan designed to eliminate or minimize exposure to bloodborne pathogens. (A number of agencies, including the American Medical Association, have published excellent model plans.)

At a minimum, the Exposure Control Plan must include the following elements:

- *Exposure Determination.* The employer must specify 1) job classification(s) in which *all* employees have occupational exposure and 2) job classification(s) in which *some* employees have occupational exposure. In the latter category, a clear explanation of the tasks or procedures that are associated with the exposure must be given. For example, the tasks of a welder do not ordinarily have occupational exposure. But if the welder is also a first aid provider, then the welder has occupational exposure to bloodborne pathogens, but only during actual first aid incidents. All exposure determinations are made without consideration of personal protective clothing or equipment.
- *Schedule and Method of Implementation.* A schedule and method of implementation for other aspects of the standard, must be put in place, namely:
 1. Methods of Compliance³
 2. Hepatitis-B vaccination and post exposure evaluation and follow -up
 3. How hazards are communicated to your employees
 4. Required recordkeeping
- Procedure for Evaluating Exposure Incidents

Review the Exposure Control Plan at least annually (and as often as changes in operations create or eliminate exposure hazards) and make it available to all employees.

Methods of Compliance

Universal Precautions

Universal Precautions means that all blood (or OPIM) must be treated as if it were known to be infectious for HIV, HBV, or other bloodborne pathogens. This assessment is made regardless of the real or perceived “risk” of the source individual.

Engineering Controls and Work Practices

To the extent possible, you are required to eliminate or reduce hazards from bloodborne pathogens. In instances

where engineering controls cannot be used, personal protective equipment must be used. Several manufacturers make excellent, low-cost packages of all the personal protective equipment needed (disposable gown, gloves, eye protection, mask, etc.). Size and accessibility of the equipment must be considered.

Handwashing facilities (soap and warm water) must be available for the use of any employee who has contacted blood or OPIM. Moreover, you must mandate that hand and skin washing take place as soon as feasible after exposure. If such facilities are not practical, you may opt to provide a sufficient quantity of antiseptic towelettes.

The employer is responsible for providing adequate personal protective equipment to the employee without cost, and to clean, maintain, and/or dispose of the devices.

Barrier creams are not acceptable protection. In fact, the presence of some barrier creams may degrade the performance of gloves and should, therefore, be avoided.

Resuscitation devices (i.e., bags, masks, shields, overlay barriers, or mouthpieces) are considered important personal protective equipment if pulmonary resuscitation is rendered.

OSHA will allow a *limited* exception to the requirement for personal protective equipment on a case-by-case basis when, in the professional judgment of the employee, the use of the protective devices would prevent the proper delivery of health care or public safety services or would increase the hazard to the employee. This is a very limited exception and it underscores the need to have proper personal protective equipment in a readily accessible location.

In the event that blood or OPIM is discharged on surfaces, disinfect the surfaces and dispose of infectious materials. This involves mechanical cleaning of surfaces (remember that the towels, sponges, etc. Used for cleaning become infectious) and the application of a suitable disinfectant (1:10 dilution of chlorine bleach is generally acceptable).

Contact a public health official or hospital for guidance on how to properly dispose of infectious materials. These materials can include:

- Liquid or semi-liquid blood or OPIM
- Items contaminated with blood or OPIM which would release these substances if compressed
- Items that are caked with dried blood or OPIM

The pre-manufactured kits often contain “biohazard” red bags for the collection and storage of ‘regulated waste.’ Use these bags, being careful to avoid any punctures.

Hepatitis B Vaccination

Hepatitis B vaccination is an effective way to provide immunity from Hepatitis B virus infection. Regulated employers who have employees exposed to bloodborne pathogens are required to make the vaccination available to each employee, without cost, within 10 days of the employee’s assignment to a job classification with bloodborne pathogen hazards. If the employee declines such vaccination, the employer must secure a release, following the format specified in the standard, and maintain it on file. Specific guidelines which must be followed to ensure appropriate levels of immunity. (Consult a licensed healthcare professional for guidance.)

A limited exception for this requirement exists in the case of employees whose sole exposure is the provision of first aid, and where the provision of first aid is not within the employees job classification (i.e., a “Good Samaritan”), and that provision is made for the vaccination within 24 hours of an exposure incident, and that all other provisions of the standard are in place (training, PPE, Exposure Control Plan, etc.).

Post Exposure Evaluation and Follow-Up

If an exposure incident takes place (i.e., an exposed employee contacts blood or OPIM), the employer should be prepared to provide to that employee an immediate, confidential, no-cost medical evaluation.

Note: While the employer is not specifically *required* to provide such evaluations to employees who are accidentally exposed to blood and/or OPIM, but who are not otherwise covered by the standard, OSHA and The Hartford strongly encourage you to do so.

The employer should fully investigate and document findings of any potential exposure incident. Provide at least the following information to the health care professional:

- A copy of the OSHA standard
- A description of the employee’s duties
- Documentation of the exposure incident
- Results of the source individual’s blood testing, if any
- All medical records for the exposed employee that are relevant to his or her treatment

Consider creating this ‘packet’ (as much as practical) *before* an incident occurs.

The employer should attempt to identify and document the source individual for the blood and/or OPIM. Attempt to secure consent from the source individual to have his or her blood tested. If the employee refuses to provide consent, document that fact in writing.

Even though you the employer is involved in obtaining consent and investigating the incident, in most cases the employer will not be informed of the results of the blood testing on the source individual without his or her express permission.

The standard requires that the health care professional who evaluates the exposed employee supply a written opinion to the exposed employee within 15 working days. The employer is required to obtain this opinion and provide it to the employee. The employer is allowed access to this written opinion.

Employee Information and Training

The employee information and training section of the OSHA standard outlines requirements which ensure that potentially exposed employees are provided with sufficient information and training to eliminate or minimize exposure.

The employer should provide appropriate biohazard labeling for any regulated waste or source of blood or OPIM (containers, etc.).

The employer should provide training to exposed employees. on an annual basis. The training program, which may be provided by suitably qualified others, should include:

- The text of the OSHA standard
- General explanations of epidemiology and symptoms of bloodborne diseases
- Modes of transmission of bloodborne pathogens
- A copy of the Exposure Control Plan
- Explanation of the methods used for recognizing tasks that present exposure to bloodborne pathogen hazards
- Explanation of applicable engineering controls, work practices, and personal protective equipment requirements
- Information on the means for disposal and/or decontamination of personal protective equipment
- Explanation of the basis for selection of personal protective equipment
- Information on the Hepatitis B vaccine, including efficacy, safety, method of administration, benefits of vaccination, and that the vaccine and vaccination will be offered free of charge (if applicable)

- Information on actions to take in the event of an exposure incident
- Procedures to follow, including reporting and post exposure medical evaluation, in the event of an exposure incident
- Information on the post exposure medical examination and follow up that the employer must provide
- Explanation of the signs and/or labels and/or color coding used in the plan
- An opportunity for an interactive question and answer period with the person who conducts the training

The person who conducts the training must be qualified and knowledgeable in the subject matter. Many employers, lacking in-house medical resources, have found it practical to contract with local physicians, HMOs, etc., to provide such training.

Notes

1. *Occupational Exposure* is defined as reasonably anticipated skin, eye, mucous membrane or parenteral contact (usually through bites) with blood or Other Potentially Infectious Materials (OPIM)
2. *Other Potentially Infectious Materials* are defined by the standard as body fluids including: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
3. *Methods of Compliance* as used here, means methods the employer will use to protect the exposed employee(s) from the hazards of bloodborne pathogens.

For more information, contact your local Hartford agent or your Hartford Loss Control Consultant. Visit The Hartford's Loss Control web site at <http://www.thehartford.com/corporate/losscontrol/>

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