

SUBJECT: Enforcement Procedures for Occupational Exposures to Bloodborne Pathogens

Purpose:

This instruction establishes policies and provides clarifications to ensure uniform inspection procedures are followed when conducting inspections to enforce the Bloodborne Pathogens Standard, 29 CFR 1910.1030.

Scope:

This directive applies MNOSHA-wide.

References:

1. Centers for Disease Control (CDC) Morbidity and Mortality Weekly Report (MMWR): "Immunization of Health-Care Workers; Recommendations of the Advisory Committee on Immunization Practices and the Hospital Infection Control Practices Advisory Committee;" December 26, 1997, Vol. 46, No. RR-18.
Website: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm>
2. CDC: "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis;" September 25, 2013.
Website: [Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. \(cdc.gov\)](http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm)
3. CDC MMWR: "Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease;" Oct. 16, 1998, Vol. 47, No. RR-19. Website: <http://www.cdc.gov/mmwr/PDF/RR/RR4719.pdf>
4. CDC MMWR: "Recommendations for Follow-Up of Health-Care Workers After Occupational Exposure to Hepatitis C Virus;" July 04, 1997, Vol. 46, No. 26. Website: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00048324.htm>
5. CDC MMWR: "Updated U. S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure

Prophylaxis;" June 29, 2001, Vol. 50, No. RR-11. Website:

<http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf>.

6. Federal OSHA Instruction CPL 02-02-069, "Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens Standard," dated 11/27/01. Website: [Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens \(osha.gov\)](http://www.osha-slc.gov/enforcement-procedures-for-the-occupational-exposure-to-bloodborne-pathogens)
7. S.F. 2397 (Laws of Minnesota, 2000, Chapter 351) which added new Minnesota Statute § 182.6555, "Reducing occupational exposures to bloodborne pathogens through sharps injuries."
8. 29 CFR Part 1910.1030, Occupational Exposure to Bloodborne Pathogens; Final Rule, Federal Register, Vol. 56, No. 235, dated 12/6/91.
9. 29 CFR Part 1910.1030, Occupational Exposure to Bloodborne Pathogens; Needlesticks and Other Sharps Injuries; Final Rule, Federal Register, Vol. 66, No. 12, dated 1/18/01.
10. MNOSHA Instruction CPL 2-0.135, "Recordkeeping Policies and Procedures."

Cancellation:

This instruction cancels MNOSHA Instruction CPL 2-2.44G, dated April 1, 2013.

BACKGROUND:

1. On December 6, 1991, Federal OSHA issued its final regulation on occupational exposure to bloodborne pathogens (29 CFR 1910.1030). Based on a review of the information in the rulemaking record, Federal OSHA determined that employees face a significant health risk as the result of occupational exposure to blood and other potentially infectious materials (OPIM) because they may contain bloodborne pathogens. These pathogens include hepatitis B virus (HBV) which causes hepatitis B, a serious liver disease; human immunodeficiency virus (HIV), which can lead to acquired immunodeficiency syndrome (AIDS) if untreated; hepatitis C virus; human T-lymphotropic virus Type 1; and pathogens causing malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease, and viral hemorrhagic fever. Federal OSHA further concluded that this hazard can be minimized or eliminated using a combination of engineering and work practice controls, personal protective clothing and equipment, training, medical surveillance, hepatitis B vaccination, signs and labels, and other provisions.

Minnesota OSHA adopted the Federal OSHA Occupational Exposure to Bloodborne Pathogens Standard on June 1, 1992, with an effective date of June 6, 1992.

2. On June 10, 2000, section 182.6555 to the Minnesota Occupational Safety and Health Act of 1973 (M.S. Chapter 182) went into effect. This statute requires employers to: (1) comply with 1910.1030; (2) amend their written Exposure Control Plans at least annually to reflect new or modified tasks and procedures as well as technology and engineering controls that have been considered and/or implemented; (3) involve employees in the review of engineering systems through the safety committee (or a sub-committee) with at least one-half of the members of the committee consisting of employees representing job classifications that would use the devices being evaluated; and (4) establish internal procedures to document routes of exposure and circumstances surrounding exposure incidents. MNOSHA Instruction CPL 2-2.44D was updated on June 10, 2000, to reflect these statutory requirements.
3. On November 6, 2000, the Needlestick Safety and Prevention Act was signed into law (Public Law 106-430). It directed OSHA to revise the Bloodborne Pathogens standard to include new examples in the definition of engineering controls; to require that Exposure Control Plans reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; to require employers to document annually in the Exposure Control Plans consideration and implementation of safer medical devices; to require employers to solicit input from non-managerial employees responsible for direct patient care in the identification, evaluation, and selection of engineering and work practice controls; to document this input in the Exposure Control Plan; and to require certain employers to establish and maintain a log of percutaneous injuries from contaminated sharps. Federal OSHA published these revisions on January 18, 2001 (link to [Final Rule here](#)), with an effective date of April 18, 2001. MNOSHA adopted the revised Bloodborne Pathogens standard on October 1, 2001. MNOSHA Instruction CPL 2-2.44E was updated on May 6, 2002, to reflect these changes.

ACTION

A. INSPECTION SCHEDULING AND SCOPE:

1. Inspection scheduling shall be conducted in accordance with the procedures outlined in the Field Compliance Manual (FCM), Chapter II, except as modified in paragraphs 2 and 3 below.
2. All inspections, programmed or unprogrammed, shall include, if appropriate, a review of the employer's Exposure Control Plan and employee interviews to assess compliance with the standard.

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3. Expansion of an inspection to areas involving the hazard of occupational exposure to body fluids (including onsite health care units and emergency response or first aid personnel) shall be performed when:
 - a. The Exposure Control Plan or employee interviews indicate deficiencies in complying with OSHA requirements, as set forth in 29 CFR 1910.1030 or this policy.
 - b. Relevant formal employee complaints are received which are specifically related to occupational exposure to blood or OPIMs.
 - c. A fatality/catastrophe inspection is conducted as the result of occupational exposure to blood or OPIM.

B. GENERAL INSPECTION PROCEDURES:

The procedures given in the FCM, Chapter III, shall be followed except as modified below:

1. Where appropriate, the facility administrator, infection control director or occupational health nurse, "in-service" education director (i.e., training director), head of central services, environmental services, and/or housekeeping should be included in the opening conference or interviewed early in the inspection.
2. The facility's sharps injury log and any other file of "incident reports" or additional records (e.g., a first aid injury log, etc.) that document the circumstances of exposure incidents in accordance with the provisions of the facility's Exposure Control Plan, should be reviewed since they may contain injuries not included on the OSHA 300 log.
3. Minnesota Occupational Safety and Health Investigators (OSHIs) shall take necessary precautions to avoid direct contact with body fluids and shall not participate in activities that will require them to come into contact with body fluids, needles, or other sharp instruments contaminated with blood. To evaluate such activities, OSHIs normally shall establish the existence of hazards and adequacy of work practices through employee interviews and shall observe them at a safe distance. [See the Field Safety and Health Manual Chapter 2.]
4. On occasions when entry into potentially hazardous areas are judged necessary, the OSHI shall be properly equipped as required by the facility as well as by his/her own professional judgment, after consultation with the OSHA Management Team (OMT) Director/Supervisor.
5. OSHIs shall use appropriate caution when entering patient care areas of the facility. When such visits are judged necessary for determining actual conditions in the facility, the privacy

of patients shall be respected. Photographs or videos of patients normally will not be necessary and in no event shall identifiable photos or videos be taken without the patient's consent.

C. RECORDING OF EXPOSURE INCIDENTS—300 LOG:

Section 1904.8 of the new recordkeeping rule requires that all employers, whether or not they are covered by the Bloodborne Pathogens standard, record all work-related needlesticks and cuts from sharp objects that are contaminated with another person's blood or OPIM on the 300 Log as an injury. The employee's name must not be entered on the 300 Log. [See the requirements for privacy cases in paragraphs 1904.29(b)(6) through (b)(9).] If the employee is later diagnosed with an infectious bloodborne disease, the identity of the disease must be entered and the classification must be changed to an illness.

If an employee is splashed or exposed to blood or OPIM without being cut or punctured, the incident must be recorded on the OSHA 300 Log if it results in the diagnosis of a bloodborne illness (i.e., HIV, hepatitis B, or hepatitis C) or it meets one or more of the following recording criteria in § 1904.7:

- death,
- days away from work,
- restricted work or transfer to another job,
- medical treatment beyond first aid,
- loss of consciousness, or
- a significant injury or illness diagnosed by a physician or other licensed health care professional.

Work-related cuts, lacerations, or scratches involving clean, non-contaminated objects or a contaminant other than blood or OPIM are only recordable if the case meets one or more of the recording criteria in 1904.7 (see above).

[See MNOSHA Instruction CPL 2-0.135, "Recordkeeping Policies and Procedures," for more recordkeeping information.]

D. MULTI-EMPLOYER WORKSITES:

The following general citation guidelines apply in multi-employer worksites (See FCM Chapters III and V):

1. Employers shall be cited for violations of the standard to which their own employees are exposed.

2. Employers shall also be cited for violations to which employees of other employers on their premises are exposed to the extent that they control the hazard. For example, they shall be cited for not providing personal protective equipment to unprotected employees of other employers on their premises.
3. The following paragraphs address some typical multi-employer situations but do not address all the circumstances that may occur. In addition, these paragraphs deal with situations in which employees are sent out to sites that are not multi-employer worksites. [Where these guidelines do not address a particular question, see Field Compliance Manual and MNOSHA Instruction ADM 3.2, "Multi-Employer Worksite Citation Policy", for additional information on multi-employer worksites.]
 - a. **EMPLOYMENT AGENCIES.** An employment agency refers job applicants to potential employers but does not put these workers on the payroll or otherwise establish an employment relationship with them; thus, the employment agency is not the employer of these workers. These agencies shall not be cited for violations affecting the workers they refer. The company that uses these workers (e.g., a hospital) is the employer of these workers and shall be cited for all violations affecting them.
 - b. **PERSONNEL SERVICES.** Personnel services firms employ medical care staff and service employees who are assigned to work at hospitals and other healthcare facilities that contract with the firm. Typically, the employees are on the payroll of the personnel services firm, but the healthcare facility exercises day-to-day supervision over them. In these circumstances, due to the concerns expressed by the court in **American Dental Association v. Martin**, 984 F.2d 823, 829-30 (7th Cir. 1993) (dictum about medical personnel services) the personnel services firm should be cited for violations of the bloodborne pathogens standard only in the following categories: (a) hepatitis B vaccinations; (b) post-exposure evaluation and follow-up; (c) recordkeeping under paragraph (h) of the standard; (d) generic training; (e) violations occurring at the healthcare facility about which the personnel services firm actually knew and where the firm failed to take reasonable steps to have the host employer (the employer using the workers such as a hospital) correct the violation (see FCM multi-employer worksite guidelines); and (f) pervasive serious violations occurring at the healthcare facility about which the personnel services firm could have known with the exercise of reasonable diligence.

When the host employer exercises day-to-day supervision over the personnel services workers, they are the employees of the host employer, as well as of the personnel service, and thus the host employer must comply with all provisions of the standard with respect to these workers. With respect to Hepatitis B vaccinations, post-exposure evaluation and follow-up, recordkeeping, and generic training, the host employer's

obligation is to take reasonable measures to assure that the personnel service firm has complied with these provisions.

- c. **HOME HEALTH SERVICES.** The **American Dental Association v. Martin** decision upheld the bloodborne pathogens standard but restricted its application to the home health services industry. These are companies whose employees provide home health services in private homes. The court held that OSHA had not adequately considered feasibility problems for such employers, where employees work at sites that the employer does not control. As a result, OSHA may not cite those employers for site-dependent provisions of the standard when the hazard is site-specific.

In implementing this decision, OSHA determined that the employer will not be held responsible for the following site-specific violations: housekeeping requirements, such as the maintenance of a clean and sanitary worksite and the handling and disposal of regulated waste; ensuring the use of personal protective equipment; ensuring that specific work practices are followed (e.g., handwashing with running water), and ensuring the use of engineering controls.

The employer will be held responsible for all non-site-specific requirements of the standard, including the non-site specific requirements of the Exposure Control Plan, hepatitis B vaccinations, post exposure evaluation and follow-up, recordkeeping, and the generic training requirements. Employers shall also be cited for failure to supply appropriate personal protective equipment to employees.

- d. **PHYSICIANS AND HEALTHCARE PROFESSIONALS WHO HAVE ESTABLISHED AN INDEPENDENT PRACTICE.** In applying the provisions of the standard in situations involving physicians, the status of the physician is important. Physicians may be employers or employees. Physicians who are unincorporated sole proprietors or partners in a bona fide partnership are employers for purposes of the OSH Act and may be cited if they employ at least one employee (such as a technician or secretary). Such physician-employers may be cited if they create or control bloodborne pathogens hazards that expose employees at hospitals or other sites where they have staff privileges, in accordance with the multi-employer worksite guidelines of the FCM and MNOSHA Instruction ADM 3.2. Because the physicians in these situations are not themselves employees, citations may not be based on the exposure of such physicians to the hazards of bloodborne diseases.

Physicians may be employed by a hospital or other healthcare facility or may be members of a professional corporation and conduct some of their activities at host employer sites where they have staff privileges. In general, professional corporations are the employers of their physician-members and must comply with the hepatitis B vaccination, post-exposure-evaluation and follow-up, recordkeeping, and generic

training provisions with respect to these physicians when they work at host employer sites. The host employer is not responsible for these provisions with respect to physicians with staff privileges, but in appropriate circumstances, may be cited under other provisions of the standard for the exposure of its physicians and other workers at a host employer site in accordance with the multi-employer worksite guidelines of the FCM and MNOSHA Instruction ADM 3.2.

- e. **INDEPENDENT CONTRACTOR.** These are companies that provide a service, such as radiology or housekeeping, to host employers. They provide supervisory personnel, as well as rank-and-file workers, to carry out the service. These companies and the host employers are responsible for complying with all provisions of the standard in accordance with multi-employer worksite guidelines of the FCM and MNOSHA Instruction ADM 3.2.

E. CLARIFICATION OF THE STANDARD ON OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS, 29 CFR 1910.1030:

The guidance that follows relates to specific provisions of 29 CFR 1910.1030 and is provided to assist OSHIs in conducting inspections where the standard may be applicable:

NOTE: Refer to 29 CFR 1910.1030 regulatory text and preamble for further information.

1. SCOPE AND APPLICATION - 1910.1030(a).

This paragraph defines the range of employees covered by the standard.

- a. Employees covered by the standard include:
 - Any general industry employee who has occupational exposure to blood or OPIM;
 - Part-time, temporary, and health care workers known as "per diem" employees;
 - Employees trained in first aid and designated by the employer as responsible for rendering medical assistance as part of his/her job duties; and
 - Students and volunteers (if they receive compensation, such as a salary).
- b. Employees in the construction, maritime, and agricultural industries are not covered by the standard (Federal OSHA Office of Field Programs, May 1992).

NOTE: The Employee Right-to-Know Standard, which is applicable to these industries, requires training and information on infectious agents to be provided for those employees who are routinely exposed to infectious agents because of their job responsibilities.

- c. Although a list is included below of a number of job classifications that may be associated with tasks that have occupational exposure to blood and OPIMs, ***the scope of this standard is in no way limited to employees in these jobs.*** The hazard of exposure to infectious materials affects employees in many types of employment and is not restricted to the health care industry. At the same time, ***employees in the following jobs are not automatically covered unless they have occupational exposure:***

- Physicians, physician's assistants, nurses, nurse practitioners, and other health care employees in clinics and physicians' offices;
- Employees of clinical and diagnostic laboratories;
- Housekeepers and maintenance workers in health care facilities;
- Personnel in hospital laundries or commercial laundries that service health care or public safety institutions;
- Tissue bank personnel;
- Employees in blood banks and plasma centers who collect, transport, and test blood;
- Freestanding clinic employees (e.g., hemodialysis clinics, urgent care clinics, health maintenance organization (HMO) clinics, and family planning clinics);
- Employees in clinics in industrial, educational, and correctional facilities (e.g., those who collect blood, and clean and dress wounds);
- Employees assigned to provide emergency first aid [See paragraph d.];
- Dentists, dental hygienists, dental assistants and dental laboratory technicians;
- Staff of institutions for the developmentally disabled (including group homes and sheltered workshops)
- Hospice employees;
- Home health care workers;
- Staff of nursing homes and long-term care facilities;
- Employees of substance abuse clinics;
- Employees of funeral homes and mortuaries;
- HIV and HBV research laboratory and production facility workers;
- Employees handling regulated waste;
- Medical equipment service and repair personnel;
- Emergency medical technicians, paramedics, and other emergency medical service providers;
- Firefighters, law enforcement personnel, and correctional officers;
- School personnel (e.g., staff with responsibility for first aid, staff responsible for assisting developmentally disabled students with aggressive behavior (e.g., biting, scratching, etc.);
- Child care workers with responsibility for first aid;
- Lifeguards.

- d. If an employee is trained in first aid and identified by the employer as responsible for rendering medical assistance **as part of his/her job duties**, that employee is covered by the standard. See the citation policy for paragraph (f)(2) regarding designated first aid providers who administer first aid as a **collateral duty** to their routine work assignments. An employee who routinely provides first aid to fellow employees with the knowledge of the employer may also fall, de facto, under this designation even if the employer has not officially designated this employee as a first aid provider.

2. DEFINITIONS - 1910.1030(b).

The following provides further clarifications of some definitions found in this paragraph:

- a. **"BLOOD"** - The term "human blood components" includes plasma, platelets, and serosanguineous fluids (e.g., exudates from wounds). Also included are medications derived from blood, such as immune globulins, albumin, and factors 8 and 9. [Letter of interpretation dated 5/5/98]
- b. **"BLOODBORNE PATHOGENS"** - While HIV and HBV are specifically identified in the standard, the term includes any pathogenic microorganism that is present in human blood and can infect and cause disease in persons who are exposed to blood containing the pathogen. Pathogenic microorganisms can also cause diseases such as hepatitis C, malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease, adult T-cell leukemia/lymphoma (caused by HTLV-I), HTLV-I associated myelopathy, diseases associated with HTLV-II, and viral hemorrhagic fever.

NOTE: According to the CDC hepatitis C virus (HCV) infection is the most common chronic bloodborne infection in the United States. HCV is a viral infection of the liver that is transmitted primarily by exposure to blood. Currently there is no vaccine effective against HCV.

- c. **"EXPOSURE INCIDENT"** - "Non-intact skin" includes skin with dermatitis, hang-nails, cuts, abrasions, chafing, acne, etc.
- d. **"ENGINEERING CONTROLS"** - means controls that isolate or remove the bloodborne pathogens hazard from the workplace. Examples include safer medical devices, such as sharps with engineered sharp injury protection (SESIPs) and needleless systems. These two terms were further defined in the revision to 1910.1030 mandated by the Needlestick Safety and Prevention Act.

- e. **"NEEDLELESS SYSTEMS"** means a device that does not use needles for: (1) the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) the administration of medication or fluids; or (3) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps. "Needleless Systems" provide an alternative to needles for the specified procedures, thereby reducing the risk of percutaneous injury involving contaminated sharps. Examples of needleless systems include, but are not limited to, intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a blunt cannula or other non-needle connection, and jet injection systems that deliver subcutaneous or intramuscular injections of liquid medication through the skin without use of a needle.
- f. **"OCCUPATIONAL EXPOSURE"** - The term "reasonably anticipated exposure" includes the potential for exposure as well as actual exposure to blood or OPIM. "Reasonably anticipated exposure" includes, among others, exposure to blood or OPIM (including regulated waste) as well as incidents of needlesticks. For example, an OSHI may document incidents in which an employee observes uncapped needles or contacts other regulated waste in order to substantiate "occupational exposure." In addition, lack of history of blood exposures among first aid personnel of a particular manufacturing site does not preclude coverage. However, the fact that an employee has first aid and CPR training does not automatically bring them under the standard. This standard should in no way discourage employers from providing CPR and first aid training to employees. Minnesota OSHA's first priority is trained employees and the use of universal precautions in rendering assistance to another person.

NOTE: This definition does not cover "Good Samaritan" acts (i.e., voluntarily aiding someone in one's place of employment) which result in exposure to blood or OPIMs, although OSHA encourages employers to offer follow-up procedures to these employees in such cases.
- g. **"OTHER POTENTIALLY INFECTIOUS MATERIALS (OPIMs)"** - Coverage under this definition also extends to blood and tissues of animals that are deliberately infected with HIV or HBV.
- h. **"PARENTERAL"** - This definition includes human bites that break the skin, which are most likely to occur in violent situations such as may be encountered by prison personnel and police and in emergency rooms or psychiatric wards.
- i. **"SHARPS WITH ENGINEERED SHARPS INJURY PROTECTION (SESIPs)"** - is defined as "a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident." This term

encompasses a broad array of devices that make injury involving a contaminated sharp less likely. They include, but are not limited to: syringes with guards or sliding sheaths that shield the attached needle after use; needles that retract into a syringe after use; shielded or retracting catheters used to access the bloodstream for intravenous administration of medication or fluids; intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a needle that is housed in a protective covering; blunt suture needles; and plastic (instead of glass) capillary tubes.

3. EXPOSURE CONTROL PLAN - 1910.1030(c).

This paragraph requires the employer to identify those tasks and procedures in which occupational exposure may occur and to identify the positions whose duties include those tasks and procedures identified with occupational exposure. The Exposure Control Plan required by paragraph (c)(1) is a key provision of the standard because it requires the employer to identify the individuals who will receive the training, protective equipment, vaccination, and other protections of the standard.

INSPECTION AND CITATION GUIDELINES.

OSHIs shall review the facility's written Exposure Control Plan. While the plan may be part of a larger document, such as one addressing all health and safety hazards in the workplace, in order for the plan to be accessible to employees, it must be a cohesive entity by itself or there must be a guiding document which states the overall policy goals and references the elements of existing separate policies that comprise the plan.

OSHIs should determine whether the plan is reviewed annually and updated to reflect significant modifications in tasks or procedures which may result in occupational exposure as required in 1910.1030 (c)(1)(iv).

If a facility is lacking an Exposure Control Plan and the other requirements of the standard have not been implemented, the other relevant paragraphs of the standard should be cited in addition to paragraph (c). These should normally be classified as serious violations.

The content of the Exposure Control Plan should be reviewed for at least the following elements:

1910.1030 (c)(1)(ii)(A) and (c)(2)(i).

The exposure determination requires employers to identify and document: 1) those job classifications in which **all** employees have occupational exposure, and/or 2) those job classifications in which **some** employees have occupational exposure.

In the latter case, the specific tasks and procedures, or groups of closely related tasks and procedures, which are associated with occupational exposure must be delineated. For example, only some of the employees in a hospital laundry room might be assigned the task of handling contaminated laundry. The tasks and procedures that are grouped must be related; i.e., they must share a common activity such as "vascular access procedures," "handling of contaminated sharps," or "handling of deceased persons," etc.

NOTE: If a job classification, task, or procedure involving occupational exposure is omitted from the list, but all employees in the job or performing the task or procedure have been included in all aspects of the plan (e.g., vaccinations, training, etc.), it is to be considered a non-serious violation in accordance with CPL 2.111, "Paperwork and Written Program Violations."

The exposure determination shall be made without taking into consideration the use of personal protective clothing or equipment.

1910.1030 (c)(1)(ii)(B).

While the primary purpose of the Exposure Control Plan is to identify those employees who have occupational exposure and to commit the employer to a timetable for implementation of the standard's requirements, paragraphs (d) - (h) of the standard must also be addressed in a manner appropriate to the circumstances of the particular workplace. An annotated copy of the final standard may be adequate for small facilities. Larger facilities could develop a broad facility-wide program incorporating provisions from the standard that apply to their establishments.

1910.1030 (c)(1)(ii)(C).

The Exposure Control Plan must include the procedure for evaluating the circumstances surrounding exposure incidents, including an evaluation of the policies and "failures of control" at the time of the exposure incident. Also consider the engineering controls and work practices in place, as well as protective equipment or clothing used, at the time of the exposure incident.

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CITATION GUIDELINES: If the employer failed to include procedures for the documentation of exposure incidents in the Exposure Control Plan, cite paragraph (c)(1)(ii)(C). If procedures are included in the plan but not implemented, cite paragraph (f)(3)(i).

1910.1030 (c)(1)(iii).

The location of the plan may be adapted to the circumstances of a particular workplace provided that the employee can access a copy at the workplace, during the workshift (e.g., if the plan is maintained solely on computer, employees must be trained to operate the computer). In accordance with 1910.1020(e), a hard copy of the Exposure Control Plan shall be made available to the employee within 15 working days of the employee's request.

1910.1030(c)(1)(iv).

This paragraph requires the Exposure Control Plan to be reviewed and updated at least annually (every 12 months) and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. As stated in the preamble to the standard, the review and update must reflect innovations in procedure and technological development that eliminate or reduce exposure to bloodborne pathogens. [56 Fed. Reg. 64109-10 (1991)]. This includes but is not limited to, newly available medical devices designed to reduce the risk of percutaneous exposures to bloodborne pathogens. A periodic review ensures that the Exposure Control Plan remains current with the latest information and scientific knowledge pertaining to the bloodborne pathogens. A review of the sharps log required in paragraph (h)(5) can identify problem areas and/or ineffective devices which may need replacement. The Exposure Control Plan must document consideration and implementation of appropriate commercially available and effective engineering controls designed to eliminate or minimize exposure. If a chosen engineering control is not commercially available (due to supply shortages, back orders, shipping delays, etc.), this must be documented in the Exposure Control Plan. The chosen control must be implemented as soon as it becomes available, and the Exposure Control Plan revised accordingly. If engineering controls were considered and not implemented, the reasons for not implementing the controls must also be documented in the Exposure Control Plan. The Exposure Control Plan must also include the procedure for evaluation of circumstances surrounding exposure incidents. [See discussion of paragraph (f)(3)(i)]

NOTE: While the exact number of injuries sustained annually in the United States is unknown, current estimates vary between 590,000 and 800,000 injuries annually. This compliance instruction clarifies the agency's position regarding the implementation of effective engineering controls to reduce needlesticks and other sharps injuries. Effective engineering controls include the safer medical devices used

to prevent percutaneous injuries before, during, or after use through safer design features. When the Final Rule was published in December 1991, the variety of engineering controls was limited although some were available. At that time adequate data and information on engineering controls and their effectiveness were not available. The preamble to the Final Rule stated that “with regard to percutaneous incidents, such as needlestick injuries, evidence indicated that most injuries were preventable...75 percent of all exposure incidents are caused by disposable syringes...and could be prevented by using syringes which incorporate resheathing or retracting designs.” [56 Fed. Reg./64057 (1991)]. Since publication of the standard, there has been a substantial increase in the number and assortment of effective engineering controls available to employers. There is now a large body of research and data available to OSHA and to the public concerning the effectiveness of these engineering controls.

CITATION GUIDELINES: The employer must review and update the plan, as necessary, to reflect changes in technology, such as the use of effective engineering controls that can eliminate or minimize exposures. If the employer did not review and update its Exposure Control Plan at least annually, paragraph (c)(1)(iv) should be cited in accordance with CPL 2.111, “Paperwork and Written Program Violations.”

1910.1030(c)(1)(v).

This paragraph requires the employer to solicit input from non-managerial employees responsible for direct patient care in the identification, selection and evaluation of effective engineering and work practice controls and document the solicitation in the Exposure Control Plan. The employer must solicit employee input in a manner appropriate to the circumstances in the workplace. Methods for soliciting employee input may include joint labor-management safety committees; involvement in informal problem-solving groups; participation in safety meetings and audits, employee surveys, worksite inspections, or exposure incident investigations; using a suggestion box or other effective methods for obtaining written employee comments; and participation in the evaluation of devices through pilot testing. The opportunities for employee input shall be effectively communicated to employees. Input from employees covered by a collective bargaining agreement may also be requested through their bargaining agent. Employers are not required to request input from each and every exposed employee; however, the employees selected must represent the range of exposure situations encountered in the workplace (e.g., emergency department, pediatrics, nuclear medicine, etc.). The employer must document the process by which the input was requested and identify the employees or the positions of those employees who were involved.

An employer with multiple worksites (e.g., a healthcare organization with hospitals, clinics, nursing homes, etc.) may choose to conduct initial product evaluations at the corporate

level by a team that involves non-managerial employees rather than having each individual site conduct separate evaluations. The evaluation team should include employees representing the various types of occupations who are involved in the care practices that will be affected by the devices being evaluated. Devices recommended by the corporate evaluation team can be sent to other sites for implementation. The employer should establish a procedure for employees at the smaller worksites to follow to report problems with a new device or to suggest a new device for evaluation.

INSPECTION GUIDELINES: OSHIs should determine how the devices used in the facility were selected and review the employers' documentation of their employees' input. Many departments require different features in a safer device and have different concerns for both employee and patient safety. Employees in various departments and situations should be interviewed to determine the extent to which the employer solicited employee input. The fact that some employees have not provided input does not automatically mean the employer has not solicited input, but should prompt the OSHI to thoroughly investigate whether input was solicited. Solicitation of employee input should be documented. In addition to employee interviews, evidence that employee input has been sought could include such things as meeting minutes, copies of documents used to request employee participation, or records of responses received from employees such as reports evaluating the effectiveness of a safer medical device in trial applications.

CITATION GUIDELINES: Section 1910.1030(c)(1)(v) should only be cited if input was not solicited from **non-managerial employees involved in administering treatment or performing any procedure in the presence of an individual receiving care.** Any employee who, for example, collects blood from patients in a nursing home, administers flu vaccinations in a factory employee health unit, or collects blood from other employees for research purposes would be performing "patient care." Laboratory workers, on the other hand, who do not have patient contact, would not be included in this provision.

NOTE: Minnesota Statute § 182.6555 requires employers who are mandated under Minn. Stat. § 182.676 to establish a safety committee to use that committee (or a sub-committee) to evaluate safer devices; at least one-half of the committee members must be non-managerial employees involved in patient care. Employers who do not have to establish a safety committee under § 182.676 are required to involve employees in the evaluation of engineering controls. All employers are required to comply with 29 CFR Part 1910.1030. The intent of the statute and 1910.1030(c)(1)(v) is to assure that employees who are involved in patient care and who will be using the devices being reviewed are involved in the evaluation of new devices. Therefore, if an employer who is required to have a safety committee does not use the safety committee (or a sub-committee) to evaluate safer devices but does involve non-managerial employees in the evaluation, no citation will be issued for failing to comply with § 182.6555. Any employer who does not involve non-managerial

employees in the evaluation of safer devices should be cited for violating 1910.1030(c)(1)(v).

1910.1030 (c)(2)(i)(A) and (B).

As previously discussed, the employer is required to list the job classifications covered by the plan. The list is part of the exposure determination. If a job classification, task, or procedure with occupational exposure is omitted from the list, but all employees in the job or performing the task or procedure have been included in all other aspects of the plan (i.e., vaccinations, training, etc.), consider it a non-serious violation.

4. METHODS OF COMPLIANCE - 1910.1030(d).

Paragraph (d) sets forth the methods by which employers shall protect their employees from the hazards of bloodborne pathogens and comply with this standard through the use of universal precautions, engineering controls, work practice controls, personal protective equipment, proper housekeeping, and handling of regulated waste.

1910.1030(d)(1) - UNIVERSAL PRECAUTIONS.

Universal precautions are the required method of control to protect employees from exposure to all human blood and OPIM. The term "universal precautions" refers to a concept of bloodborne disease control which requires that all human blood and OPIM be treated as if known to be infectious for HIV, HBV, HCV, or other bloodborne pathogens regardless of the perceived "low risk" status of a patient or patient population.

Alternative concepts of infection control are called Body Substance Isolation (BSI) and Standard Precautions. These methods define all body fluids and substances as infectious. These methods incorporate not only the fluids and materials covered by this standard but expand coverage to include all body fluids and substances.

These concepts are acceptable alternatives to universal precautions provided facilities utilizing them adhere to all other provisions of this standard.

CITATION GUIDELINES: If the employer has a policy of treating the blood or OPIM of some patients as potentially infectious and the blood or OPIM of others (e.g., the elderly or children) as non-infectious, a violation of this provision exists.

1910.1030(d)(2) - ENGINEERING CONTROLS AND WORK PRACTICES.

This paragraph requires the employer to institute engineering and work practice controls as the primary means of eliminating or minimizing employee exposure. It conforms to OSHA's traditional adherence to a hierarchy of controls. OSHA has always required employers to use engineering and work practice controls. Thus, the employer must use engineering and work practice controls that eliminate occupational exposure or reduce it to the lowest feasible extent. Preventing exposures requires a comprehensive program, including engineering controls (e.g., needleless devices, shielded needle devices, and plastic capillary tubes) and proper work practices (e.g., no-hands procedures in handling contaminated sharps, eliminating hand-to-hand instrument passing in the operating room). Paragraph F.2. of this directive includes definitions of engineering controls, safer medical devices, needleless systems, and sharps with engineered sharps injury protection. If engineering and work practice controls do not eliminate exposure, employers must provide, and ensure that employees use, personal protective equipment.

Note that the use of sharps containers is not an acceptable means of complying with (d)(2)(i). The specific provisions of (d)(4)(iii)(A) cover sharps containers and thus pre-empts this section.

Needles that will not become contaminated by blood during use (such as those used only to draw medication from vials) are not required to have engineering controls under this standard. The needle used for the actual injection, however, must incorporate engineering controls. The employer must also make changes to its Exposure Control Plan to include the selection and use of these engineering controls.

Safer medical devices are generally of two types: needleless systems (e.g., needleless IV connectors) and sharps with engineered sharps injury protection (e.g., self-sheathing needles on syringes). Substitution methods such as the use of plastic (instead of glass) capillary tubes are also available. Appendix E (Engineering Control Evaluation Forms) provides some examples of forms an employer might use for evaluation of engineering controls.

Where engineering controls will reduce employee exposure either by removing, eliminating or isolating the hazard, they must be used. Significant improvements in technology are most evident in the growing market of safe medical devices that minimize, control or prevent exposure incidents. OSHA does not advocate the use of one particular device over another.

Ideally, the most effective way of removing the hazard of a contaminated needle is to eliminate the needle completely by converting to needleless systems. When this is not possible, removal of the hazard as soon as possible after contamination is required. This is

best accomplished by using a sharp with engineered sharps injury protection, which shields the sharp from exposure as soon as it is withdrawn from the patient.

No one medical device is appropriate in all circumstances of use. Employers must implement the safer medical devices that are appropriate, commercially available, and effective.

The FDA is responsible for clearing medical devices for marketing, although this “clearance” alone is not enough to guarantee the device will be effective in the workplace. The employer must rely on further evidence to ensure its effectiveness in the situations where it will be used. There are specific design features for recessed needle systems that the Food and Drug Administration has published and agrees are important in preventing percutaneous injuries. These design features have the following characteristics:

- a. A fixed safety feature provides a barrier between the hands and the needle after use; the safety feature should allow or require the worker’s hands to remain behind the needle at all times;
- b. The safety feature is an integral part of the device and not an accessory;
- c. The safety feature is in effect before disassembly and remains in effect after disposal to protect users and trash handlers, and for environmental safety; and
- d. The safety feature is as simple as possible, and requires little or no training to use effectively.

INSPECTION GUIDELINES: OSHIs should determine through interviews or observation of work involving the use of needles whether sufficient engineering controls and work practices, such as immediate disposal of used needles into a sharps container, are used. While it is generally accepted that an exposure incident can occur at any time or place, a review of the facility’s records can better direct the OSHI to areas that are more likely to be sites of exposure incidents. Data from the 2002 U.S. Exposure Prevention Information Network (obtained from Needlestick and Sharp-Object Injury Reports from 47 hospitals; <https://internationalsafetycenter.org/wp-content/uploads/reports/2002-Needlestick-and-Sharp-Object-Injury-Report.pdf>) show that injuries occurred, in order of frequency, in patient rooms, operating rooms/recovery, emergency departments, and intensive/critical care units. The report indicates that nurses (RNs and LPNs) were injured more often than any other type of healthcare worker.

The OSHI should determine if there were occasions where injuries occurred during the same procedure, using the same equipment, in the same location or among similar employees (e.g., housekeepers) and determine whether engineering or work practices have been implemented to prevent or minimize future injuries. The OSHI should investigate whether the employer has instituted alternative engineering controls and work practices to eliminate or minimize employee exposure in areas where exposure incidents have been documented.

If an employer reports a problem with a medical device, the OSHI should ask whether the problem was reported to the FDA. Reports of device failure or other problems associated with medical devices should be reported to “MedWatch” at 1-800-332-1088 (<http://www.fda.gov/Safety/MedWatch/HowToReport/default.htm>). MedWatch tracks problems with medical devices and equipment; however, MedWatch does not accept, nor does it track, reports of needlesticks.

Most preferable is the use of devices which offer an alternative to needles being used to perform the procedure. Examples of such devices include stopcocks (on-off switch), needle-protected systems, or needleless systems which can be used in place of open needles to connect intravenous lines. Other devices which are integral to the syringe, such as self-sheathing needles, allow both hands to remain behind the needle and require very little manipulation to isolate the needle safely.

When a health care worker must recap, such as during intermittent administration of various drugs during certain procedures, and when it is not feasible to use self-sheathing needle syringes, the employee must use some type of device that protects the hand or allows a safe one-handed recapping method. A proper one-handed scoop method is a work practice which may also be used in these circumstances. [See discussion of 1910.1030(d)(2)(vii) for more details.]

OSHIs should evaluate the work practices used by health care providers to determine that they ensure the effectiveness of engineering controls. For example, some devices provide a fixed barrier between the hands and the needle after use. While some finger/hand shields available on the market offer full protection of the hand holding the needle sheath from accidental puncture, some do not. They may leave much of the hand area uncovered and are not considered acceptable protection for use in a two-handed recapping procedure. Both the shield and the cap must be constructed so that an employee is not exposed to puncture from a needle protruding from the side or end of the cap.

OSHIs should note that sharps may include more than the traditional needles or scalpels. They also include anything that might produce a puncture wound which would expose employees to blood or OPIM (e.g., the ends of contaminated orthodontia wires or broken glass).

While employers do not automatically have to institute the most sophisticated engineering controls (e.g., needleless IV connectors, self-sheathing needles), it is the employer’s responsibility to evaluate the effectiveness of existing controls and to review the feasibility of instituting more advanced engineering controls. The lack of recorded injuries on the sharps injury log or OSHA 300 does not exempt the employer from this provision.

OSHI should carefully evaluate the exposure control measures, such as effective engineering controls, that are in use at the facility. Part of this evaluation should include whether other devices that are commercially available were reviewed or considered by the employer and whether there is evidence that other engineering controls would reduce exposures. Such evidence might include CDC studies of efficacy, pilot tests by the employer, or data available in published studies. The Record Summary indicates that employers are using safer equipment and devices, e.g., over 87% of the respondents who provided information on device usage now use needleless or shielded needle IV line access. Other popular devices include blunt suture needles, safer syringes, and safer phlebotomy devices. This is not an exhaustive list of effective engineering controls that are available. OSHIs should not look for the same device or answer at every site; the focus should be on the “process” and “results” rather than the specific device.

Compliance with this paragraph should take into consideration that the availability or use of an engineering control is not enough to guarantee that an employee cannot be injured. Employee acceptance and employee training also are required for the engineering control to be effective. Examples of effective engineering controls can be found in several resources linked on Federal OSHA’s Bloodborne Pathogens and Needlestick Prevention page [Bloodborne Pathogens - Overview | Occupational Safety and Health Administration \(osha.gov\)](https://www.osha.gov/blood-borne-pathogens-overview).

CITATION GUIDELINES: Citations for paragraph (d)(2)(i) should be issued for the following:

No engineering controls are being used to eliminate or minimize exposure

If a combination of engineering and work practice controls used by the employer does not eliminate or minimize exposure

When the OSHI finds that an employer is using an engineering control, but believes another device would be clearly more effective than the one in use, the OSHI should document how the device was being used and how it was selected.

The citation should state that the employer failed to use engineering controls or work practices that would “eliminate or minimize exposure” and identify particular engineering controls, such as self-sheathing needles, and particular work practice controls, such as no-hand procedures in handling contaminated sharps, which should have been used. After each particular control mentioned in the citation, the words “among other controls” should be added unless it is clear that there are no other controls.

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Paragraph (d)(2)(i) should not be cited where another provision of the standard mandates a specific engineering or work practice control [e.g., paragraph (d)(4)(iii)(A) for sharps containers and paragraph (d)(2)(vii) for the prohibition of recapping].

1910.1030 (d)(2)(ii).

This paragraph requires that engineering controls be examined and maintained or replaced on a regular schedule to ensure their effectiveness. Regularly scheduled inspections are required to confirm, for instance, that engineering controls such as protective shields have not been removed or broken, that sharps disposal containers are being replaced at sufficiently frequent intervals and that other physical, mechanical, or replacement-dependent controls are functioning as intended.

CITATION GUIDELINES: It is the employer's responsibility to regularly examine and repair and/or replace engineering controls as often as necessary to ensure that each control is maintained and that it provides the protection intended. If the OSHI finds that there is no system for regular checking of the engineering controls or that regular checking is not done, paragraph (d)(2)(ii) should be cited.

If there is a check system, but the OSHI finds, for example, that the biosafety cabinet is not functional, filters are overloaded (in research laboratories or production facilities), disposal containers are overfilled, or a splash shield is broken or missing, paragraph (d)(2)(ii) should be cited if an effective monitoring system would have uncovered the deficiency.

Additionally, if there is unprotected employee exposure, paragraph (d)(2)(i) should be cited for failure to use personal protective equipment after institution of engineering controls.

1910.1030 (d)(2)(iii) through (d)(2)(vi).

These paragraphs require employers to provide handwashing facilities which are readily accessible to employees. Handwashing with soap and at least tepid running water must be performed as soon as feasible, particularly in cases of gross contamination, to adequately flush contaminated material from the skin.

1910.1030 (d)(2)(iv).

This paragraph allows the use of alternative handwashing methods as an interim measure when soap and water are not a feasible means of washing the hands or other parts of the body. Antiseptic hand cleaner, in conjunction with clean cloth or paper towels, or antiseptic towelettes are examples of alternative methods. When these types of alternatives are used, employees shall wash their hands (or other affected area) with soap and running water as

soon as feasible thereafter. OSHIs may see these types of alternative washing methods used by ambulance-based paramedics and emergency medical technicians (EMTs), firefighters, police, and mobile blood collection personnel who are exposed to blood or OPIM with no means of washing up with running water at the site of the exposure (e.g., a crime scene, traffic accident, fire).

1910.1030 (d)(2)(v).

This paragraph requires employers to ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other PPE. There is no requirement for handwashing upon leaving the work area unless contact with blood or OPIM has occurred or gloves/PPE have been removed.

CITATION GUIDELINES: If OSHIs find that required handwashing facilities are not being provided, paragraph (d)(2)(iii) should be cited unless the employer demonstrates that handwashing facilities are not feasible. If infeasibility is demonstrated, paragraph (d)(2)(iv) should be cited when the required alternatives are not used. If handwashing is not performed by the employees after exposures or removal of gloves, paragraphs (d)(2)(iv), (v), or (vi) should be cited.

At a fixed establishment, if handwashing facilities are not readily accessible, i.e., within a reasonable distance from the area where the employee is exposed, (d)(2)(iii) should be cited. For example, if an employee must leave the work area and thread his/her way through doorways and/or stairs to wash, there is a reasonable chance of resultant environmental surface contamination. This situation is a violation.

1910.1030 (d)(2)(vii).

Shearing or breaking of contaminated needles is completely prohibited by this paragraph. Bending, recapping, or removing contaminated needles by hand is prohibited as a general practice. The practice of removing the needle from a used blood-drawing/phlebotomy device is rarely, if ever, required by a medical procedure. Because such devices involve the use of a double-ended needle, such removal clearly exposes employees to additional risk. Devices with needles must be used and immediately discarded after use, un-recapped, into accessible sharps containers. However, certain circumstances may exist in which recapping, bending, or removing needles is necessary; e.g., when administering incremental doses of a medication such as an anesthetic to the same patient. While these circumstances may currently require recapping, bending, or removing needles, the employer must continue to review and evaluate new devices, etc. that may become available in the future that could make recapping, bending or removing needles unnecessary.

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In these procedures, if the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical procedure, recapping is allowed but must be performed by some method other than the traditional two-handed procedure; e.g., by means of a mechanical device or forceps.

The use of the properly performed one-hand scoop method (in which the hand holding the sharp is used to scoop up the cap from a flat surface) for recapping is a recognized and acceptable method; however, the scoop method must be performed in a safe manner and must be limited to situations in which recapping is necessary.

If the employer claims that no alternative to bending, recapping, or removing contaminated needles is feasible or that such action is required by a specific medical procedure, the OSHI should review the Exposure Control Plan for a written justification supported by reliable evidence. This justification must state the basis for the employer's determination that no alternative is feasible or must specify that a particular medical procedure requires, for example, the bending of the needle and the use of forceps to accomplish this.

1910.1030 (d)(2)(viii).

Since reusable sharps, such as large bore needles, scalpels, and saws, pose the same percutaneous exposure hazard as disposable sharps, they must be contained in a manner that eliminates or minimizes the hazard until they are reprocessed. Therefore, the containers for reusable sharps must meet the same requirements as containers for disposable sharps [see the discussion of 1910.1030(d)(4)(iii)(A)(1)] with the exception that they are not required to be closable since it is anticipated that containers used for collecting and holding reusable sharps will, themselves, be reused. However, it is recommended that if the filled container is to be moved from one area to another that it be covered or otherwise secured to prevent the contents from spilling should the container be accidentally dropped or knocked over. [See the discussion of 1910.1030(d)(4)(ii)(E) for the manner in which these reusable sharps are to be stored and processed and 1910.1030(d)(4)(iii)(A)(4) for the requirements for cleaning and processing of these reusable containers.]

1910.1030 (d)(2)(ix) and (x).

These paragraphs are intended primarily to eliminate or minimize indirect transmission of HBV from contaminated environmental surfaces.

Hand cream is not considered a "cosmetic" and is permitted. It should be noted that some petroleum-based hand creams can adversely affect glove integrity, and the handwashing requirements of Paragraphs (d)(2)(v) and (d)(2)(vi) shall be followed.

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NOTE: The term "work area" means the area where work involving exposure or potential exposure to blood or OPIM exists, along with the potential contamination of surfaces. Employees are permitted to eat and drink in an ambulance cab, for example, as long as the employer has implemented procedures to permit employees to wash up and change contaminated clothing prior to entering the ambulance cab, and to ensure that patients and contaminated material remain behind the separating partition.

INSPECTION GUIDELINES: In addition to direct contamination of food and drink by blood or OPIM, OSHIs must keep in mind that containers of food and beverage may also become contaminated, resulting in unsuspected contamination of the hands. The purpose of this paragraph is to prevent food and drink from being contaminated by the leakage/spilling of specimen containers, contact with contaminated items, or the performance of activities (e.g., laboratory analysis) that could generate splashes, sprays, or droplets of blood or OPIM.

The appropriate paragraph (d)(2)(ix) or (x) should be cited for the deficiencies.

1910.1030 (d)(2)(xi).

The intent of this paragraph is not only to decrease the chances of direct employee exposure through spraying or splashing of infectious materials onto employees, but also to reduce contamination of surfaces in the general work area.

Surgical power tools, lasers, and electrocautery devices may generate aerosols as well as be a source for splashing and spattering. Some of these devices include labeling recommendations such as local exhaust ventilation. The employer is responsible for appropriate operation of these devices, including controls recommended by the manufacturer.

Typically, reasonably anticipated spattering or generation of droplets would necessitate use of eye protection and a mask or face shield to prevent contamination of the mucous membranes of the eyes, nose, and mouth. [See the discussion of 1910.1030(d)(3)(x)].

The use of sprays, brushes, and high pressure in equipment lines is particularly hazardous.

CITATION GUIDELINES: A citation should normally be issued for paragraph (d)(2)(xi) if cleaning procedures unnecessarily cause splashing, spraying, spattering, and generation of droplets of blood or OPIM.

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1910.1030 (d)(2)(xii).

While this paragraph prohibits mouth pipetting/suctioning, the agency allows a recognized emergency care method of clearing an infant's airways called "DeLee suctioning" in the following situation:

In an emergency,

When no other method is available; and

A trap which prevents suctioned fluid from reaching the employee's mouth is inserted in-line between the infant and the employee.

1910.1030 (d)(2)(xiii) to (d)(2)(xiii)(C).

These paragraphs deal with the containerization and labeling of specimens with the intent to eliminate or minimize the possibility of inadvertent employee contact with blood or OPIM which have leaked out of the container, contaminated exterior surfaces of the container, and/or surrounding surfaces. The labeling requirement warns employees that these substances are present so that proper handling precautions can be taken.

The labeling exemption listed in paragraph (d)(2)(xiii)(A) applies to facilities which handle all specimens (not just those which contain blood or OPIM) with universal precautions.

This exemption applies only while these specimens remain in the facility.

All employees who will have contact with the specimens must be trained to handle all specimens with universal precautions.

If the specimens leave the facility (e.g., during transport, shipment, or disposal) a label or red color-coding is required.

Extracted teeth are subject to the containerization and labeling provisions of the standard. However, citations will not be issued to dentists and doctors for non-employee exposures. Extracted teeth, gall stones and kidney stones may be given to the patients. In these situations, the teeth and stones are not subject to the containerization and labeling provisions of the standard.

The use of pneumatic tube systems for transport of small materials in hospitals now includes transmittal of laboratory specimens and other more fragile items. The primary concern in the transportation of clinical specimens in a pneumatic tube system is leakage of the specimen into the carrier and potentially into the system tubing. Some systems have

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virtually eliminated breakage as a cause of leakage by means of padded inserts for carriers and soft delivery of the carrier. Leakage generally results from improper packaging and/or the use of primary containers that do not prevent leakage during transport.

All workers who might potentially open a carrier shall be trained to regard the contents as biohazardous in nature. Employees who open biohazard carriers shall wear gloves in accordance with paragraph (d)(3) when removing specimens from the tube system carrier, because it may be contaminated with leakage. They shall be trained in decontamination of the carrier and, if need be, the tube system in accordance with paragraph (g)(2).

All precautions and standards for manual transport of specimens also apply to the automated transport of specimens (e.g., containerization and tagging/labeling).

Blood-drenched clothing and other blood contaminated evidence collected by law enforcement personnel is considered a specimen under the standard. Because storage of this material while wet may cause deterioration of the evidence, additional safeguards may be necessary. For example, when evidence such as blood-drenched clothing is collected, it must be placed in a closed, labeled/color-coded container to prevent leakage (e.g., a plastic bag, etc.) for transport to the evidence room. Upon receipt at the evidence room, this material may be removed from the container and allowed to air-dry. Personnel performing this task are covered by the standard and must be provided with training, HBV vaccination, personal protective equipment, etc. In addition, the area where the evidence is exposed must be segregated or otherwise limited to access by trained personnel only; e.g., marked to warn other employees. When dry, the evidence should be placed in proper, closed specimen containers. All other pertinent provisions of the standard, such as decontamination of reusable containers and contaminated surfaces, etc. are also applicable.

INSPECTION GUIDELINES: OSHIs should observe or document work practices to determine whether a secondary container is being used when necessary. If a bloody glove contaminates the outside of a primary container while the employee is placing a specimen, the employee would need to use a secondary container. Also, primary containers which may be punctured by their contents, including such items as pointed bone slivers, must be placed in a puncture-resistant secondary container.

1910.1030 (d)(2)(xiv).

When it is not possible to decontaminate equipment prior to servicing or shipping (e.g., highly technical or sensitive equipment and/or limited access to contaminated parts), at least partial decontamination, such as flushing lines and wiping the exterior, shall be accomplished.

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INSPECTION AND CITATION GUIDELINES: OSHIs should ensure that the employer's program makes provision for the required equipment labels. A label must be attached to equipment stating which portions of the equipment remain contaminated in order to inform downstream servicing/repair employees of the hazard and precautions they need to take.

Before citing (d)(2)(xiv), OSHIs should document that equipment is being shipped and/or serviced.

OSHIs should observe or document work practices used when employees are decontaminating equipment. [See 1910.1030(d)(2)(xi) for use of high pressure equipment.]

When decontaminating reusable equipment that is heavily soiled, the employee will have to perform some prewashing before proceeding with decontamination because most disinfectants/sterilants cannot sufficiently penetrate the organic material that may remain on such heavily soiled equipment. [See the discussion of 1910.1030(d)(4)(ii)(E) for details].

1910.1030(d)(3) - PERSONAL PROTECTIVE EQUIPMENT.

When there is occupational exposure, personal protective equipment (PPE) must be provided at no cost to the employee to prevent blood or OPIM from passing through to, or contacting the employees' work or street clothes, undergarments, skin, eyes, mouth, or other mucous membranes.

1910.1030 (d)(3)(i).

The type and amount of PPE shall be chosen to protect against contact with blood or OPIM based upon the type of exposure and quantity of these substances which can be reasonably anticipated to be encountered during the performance of a task or procedure.

INSPECTION AND CITATION GUIDELINES: The financial responsibility for purchasing and providing PPE rests with the employer. The employer is not obligated under this standard to provide general work clothes to employees, but is responsible for providing PPE. If laboratory coats or uniforms are intended to protect the employee's body from contamination, they are to be provided by the employer at no cost to the employee.

Laboratory coats, uniforms, and the like that are used as PPE shall be laundered by the employer and not sent home with the employee for cleaning. [See the discussion of 1910.1030(d)(3)(iv)].

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Scrubs are usually worn in a manner similar to street clothing, and normally should be covered by appropriate gowns, aprons or laboratory coats when splashes to skin or clothing are reasonably anticipated.

If a pullover scrub (as opposed to scrubs with snap closures) becomes minimally contaminated, employees should be trained in accordance with paragraph (g)(2)(vii)(G) to remove the pull-over scrub in such a way as to avoid contact with the outer surface; e.g., rolling up the garment as it is pulled toward the head for removal.

However, if the amount of blood exposure is such that the blood penetrates the scrub and contaminates the inner surface, not only is it impossible to remove the scrub without exposure to blood, but the penetration itself would constitute skin exposure. Even though wearing scrubs for protection against exposures of this magnitude is inappropriate, it may also be prudent to train employees on the proper methods to remove grossly contaminated scrubs and prevent exposure to the face.

A gown which is frequently ripped or falls apart under normal use would not be considered "appropriate PPE."

Resuscitator devices are to be readily available and accessible to employees who can reasonably be expected to perform resuscitation procedures.

Emergency ventilation devices also fall under the scope of PPE and hence must be provided by the employer for use in resuscitation (e.g., masks, mouthpieces, resuscitation bags, shields/overlay barriers).

Improper use of PPE and emergency ventilation devices should be cited as a violation of paragraph (d)(3)(ii). Improper use includes failure to follow the manufacturer's instructions and/or accepted medical practice.

NOTE: The American Society for Testing Materials (ASTM) has several complete testing and evaluating methods which can be used for assessing the resistance of materials for PPE for medical use (ASTM F1819-07, ASTM F1671-07, and ASTM F1670-08).

1910.1030 (d)(3)(ii).

This paragraph requires the use of PPE. It also provides for a limited exemption from the use of PPE, based on situations in which use of PPE would prevent the proper delivery of health care or public safety services, or would pose an increased hazard to the personal safety of the worker. The following represents examples of when such a situation could occur:

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A sudden change in patient status occurs such as when an apparently stable patient unexpectedly begins to hemorrhage profusely, putting the patient's life in immediate jeopardy;

A firefighter rescues an individual who is not breathing from a burning building and discovers that his/her resuscitation equipment is lost/damaged and he/she must administer CPR;

A bleeding suspect unexpectedly attacks a police officer with a knife, threatening the safety of the officer and/or co-workers.

NOTE: An employee's decision not to use PPE is to be made on a case-by-case basis and must have been prompted by legitimate and truly extenuating circumstances. In such cases, no citation should be issued when the employee temporarily and briefly abandons use of PPE. This does not relieve the employer of the responsibility to ensure that PPE is readily accessible at all times. The employer must investigate and document why PPE was not used in each case and evaluate the circumstances surrounding the incident to reduce the likelihood of a future (unprotected) incident.

CITATION GUIDELINES: 1910.1030 (d)(3)(ii) should be cited if PPE is not being used properly. Improper use would include wearing the wrong PPE (e.g., wearing a laboratory coat when a rubber apron is needed) or wearing the wrong size PPE.

In addition, paragraph (g)(2)(vii)(G) should be cited if the employees have not been adequately trained.

Unless all elements of the exemption, including the documentation requirement are met, the employer should not receive the benefit of this exemption and paragraph (d)(3)(ii) should be cited.

1910.1030 (d)(3)(iii).

This paragraph requires that the employer provide PPE in appropriate sizes and accessible locations. In addition, hypoallergenic gloves, glove liners, powderless gloves (see Note below), or other similar alternatives must be readily available and accessible at no cost to those employees who are allergic to the gloves normally provided. Similar alternatives must supply appropriate barrier protection. OSHIs should review the employer's program and, through employee interviews and inspection of places where PPE is kept, ensure that these provisions have been met.

NOTE: In accordance with a notice published in the Federal Register, Volume 62, No. 189, effective September 30, 1998, the FDA now requires labeling statements for medical

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devices which contain natural rubber and prohibits the use of the word “hypoallergenic” to describe such products. Additional information on the incidence of hypersensitivity reactions to natural rubber latex can be found in the following documents: NIOSH Alert: “Preventing Allergic Reactions to Natural Rubber Latex in the Workplace,” June 1997, Publication No. 97-135 (<http://www.cdc.gov/niosh/docs/97-135/>); and OSHA Safety and Health Information Bulletin: “Potential for Sensitization and Possible Allergic Reaction To Natural Rubber Latex Gloves and other Natural Rubber Products.” [NaturalRubberLatexGloves.1.11.08.pmd \(osha.gov\)](#)).

CITATION GUIDELINES: If PPE is not provided at no cost to the employee, cite paragraph (d)(3)(i). If PPE is not being used properly or the wrong PPE is used (e.g., wearing a laboratory coat when a rubber apron is needed or the employee is wearing the wrong size PPE) cite paragraph (d)(3)(ii). If PPE is not available in appropriate sizes or readily accessible, cite paragraph (d)(3)(iii). For example, the clothing of paramedics out on an emergency call may become blood-soaked. If they are unable to change before the next emergency call because a second set of clothing is located at the ambulance's home base, and the ambulance does not return to base for prolonged periods, a violation of paragraph (d)(3)(iii) would exist.

If it is common practice that PPE is not utilized during certain situations or procedures where exposure to blood or OPIM is anticipated, then a violation of paragraph (d)(3)(ii) would exist. If inaccessibility of PPE exists, paragraph (d)(3)(iii) should also be cited.

1910.1030 (d)(3)(iv).

It is the employer's responsibility not only to provide PPE, but to clean, maintain, and/or dispose of it.

While many employees have traditionally provided and laundered their own uniforms or laboratory coats or the like, if the item's intended function is to act as PPE, then it is the employer's responsibility to provide, clean, repair, replace, and/or dispose of it.

Home laundering is not permitted since the standard requires that the laundering be performed by the employer at no cost to the employee. Home laundering is unacceptable because the employer cannot ensure that proper handling or laundering procedures are being followed and because contamination could migrate to the homes of employees.

If the employee wishes to choose, wear, and maintain his/her own uniform or laboratory coat, then he/she would need to don additional employer-handled and employer-controlled PPE when performing tasks where it is reasonable to anticipate exposure to blood or OPIM.

If an employee's uniform, which is not intended to function as protection against a hazard and is not considered personal protective equipment, becomes contaminated by an unanticipated exposure to blood or OPIM, the employer is not responsible to launder that uniform. The employee should disinfect the contaminated area on the uniform and launder the uniform at home, assuming the contaminated area on the uniform is an isolated spot that has not soaked through to the employee's bare skin or undergarments. If the contaminated area has soaked through to bare skin or undergarments or resulted from a splash/spray of blood or OPIMs and is not isolated in a small area, then the uniform must be removed, bagged and handled appropriately. The uniform can then be laundered either by the employer or employee. The employer is encouraged to provide temporary clothing in this situation, at least until the uniform can be laundered or replaced. The employer must train employees to report all such occurrences so that an evaluation can be made. If a reoccurrence can be reasonably anticipated in the future, the employer must provide the appropriate personal protective equipment and ensure its use.

CITATION GUIDELINES: If PPE is not cleaned, laundered, and disposed of by the employer, or if the employer cleans the PPE but there is a charge to the employee, then paragraph (d)(3)(iv) should be cited. If PPE is not repaired and/or replaced by the employer at no cost to the employee, cite paragraph (d)(3)(v).

If PPE is not removed when penetrated by blood or OPIM, cite paragraph (d)(3)(vi).

If the PPE is not changed, and additional PPE was available, paragraph (g)(2)(vii)(G) may also be cited if employees have not been adequately trained.

1910.1030 (d)(3)(vii).

To minimize migration of contamination beyond the work area, employees must wash up and change any contaminated clothing before leaving a work area; i.e., before they may enter designated lunchrooms or break rooms. Failure to wash up would be cited under (d)(2)(iv), (v) or (vi).

INSPECTION AND CITATION GUIDELINES: While the "work area" must be determined on a case-by-case basis, a work area is generally considered to be an area where work involving occupational exposure occurs or where the contamination of surfaces may occur. The standard would not require employees to change PPE when traveling, for example, from one hospital laboratory area to another, provided the connecting hallway is also considered to be a work area. The OSHI should evaluate on a case-by-case basis whether the employee received adequate training in accordance with paragraph (g)(2)(vii)(F) to ensure that no surface contamination occurs during the employee's movement. A violation would exist for the following:

An employee wearing contaminated gloves exits from a pathology laboratory to use a public telephone located in a public hallway of the hospital. Under such circumstances, it can be reasonably anticipated that another employee, without benefit of gloves or knowledge of the potential surface contamination, could use the phone and unwittingly become contaminated.

1910.1030 (d)(3)(ix)(A)-(C).

These paragraphs discuss the use of gloves. Gloves of appropriate sizes must be made available in accordance with paragraph (d)(3)(iii). Studies have shown that gloves provide a barrier, but that neither vinyl nor latex procedure gloves are completely impermeable. Thus, handwashing after glove removal is required. Disposable gloves must be replaced as soon as practical or as soon as feasible when contaminated.

While disposable gloves must be replaced as soon as practical when contaminated, obviously some critical procedures (i.e., surgery, delivery) cannot be interrupted to change gloves. The key words to evaluate are "practical" and "feasible."

Disinfecting agents may cause deterioration of the glove material; washing with surfactants could result in "wicking" or enhanced penetration of liquids into the glove via undetected pores thereby transporting potentially infectious materials into contact with the hand. For this reason, disposable (single use) gloves may not be washed and reused.

Note that certain solutions, such as iodine, may cause discoloration of gloves without affecting their integrity and function.

At a minimum, gloves shall be used where there is reasonable anticipation of employee hand contact with blood, OPIM, mucous membranes, or nonintact skin; when performing vascular access procedures; or when handling or touching contaminated surfaces or items.

Gloves are usually not necessary when administering intramuscular or subcutaneous injections as long as bleeding that could result in hand contact with blood or OPIM is not anticipated.

Plastic film food handling gloves ("cafeteria" or "baggie" gloves) are not considered to be appropriate for use in exposure-related tasks. They would not fit the employee as required by paragraph (d)(3)(iii) of the standard nor would they provide the required protection.

1910.1030 (d)(3)(ix)(D).

The exemption regarding the use of gloves during phlebotomy procedures applies only to employees of volunteer donor blood collection centers, and does not apply to phlebotomy conducted in other settings such as plasmapheresis centers or hospitals. In volunteer blood donation centers, it is the responsibility of the employer to determine if gloving for all phlebotomies is necessary or not. If the employer determines that routine gloving is not necessary, the employer must:

- (a) periodically reevaluate the decision to determine if it is still appropriate;
- (b) make gloves available to all employees who wish to use them for phlebotomy;
- (c) not discourage the use of gloves for phlebotomy; and
- (d) require that gloves be used for phlebotomy when: (1) the employee has cuts, scratches, or other breaks in his or her skin; (2) the employee judges that hand contamination with blood may occur (for example when performing phlebotomy on an uncooperative source individual), and (3) the employee is receiving training in phlebotomy.

INSPECTION GUIDELINES: Where an employer in a volunteer donor blood collection center does not require routine gloving for all phlebotomies, document that the employer has fulfilled the requirements of paragraphs (d)(3)(ix)(D)(1) through (d)(3)(ix)(D)(4)(iii), and that employees have received the training necessary to make an informed decision on the wearing of gloves.

CITATION GUIDELINES: 1910.1030 (d)(3)(ix)(D) should not be cited. Rather, the other paragraphs of (d)(3) should be cited if such an employer violates them and if the employer has not demonstrated fulfillment of all the requirements of the exemptions.

1910.1030 (d)(3)(x).

This paragraph requires protection for the mucous membranes of the face and upper respiratory tract exposure. Depending on the degree and type of anticipated exposure, minimum protection for the face would consist of a surgical mask in conjunction with eye glasses with solid side shields or, alternatively, a chin length face shield.

The employer would not necessarily have to provide prescription eyewear for employees. They could provide and mandate the use of side shields, goggles, and/or protective face shields, and provide proper training in decontamination procedures.

During microsurgery, when it is not reasonably anticipated that there would be any spattering, a surgeon would not be required to wear eye protection while observing surgery through the microscope.

1910.1030 (d)(3)(xi)-(xii).

The requirements for the use of personal protective body clothing, such as gowns, aprons, laboratory coats, clinic jackets, surgical caps, or shoe covers, and the degree to which such PPE must resist penetration, are performance based. The employer must evaluate the task and the type of exposure expected and, based on the determination, select the "appropriate" personal protective clothing in accordance with paragraph (d)(3)(i). For example, laboratory coats or gowns with long sleeves shall be used for procedures in which exposure of the forearm to blood or OPIM is reasonably anticipated to occur.

INSPECTION GUIDELINES: The task being performed and the degree of anticipated exposure must be evaluated by direct observation, employee interview, or review of written standard operating procedures.

1910.1030(d)(4) - HOUSEKEEPING.

The term "worksite" in this paragraph refers not only to permanent fixed facilities such as hospitals, dental/medical offices, clinics, etc., but also covers temporary non-fixed workplaces, including, but not limited to ambulances, bloodmobiles, temporary blood collection centers, and any other non-fixed worksites which have a reasonable possibility of becoming contaminated with blood or OPIM.

1910.1030 (d)(4)(i).

Cleaning schedules and methods will vary according to the factors outlined in this paragraph. While extraordinary attempts to disinfect or sterilize environmental surfaces such as walls or floors are rarely indicated, routine cleaning and removal of soil are required.

The employer must determine and implement an appropriate written schedule of cleaning and decontamination based upon the location within the facility (e.g., surgical operatory versus patient room), the type of surface to be cleaned (e.g., hard-surfaced flooring versus carpeting), type of soil present (e.g., gross contamination versus minor splattering) and tasks and procedures being performed (e.g., laboratory analyses versus routine patient care).

The particular disinfectant used, as well as the frequency with which it is used, will depend upon the circumstances in which the housekeeping task occurs.

1910.1030 (d)(4)(ii).

Since environmental contamination is an effective method of disease transmission for HBV (the CDC states that HBV can survive for at least one week in dried blood on environmental surfaces or contaminated needles and instruments), paragraph (d)(4)(ii) provides the

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minimum requirements for the cleaning and decontamination of equipment and environmental and working surfaces that come into contact with blood or OPIM.

Under paragraph (d)(4)(ii)(A), cleaning of contaminated work surfaces after completion of procedures is required to ensure that employees are not unwittingly exposed to blood or OPIM remaining on a surface from previous procedures. This paragraph requires contaminated work surfaces to be cleaned with an “appropriate disinfectant.” Appropriate disinfectants include a diluted bleach solution and EPA-registered tuberculocides (List B), sterilants registered by EPA (List A), products registered against HIV/HBV (List D) or Sterilants/High Level Disinfectants cleared by the FDA. List D includes primarily quaternary ammonia products that EPA has approved as effective against HIV and HBV. A possible list can be found at [EPA’s Registered Antimicrobial Products Effective Against](#). The sterilants and high level disinfectants cleared by FDA can be found at [FDA-Cleared Sterilants and High Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices | FDA](#). Any of the above products are considered effective when used according to the manufacturer’s instructions, provided the surfaces have not become contaminated with agents or volumes of, or concentrations of, agents for which higher level disinfection is recommended.

NOTE: The lists contain the primary registrants’ products only. The same formulation is repackaged and renamed and distributed by other companies. These renamed products will not appear on the list, but their EPA Registration Number must appear on the label. Products cleared solely by the FDA will not have an EPA number.

INSPECTION AND CITATION GUIDELINES: OSHIs should check the product label for EPA registration and/or consult the EPA lists of registered sterilants (representing the highest level of antimicrobial activity that destroys all viruses), tuberculocidal disinfectants (effective against tuberculosis bacteria and the specific viruses named on the product label as well as the hepatitis B virus), and antimicrobials with HIV/HBV efficacy claims for verification that the disinfectant used is appropriate. The employer must follow the label instructions regarding the amount of disinfectant and the length of time it must remain wet on the surface. Since the effectiveness of a disinfectant is governed by strict adherence to the instructions on the label, OSHIs should also interview employees to ensure that the disinfectants are being used according to the manufacturer’s instructions.

NOTE: Fresh solutions of 5.25% sodium hypochlorite (household bleach) diluted between 1:10 and 1:100 with water and made up daily (every 24 hours) are also considered appropriate for disinfection of environmental surfaces and for decontamination of sites following initial cleanup (i.e., wiping up) of spills of blood or OPIMs. Contact time for bleach is generally considered to be the time it takes the product to air dry. Solutions of bleach should not be stored in glass containers, but in material such as the plastic in which the bleach, the consumer product, is packaged. Bleach may

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cause damage to some medical instruments and therefore cannot be used in all cases. In addition, gross contamination must be cleaned up first with a soap and water solution, to ensure the disinfectant is completely effective.

Where procedures are performed on a continual basis throughout a shift or a day, as may be the case with a clinical laboratory technician performing blood analyses, it is not the agency's intent for the work surface to be decontaminated before the technician can proceed to the next analysis; rather for contaminated work surfaces to be decontaminated after the procedures are completed which, in this example, would include a set of analyses. The completion of procedures might also occur when the employee is going to leave the work area for a period of time.

Decontamination is not automatically required after each patient care procedure, but is required only after procedures resulting in surface contamination.

There may be some instances in which "immediate" decontamination of overt contamination and spills may not be practical as with, for example, an operating table during surgery.

The work surface decontamination is to be performed at the end of the work shift if the work surface may have been contaminated since the last cleaning by, for example, setting down contaminated instruments or specimens on the work surface. This requirement is based upon the existence of a contaminated work surface rather than a particular worksite location. It does not, for example, encompass desks, countertops, and so forth that remain uncontaminated.

The use of protective coverings described in paragraph (d)(4)(ii)(B) is an acceptable alternative for protecting items and surfaces against contamination and is particularly useful in situations in which a piece of equipment would be difficult to decontaminate but could be protected by a cover. If this option is chosen, the covering must be removed and replaced at the stated minimum intervals; e.g., as soon as feasible following overt contamination, or at the end of a work shift if it may have become contaminated during the shift.

More stringent decontamination rules, such as cleaning equipment or changing coverings between patients, may be prudent infection control policy but do not fall under OSHA's jurisdictional mandate to safeguard employee (not patient) health.

1910.1030 (d)(4)(ii)(C)

This paragraph requires both the inspection and decontamination on a regularly scheduled basis of cans, bins, pails, and so forth which are intended for reuse.

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Since these containers may be used in a manner which presents the potential for their becoming contaminated with blood or OPIM, they must be cleaned immediately or as soon as feasible upon visible contamination. For example, a reusable metal trash may be lined with a disposable plastic regulated waste bag which leaks and contaminates the can. In addition, regular decontamination will prevent the can from contaminating the outside of successive bags. Disinfection is not necessary to ensure the safety of these containers when they are used for their intended purpose; it may be possible to achieve proper decontamination by means of a soap and water wash.

1910.1030 (d)(4)(ii)(D)

This paragraph prohibits picking up potentially contaminated broken glassware by hand.

Since contaminated broken glass (e.g., glass capillary tubes, lab specimen dishes, phlebotomy tubes) is capable of inflicting percutaneous injury and direct inoculation of bloodborne pathogens into the bloodstream, paragraph (d)(4)(ii)(D) stipulates that broken glassware which may be contaminated shall not be picked up directly with the hands. The tools which are used in cleanup (e.g., forceps) must be properly decontaminated or discarded after use and the broken glass placed in a sharps container and employees must be given specific information and training with respect to this task in accordance with the requirements of paragraph (g)(2). Vacuum cleaners are not appropriate for cleanup of contaminated broken glass.

1910.1030 (d)(4)(ii)(E) –

This paragraph prohibits employers from allowing employees to place their hands into containers whose contents include reusable sharps contaminated with blood or OPIM. The intent is to prevent conditions of use in which the contents cannot be seen and safely handled. For example, employees must not reach into sinks filled with soapy water into which sharp instruments have been placed; appropriate controls in such a circumstance would include the use of strainer type baskets to hold the instruments and forceps to remove the items.

The final standard recognizes that proper decontamination of reusable equipment, such as glassware or hand instruments, cannot be achieved in the presence of organic debris (e.g., blood) as it interferes with the efficacy of the disinfecting/sterilizing process and the number of products which can successfully penetrate a heavy bioburden is limited.

1910.1030 (d)(4)(iii) - REGULATED WASTE.

This paragraph requires regulated waste to be properly contained and disposed of, so as not to become a source of transmission of disease to workers.

To eliminate the implication that OSHA has determined the "infectivity" of certain medical wastes, the bloodborne pathogens standard uses the term "regulated waste" to refer to the following categories of waste which require special handling, at a minimum:

Liquid or semi-liquid blood or OPIM.

Items contaminated with blood or OPIM and which would release these substances in a liquid or semi-liquid state if compressed.

Items that are caked with dried blood or OPIM and are capable of releasing these materials during handling.

Contaminated sharps.

Pathological and microbiological wastes containing blood or OPIM.

INSPECTION AND CITATION GUIDELINES: The actual volume of blood shall not be used as the determining factor as to whether or not a particular material is to be considered regulated waste since 10 ml of blood on a disposable bed sheet would appear as a spot (not regulated waste) while the same amount of blood on a cotton ball would likely cause saturation and dripping (regulated waste). Similarly, an item may adequately contain these materials when in a static state yet liberate them when compacted in the waste container.

Rather, the potential for dripping of liquid blood or OPIM, or flaking off of dried blood or OPIM should be considered.

Under no circumstances should a bag of waste be squeezed or shaken to determine this. OSHIs should exercise professional judgment to make a determination based on visual factors such as a pool of liquid in the bottom of the container or dried blood flaking or falling off during handling, or based on employee interviews.

NOTE: Keep in mind that while OSHA specifies certain features of the regulated waste containers, including appropriate tagging, the ultimate disposal method (landfilling, incinerating, and so forth) for medical waste falls under the EPA and State and local regulations. In Minnesota, the Infectious Waste Control Act (Minn. Stat. 116.76-116.82) governs the proper disposal of infectious (regulated) waste. A revision to that Act, effective August 1, 1993, requires all generators of infectious waste (other

than households) to put all non-infectious waste (regular garbage) in bags or other containers that are sufficiently transparent (clear) so the contents may be viewed from the exterior of the container.

The EPA's Standard for the Tracking and Management of Medical Waste and a number of state regulations consider used needles to be regulated medical waste regardless of the presence of infectious agents. Minnesota is one of those states where used needles are considered to be regulated (infectious) waste. OSHIs should consider a used or discarded needle to be contaminated and, therefore, regulated waste.

Proper disposal of regulated (infectious) waste that is generated by home health care providers while in a patient's home is to be disposed of by the family. Home health care providers should encourage the family to properly dispose of infectious wastes to prevent exposures to waste service haulers and other downstream employees. For more information on infectious waste disposal, contact the Minnesota Pollution Control Agency at 651-296-6300 or toll-free at 1-800-657-3864.

1910.1030 (d)(4)(iii)(A)(1).

This provision should be cited if contaminated sharps are not discarded in containers immediately or as soon as feasible. If containers are located too far away from the point of use, then (d)(4)(iii)(A)(2)(i) should be cited. [See below.]

1910.1030(d)(4)(iii)(A)(1)(i)-(iv).

The construction of the sharps containers must meet at least four criteria, two of which will be easily discernible. The OSHI should examine a container, preferably empty, to check that it is closable and color-coded or labeled.

Sharps containers are made from a variety of products, from cardboard to plastic. As long as they meet the definition of a sharps container, the OSHI should consider them to be acceptable no matter what the composition.

If questions arise, consult the manufacturer's literature or contact the manufacturer directly to determine if the container is leak-proof on the sides and bottom, as well as puncture resistant. The NIOSH publication, "Selecting, Evaluating and Using Sharps Disposal Containers;" January 1998, Publication No. 97-111, is also a good resource (<http://www.cdc.gov/niosh/docs/97-111/pdfs/97-111.pdf>).

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If the container is considered puncture-resistant by the manufacturer, but there is evidence, through observation or employee statements that sharps have been protruding through a container, paragraph (d)(4)(iii)(A)(1)(ii) should be cited.

The sharps container should not create additional hazards. Some sharps containers have unwinders that are used to separate needles from reusable syringes or from reusable vacutainer holders. The design of the sharps container and the location of the unwinder must allow the needle removal to be accomplished in a safe, one-handed manner. If this situation is encountered, determine if the circumstances warrant needle removal.

If they do not, paragraph (d)(2)(vii)(A) which prohibits needle removal unless no alternative is feasible or it is required by a specific medical procedure, should be cited.

If needle removal must be accomplished, the employee shall be trained in the correct procedure as required by (g)(2)(vii)(F).

The needle sheath is not to be considered a "waste container" because it is viewed as a temporary measure. Self-sheathing needle products and other SESIPs, even after activation, must be disposed of in a sharps container which conforms to the requirements of paragraph (d)(4)(iii)(A)(1).

Duct tape may be used to secure a sharps container lid but is not acceptable if it serves as the lid itself.

1910.1030 (d)(4)(iii)(A)(2)(i).

The OSHI should ensure that the sharps container is as close as feasible to where sharps are used or can be reasonably anticipated to be found.

If an employee must travel to a remote location to discard a sharp, it will increase the possibility of an accidental needlestick and increase the chances that needles and sharps will be improperly discarded and create potential hazards for other staff members.

It may be difficult to place containers in the immediate use area in locations such as correctional facilities, psychiatric units, pediatric units, or residential homes. Alternatives include using containers which are lockable or which are designed to prevent removal of syringes while maintaining easy accessibility for discarding. Containers may also be locked onto a mobile cart if one is used by health care workers in these units, or they may be brought to the site and removed by the employees upon leaving.

The determination of whether or not the container is as close as feasible shall be made on a case-by-case basis. After interviewing employees, if the OSHI believes there is a better

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location for the container, management should be given the opportunity to explain the present location. The acceptability of an alternate location identified by the OSHI should also be discussed. The OSHI should then decide if a violation of this paragraph exists.

Laundries shall also have sharps containers easily accessible due to the incidence of needles being mixed with laundry. Facilities that handle shipments of waste which may contain contaminated sharps, shall also have sharps containers available in the event a package accidentally opens and releases sharps.

1910.1030 (d)(4)(iii)(A)(2)(iii).

The OSHI should ensure the employer's Exposure Control Plan specifies how and when the sharps containers will be replaced and that the program is followed. The OSHI should ensure that sharps containers are being replaced routinely to prevent overfilling. The Record Summary states that overfilling of sharps containers is an often reported problem. Overfilling is often associated with containers that were too small to accommodate the volume of sharps, limited ability to see the contents in order to determine the remaining capacity, and lax procedures for container maintenance. Examples of methods that can be used to determine when sharps containers need to be replaced include using sharps containers that have a transparent window which make it easy to see when the container is nearly full or placing the container at a height which allows employees to easily see if the container needs to be replaced. Overfilling sharps containers should be cited under paragraph (d)(4)(iii)(A)(2)(iii).

1910.1030 (d)(4)(iii)(A)(3)(i) and (ii).

Containers of contaminated sharps must be closed prior to movement, and the containers must be placed in secondary containers if leakage is possible.

1910.1030 (d)(4)(iii)(A)(3)(ii)(B).

It is reasonable to presume that some sharps containers will contain residual liquids. If the container cannot be sealed to prevent leakage, it must be placed in a secondary container.

1910.1030 (d)(4)(iii)(A)(4).

A reusable sharps container system will be acceptable if it does not expose employees to the risk of percutaneous injury. No system involving the manual opening, emptying, or cleaning of the containers will be allowed. The only acceptable system is a fully automated container cleaning system that eliminates employee exposure to sharps.

1910.1030 (d)(4)(iii)(B).

While this paragraph requires that regulated waste containers be closable, simply being closed does not ensure that wastes will be contained. Waste-containing bags may break and spill their contents, including liquid blood, while, for example, being loaded onto incinerator hoppers, thus contaminating both the employees and the work area.

Also, small medical offices which generate only a small volume of regulated waste may place that waste in a large holding container until the container is filled. In such a case, the design of the container must be such that it is able to retain the waste over an extended period of time between pickups by a specialized waste service.

The OSHI should, therefore, check for visual signs of leakage of fluids during handling, storage, transport, or shipping.

Any failures to comply with the container construction requirements would be cited under this paragraph.

1910.1030 (d)(4)(iii)(B)(1)(iii) and (2)(iii).

Regulated waste containers are required to be labeled with the biohazard symbol or color coded to warn employees who may have contact with the containers of the potential hazard posed by their contents. Regulated waste in Minnesota will be handled as "infectious waste" under the Minnesota Infectious Waste Control Act of 1989 and, therefore, must be labeled with the biohazard symbol.

Even if a facility considers all of its waste to be regulated waste, the waste containers must still bear the required label or color-coding in order to protect new employees, who would not normally come into contact with wastes, and employees from outside the facility. This requirement is in contrast to the labeling alternative allowed when laundries use universal precautions for the handling of all soiled laundry.

Regulated waste that has been decontaminated need not be labeled or color-coded. In such a case, the OSHI should verify that the employer's Exposure Control Plan states the decontamination procedures to be followed.

In order to ensure that the decontamination process is successful, the employer must monitor factors such as the content, volume, density, configuration, and organic content of the load of waste. [See the discussion of 1910.1030(g)(1)(i)(I)].

The temperature needed for the complete breakdown of plastics, as required by EPA, is sufficient to decontaminate regulated waste.

Autoclave efficiency can be verified by means of biological or chemical indicators. While most disposal bags used will contain an indicative color strip, if this is not the case a review may be made of the documentation kept for the sterilizer. Such documentation should include: (1) date, time, and operator of each run; (2) type and approximate amount of waste tracked; (3) post-treatment reading of temperature-sensitive tape; (4) dates and results of calibration of the sterilizer; and (5) results of routine spore testing.

Paragraph (g)(1)(i) also contains labeling requirements, and because this section references (g)(1)(i), (g)(1)(i) should be cited instead of (d)(4)(iii).

1910.1030 (d)(4)(iii)(B)(2).

A second container is required to be used when outside contamination of the first waste container occurs. This provision does not require routine double-bagging but rather requires double-bagging in such circumstances as a waste container being splashed with blood during surgery or autopsy, when a container has been handled by an employee with bloody gloves, or when a waste bag leaks blood or OPIM onto an adjacent bag.

1910.1030(d)(4)(iv) - LAUNDRY

This paragraph reduces employee exposure to bloodborne pathogens by reducing the amount of manual handling of contaminated laundry. Restricting the sorting to the laundry area will also reduce contamination of additional surfaces.

INSPECTION AND CITATION GUIDELINES: 1910.1030 (d)(4)(iv)(A) and (A)(1) limit the handling of laundry to removal and bagging or containerization. The OSHI should check the laundry collection program as well as the training of the employees assigned to these tasks.

1910.1030 (d)(4)(iv)(A)(2).

This paragraph allows the employer to either:

Label or color-code according to paragraph (g)(1)(i), OR

Utilize universal precautions in the handling of all soiled (i.e., used) laundry.

If universal precautions are used for handling all soiled laundry, the employer may use an alternative color or label for the bags/containers, as long as all employees are trained to recognize them as containing soiled laundry which requires the use of universal precautions.

Refer to 1910.1030(d)(4)(iv)(C) for labeling requirements when laundry is shipped off-site.

1910.1030 (d)(4)(iv)(A)(3).

The material for the bags or containers used in laundry collection must prevent soak-through or leakage of fluids to the exterior, if the contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage. Not all contaminated laundry must be placed in such bags or containers, only laundry wet enough to leak or soak through and expose workers handling the bags/containers to blood or OPIM, or contaminate other surfaces should be considered contaminated laundry.

1910.1030 (d)(4)(iv)(B).

Employees having direct contact with contaminated laundry must wear protective gloves (e.g., utility gloves) and any other appropriate personal protective equipment, in order to prevent or reduce contact exposure to blood or OPIM. Any other personal protective equipment required must be determined on a case-by-case basis. Gowns, aprons, eyewear, and masks may be necessary to prevent employee exposure.

1910.1030 (d)(4)(iv)(C).

The employer generating the laundry must have determined if the facility to which it is shipped utilizes universal precautions in the handling of all laundry. If not, all bags or containers of contaminated laundry must be labeled or color-coded in accordance with paragraph (g)(1)(i). In this instance, if the employer generating the laundry chooses to color-code rather than label, the color of the bag must be red.

INSPECTION AND CITATION GUIDELINES: Check the employer's program to determine if laundry is shipped to another facility for cleaning and evaluate the methods used to ship contaminated laundry to a facility that does not utilize universal precautions in the handling of all soiled laundry.

The following are unacceptable shipment methods and constitute violations of this paragraph:

The contaminated laundry is not shipped labeled or in a red bag.

The contaminated laundry is shipped with an improper label.

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The contaminated laundry is shipped in a bag color-coded for in-house use (in a color other than red).

Current CDC recommendations for the laundering of contaminated linen indicate that normal laundering methods are adequate (<https://www.cdc.gov/hai/prevent/resource-limited/laundry.html>).

5. HIV AND HBV RESEARCH LABORATORIES AND PRODUCTION FACILITIES - 1910.1030(e).

This paragraph includes additional requirements that must be met by research laboratories and production facilities engaged in the culture, production, concentration, and manipulation of HIV and HBV.

"Research laboratory" means a laboratory which produces or uses research laboratory scale amounts of HIV or HBV. Although research laboratories may not have the volume found in production facilities, they deal with solutions containing higher viral titers than those normally found in patients' blood. Academic research laboratories are included in this definition. Laboratories that conduct research unrelated to HIV or HBV on blood and other body fluids, or who use unconcentrated blood or blood components as the source of HIV and HBV, are not considered research laboratories for the purpose of this paragraph.

"Production facilities" are those engaged in industrial scale, large volume, or high concentration production of HIV or HBV.

NOTE: Employers in a HIV/HBV research laboratory or production facility remain responsible for complying with the entire standard. Requirements stated elsewhere in the standard are not repeated in this paragraph of the standard. These requirements are based largely on information from published guidelines of the National Institutes of Health (NIH): "Biosafety in Microbiological and Biomedical Laboratories;" Revised June 2020. (https://www.cdc.gov/labs/pdf/SF_19_308133-A_BMBL6_00-BOOK-WEB-final-3.pdf)

INSPECTION AND CITATION GUIDELINES: OSHIs should review the covered facility's plan, interview a sufficient number of employees, and observe work practices as necessary to determine if the requirements of this paragraph are met. Care shall be taken to ensure the OSHI understands the special practices and precautions in place at the facility, so that the OSHI is not placed at risk. Specific requirements include:

1910.1030 (e)(2)(i).

The term "regulated waste" refers to the definition in the Bloodborne Pathogens Standard [1910.1030 (b) of the standard]. The purpose of decontaminating regulated waste is to prevent the accidental exposure of other employees to the concentrated virus.

1910.1030 (e)(2)(ii)(A) through (M).

Paragraphs (A), (C), and (D) require employers to limit access to the laboratory and warn of the hazards associated with bloodborne pathogens. OSHIs should review the written policies and procedures to determine if they are adequate to ensure that access to the work areas and animal rooms is limited to authorized persons. Interviews with employees should be used to determine if the policies are followed.

1910.1030 (e)(2)(ii)(E).

The "other physical containment device" must be sufficient to ensure that virus-containing material will be kept away from the worker's mucous membranes, unprotected skin, and breathing zone.

1910.1030 (e)(2)(ii)(H) and (I).

These paragraphs are designed to prevent the spread of contamination to other work areas. Paragraph (I) allows for an alternative to a HEPA filter as long as it is of equivalent or superior efficiency. HEPA filters may be ineffective in humid atmospheres.

The employer must also have made provisions for routine maintenance and/or replacement of all filters and traps.

If the OSHI suspects that the engineering controls are failing to prevent the spread of the virus, the manufacturer should be contacted to establish the limits and required maintenance of the filters and traps.

1910.1030 (e)(2)(ii)(J).

Determine if the use of needles and syringes is kept to a minimum and that they are properly handled as required, paying particular attention to establishing if the puncture-resistant containers are properly autoclaved or decontaminated before being discarded, reused, or incinerated.

1910.1030 (e)(2)(ii)(M).

This paragraph ensures that any necessary additional procedures are developed to protect employees in situations unique to a research/production facility. The biosafety manual required by this paragraph shall be reviewed and updated annually or more often if necessary. The facility will thus be required to review its procedures and determine if they are adequate to protect workers.

1910.1030 (e)(2)(iii).

Specific containment equipment is required by this paragraph to minimize or eliminate exposure to the viruses.

If the OSHI determines that biological safety cabinets (BSC) have been chosen as the means of containment, they must be certified (Class I, Class II, or Class III, as appropriate) when installed or moved, and at least annually.

The OSHI should check that a dated tag is affixed to the BSC indicating who performed the certification. Alternatively, a certification report attesting to a minimum inward face velocity of at least 75 linear feet per minute and the integrity of the HEPA filters should be reviewed. The report must be dated and signed by the trained technician performing the measurements and integrity tests.

In the alternative, appropriate combinations of PPE or physical containment devices (examples listed in the standard) will be accepted.

1910.1030 (e)(3)(i) and (e)(4)(iii).

The handwashing facility must be supplied with at least tepid water, soap, and hand towels. The eyewash must supply a sufficient quantity of water to completely flush the eyes. A 15-minute supply of continuous free-flowing water is acceptable. The hands must be free to hold the eyelids open to aid in the complete flushing of the eyes. Portable facilities are acceptable only if they meet these requirements. The eyewash should meet the requirements of American National Standards Institute Standard for Emergency Eyewash and Shower Equipment (ANSI Z358.1).

1910.1030 (e)(4)

This paragraph covers additional requirements for production facilities only. The requirement in paragraph (e)(4)(v) minimizes the potential for accidental exposure to other employees from the transport of culture fluids, plastic ware, and other contaminated equipment.

1910.1030(e)(5)

The additional training requirements are specified in paragraph (g)(2)(ix). Any violations found should be cited under that paragraph of the standard. [See the discussion of 1910.1030(g)(2)(ix)(A) to (C)]

6. HEPATITIS B VACCINATION AND POST-EXPOSURE EVALUATION AND FOLLOW-UP - 1910.1030(f).

This paragraph provides a means to protect employees from infection caused by hepatitis B virus by requiring employers to make hepatitis B vaccination available to employees with occupational exposure to blood or OPIM. It also ensures that employees receive appropriate medical follow-up after each specific exposure incident. [Appendix A provides flow charts for these requirements.]

1910.1030(f)(1) - GENERAL.

This paragraph refers to the hepatitis B vaccination as both the hepatitis B vaccine and vaccination series. These are to be made available to all occupationally exposed employees. In addition, a post-exposure evaluation and follow-up procedures are to be made available to all employees covered by this standard who experience an exposure incident. While it is OSHA's intent to have the employer remove, as much as possible, obstacles to the employee's acceptance of the vaccine, the term "made available" emphasizes that it is the employee's option to participate in the vaccination and follow-up programs.

INSPECTION GUIDELINES: Examine the employer's program to determine if the vaccination series and post-exposure follow-up procedures meet the requirements of paragraph (f)(1)(ii).

1910.1030 (f)(1)(ii)(A).

The term "no cost to the employee" means no "out of pocket" expense to the employee.

The employer may not require the employee to use his/her health care insurance to pay for the series unless the employer pays all of the cost of the health insurance and unless there is no cost to the employee in the form of deductibles, co-payments, or other expenses. Even partial employee contribution to the insurance premium means the employee could be affected by a rise in the total premium caused by insurance company reaction to widespread hepatitis B vaccinations and is therefore unacceptable. Likewise, any use of a

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spouse or other family member's insurance plan to provide vaccination would not be considered "at no cost" to the employee.

The employer may not institute a program in which the employee pays the original cost of the vaccine and is reimbursed by the employer if she/he remains employed for a specified period of time.

An "amortization contract" which requires employees to reimburse the employer for the cost of the vaccination should they leave his/her employment prior to a specified period of time is similarly prohibited. A waiver of liability with respect to acceptance of the vaccine is also prohibited.

1910.1030 (f)(1)(ii)(B).

The term "reasonable time and place" requires the medical procedures and evaluations to be convenient to the employee. They shall be offered during normally scheduled work hours. If participation requires travel away from the worksite, the employer must bear the cost.

1910.1030 (f)(1)(ii)(C).

The Minnesota Board of Nursing (612-317-3000) allows nurses to carry out the procedures and evaluations required by Paragraph (f) if working under the standing orders of a physician. A nurse practitioner has more independence and may have prescriptive authority if certain conditions are met. The Minnesota Board of Medical Practice (612-617-2130) can clarify the role of physician assistants in these procedures.

1910.1030 (f)(1)(ii)(D).

This paragraph takes into consideration the changing nature of medical treatment relating to Hepatitis B. The CDC is the U. S. Public Health Service (USPHS) agency responsible for issuing guidelines and making recommendations regarding infectious agents. OSHA requires use of the CDC guidelines current at the time of the evaluation or procedure. Copies of the current guidelines and other CDC documents can be obtained on CDC's website, <http://www.cdc.gov>. The hepatitis B vaccination must be given in the standard dose and through the standard route of administration as recommended in the USPHS/CDC guidelines. The current CDC guideline regarding Hepatitis B is MMWR "Updated U. S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis;" June 29, 2001, Vol. 50, No. RR-11 (<http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf>.) It states that employees who have ongoing contact with patients or blood and are at ongoing risk for percutaneous injuries

with sharp instruments or needlesticks be tested for antibody to Hepatitis B surface antigen, one to two months after the completion of the three-dose vaccination series. The CDC guideline applies to healthcare workers in hospitals and health departments including physicians, nurses, phlebotomists, medical technicians, emergency medical personnel, dental professionals and students, medical and nursing students, laboratory technicians, hospital volunteers, and administrative staff. In addition to healthcare workers in hospitals and health departments, the recommendations apply to healthcare workers in private physicians' offices, nursing homes, correctional facilities, schools, and laboratories, and to first responders (i.e., EMTs, paramedics).

Healthcare employees who do not respond to the primary vaccination series must be revaccinated with a second three-dose vaccine series and retested, unless they are HbsAg-positive (infected). Non-responders must be counseled.

The current CDC guideline for HIV is: "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis;" September 25, 2013, [Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. \(cdc.gov\)](https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6113a1.htm).

INSPECTION GUIDELINES: It is important that the OSHI investigate thoroughly whether the employer knows of the contents of the CDC guidelines. Evidence may include statements from supervisors or managers that they were aware of the guidelines; an interview with the employer; employer's attendance at conferences or seminars where in-service training about the CDC guidelines was provided, knowledge of interactive webpages associated with the CDC, actual copies of the MMWR or USPHS guidelines, and/or employee interviews where knowledge of the MMWR or USPHS guidelines has been made evident.

CITATION GUIDELINES: Paragraph (f)(1)(ii)(D) should be cited if the employer failed to provide vaccinations, evaluations, or follow-up procedures for Hepatitis B in accordance with the CDC recommendations that were current at the time these procedures took place. Any additional requirements (such as obtaining a written healthcare professional's opinion) specified in paragraph (f) must also be met.

1910.1030 (f)(1)(iii)

This paragraph requires that all laboratory tests be conducted by an accredited laboratory. OSHIs should determine by means of employer documentation (e.g., certificate) that the laboratory is accredited by a national accrediting body (e.g., American Association of Blood Labs, College of American Pathologists, Joint Commission on Accreditation of Healthcare Organizations, etc.) or equivalent State agency which participates in a recognized quality assurance program.

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1910.1030(f)(2) - HEPATITIS B VACCINATION.

OSHA should determine whether or not all occupationally exposed employees have the hepatitis B vaccination series made available to them after training required by paragraph (g)(2)(vii)(I) and within 10 working days of their initial assignment. The term "made available" includes the health care professional's evaluation and arranging for the administration of the first dose of the hepatitis B vaccination series to begin within the 10 days. This includes all employees with reasonably anticipated occupational exposure, regardless of how often the exposure may occur. Part-time and temporary employees are included in this coverage. The vaccine does not have to be made available if the employer documents (1) the exemption(s) set forth in paragraph (f)(2), or (2) the signature of the employee on the mandatory declination form. (See Appendix A of 1910.1030 for the mandatory declination form.)

1910.1030 (f)(2)(i)

This paragraph states the circumstances under which an employer is exempted from making the vaccination available. If, (a) the complete hepatitis B vaccination series was previously received [three vaccines, or in the case of a non-responder, six], or (b) antibody testing shows the employee to be immune, or (c) the vaccine cannot be given for medical reasons, the series does not have to be made available. If the employer claims one of these exemptions, it must be documented in the employee's medical record in accordance with (h)(1)(ii)(B).

Current USPHS guidelines recommend routine post-vaccination screening for antibody to HBsAg (anti-HBs) for certain healthcare workers. [See discussion of (f)(1)(ii)(D)]. Periodic antibody tests thereafter are not currently recommended.

CITATION GUIDELINES: Citations should be issued when designated first aid providers, who have occupational exposure, are not offered the hepatitis B vaccine before they are exposed, unless the following conditions are in place:

- (a) The primary job assignment of such designated first aid providers is not the rendering of first aid or other medical assistance, and any first aid rendered by such persons is rendered only as a collateral duty responding solely to injuries resulting from workplace incidents, generally at the location where the incident occurred.

NOTE: This provision does not apply to designated first aid providers who render assistance on a regular basis, for example, at a first aid station, clinic, dispensary or other location where injured employees routinely go for such assistance, nor does

it apply to any health care, emergency, or public safety personnel who are expected to render first aid in the course of their work. These employees must be offered the vaccine prior to exposure.

- (b) The employer's Exposure Control Plan specifically addresses the provision of hepatitis B vaccine to all unvaccinated first aid providers who have rendered assistance in any situation involving the presence of blood or OPIM (regardless of whether an actual "exposure incident," as defined by the standard, occurred) and the provision of appropriate post-exposure evaluation, prophylaxis and follow-up for those employees who experience an "exposure incident." The Exposure Control Plan must include:
 - (i) Provision for a reporting procedure that ensures that all first aid incidents involving the presence of blood or OPIM will be reported to the employer before the end of the work shift during which the first aid incident occurred. The report must be recorded on a list of such first aid incidents. The report must be readily available to all employees and shall be provided to MNOSHA upon request.

The report must include the names of all first aid providers who rendered assistance, regardless of whether personal protective equipment was used and must describe the first aid incident, including time and date.

The description must include a determination of whether or not, in addition to the presence of blood or OPIMs, an "exposure incident" occurred. This determination is necessary in order to ensure that the proper post-exposure evaluation, prophylaxis and follow-up procedures required by paragraph (f)(3) of the standard are made available immediately if there has been an "exposure incident" as defined by the standard.
 - (ii) Provision for the bloodborne pathogens training program for designated first aid providers to include the specifics of this reporting procedure.
 - (iii) Provision for the full hepatitis B vaccination series to be made available as soon as possible, but in no event later than 24 hours, to all unvaccinated first aid providers who have rendered assistance in any situation involving the presence of blood or OPIM regardless of whether or not a specific "exposure incident" occurred.
- (c) If all requirements noted in paragraphs (a) and (b) above are not complied with, cite paragraph (f)(2)(i) for failure to provide the hepatitis B vaccine.

NOTE: All other requirements of the standard (i.e., training, personal protective equipment, etc.) continue to apply.

1910.1030 (f)(2)(ii).

Pre-vaccination screening for antibody status cannot be required of an employee, although if an employer wishes, he/she can make it available at no cost to employees. An employee may decline the prescreening, and the employer must still make the vaccination series available to the employee.

1910.1030 (f)(2)(iii).

The signing of the hepatitis B vaccine declination form by the employee, at the time the vaccination is made available, does not relieve the employer from the requirement to provide the vaccine at a later date if the employee so chooses.

1910.1030 (f)(2)(iv).

Employers must ensure that employees who decline the vaccine sign a declination form. The language in the declination form is set forth in 1910.1030, Appendix A. An employer's form which conveys the same information as Appendix A, although in different words, should be considered a de minimis violation. However, any additions to that language should be made for the sole purpose of improving employee comprehension. Forms must not add language that would discourage employee acceptance of the vaccine or add liability concerns.

If the employer has added information that requires the employee to provide confidential medical information, regardless of whether it is physically on the declination form or on a separate form, a citation of (h)(1)(iii) should be considered.

The standard does not make reference to consent forms for employees accepting the vaccine. Medical informed consent forms are acceptable. However, any waiver of liability for any harm caused by the vaccine violates paragraph (f)(1)(ii)(A), which requires that the vaccine be provided at no cost. Consent forms which require the employee to release his or her test results to the employer violate the confidentiality requirements in paragraph (f)(5)(iii). Consent forms on which the hazards of the vaccine are clearly exaggerated violate paragraph (g)(2)(vii)(i).

1910.1030 (f)(2)(v).

At the time of this publication, the possible need for booster doses of the hepatitis B vaccine is still being assessed. There is no current requirement to provide boosters unless the USPHS recommends it at a later date.

1910.1030(f)(3) - POST-EXPOSURE EVALUATION AND FOLLOW-UP.

This paragraph requires the employer to make immediately available a confidential medical evaluation and follow-up to an employee reporting an exposure incident.

Bloodborne pathogens are defined by the standard (see the Definitions paragraph of this directive), to include more than just HIV and HBV. The standard applies to any pathogenic microorganism present in human blood that can cause disease in humans. Paragraph (f)(3) is not specific to HIV and HBV. This paragraph requires that the employer provide post-exposure evaluation and follow-up to employees for bloodborne pathogens, such as hepatitis C (HCV), as recommended by the CDC. The current CDC recommendations for HBV and HCV are found in MMWR "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis;" June 29, 2001, Vol. 50, No. RR-11 (<http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf>.)

The current CDC guideline for HIV is: "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis;" September 25, 2013. ([Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. \(cdc.gov\)](http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf))

NOTE: Employees who do not fall within the scope of this standard may still experience a specific exposure incident at work that is unrelated to the performance of their job duties. An example is "Good Samaritan" assistance, voluntarily performed, to an injured co-worker or a member of the public. In such a case, OSHA strongly encourages their employer to offer them the follow-up procedures set forth in this paragraph.

INSPECTION GUIDELINES: The OSHI should determine if the employer's plan ensures immediate and confidential post-exposure and follow-up procedures in accordance with the current CDC guidelines. As advised in paragraph (f)(1)(ii)(D), the OSHI should document the employer's awareness of CDC guidelines. At sites where an exposure incident has occurred it should be determined if the procedures were properly followed through interviews, incident report reviews, and, if necessary, medical records reviews.

The word "immediately" is used in the standard to emphasize the importance of prompt medical evaluation and prophylaxis. An exact time was not given in the standard since medical knowledge concerning the effectiveness of post-exposure prophylactic measures is constantly changing and can vary depending on the infection of concern. OSHA requires the evaluation and follow-up procedures to be given as soon as possible after exposure.

If the OSHI believes that an employer is not properly following accepted post-exposure procedures, the employer needs specific information about current accepted procedures, or the OSHI believes that access to care was delayed or denied, the OSHI should consult his/her supervisor.

The employer must also have established a system that maintains the required medical records in a way that protects the confidentiality of the employee's identity and test results. If the employer has contracted with a clinic or other health care facility to provide the follow-up programs, the confidentiality requirements must be part of the contract.

The boundary between employer and healthcare professional may be blurred in a medical setting in which, for example, the physician is both the employer and the evaluating healthcare professional or where the employer's certified medical laboratory analyzes the serological samples. In such cases, the OSHI should ensure that requirements for consent and confidentiality have been followed. The medical information is to be confined to the medical department and not to be discussed with or revealed to others (e.g., the personnel department, supervisors, or other healthcare professionals who do not need the information to comply with the standard).

CITATION GUIDELINES: The employer should be cited for violating paragraph (f)(3) provisions [except (iv)] for not providing a confidential medical evaluation and follow-up, e.g., testing. Failure to provide post-exposure prophylaxis should be cited under (f)(3)(iv).

1910.1030 (f)(3)(i).

Documentation of the circumstances surrounding an exposure incident will help the employer and the OSHI determine, for example, if PPE is being used or if training is lacking. Percutaneous injuries are primarily associated with the following activities: disposing of needles, administering injections; drawing blood, including use of capillary tubes; recapping needles; and handling trash and dirty linens.

Following an exposure incident, such as a needlestick or other sharps injury, employers are required to document, at a minimum, "the route(s) of exposure and the circumstances under which the exposure incident occurred" per paragraph (f)(3)(i) and M.S. § 182.6555.

The documentation of circumstances surrounding an incident by the employer allows identification and correction of hazards. To be useful, the documentation must contain sufficient detail about the incident. Minn. Stat. § 182.6555 states that this information should include: (1) engineering controls in use at the time; (2) work practices followed; (3) a description and brand name of the device in use; (4) protective equipment or clothing that was used at the time of the exposure incident; (5) location; (6) procedure being performed when the incident occurred; (7) the employee's training; and (8) the injured

employee's opinion about whether any other engineering, administrative, or work practice control could have prevented the injury and the basis for that opinion. Additional information might also include a comparison of similar occurrences and recommendations to avoid future incidents, although this information is not mandatory. OSHIs should request copies of the employer's documentation on exposure incidents to determine if they are in compliance with paragraph (c)(1)(ii)(C) and (f)(3)(i).

INSPECTION AND CITATION GUIDELINES: The goal of the employer should be to implement a method or device that prevents exposure incidents from recurring. Evaluating the circumstances around an exposure incident as required by paragraph (f)(3)(i) provides the employer with data necessary to make effective decisions about engineering controls and work practices that will reduce the risk of exposure. The OSHI should review the employer's documentation of exposure incidents and the procedures for evaluating the circumstances surrounding exposure incidents contained in the Exposure Control Plan to determine if they are in compliance with paragraphs (c)(1)(ii)(C) and (f)(3)(i). Cite paragraph (f)(3)(i) if the employer did not document exposure incidents.

1910.1030 (f)(3)(ii).

This paragraph requires the employer to identify the source individual in an exposure incident, unless this is infeasible. The employer must document in writing the identity of, or infeasibility of identifying, the source individual. Examples of when it may not be feasible to identify the source individual include incidents of needlesticks by unmarked syringes left in laundry or those involving blood samples which are not properly labeled, as well as incidents occurring where State or local laws prohibit such identification.

1910.1030 (f)(3)(ii)(A).

This paragraph requires testing of the source individual's blood after consent is obtained. The employer must ask for consent from the source individual or anyone legally authorized to give consent on his/her behalf. If legally required consent is not obtained, the employer must document this in writing unless there is clear evidence that consent could not be obtained. The OSHI should ensure that the employer's plan includes this provision.

For those jurisdictions that do not require consent of the individual, available blood may be used for testing rather than redrawing a specimen. The term "if available" applies to blood samples that have already been drawn from the source individual. Redrawing of blood specifically for HBV and HIV testing without consent of the source individual is not required.

NOTE: In Minnesota, no statute requires mandatory testing nor does any statute address consent as a general issue that is applicable in all situations. Some statutes cover

consent for a specific population such as hospital and nursing home patients (Minnesota Statute §144.651 requires patients to be given information about their diagnosis, treatment, alternatives, risks, and prognosis) and emergency responders (Minn. Stat. §144.7401-§144.7415 addresses testing and counseling of emergency responders who have experienced a significant exposure). Because there is no clearly stated statutory requirement applicable to all cases and because there are case law decisions on some matters related to consent, employers should consult their legal advisers to determine the consent necessary in their situation.

1910.1030 (f)(3)(ii)(C).

This paragraph does not authorize the employer to be informed of the results of source individual or exposed employee testing. However, the results of the source individual's testing must be made available to the exposed employee in accordance with applicable State and Federal laws and regulations concerning medical privacy and confidentiality.

1910.1030 (f)(3)(iii).

The OSHI should determine if the employer's program offers covered employees all of the listed requirements, in the event of an exposure incident. Counseling and evaluation of reported illnesses is not dependent on the employees electing to have baseline HBV and HIV serological testing.

1910.1030 (f)(3)(iii)(A).

The consent of the employee must be obtained before the collection and testing of his or her blood.

1910.1030 (f)(3)(iii)(B).

This paragraph allows employees the opportunity for future testing without the need for an immediate decision. Employees involved in an exposure incident have at least 90 days following baseline blood collection to decide if they wish to have their blood tested for HIV.

To the employee, HIV testing may present adverse ramifications, (e.g., confidentiality, employment, prejudice, or lack of medical information). Therefore, the 90-day time frame allows for the opportunity to obtain knowledge about baseline serologic testing after exposure incidents, and to participate in further discussion, education or counseling. This opportunity will, instead of placing a demand on the employee to make an immediate decision, encourage employees to consent to blood collection at the time of exposure.

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Employers are required to preserve the blood the employee consented to have drawn, if it was not tested for HIV initially, for at least the 90-day period. OSHIs should check that if the employer contracts for post-exposure follow-up, the contractor has been informed of the 90-day requirement.

1910.1030 (f)(3)(iv).

Employers must follow the current guidelines at the time of exposure to determine if post-exposure prophylaxis is medically indicated. See paragraph (f)(3) above.

CITATION GUIDELINES: Failure to offer post-exposure HIV prophylaxis under the current CDC guidelines should be cited as a violation of paragraph (f)(3)(iv). The guidelines leave decisions about prophylaxis up to the healthcare professional. However, in unusual circumstances involving gross misapplication of the CDC guidelines by the healthcare professional, the employer may be cited. In such cases, the OSHI should discuss the case with his/her OMT Director/Supervisor.

1910.1030(f)(4) - INFORMATION PROVIDED TO THE HEALTH CARE PROFESSIONAL.

This paragraph requires the employer to provide information to the health care professional responsible for the employee's hepatitis B vaccination and post-exposure incident follow-up.

INSPECTION GUIDELINES: Determine if the employer's plan includes providing a copy of this standard to the health care professional responsible for the employee's hepatitis B vaccination.

In the case of an exposure incident, the plan must provide for the transmission of the information required by (f)(4)(ii)(A-C) and (E) to the health care professional. The information required by (f)(4)(ii)(D) must be provided only if available.

The employer does not have a specific right to know the actual results of the source individual's blood testing, but must ensure that the information is provided to the evaluating health care professional.

If the evaluating health care professional is also the employer, the information must still be in the employee's record and made available at the time of a post-exposure incident. All applicable laws and standards of confidentiality apply in this situation.

1910.1030(f)(5) - HEALTH CARE PROFESSIONAL'S WRITTEN OPINION.

The employer is required to obtain and provide a written opinion to the employee within 15 working days of completion of the original evaluation. Employer access is allowed to the health care professional's written opinion. The standard specifies the information that is to be included in the written opinion:

- (a) For hepatitis B vaccination: whether hepatitis B vaccination is indicated for the employee, and if the employee received the vaccination;
- (b) For post-exposure evaluation and follow-up: that the employee has been informed of the results of the evaluation and told about any medical conditions resulting from exposure to blood or OPIMs requiring further evaluation or treatment.
- (c) All other findings or diagnoses shall remain confidential and shall not be included in the written report. The employer is afforded access to the limited information stated above. Any information regarding the results of the employee's evaluation or medical conditions must be conveyed by the health care professional to the employee alone and not as part of the written opinion that goes to the employer.

1910.1030 (f)(5)(i)

This paragraph limits the health care professional's written opinion to very specific information regarding the employee's hepatitis B vaccine status, including indication for vaccine and whether such vaccination was initiated, (i.e., the first shot had been given).

1910.1030 (f)(5)(ii)

This paragraph requires documentation that a post-exposure evaluation was performed and that the exposed employee was informed of the results as well as any medical conditions resulting from exposure which require further evaluation and treatment.

7. EMPLOYEE INFORMATION AND TRAINING - 1910.1030(g).

Paragraph (g) ensures that employees receive sufficient warning through labels, signs, and training to eliminate or minimize their exposure to bloodborne pathogens.

1910.1030(g)(1) - LABELS.

Labels must be provided on containers of regulated waste, on refrigerators and freezers that are used to store blood or OPIM, and on containers used to store, dispose of, transport, or ship blood or OPIM. This requirement alerts employees to possible exposure since the

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nature of the material or contents will not always be readily identifiable as blood or OPIM. (See Appendix B of this instruction.)

NOTE: The labeling requirements do not preempt either the U. S. Postal Service labeling requirements (39 CFR Part III) or the Department of Transportation's Hazardous Materials Regulations (49 CFR Parts 171, 180).

DOT labeling is required on some transport containers (i.e., those containing "known infectious substances"). It is not required on all containers for which 1910.1030 requires the biohazard label. Where there is an overlap between the OSHA-mandated label and the DOT-required label, the DOT label will be considered acceptable on the outside of the transport container, provided that the OSHA-mandated label appears on any internal containers which may be present. Containers serving as collection receptacles within a facility must bear the OSHA label since these are not covered by the DOT requirements.

INSPECTION AND CITATION GUIDELINES: The OSHI should determine that the warning labels in the facility are used as required by paragraphs (g)(1)(i)(A) through (D) and include the term "BIOHAZARD."

1910.1030 (g)(1)(i)(E) through (G).

These paragraphs list exemptions from the labeling requirements which are in addition to those exemptions listed for specimens in paragraph (d)(2)(xiii)(A) and for laundry in paragraph (d)(4)(iv)(A)(2).

Blood and blood products bearing an identifying label as specified by the Food and Drug Administration, which have been screened for HBV and HIV antibodies and released for transfusion or other clinical uses, are exempted from the labeling requirements.

When blood is being drawn or laboratory procedures are being performed on blood samples, the individual containers housing the blood or OPIM do not have to be labeled provided the larger container into which they are placed for storage, transport, shipment, or disposal (e.g., test tube rack) is labeled.

1910.1030(g)(1)(i)(I).

Regulated waste that has been decontaminated by incineration, autoclaving, or chemical means, prior to disposal is not required to bear the BIOHAZARD warning label.

Decontamination is discussed under 1910.1030(d)(4)(iii)(B)(1)(iii) and (2)(iii).

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Failure to ensure adequate decontamination procedures prior to removal of the hazard label should be cited under (g)(1)(i)(A), since the material would still be regulated waste.

NOTE: Under Minnesota Statute § 116.78, subd. 4(2), decontaminated sharps may not be compacted or mixed with other waste material unless they are part of an infectious waste decontamination process approved by the Commissioner of Health or the Commissioner of the Pollution Control Agency that will prevent exposure during transportation and disposal.

1910.1030(g)(2) - INFORMATION AND TRAINING.

All employees with occupational exposure must receive initial and annual training on the hazards associated with blood and OPIM, and the protective measures to be taken to minimize the risk of occupational exposure. Retraining shall take place when changes in procedures or tasks occur which affect occupational exposure. While the provisions for employee training are performance oriented, with flexibility allowed to tailor the program to, for example, the employee's background and responsibilities, the categories of information listed in paragraph (g)(2)(vii) must be covered at a minimum. These requirements include some site-specific information.

INSPECTION GUIDELINES: The OSHI should verify that the training is provided at the time of initial employment and at least annually thereafter as well as whenever a change in an employee's responsibilities, procedures, or work situation is such that an employee's occupational exposure is affected. "At the time of initial assignment to tasks where occupational exposure may take place" means that employees shall be trained prior to being placed in positions where occupational exposure may occur. The annual retraining for these employees must be provided within one year of their original training. This refresher training must cover topics listed in the standard to the extent needed and must emphasize new information or procedures. It does not need to be an exact repetition of the previous annual training.

Part-time and temporary employees, and health care employees known as "per diem" employees are covered and are also to be trained on company time.

The OSHI should interview a representative number of employees from different work areas to determine that the training (including written material, oral presentations, films, videos, computer programs, or audiotapes) was presented in a manner that was appropriate to the employee's education, literacy level, and language, and also that the trainer was able to answer questions as needed. If an employee is only proficient in a foreign language, the trainer or an interpreter must convey the information in that foreign language.

1910.1030 (g)(2)(vii)(B) and (C).

These paragraphs require that HIV and HBV and other bloodborne diseases be described. The employer must convey the idea that a number of bloodborne diseases other than HIV and HBV exist, such as hepatitis C or syphilis. At the same time, the employer need not cover such uncommon diseases such as Cruetzfeld-Jacob disease unless, for example, it is appropriate for employees working in a research facility with that particular virus.

HCV is the most common chronic bloodborne infection in the United States. Persons who are chronically infected with HCV may not be aware of their infection because they may not be clinically ill. The infection may lead to chronic liver disease that develops slowly, often taking two or more decades before it is recognized. It is important that training include information on the transmission and symptoms of HCV.

1910.1030(g)(2)(vii)(F).

This paragraph requires that training include an explanation of the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices, and personal protective equipment.

This requirement is very important, because the development of safer engineering controls introduces a variety of new techniques and practices to the work environment. Manufacturers market passive safety features, active devices, integrated safety designs, and accessory safety devices. The Record Summary respondents repeatedly emphasized the necessity of effective training and education whenever new engineering controls are implemented. Training must include instruction in any new techniques and practices. "Hands-on" training is particularly useful. Employee participation in the selection of new devices, which plays a major part in their acceptance and correct use, is required by the Bloodborne Pathogens Standard and M.S. § 182.6555. [See above discussion on paragraphs (c)(1)(iv), (c)(1)(v) and (d)(2) on engineering and work practice controls.]

1910.1030 (g)(2)(vii)(J).

The word "emergency" in this paragraph refers to blood exposure outside the normal scope of work. This does not refer to hospital emergency rooms or emergency medical technicians' work.

1910.1030 (g)(2)(vii)(N).

This paragraph requires that there be an opportunity for interactive questions and answers with the person conducting the training session. During training, it is critical that trainees have an opportunity to ask and receive answers to questions where material is unfamiliar to

them. Frequently, a trainee may be unable to go further with the training or to understand related training content until a response is received.

Training the employees solely by means of a film or video without the opportunity for a discussion period would constitute a violation of this paragraph.

Similarly, a generic computer program, even an interactive one, is not considered appropriate unless the employer supplements such training with the site-specific information required (e.g., the location of the Exposure Control Plan and the procedures to follow if an exposure incident occurs, etc.) and a person is accessible for interaction.

Trainees must have direct access to a qualified trainer during training. This requirement can be met if trainees have direct access to a trainer by way of a telephone hot line. The use of an electronic mail system to answer employee questions is not considered direct access to a qualified trainer, unless the trainer is available to answer e-mailed questions at the time the questions arise.

1910.1030 (g)(2)(viii).

The person conducting the training is required to be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address. In addition to demonstrating expertise in the area of the occupational hazard of bloodborne pathogens, the trainer must be familiar with the manner in which the elements in the training program relate to the particular workplace.

The OSHI should verify the competency of the trainer based on the completion of specialized courses, degree programs, or work experience, if he/she determines that deficiencies in training exist.

Possible trainers include a variety of health care professionals such as infection control practitioners, nurse practitioners, registered nurses, physician's assistants, or emergency medical technicians.

Non-health care professionals, such as industrial hygienists, epidemiologists, or professional trainers, may conduct the training provided they are knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace. One way, but not the only way, knowledge can be demonstrated is the fact that the person received specialized training.

In some workplaces, such as dental or physicians' offices, the individual employer may conduct the training provided he or she is familiar with bloodborne pathogen exposure control and the subject matter required by paragraphs (g)(2)(vii)(A) through (N).

1910.1030 (g)(2)(ix)(A)-(C).

"Standard microbiological practices" in these paragraphs refer to procedures outlined in the National Institutes of Health: "Biosafety in Microbiological and Biomedical Laboratories," 56th Edition, Revised June 2020 (https://www.cdc.gov/labs/pdf/SF_19_308133-A_BMBL6_00-BOOK-WEB-final-3.pdf).

The requirement that "proficiency" be demonstrated means that employees who are experienced laboratorians may not need to be retrained in accordance with these paragraphs.

Education such as a graduate degree in the study viral diseases or another closely related subject area with a period of related laboratory research experience would also constitute "proficiency."

The employer is responsible for evaluating the employee's proficiency and for documenting the mechanism used to determine proficiency.

8. RECORDKEEPING - 1910.1030(h).

Records are required to be kept for each employee covered by this standard for training, as well as for medical evaluations, treatment, and surveillance.

Medical records required by paragraph (h)(1) will be of particular importance to the health care professional in determining vaccination status and courses of treatment to follow in the event of an exposure incident. Although the employer is required to establish and maintain medical records, he/she may contract for the services of a health care professional located off-site and that person or company may retain the records.

The requirements of 1910.1020 apply. In particular, 1910.1020(d)(1)(i)(C) provides that the medical records of employees who have worked for less than one (1) year need not be retained beyond the term of employment if they are provided to the employee upon termination of employment.

NOTE: While paragraph (h)(1)(iii) requires that medical records are to be kept confidential, paragraph (h)(1)(iii)(B) stipulates that disclosure is permitted when required by this standard or other Federal, State, or local law.

INSPECTION GUIDELINES: All medical records required to be kept by this standard are also required to be made available to OSHA. The OSHI must protect the confidentiality of these

records. If they are copied for the case file, the statutes and rules governing data practices must be followed. (See ADM 3.7, Data Practices and Release of Case File Information)

The OSHI should review the employer's recordkeeping program to ensure that the required information is collected, and provision has been made to ensure the confidentiality of the medical records in accordance with 29 CFR 1910.1020. While 1910.1020(a) makes allowances for its provisions being carried out on behalf of the employer, paragraph 1910.1020(b)(3) states that "each employer must ensure that the preservation and access requirements are complied with regardless of the manner in which the records are made or maintained." If the employer has contracted with a responsible third party to maintain the required records, the employer should only be cited for deficiencies of which she/he knew or could have known with the exercise of reasonable diligence.

1910.1030 (h)(2)

This paragraph requires accurate recordkeeping of training sessions, including titles of the employees who attend. The records are necessary to assist the employer and OSHA in determining whether the training program adequately addresses the risks involved in each job. Additionally, this information is helpful in tracking the relationship between exposure incidents (e.g., needlesticks) and various jobs and the corresponding level of training.

Training records may be stored on-site and therefore the actual documents will be easily accessible for review. In order to ensure that the employee training is complete, all the components of the program required by paragraph (g)(2)(vii) must be covered.

Training records are not considered to be confidential and may be maintained in any file. They must be retained for three years from the training date.

1910.1030(h)(5)

This paragraph requires employers to establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. This log is separate from the log of injuries and illnesses kept under Part 1904. Employers who are already partially exempt from Part 1904 recordkeeping requirements (i.e., employers who had fewer than ten employees during the preceding calendar year) are not required to keep a sharps injury log, but are encouraged to do so. (The SIC exemption adopted by federal OSHA in Part 1904 was not adopted by Minnesota OSHA and is not in effect in Minnesota.)

The log must include the type and brand of device involved in the incident, the department or work area where the exposure incident occurred and an explanation of how the incident occurred so that the intended evaluation of risk and device effectiveness can be

accomplished. More information may be included; however, the confidentiality of the injured employee must be maintained throughout the process. If the nature of the incident is such that determining the type and brand of the device would increase the potential for additional exposure (e.g., housekeeper stuck through trash bag), the type/brand may be recorded as “unknown.”

The purpose of the log is to aid in the evaluation of devices being used in the workplace and to quickly identify problem areas in the facility. Thus, it should be reviewed regularly and during the review and update of the Exposure Control Plan.

If the data is made available to other parties (e.g., supervisors, safety committees, employees, employee representatives), any information that directly identifies an employee or any information that could reasonably be used to identify the employee must be withheld. Logs must be saved for at least five years following the end of the calendar year that they cover.

INSPECTION GUIDELINES: The format of the sharps injury log is not specified. The employer is permitted to determine the format in which the log is maintained (e.g., paper or electronic) and may include information in addition to that required by the standard so long as the privacy of the injured worker is protected. Many employers already compile reports of percutaneous injuries to comply with paragraph (f)(3). Existing mechanisms for collecting these reports could be considered sufficient to meet the requirements for maintaining a log provided that the information requirements specified by the standard and the confidentiality of the injured employee is protected

CITATION GUIDELINES: Employers partially exempt from recordkeeping requirements under 29 CFR Part 1904 are exempt from the requirement of maintaining a sharps injury log, but are encouraged to do so. All employers, however, must still comply with the post-exposure documentation requirements of (f)(3)(i), even when a physical log is not required.

F. INTERFACE WITH OTHER STANDARDS:

1. The former recordkeeping rule required recording of needlesticks and other exposure incidents on the OSHA 300 only if there was a seroconversion or the injury required medical treatment. Medical treatment includes the administration of post-exposure prophylaxis.

The revised recordkeeping standard, Part 1904, went into effect on January 1, 2002. Paragraph 1904.8 requires all work-related injuries from needlesticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person’s blood or OPIM to be recorded on the OSHA 300 as an injury. Employers must keep a separate

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confidential list of the case numbers and employee names so they can update the cases or provide them if asked by the government. If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.

2. The Employee Right-to-Know Act applies to hazards of chemicals in the workplace, harmful physical agents, and infectious agents in the workplace and complements the Bloodborne Pathogen Standard in the control of biological hazards.
3. Records concerning employee exposure to bloodborne pathogens and records about HIV and/or HBV status are considered employee medical records within the meaning of 29 CFR 1910.1020. Under Minnesota Statute § 182.663, the OSHI may review these records for purposes of determining compliance with 29 CFR 1910.1020. The OSHI should not record or take offsite any information from the medical record other than documentation of the fact of compliance or noncompliance. Generally, compliance/noncompliance verification requires no additional action (i.e., in-depth review, copying, and/or removal of confidential medical information from the worksite). If additional or more detailed information is required for clarification or to support a suspected violation, or if the employer denies access to medical records during the course of the inspection, the OSHI should discuss the matter with his/her OMT Director/Supervisor.
4. Generally, the respiratory protection standard, 29 CFR 1910.134 does not apply. However, placing or storing respirators in areas where they could be contaminated by body fluids constitutes a violation of 29 CFR 1910.134(h)(2)(i).
5. The Hazardous Waste Operations and Emergency Response Standard, 29 CFR 1910.120, covers four groups of employees--workers at uncontrolled hazardous waste remediation sites; workers at Resource Conservation and Recovery Act (RCRA) permitted hazardous waste treatment, storage, and disposal facilities; workers performing corrective actions involving cleanup operations at RCRA sites; and those workers expected to respond to emergencies caused by the uncontrolled release of a hazardous substance.

The definition of hazardous substance includes any biological agent or infectious material which may cause disease or death. There are potential scenarios where the Bloodborne Pathogens and Hazardous Waste Operations and Emergency Response Standards may interface such as:

Workers involved in cleanup operations at hazardous waste sites involving infectious waste;

Workers responding to an emergency caused by the uncontrolled release of infectious material; e.g., a transportation accident; and

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Workers at RCRA permitted incinerators that burn infectious waste.

Employers of employees engaged in these types of activities must comply with the requirements in 29 CFR 1910.120 as well as the bloodborne pathogens standard. If there is a conflict or overlap, the provision that is more protective of employee safety and health applies.

James Krueger, Director MNOSHA Compliance
For the MNOSHA Management Team

Distribution: OSHA Compliance and WSC Director

Attachments: Appendix A: Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up Algorithms
Appendix B: Labeling Requirements Chart
Appendix C: Bloodborne Pathogens Compliance Checklist
Appendix D: Typical Committees in Health Care Facilities
Appendix E: Engineering Control Evaluation Forms
Appendix F: Model Exposure Control Plan

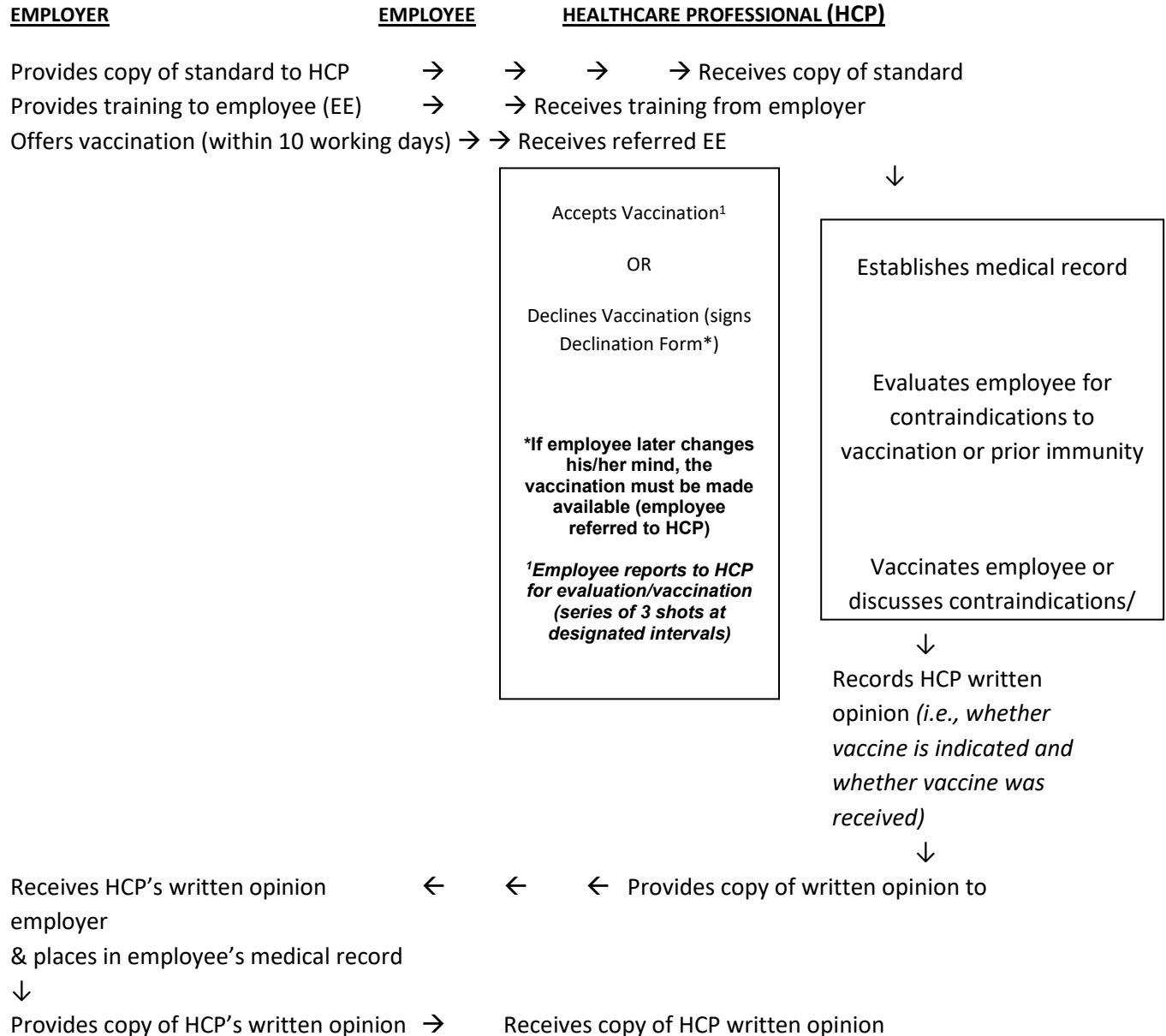
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Appendix A: Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up Algorithms

The following flow chart below shows the steps involving the employer, employee, and healthcare provider concerning Hepatitis B vaccination standard and the actions that are required by these parties.

HEPATITIS B VACCINATION

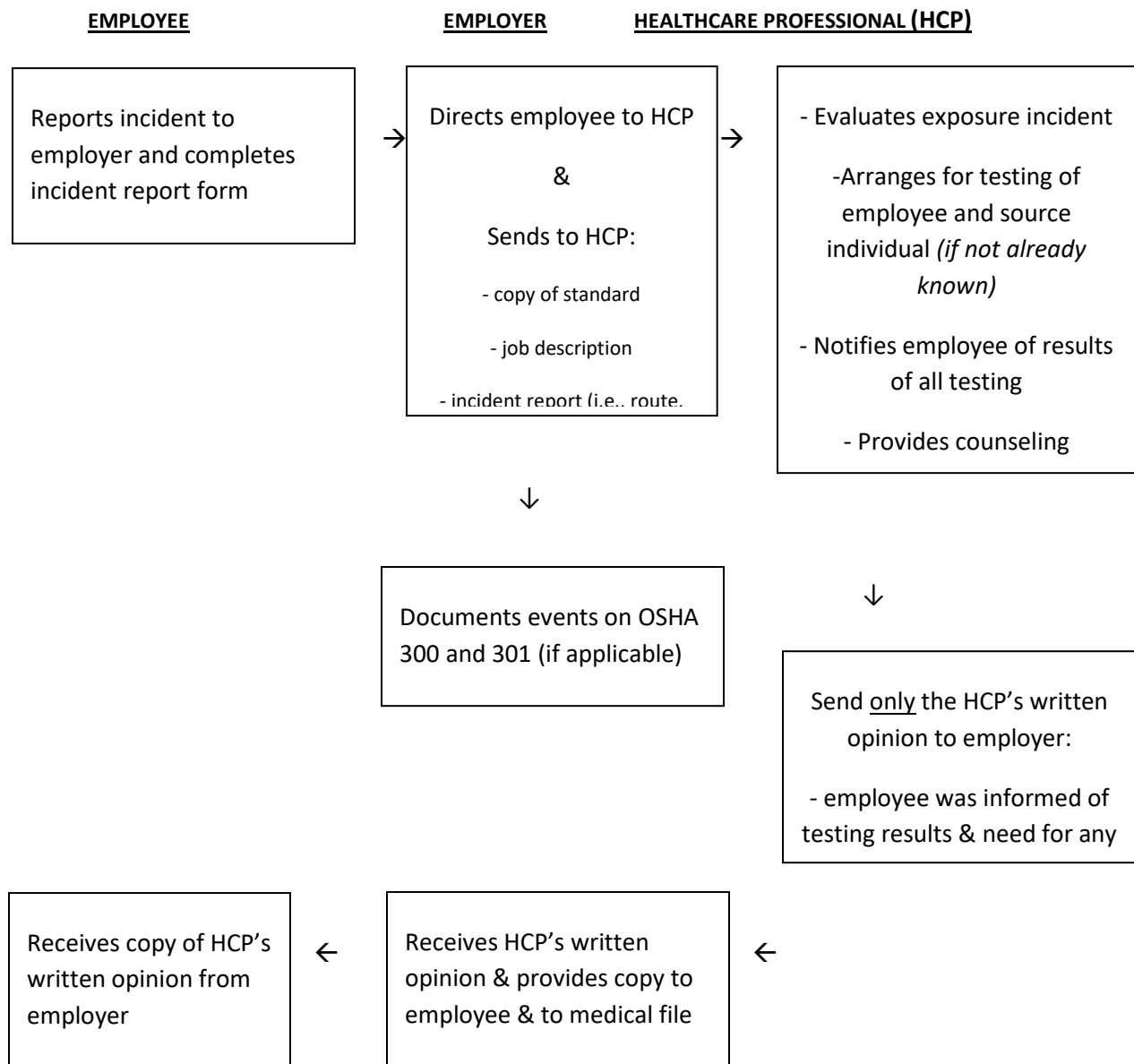


Source: [Blood-borne Pathogen Exposure Plan – CSB/SJU \(csbsju.edu\)](https://www.csb-sju.edu/csbsju.edu), Section M, summary chart

POST-EXPOSURE EVALUATION AND FOLLOW-UP

The following flow chart below shows the steps involved with a post exposure Hepatitis B evaluation and the follow-up items that occur during this process.

Following and Exposure Incident:



Source: [Blood-borne Pathogen Exposure Plan – CSB/SJU \(csbsju.edu\)](http://csbsju.edu), Section N and Summary Information

Appendix B: Labeling Requirements Chart

The following chart lists labeling requirements for various containers and storage areas, noting if no label is required, a biohazard label is required, or a red color coded container is required.

LABELING REQUIREMENTS

ITEM	NO LABEL REQUIRED	BIOHAZARD LABEL	RED COLOR-CODED CONTAINER
Regulated waste container		X ¹	
Reusable contaminated sharps		X	OR X
Refrigerator/freezer holding blood or other potentially infectious materials (OPIM)		X	
Containers used for storage, transport, or shipping of blood or OPIM		X	OR X
Blood/blood products released for clinical use	X		
individual specimen container of blood or OPIM remaining in facility	X ²	OR X	OR X

Specimens shipped from the primary facility to another facility		X	OR X
Individual containers of blood or OPIM placed in labeled container during storage, transport, shipment, or disposal	X		
Contaminated equipment needing servicing or shipping		X³	
Contaminated laundry	X⁴	OR X	OR X
Laundry sent to another facility that does not use universal precautions.		X	OR X

- ¹ Although 1910.1030 allows either form of labeling for regulated waste containers, the Minnesota Infectious Waste Control Act (Minn. Stat. 116.76 to 116.82) requires infectious (regulated) waste to be labeled with the biohazard symbol or with the words "infectious waste" written in letters no less than one inch in height. (Minn. Stat. 116.78, Subd. 2). Employers who dispose of regulated/infectious waste at their facility (i.e., an on-site incinerator) may use either form of labeling. However, employers whose regulated/infectious waste is collected or shipped off-site for disposal, must label the infectious waste containers in accordance with Minn. Stat. 116.78.
- ² Labels are not required if universal precautions are used in handling all specimens and containers are recognizable as containing specimens.
- ³ Specifying, in addition, the location of the contamination.
- ⁴ Alternative label or color code must be used when facility uses universal precautions in handling laundry and employees can recognize containers as requiring compliance with universal precautions.

Appendix C: Bloodborne Pathogens Compliance Checklist

BLOODBORNE PATHOGENS (1910.1030) - COMPLIANCE CHECKLIST

- ☐ Does the employer have employees with reasonably anticipated occupational exposure to blood or other potentially infectious materials (OPIM)?

- ☐ Does the employer have a written Exposure Control Plan that identifies workers with occupational exposure and specifies the methods of protecting and training employees? Is the plan reviewed at least annually? Is it accessible to all employees? Does the plan document the employer's consideration and implementation of effective engineering controls? Are affected, non-managerial employees responsible for direct patient care involved in the identification, selection and evaluation of engineering controls?

- ☐ Does the employer mandate the practice of universal precautions, standard precautions, or body substance isolation (BSI)?

- ☐ Has the employer provided the appropriate personal protective equipment? Ensured its use? Made it accessible?

- ☐ Has the employer instituted engineering controls (i.e., sharps containers)? Are these controls examined, maintained, or replaced on a regular schedule to ensure effectiveness?

- ☐ Has the employer made employees aware of workplace practices (i.e., handwashing, no eating/drinking in areas of potential exposure, proper handling/disposal of sharps, handling of contaminated laundry)?

- ☐ Has the employer provided facilities/equipment to comply with workplace practices, such as handwashing sinks (antiseptic wipes if soap/water infeasible), biohazard labeling, sharps containers, bleach or an EPA registered disinfectant that is labeled as effective against HIV and HBV, provided such surfaces have not become contaminated with agents or volumes or concentrations of agents for which higher level disinfection is recommended, to clean blood spills?

- ☐ Does the employer have a written schedule for decontaminating areas, items or surfaces?

- ☐ Has the employer provided red bags/biohazard labeled bags for items considered regulated (infectious) waste? Are sharps containers puncture-resistant, red in color, or labeled with the biohazard sign?

- ☐ Has the employer offered (free of charge) the Hepatitis B vaccination series to employees with occupational exposure? Signed declination forms? Was antibody testing done one to two months after the completion of the three-dose vaccination series for healthcare workers who have ongoing contact with patients or blood and are at ongoing risk for percutaneous injuries with sharp instruments or needlesticks be tested for antibody to Hepatitis B surface antigen?

- ☐ Did the employer choose to follow the July 1992 revised interpretation allowing the employer to offer the Hepatitis B vaccination series after first aid providers have rendered first aid involving blood or OPIM? Is a first aid log maintained? *[Does not apply to healthcare employers.]*

- ☐ Does the employer have a post-exposure follow-up program for those employees experiencing an exposure incident?

- ☐ Does the employer provide a confidential medical evaluation documenting the circumstances of exposure, identifying and testing the source individual if feasible, testing the exposed employee's blood upon consent, post-exposure prophylaxis, counseling, and evaluation of reported illnesses? Health care professional's written opinion as per the standard?

- ☐ Has the employer established a Sharps Injury Log for the recording of percutaneous injuries from contaminated sharps? *[Does not apply to employers with fewer than 10 employees.]* Does the log include at least the minimum information required; i.e., type/brand of device involved in the incident, the department/work area where the incident occurred, and an explanation of how the incident occurred?

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- ☐ Does the employer keep medical records confidential? Maintained for duration of employment plus 30 years?

- ☐ Does the employer record all injuries from contaminated sharps on the OSHA 300 Log? Are the privacy provisions of 1910.1030 observed; i.e., is the employee's name not recorded on the OSHA-300 log and a separate confidential list of case numbers and employee names maintained.)?

- ☐ Has the employer conducted initial and annual training per the standard requirements [(1910.1030(g)(2)(ii))]? Was there opportunity for questions/answers (interaction) during training? Training records maintained for 3 years?

The Bloodborne Pathogens Standard, 1910.1030, is quite extensive. This checklist is by no means all inclusive. Always consult the standard for 100% compliance.

Source: https://mn.gov/admin/assets/bloodb_pathogens_compliance_checklist_tcm36-205860.pdf

Appendix D: Typical Committees in Health Care Facilities

TYPICAL COMMITTEES IN HEALTH CARE FACILITIES

The OSHI may find that a health care facility has a variety of committees involved in assuring compliance with the bloodborne pathogens standard. Although committees are rarely mandated by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the Health Care Financing Administration (HCFA), there are certain committees which are typically found in health care facilities. Although the minutes or reports from these committees may be “protected” (not available to the general public), discussions about the committees’ functions may be useful in evaluating the facility’s processes. Committee functions may vary and there is no prescribed form for their structure. However, listed below are some general functions and the committees which might be involved in those processes:

ASSURING IMPLEMENTATION OF THE EXPOSURE CONTROL PLAN

Safety Committee/Employee Health Committee

Typically composed of representatives from the occupational health unit, safety manager, human resources, and employees from the various departments. The duties of this committee usually include:

- Developing and reviewing policies and procedures for safe and healthy work conditions for employees.
- Developing and evaluating all safety and health programs, including implementation of the Exposure Control Plan for Bloodborne Pathogens.
- Establishing and implementing procedures for workplace safety inspections.
- Establishing procedures for investigating and recording all workplace accidents, illnesses, and fatalities.
- Assuring implementation of OSHA standards, including resource allocation.
- Making recommendations in response to exposure incidents.
- Reviewing screening and surveillance data.

Infection Control Committee

Typically composed of employee and management representatives from various departments including the infection control practitioner and facility epidemiologist. The duties of this committee usually include:

- Analyzing and identifying infections among patients/residents.
- Developing and evaluating infection control plans to protect the patients/residents, including the use of universal precautions.
- Establishing policies and procedures regarding infection control, focusing on risks to patients/residents and the general public (e.g., visitors, volunteers, etc.).

HAZARD IDENTIFICATION (Including worksite inspections and tracking trends)

Safety Committee (see description above)

Facilities Maintenance/Hazardous Waste Committee

Typically composed of the facilities engineer and representatives from various departments. The duties of this committee usually include:

- Developing and reviewing policies and procedures related to environmental, facility, and hazardous waste issues.
- Coordinating with the Safety and Quality Assurance committees for investigation and recording all workplace accidents, illnesses, and fatalities which relate to environmental and hazardous waste issues.
- Assuring compliance with applicable OSHA standards.
- Performing building inspections.

Quality Care/Assurance/Utilization Review/Risk Management Committee

Typically composed of a Board of Directors representative, chief executive officer, director of quality care/assurance/utilization review/risk management, and representatives from various departments. The duties of this committee usually include:

- Ensuring the presence of overall acceptable standards of quality care for patients/residents.
- Complying with laws and regulations related to patient safety, specifically JCAHO and HCFA.
- Evaluating the utilization of health care services by patients/residents.

SELECTION, EVALUATION & RECOMMENDATIONS FOR PPE AND NEW DEVICES

Products Management Committee

Typically composed of the safety director, the purchasing agent and representatives from various departments. The duties of this committee typically include:

- Monitoring equipment currently in use.
- Evaluating new products being considered or already ordered.
- Providing information about equipment and products to involved employees.

Quality Care/Assurance/Utilization Review/Risk Management Committee (see description above)

Safety Committee (see description above)

EDUCATION/TRAINING/ORIENTATION

Education Committee

Typically composed of a Board of Directors representative and representatives from various departments. The duties of this committee usually include:

- Assuring delivery of education programs for both professional and non-professional employees within the health care facility and the community, such as training with new equipment.
- Ensuring that educational presentations meet professional standards.
- Evaluating new employee orientation and on-going continuing educational programs.

Products Management Committee (see description above)

RECORDKEEPING

Safety Committee (see description above)

Quality Care/Assurance/Utilization Review/Risk Management Committee (see description above)

Infection Control Committee (see description above)

ASSURE COMPLIANCE BY PHYSICIAN STAFF

Medical Executive Committee

Typically composed of elected officers of the medical staff, the immediate past president of the medical staff, the chairpersons of the various medical departments, and physicians on the Board of Directors. The president of the hospital, vice president of medical affairs, director of nursing services and director of quality care/assurance/utilization review/risk management serve as nonvoting members. The duties of this committee usually include:

- Accounting to the Board of Directors for patient/resident care.
- Acting on reports and recommendations offered by other committees.
- Coordinating the activities of the medical staff.
- Making recommendations on medical issues.
- Recommending appointment, reappointment, and corrective action of medical staff.

OTHER COMMITTEES WHICH THE OSHI MAY ENCOUNTER

Budget/Finance and Audit Committee

Typically composed of representatives from the Board of Directors, chief executive officer, chief financial officer, and various department directors. The duties of this committee usually include:

- Monitoring the financial status of the health care facility.
- Advising the Board of Directors concerning financial policies.
- Reporting to the Board of Directors on the effectiveness of resource allocations.

Ethics Committee

Typically composed of facility staff such as nurses, physicians, attorneys, hospital administrators, social workers and clergy. May also include community members. The duties of this committee usually include:

- Clarifying complex ethical issues that affect the care and treatment of patients/residents in the health care facility.

Information Systems Committee

Typically composed of the director of information systems and representatives from the various departments. The duties of this committee usually include:

- Evaluating and recommending clinical computer systems.
- Providing training on clinical computer systems.
- Responding to requests for assistance with computer applications.

Pharmacy and Therapeutics Committee

Typically composed of the director of pharmacy, a nursing representative, the infection control practitioner, a dietician, and a physician. The duties of this committee usually include:

- Developing policies and procedures concerning drugs used in the facility.
- Establishing standards concerning the use of investigational drugs.
- Recommending drugs to be made available at the facility (“formulary”), including vaccines.

APPENDIX E: ENGINEERING CONTROL EVALUATION FORMS

The following pages contain sample forms that may be used in evaluating safer engineering controls. These forms are only applicable to certain groups of devices. Safer engineering controls are not limited to the devices contained in the following pages. ***None of these forms are specifically required by the bloodborne pathogens standard, but they may be useful as guidance documents.*** Employers are responsible for setting the evaluation criteria for the devices used in their facilities in accordance with the standard.

SAMPLE FORMS:

NIOSH

Questionnaire for Evaluating Sharps Disposal Container Performance

ECRI®

ECRI's Needlestick-Prevention Device Evaluation Form

NPD Cost Calculation Worksheet

Training for Development of Innovative Control Technologies (TDICT)®

SAFETY FEATURE EVALUATION FORMS

SAFETY SYRINGES

I.V. ACCESS DEVICES

SHARPS DISPOSAL CONTAINERS

I.V. CONNECTORS

VACUUM TUBE BLOOD COLLECTION SYSTEMS

E. R. SHARPS DISPOSAL CONTAINERS

SAFETY DENTAL SYRINGES

HOME USE SHARPS DISPOSAL CONTAINER

QUESTIONNAIRE FOR EVALUATING SHARPS*DISPOSAL CONTAINER PERFORMANCE*

INSTRUCTIONS: Product evaluators should inspect and operate containers to be evaluated in side-by-side comparisons. Representative sharps (syringes, IV sets, blades, biopsy needles, pipettes, etc.) should be used to test candidate products. Actual use conditions should be simulated, if possible. Prior to inserting test sharps, attempt to reopen sealed containers and attempt to spill or remove contents from unsealed containers if this is a functional requirement. Evaluation facilitators should provide product manufacturer literature and visual instructions and should demonstrate proper operation of each of the containers. Use of this guideline requires knowledge that the ideal product may not exist and that this evaluation tool was based on common product designs available at the time.

*PLEASE CIRCLE YOUR RESPONSE**FUNCTIONALITY*

agree disagree

Container is stable when placed on horizontal surface and when used as described in the

product labeling for use in trays, holders, or enclosures.....1	2	3	4	5
Container provides for puncture, leak, and impact resistance1	2	3	4	5
Container, labels, warning devices, and brackets are durable.....1	2	3	4	5
Container is autoclavable, if necessary1	2	3	4	5
Container is available in various sizes and capacities.....1	2	3	4	5
Container is available with auxiliary safety features (e.g., restricted access to sharps in the container), if required1	2	3	4	5
Closure mechanism will not allow needlestick injury1	2	3	4	5
Closure mechanism provides secure seal1	2	3	4	5
Design minimizes needle-tip flipback.....1	2	3	4	5
Design promotes clinical performance (e.g., will not compromise sterile field				

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or increase injury or infection control hazards)	1	2	3	4	5
Design resists easy reopening after sealing for final disposal or autoclaving	1	2	3	4	5
Inlet design defeats waste removal when open	1	2	3	4	5
Inlet design prevents spillage of contents (physical or liquid) while sharps disposal					
container is in use in the intended upright position.....	1	2	3	4	5
Containers designed to be reopenable have removable lids designed with tight closure					
that facilitates ease of removal with grip safety and comfort.....	1	2	3	4	5
Mounting brackets are rugged and designed for ease of service and decontamination	1	2	3	4	5

ACCESSIBILITY

			agree	disagree
Container available in various opening sizes and shapes	1.....	2	3	4 5
Containers are supplied in sufficient quantity	1.....	2	3	4 5
Container has an entanglement-free opening/access way	1.....	2	3	4 5
Container opening/access way and current fill status visible to user prior to				
placing sharps into container	1.....	2	3	4 5
Internal design/molding of container does not impede ease of use	1	2	3	4 5
Handles, if present, are located above full-fill level	1.....	2	3	4 5
Handles, if present, facilitate safe vertical transport and are located away from				
opening/access way and potentially soiled surfaces	1.....	2	3	4 5
Fixed locations place container within arm's reach of point of waste generation.....	1	2	3	4 5
Fixed locations allow for installation of the container below horizontal vision level	1	2	3	4 5
If necessary, in high patient or visitor traffic areas, container should provide for				
security against tampering.	1.....	2	3	4 5

VISIBILITY

			agree	disagree
Color or warning label implies danger	1.....	2	3	4 5
A warning indicator (i.e., color or warning label) is readily visible to the user				
prior to user placing sharps into container)	1.....	2	3	4 5
Overfill level provided and current fill status is readily visible to the user				
prior to use placing sharps into container	1.....	2	3	4 5
Sharps disposal container complies with OSHA requirements	1.....	2	3	4 5

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Disposal opening/access way is visible prior to user placing sharps into container	1	2	3	4	5
Security, mounting, aesthetic, and safety features do not distort visibility of the opening/access way or fill status indicator 1.....	2	3	4	5	

ACCOMMODATION

			agree	disagree	
No sharp edges in construction or materials 1.....	2	3	4	5	
Safety features do not impede free access 1.....	2	3	4	5	
Promotes patient and user satisfaction (i.e., aesthetic to extent possible)	1	2	3	4	5
Is simple to operate 1.....	2	3	4	5	
Any emissions from final disposal comply with pollution regulations	1	2	3	4	5
Easy to assemble, if required 1.....	2	3	4	5	
Components of containers that require assembly are easy to store prior to use.....	1	2	3	4	5
Use allows one-handed disposal 1.....	2	3	4	5	
Product available in special designs for environments with specific needs (e.g., laboratories, emergency rooms, emergency medical services, pediatrics, correctional facilities) 1.....	2	3	4	5	
Mounting system durable, secure, safe, cleanable, and, where appropriate, lockable.....	1	2	3	4	5
Mounting systems allow height adjustments 1.....	2	3	4	5	
Design promotes task confidence 1.....	2	3	4	5	
Cost effectiveness 1.....	2	3	4	5	

OTHER COMMENTS

What design or performance requirements are missing from the product you evaluated that are really needed to safely or more comfortably conduct your job or sharps-related task?

Additional Evaluator Concerns and Comments:

This product selection questionnaire was developed by the Centers for Disease Control and Prevention's National Institute for Occupational Safety and Health in conjunction with NIOSH Education Resource Centers; The Johns Hopkins University, Baltimore; the University of Texas, Houston; the University of California, Berkeley; and the Mount Sinai School of Medicine, New York City. (Federal OSHA Instruction CPL 2-2.69, 11/27/01)

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19. Does using the NPD instead of a conventional device result in only a modest (if any) increase in sharps container waste volume? (Answer "No" if the NPD will increase waste volume significantly)Yes No

OVERALL

20. Would you recommend using this device? Yes.....No

Comments (e.g., describe problems, list incompatibilities) – continue on back of page if needed.

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NPD Cost Calculation Worksheet*

The following worksheet shows a sample cost calculation with sample data included on a side table.

WORKSHEET

PROTECTIVE SYSTEM

NPD (supplier/trade name) _____
 A. Price per device A = \$ _____
 B. Uses per year B = _____
 C. Uses per device C = _____
 D. Quantity used per year (B + C) D = _____
 E. NPD cost per year (A x D) E = _____
Additional component _____
 F. Price per device F = \$ _____
 G. Uses per year G = _____
 H. Uses per device H = _____
 I. Quantity used per year (G + H) I = _____
 J. Additional component cost per year (F x I) J = _____
 K. Annual protective system cost (E + J) K = _____

CONVENTIONAL SYSTEM

Conventional device _____
 L. Price per device L = \$ _____
 M. Uses per year M = _____
 N. Uses per device N = _____
 O. Quantity used per year (M + N) O = _____
 P. Conventional device cost per year (L x O) P = \$ _____
Additional component _____
 Q. Price per device Q = \$ _____
 R. Uses per year R = _____
 S. Uses per device S = _____
 T. Quantity used per year (R + S) T = _____
 U. Additional component cost per year (Q x T) U = _____
V. Annual conventional system cost (P + U) V = _____

RELATED DISPOSAL COSTS:

Additional sharps containers:

W. Disposal volume of each NPD W = _____
 X. Disposal volume of each conventional device X = _____
 Y. Sharps container volume Y = _____
 Z. Number of additional sharps containers per year Z = _____
 AA. Price per sharps container AA = \$ _____
 AB. Annual additional sharps containers cost (Z x AA) AB = _____
AC. Other additional disposal costs AC = _____
AD. Total annual increase in disposal costs (AB + AC) AD = _____

NSI COST

AE. Number of NSIs per year with conventional device AE = _____
 AF. Projected NSIs per year with NPD (50% x AE) AF = _____
 AG. Cost of each NSI AG = \$ _____
 AH. Annual NSI cost savings (AG x [AE - AF]) AH = \$ _____
AI. MISCELLANEOUS COSTS AI = \$ _____

SAMPLE DATA

Protective blood collection tube holder
 XYZ Medical Pro Hold
 A = \$4.00
 B = 130,000
 C = 300
 D = 433
 E = \$1,732
 XYZ Medical ProHold Sharps Container
 F = \$3.50
 G = Dispose of 130,000 needles
 H = NA (see next entry)
 I = 32**
 J = \$112

 K = \$1,844

 Blood collection tube holder
 XYZ Medical Tube Holder
 L = \$0.15
 M = 130,000
 N = 300
 O = 433
 P = \$65

 Conventional 1 qt. sharps container
 Q = \$2.13
 R = Dispose of 130,000 needles
 S = NA (see next entry)
 T = 32**
 U = \$68.16

 V =- \$133.16

 W = 14 cm³ (tube holder only)
 X = 12 cm³ (tube holder only)
 Y = 1 qt (943 cm³)

 Z = 1 (assumes 100% packing efficiency)
 AA = \$3.50
 AB = \$3.50
 AC = None
 AD = \$3.50
 AE = 6
 AF = 3
 AG = \$540
 AH = \$1,620
 AI = None
 AJ = \$227.50

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AJ. NET PROTECTIVE SYSTEM**COSTS (K+AD+AI-AH)**

AJ = \$ _____

AK. Annual Increase in Expenditures (AJ – V) AK = _____

* The figures obtained by completing this worksheet should be used for comparison purposes only. These figures will not reflect the actual costs and costs savings associated with implementing the alternative under consideration, and they cannot reflect the true value of using an NPD in terms of staff safety and the economic impact on NSIs that result in seroconversion.

** Calculated by multiplying the estimated volume of one needle (0.23 cm) by the number of needles per year (130,000) and then dividing by the volume of one sharps container (1 qt. = 943 cm). Note that this analysis assumes 100% packing efficiency.

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This image is a medical symbol.

GUIDELINES FOR THE USE OF SAFETY FEATURE EVALUATION SHEETS

Coordinators:

Determine which products are to be evaluated and provide at least four or more test samples for each individual evaluating the product. (Each evaluator should have enough samples to disassemble and examine the design thoroughly.)

Set up a testing station for each type of device which allows testers to evaluate products in a simulated patient procedure. Provide training dummies (injection pads, oranges, etc.) as necessary.

Provide visual instructions and demonstrate proper use of each device.

Review the instructions and rating system with each evaluator.

Encourage each evaluator to comment on the sheets and prioritize the questions at the end of the evaluation. This will provide a useful decision making tool and will help alert you to specific areas of concern which may not have been covered by the questionnaire.

Evaluators:

Re-enact all steps of the intended or possible procedures performed with the device being tested.

Attempt to misuse the device and circumvent or disable the safety feature.

Answer each question, including the short answer section at the end. If you do not understand a question, please write comments directly on the sheets.

NOTE: The utility of these criteria is for initial screening of devices and **NOT** for clinical assessment/pilot testing. Certain assumptions have been made in the development of these forms based on information about currently available products. We recognize the likelihood that the ideal product may not exist. TDICT welcomes your comments on the use of these tools.

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San Francisco General Hospital
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San Francisco, CA 94110
(Federal OSHA Instruction CPL 2-2.69, 11/27/01)

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SAFETY FEATURE EVALUATION FORM**SAFETY SYRINGES**

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

agree disagree

During Use:

- | | | | | | | |
|-----|---|---|---|---|---|------|
| 1. | The safety feature can be activated using a one-handed technique | 1 | 2 | 3 | 4 | 5N/A |
| 2. | The safety feature does not obstruct vision of the tip of the sharp..... | 1 | 2 | 3 | 4 | 5N/A |
| 3. | Use of this product requires you to use the safety feature1..... | 2 | 3 | 4 | 5 | N/A |
| 4. | This product does not require more time to use than a non-safety device | 1 | 2 | 3 | 4 | 5N/A |
| 5. | The safety feature works well with a wide variety of hand sizes | 1 | 2 | 3 | 4 | 5N/A |
| 6. | The device is easy to handle while wearing gloves 1..... | 2 | 3 | 4 | 5 | N/A |
| 7. | This device does not interfere with uses that do not require a needle | 1 | 2 | 3 | 4 | 5N/A |
| 8. | This device offers a good view of any aspirated fluid 1..... | 2 | 3 | 4 | 5 | N/A |
| 9. | This device will work with all required syringe and needle sizes | 1 | 2 | 3 | 4 | 5N/A |
| 10. | This device provides a better alternative to traditional recapping | 1 | 2 | 3 | 4 | 5N/A |

After Use:

- | | | | | | | |
|-----|--|---|---|---|---|------|
| 11. | There is a clear and unmistakable change (audible or visible) that occurs when the
the safety feature is activated 1..... | 2 | 3 | 4 | 5 | N/A |
| 12. | The safety feature operates reliably 1..... | 2 | 3 | 4 | 5 | N/A |
| 13. | The exposed sharp is permanently blunted or covered after use and prior to disposal | 1 | 2 | 3 | 4 | 5N/A |
| 14. | This device is no more difficult to process after use than non-safety devices | 1 | 2 | 3 | 4 | 5N/A |

Training:

- | | | | | | | |
|-----|---|---|---|---|---|------|
| 15. | The user does not need extensive training for correct operation..... | 1 | 2 | 3 | 4 | 5N/A |
| 16. | The design of the device suggests proper use 1..... | 2 | 3 | 4 | 5 | N/A |
| 17. | It is not easy to skip a crucial step in proper use of the device | 1 | 2 | 3 | 4 | 5N/A |

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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SAFETY FEATURE EVALUATION FORM

I.V. ACCESS DEVICES

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

agree disagree

1. The safety feature can be activated using a one-handed technique 1 2 3 4 5 N/A
2. The safety feature does not interfere with normal use of this product..... 1 2 3 4 5 N/A
3. Use of this product requires you to use the safety feature1..... 2 3 4 5 N/A
4. This product does not require more time to use than a non-safety device 1 2 3 4 5 N/A
5. The safety feature works well with a wide variety of hand sizes 1 2 3 4 5 N/A
6. The device allows for rapid visualization of flashback in the catheter or chamber 1 2 3 4 5 N/A
7. Use of this product does not increase the number of sticks to the patient..... 1 2 3 4 5 N/A
8. The product stops the flow of blood after the needle is removed from the catheter
(or after the butterfly is inserted) and just prior to line connections or hep-lock capping 1 2 3 4 5 N/A
9. A clear and unmistakable change (either audible or visible) occurs when the
safety feature is activated..... 1 2..... 3 4 5 N/A
10. The safety feature operates reliably 1 2..... 3 4 5 N/A
11. The exposed sharp is blunted or covered after use and prior to disposal 1 2 3 4 5 N/A
12. The product does not need extensive training to be operated correctly..... 1 2 3 4 5 N/A

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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SAFETY FEATURE EVALUATION FORM
SHARPS DISPOSAL CONTAINERS

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

agree . . . disagree

- | | | | | | | | |
|-----|---|---|---|---|-----|-----|-----|
| 1. | The container's shape, its markings, or its color, imply danger | 1 | 2 | 3 | 4 | 5 | N/A |
| 2. | The implied warning of danger can be seen from the angle at which people commonly view it
(very short people, people in wheel chairs, children, etc.)..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 3. | The implied warning can be universally understood by visitors, children, and patients..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 4. | The container's purpose is self-explanatory and easily understood by a worker
who may be pressed for time or unfamiliar with the hospital setting..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 5. | The container can accept sharps from any direction desired | 1 | 2 | 3 | 4 | 5 | N/A |
| 6. | The container can accept all sizes and shapes of sharps 1..... | 2 | 3 | 4 | 5 | N/A | |
| 7. | The container allows single-handed operation. (Only the hand holding the
sharp should be near the container opening) 1..... | 2 | 3 | 4 | 5 | N/A | |
| 8. | It is difficult to reach in and remove a sharp 1..... | 2 | 3 | 4 | 5 | N/A | |
| 9. | Sharps can go into the container without getting caught on the opening..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 10. | Sharps can go into the container without getting caught on any molded shapes in the interior | 1 | 2 | 3 | 4 | 5 | N/A |
| 11. | The container is puncture resistant 1..... | 2 | 3 | 4 | 5 | N/A | |
| 12. | When the container is dropped or turned upside down (even before it is permanently
closed) sharps stay inside 1..... | 2 | 3 | 4 | 5 | N/A | |
| 13. | The user can determine easily, from various viewing angles, when the container is full | 1 | 2 | 3 | 4 | 5 | N/A |
| 14. | When the container is to be used free-standing (no mounting bracket), it is stable
and unlikely to tip over 1..... | 2 | 3 | 4 | 5 | N/A | |
| 15. | It is safe to close the container. (Sharps should not protrude into the path of hands
attempting to close the container) 1 2..... | 3 | 4 | 5 | N/A | | |
| 16. | The container closes securely (e.g., if the closure requires glue, it may not work if
the surfaces are soiled or wet.) 1..... | 2 | 3 | 4 | 5 | N/A | |
| 17. | The product has handles which allow you to safely transport a full container..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 18. | The product does not require extensive training to operate correctly | 1 | 2 | 3 | 4 | 5 | N/A |

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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SAFETY FEATURE EVALUATION FORM**I.V. CONNECTORS**

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

agree disagree

- | | | | | | | | |
|-----|---|---------|---------|---|---|-----|-----|
| 1. | Use of this connector eliminates the need for exposed needles in connections | 1 | 2 | 3 | 4 | 5 | N/A |
| 2. | The safety feature does not interfere with normal use of this product | 1 | 2 | 3 | 4 | 5 | N/A |
| 3. | Use of this product requires you to use the safety feature1 | 2 | 3 | 4 | 5 | N/A | |
| 4. | This product does not require more time to use than a non-safety device | 1 | 2 | 3 | 4 | 5 | N/A |
| 5. | The safety feature works well with a wide variety of hand sizes | 1 | 2 | 3 | 4 | 5 | N/A |
| 6. | The safety feature allows you to collect blood directly into a vacuum tube,
eliminating the need for needles | 1 | 2 | 3 | 4 | 5 | N/A |
| 7. | The connector can be secured (locked) to &-sites, hep-locks, and central lines | 1 | 2 | 3 | 4 | 5 | N/A |
| 8. | A clear and unmistakable change (either audible or visible) occurs when the safety
feature is activated | 1 | 2 | 3 | 4 | 5 | N/A |
| 9. | The safety feature operates reliably | 1 | 2 | 3 | 4 | 5 | N/A |
| 10. | The exposed sharp is blunted or covered after use and prior to disposal | 1 | 2 | 3 | 4 | 5 | N/A |
| 11. | The product does not need extensive training to be operated correctly | 1 | 2 | 3 | 4 | 5 | N/A |
-

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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SAFETY FEATURE EVALUATION FORM
VACUUM TUBE BLOOD COLLECTION SYSTEMS

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

		agree	disagree	
1.	The safety feature can be activated using a one-handed technique	1	2	3 4 5 N/A
2.	The safety feature does not interfere with normal use of this product.....	1	2	3 4 5 N/A
3.	Use of this product requires you to use the safety feature1.....	2	3	4 5 N/A
4.	This product does not require more time to use than a non-safety device	1	2	3 4 5 N/A
5.	The safety feature works well with a wide variety of hand sizes	1	2	3 4 5 N/A
6.	The safety feature works with a butterfly 1.....	2	3	4 5 N/A
7.	A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated 1.....	2	3	4 5 N/A
8.	The safety feature operates reliably 1.....	2	3	4 5 N/A
9.	The exposed sharp is blunted or covered after use and prior to disposal	1	2	3 4 5 N/A
10.	The inner vacuum tube needle (rubber sleeved needle) does not present a danger of exposure	1	2	3 4 5 N/A
11.	The product does not need extensive training to be operated correctly.....	1	2	3 4 5 N/A

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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SAFETY FEATURE EVALUATION FORM

E. R. SHARPS DISPOSAL CONTAINERS

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

		agree	disagree		
1.	The container's shape, its markings, or its color, imply danger which can be understood by visitors, children, and patients	1.....	2	3	4 5 N/A
2.	The implied warning of danger can be seen from the angle at which people commonly view it (very short people, people in wheelchairs, children, etc.)	 1	2	3	4 5 N/A
3.	The container can be placed in a location that is easily accessible during emergency procedures	 1	2	3	4 5 N/A
4.	The container's purpose is self-explanatory and easily understood by a worker who may be pressed for time or unfamiliar with the hospital setting.....	 1	2	3	4 5 N/A
5.	The container can accept sharps from any direction desired	 1	2	3	4 5 N/A
6.	The container can accept all sizes and shapes of sharps	 1	2	3	4 5 N/A
7.	The container is temporarily closable, and will not spill contents (even after being dropped down a flight of stairs)	 1	2	3	4 5 N/A
8.	The container allows single-handed operation. (Only the hand holding the sharp should be near the container opening)	 1	2	3	4 5 N/A
9.	It is difficult to reach in and remove a sharp	 1	2	3	4 5 N/A
10.	Sharps can go into the container without getting caught on the opening or any molded shapes in the interior	 1	2	3	4 5 N/A
11.	The container can be placed within arm's reach	 1	2	3	4 5 N/A
12.	The container is puncture resistant	 1	2	3	4 5 N/A
13.	When the container is dropped or turned upside down (even before it is permanently closed) sharps stay inside	 1	2	3	4 5 N/A
14.	The user can determine easily, from various viewing angles, when the container is full	 1	2	3	4 5 N/A
15.	When the container is to be used free-standing (no mounting bracket), it is stable and unlikely to tip over	 1	2	3	4 5 N/A
16.	The container is large enough to accept all sizes and shapes of sharps, including 50 ml preloaded syringes	 1	2	3	4 5 N/A
17.	It is safe to close the container. (Sharps should not protrude into the path of hands attempting to close the container)	 1 2	3	4	5 N/A
18.	The container closes securely under all circumstances	 1	2	3	4 5 N/A
19.	The product has handles which allow you to safely transport a full container	 1	2	3	4 5 N/A
20.	The product does not require extensive training to operate correctly	 1	2	3	4 5 N/A

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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SAFETY FEATURE EVALUATION FORM
SAFETY DENTAL SYRINGES

Date: _____ Department: _____ Occupation: _____

Product: _____ Number of times used: _____

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

agree . . . disagree

- | | | | | | | | |
|-----|--|---|---|---|-----|-----|-----|
| 1. | The safety feature can be activated using a one-handed technique | 1 | 2 | 3 | 4 | 5 | N/A |
| 2. | The safety feature does not obstruct vision of the tip of the sharp and the intraoral injection site | 1 | 2 | 3 | 4 | 5 | N/A |
| 3. | Use of this product requires you to use the safety feature1..... | 2 | 3 | 4 | 5 | N/A | |
| 4. | This product does not require more time to use than a non-safety device | 1 | 2 | 3 | 4 | 5 | N/A |
| 5. | The safety feature works well with a wide variety of hand sizes | 1 | 2 | 3 | 4 | 5 | N/A |
| 6. | The device is easy to handle while wearing gloves 1..... | 2 | 3 | 4 | 5 | N/A | |
| 7. | The device is easy to handle when wet 1 2..... | 3 | 4 | 5 | N/A | | |
| 8. | This device accepts standard anesthetic carpules and does not hinder carpule changing | 1 | 2 | 3 | 4 | 5 | N/A |
| 9. | The safety feature does not restrict visibility of carpule contents intraorally | 1 | 2 | 3 | 4 | 5 | N/A |
| 10. | This device accepts standard dental needles of all common lengths and gauges, and
does not interfere with needle changing 1..... | 2 | 3 | 4 | 5 | N/A | |
| 11. | The device provides a better alternative to traditional recapping..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 12. | Sterilization of this device is as easy as a standard dental syringe..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 13. | For syringes with integral needles only: The needle on this syringe will not break
while bending and repositioning in the tissue 1..... | 2 | 3 | 4 | 5 | N/A | |
| 14. | This device is no more difficult to break down after use for sterilization than a
standard dental syringe 1..... | 2 | 3 | 4 | 5 | N/A | |
| 15. | The safety feature operates reliably ...1 2..... | 3 | 4 | 5 | N/A | | |
| 16. | The exposed sharp is permanently blunted or covered after use and prior to disposal | 1 | 2 | 3 | 4 | 5 | N/A |
| 17. | There is a clear and unmistakable change (either visible or audible) that occurs
when the safety feature is activated 1..... | 2 | 3 | 4 | 5 | N/A | |
| 18. | The user does not need extensive training to operate the product correctly..... | 1 | 2 | 3 | 4 | 5 | N/A |
| 19. | The design of the device allows for easy removal of the needle from the syringe | 1 | 2 | 3 | 4 | 5 | N/A |
| 20. | The design of the device allows for easy removal of the carpule from the syringe | 1 | 2 | 3 | 4 | 5 | N/A |
-

Of the above questions, which three are the most important to your safety when using this product?

Are there other questions which you feel should be asked regarding the safety/utility of this product?

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Appendix F: Model Exposure Control Plan

MODEL EXPOSURE CONTROL PLAN

This Model Exposure Control Plan was prepared by Federal OSHA as part of Federal OSHA Instruction CPL 2-2.69, "Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens", [Appendix D](#). This model plan is intended to serve as an example of the contents of an Exposure Control Plan that is required by the Bloodborne Pathogens Standard. A central component of the requirements of the standard is the development of an Exposure Control Plan (ECP).

The intent of this model is to provide small employers with an easy-to-use guideline for developing a written Exposure Control Plan. Each employer will need to adjust or adapt the model for their specific use.

The information contained in this publication is not considered a substitute for the OSH Act or any provisions of OSHA standards. It provides general guidance on a particular standard-related topic but should not be considered a definitive interpretation for compliance with OSHA requirements. The reader should consult the OSHA standard in its entirety for specific compliance requirements.

POLICY

The (Facility Name) is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following Exposure Control Plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR Part 1910.1030, "Occupational Exposure to Bloodborne Pathogens."

The ECP is a key document to assist our firm in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:

- ☐ Determination of employee exposure
- ☐ Implementation of various methods of exposure control including:
 - Universal precautions
 - Engineering and work practice controls
 - Personal protective equipment
 - Housekeeping
- ☐ Hepatitis B vaccination
- ☐ Post-exposure evaluation and follow-up
- ☐ Communication of hazards to employees and training
- ☐ Recordkeeping
- ☐ Procedures for evaluating circumstances surrounding an exposure incident

The methods of implementation of these elements of the standard are discussed in the subsequent pages of this ECP.

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PROGRAM ADMINISTRATION

_____ (*Name of responsible person or department*) is (are) responsible for the implementation of the ECP. _____ (*Name of responsible person or department*) will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures. Contact location/phone number: _____.

Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

_____ (*Name of responsible person or department*) will maintain and provide all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. _____ (*Name of responsible person or department*) will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes. Contact location/phone number: _____.

_____ (*Name of responsible person or department*) will be responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained. Contact location/phone number: _____.

_____ (*Name of responsible person or department*) will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives. Contact location/phone number: _____.

EMPLOYEE EXPOSURE DETERMINATION

The following is a list of all job classifications at our establishment in which **all** employees have occupational exposure:

<u>Job Title</u>	<u>Department/Location</u>
<u>(Example: Phlebotomists)</u>	<u>(Clinical Lab)</u>
_____	_____
_____	_____

The following is a list of job classifications in which **some** employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures in which occupational exposure may occur for these individuals:

<u>Job Title</u>	<u>Department/Location</u>	<u>Task/Procedure</u>
<u>(Example: Housekeeper)</u>	<u>(Environmental Services)</u>	<u>(Handling Regulated Waste)</u>
_____	_____	_____
_____	_____	_____

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Part-time, temporary, contract and per diem employees who are assigned to jobs or tasks that may potentially expose them to blood are covered by the standard. How the provisions of the standard will be met for these employees should be described in the ECP.

METHODS OF IMPLEMENTATION AND CONTROL

Universal Precautions

All employees will utilize universal precautions.

Exposure Control Plan

Employees covered by the Bloodborne Pathogens Standard receive an explanation of this ECP during their initial training session. It will also be reviewed in their annual refresher training. All employees have an opportunity to review this plan at any time during their work shifts by contacting (Name of responsible person or department). If requested, we will provide an employee with a copy of the ECP free of charge and within 15 days of the request.

(Name of responsible person or department) is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Engineering Controls and Work Practices

Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. The specific engineering controls and work practice controls used are listed below:

- ☐ (For example: non-glass capillary tubes, needleless systems, etc.)
- ☐ _____
- ☐ _____

Sharps disposal containers are inspected and maintained or replaced by (Name of responsible person or department) every (list frequency) or whenever necessary to prevent overfilling.

This facility identifies the need for changes in engineering control and work practices through (Examples: Review of OSHA records, employee interviews, committee activities, etc.)

We evaluate new procedures or new products regularly by (Describe the process, literature reviewed, supplier information, products considered, etc.)

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Both front-line workers and management officials are involved in this process: (Describe how employees will be involved)

(Name of responsible person or department) will ensure effective implementation of these recommendations.

Personal Protective Equipment (PPE)

PPE is provided to our employees at no cost to them. Training is provided by (Name of responsible person or department) in the use of the appropriate PPE for the tasks or procedures employees will perform.

The types of PPE available to employees are as follows (list location) :

(Examples: gloves, goggles, etc.)

PPE is located _____ and may be obtained through (Name of responsible person or department). *(Specify how employees are to obtain PPE, and who is responsible for ensuring that it is available.)*

All employees using PPE must observe the following precautions:

- ☐ Wash hands immediately or as soon as feasible after removal of gloves or other PPE.
- ☐ Remove PPE after it becomes contaminated, and before leaving the work area.
- ☐ Used PPE may be disposed of in _____ *(List appropriate containers for storage, laundering, decontamination, or disposal.)*
- ☐ Wear appropriate gloves when it can be reasonably anticipated that there may be hand contact with blood or OPIM, 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.
- ☐ Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- ☐ Never wash or decontaminate disposable gloves for reuse.
- ☐ Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- ☐ Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

The procedure for handling used PPE is as follows: *(may refer to specific agency procedure by title or number and last date of review)*

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(For example, how and where to decontaminate face shields, eye protection, resuscitation equipment)

Housekeeping

Regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see Labels), and closed prior to removal to prevent spillage or protrusion of contents during handling.

The procedure for handling **sharps disposal containers** is: *(may refer to specific agency procedure by title or number and last date of review)*

The procedure for handling **other regulated waste** is: *(may refer to specific agency procedure by title or number and last date of review)*

Contaminated sharps are discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leakproof on sides and bottoms, and labeled or color-coded appropriately. Sharps disposal containers are available at _____ *(must be easily accessible and as close as feasible to the immediate area where sharps are used)*.

Bins and pails (e.g., wash or emesis basins) are cleaned and decontaminated as soon as feasible after visible contamination.

Broken glassware which may be contaminated is picked up using mechanical means, such as a brush and dust pan.

Laundry

The following contaminated articles will be laundered by the employer:

_____	_____
_____	_____
_____	_____

Laundering will be performed by _____ *(Name of responsible person or department)* at _____ *(time and/or location)*.

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The following laundering requirements must be met:

- * handle contaminated laundry as little as possible, with minimal agitation
- * place wet contaminated laundry in leak-proof, labeled or color-coded containers before transport. Use (red bags or bags marked with biohazard symbol) for this purpose.
- * wear the following PPE when handling and/or sorting contaminated laundry: (List appropriate PPE).

Labels

The following labeling method(s) is used in this facility:

EQUIPMENT TO BE LABELED LABEL TYPE (size, color, etc.)
(e.g., specimens, contaminated laundry, etc.) (red bag, biohazard label, etc.)

_____	_____
_____	_____
_____	_____

(Name of responsible person or department) will ensure warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify _____ if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.

HEPATITIS B VACCINATION

(Name of responsible person or department) will provide training to employees on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost after training and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series, 2) antibody testing reveals that the employee is immune, or 3) medical evaluation shows that vaccination is contraindicated.

However, if an employee chooses to decline vaccination, the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept at (List location or person responsible for this recordkeeping).

Vaccination will be provided by (List Health Care Professional who is responsible for this part of the plan) at (location).

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Following the medical evaluation, a copy of the health care professional's Written Opinion will be obtained and provided to the employee. It will be limited to whether the employee requires the hepatitis vaccine, and whether the vaccine was administered.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

Should an exposure incident occur, contact _____ (*Name of responsible person*) at the following number: _____.

An immediately available confidential medical evaluation and follow-up will be conducted by (Licensed Health Care Professional). Following the initial first aid (clean the wound, flush eyes or other mucous membrane, etc.), the following activities will be performed:

- Document the routes of exposure and how the exposure occurred.
- Identify and document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).
- Obtain consent and make arrangements to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider.
- If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.
- Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
- After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status.
- If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

ADMINISTRATION OF POST-EXPOSURE EVALUATION AND FOLLOW-UP

(Name of responsible person or department) ensures that the health care professional(s) responsible for employees' hepatitis B vaccination and post-exposure evaluation and follow-up are given a copy of OSHA's bloodborne pathogens standard.

(Name of responsible person or department) ensures that the health care professional evaluating an employee after an exposure incident receives the following:

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- a description of the employee's job duties relevant to the exposure incident
- route(s) of exposure
- circumstances of exposure
- if possible, results of the source individual's blood test
- relevant employee medical records, including vaccination status

(Name of responsible person or department) provides the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

(Name of responsible person or department) will review the circumstances of all exposure incidents to determine:

- engineering controls in use at the time
- work practices followed
- a description of the device being used (including type and brand)
- protective equipment or clothing that was used at the time of the exposure incident (*gloves, eye shields, etc.*)
- location of the incident (*O.R., E.R., patient room, etc.*)
- procedure being performed when the incident occurred
- employee's training

(Name of responsible person) will record all percutaneous injuries from contaminated sharps in the Sharps Injury Log and the OSHA 300 Log of Occupational Injuries and Illnesses.

If it is determined that revisions need to be made, (Responsible person or department) will ensure that appropriate changes are made to this ECP. (*Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.*)

EMPLOYEE TRAINING

All employees who have occupational exposure to bloodborne pathogens receive training conducted by (Name of responsible person or department). (*Attach a brief description of the trainer's qualifications.*)

All employees who have occupational exposure to bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

- a copy and explanation of the standard
- an explanation of our ECP and how to obtain a copy

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- an explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident
- an explanation of the use and limitations of engineering controls, work practices, and PPE
- an explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
- an explanation of the basis for PPE selection
- information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge.
- information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- an explanation of the procedure 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 employer is required to provide for the employee following an exposure incident
- an explanation of the signs and labels and/or color coding required by the standard and used at this facility
- an opportunity for interactive questions and answers with the person conducting the training session.

Training materials for this facility are available at: _____.

RECORDKEEPING**Training Records:**

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years at (Name of responsible person or location of records).

The training records include:

- * the dates of the training sessions
- * the contents or a summary of the training sessions
- * the names and qualifications of persons conducting the training
- * the names and job titles of all persons attending the training sessions

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to (Name of responsible person or department).

Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1020, "Access to employee Exposure and Medical Records."

(Name of responsible person or department) is responsible for maintenance of the required medical records. These confidential records are kept at (list location) for at least the duration of employment plus 30 years.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to (Name of responsible person or department and address).

OSHA Recordkeeping

An exposure incident is recordable on the OSHA 300 Log if the case meets OSHA's Recordkeeping Requirements (29 CFR Part 1904). This determination and the recording activities are done by (Name of responsible person or department).

Sharps Injury Log

In addition to the 1904 Recordkeeping Requirements, all percutaneous injuries from contaminated sharps are also recorded in the sharps injury log. All incidents must include at least:

- the date of the injury
- the type and brand of the device involved;
- the department or work area where the incident occurred
- an explanation of how the incident occurred.

This log is reviewed at least annually as part of the annual evaluation of the program and is maintained for at least five years following the end of the calendar year that they cover. If a copy is requested by anyone, it must have any personal identifiers removed from the report.

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 myself.

Signed: (Employee's Signature) .

Date: _____

Establishment/Facility Name:

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29 CFR 1910.1030, OSHA's Bloodborne Pathogens Standard, in paragraph (h)(5) requires an employer to establish and maintain a Sharps Injury Log for recording all percutaneous injuries in a facility occurring from *contaminated* sharps. The purpose of the Log is to aid in the evaluation of devices being used in health care and other facilities and to identify problem devices or procedures requiring additional attention or review. This log must be kept in addition to the injury and illness log required by 29 CFR 1904. The Sharps Injury Log should include all sharps injuries occurring in a calendar year. The list must be retained for five years following the end of the year to which it relates. The log must be kept in a manner that preserves the confidentiality of the affected employee. [In addition to the above information, Minn. Stat. § 182.6555 recommends that the employee's training be noted and the employee's opinion about whether any other engineering, administrative, or work practice control could have prevented the injury and the basis for that opinion be noted as well.] This sample details the information that must be gathered for contaminated sharps injuries. The employer may use any format, layout, and means of maintaining the data (i.e., computer, paper, etc.) they deem appropriate for their facility.