
Purpose: This instruction establishes policies and provides clarifications to ensure uniform inspection procedures are followed when conducting inspections to enforce the Occupational Exposure to Bloodborne Pathogens Standard.

Scope: This instruction applies MNOSHA-wide.

References:


NOTE: Due to the length of these documents, copies have not been attached to this instruction. Paper copies are available for reference in each MNOSHA Area Office. In addition, these documents, as well as others mentioned in this instruction, are available on the Internet. Web site addresses for these additional resources may be found in Appendix A.


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.”


10. MNOSHA Instruction CPL 2-0.131, “Recordkeeping Policies and Procedures.”

Cancellation: This instruction cancels MNOSHA Instruction CPL 2-2.44D CH-1, dated June 10, 2000, including all appendixes.

A. BACKGROUND: In September 1986, Federal OSHA was petitioned by various unions representing health care employees to develop an emergency temporary standard to protect employees from occupational exposure to bloodborne diseases. Federal OSHA decided to pursue the development of a Paragraph 6(b) of the Act standard and published a proposed rule on May 30, 1989.

1. Federal OSHA also concluded that the risk of contracting the hepatitis B virus (HBV) and human immunodeficiency virus (HIV) among members of various occupations within the health care sector required an immediate response and therefore issued Federal OSHA Instruction CPL 2-2.44, January 19, 1988. That instruction was canceled by CPL 2-2.44A, August 15, 1988, and subsequently, CPL 2-2.44B was issued February 27, 1990.

Minnesota OSHA issued Division Policy 132 in December 1987 to provide guidelines for the inspection and elimination of worker exposure to bloodborne diseases. Division Policy 132 was subsequently updated in 1988 (Division Policy 132A) and 1990 (Division Policy 132B) incorporating Federal OSHA guidelines, recommendations of the Centers for Disease Control (CDC), and requirements of the Minnesota Employee Right-to-Know Act.

2. 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 HBV which causes hepatitis B, a serious liver disease; HIV, which causes Acquired Immunodeficiency Syndrome (AIDS); hepatitis C virus; human T-lymphotrophic 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.


3. On September 9, 1998, federal OSHA published a Request for Information (RFI) on engineering and work practice controls used to eliminate or minimize the risk of occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps. The responses indicated that safer medical devices along with training are the most effective means of reducing injury rates. A summary of the comments received in response to the RFI was published in March 1999. On November 5, 1999, federal OSHA issued CPL 2-2.44D. It incorporated information from the RFI, past interpretations and several CDC guidelines on vaccination and post-exposure prophylaxis. MNOSHA Instruction CPL 2-2.44D was revised on February 29, 2000, to reflect changes in the federal directive.
4. On June 10, 2000, new 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.

5. 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, with an effective date of April 18, 2001. MNOSHA adopted the revised Bloodborne Pathogens standard on October 1, 2001. Amendments to this directive reflect these changes in the Bloodborne Pathogens standard.

B. 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.

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 other potentially infectious materials (OPIM).
   c. A fatality/catastrophe inspection is conducted as the result of occupational exposure to blood or OPIM.

C. 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), and head of central services, environmental services, and/or housekeeping shall 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, shall 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.]

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 OMT Director.

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.

D. 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 other potentially infectious material (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 2-0.131, “Recordkeeping Policies and Procedures,” for more recordkeeping information.]
E. MULTI-EMPLOYER WORKSITES: The following general citation guidelines apply in multi-employer worksites (See the Field Compliance Manual [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 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.

F. 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 other potentially infectious material;
      
      * 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 other potentially infectious materials, 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);
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, Creutzfeld-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 Centers for Disease Control and Prevention (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. (MMWR: Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease, October 16, 1998/Vol. 47/No. RR-19). [See Appendix A for the Web site address.]

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 other potentially infectious materials, although OSHA encourages employers to offer follow-up procedures to these employees in such cases.

g. "OTHER POTENTIALLY INFECTIOUS MATERIALS (OPIM)". Coverage under this definition also extends to blood and tissues of animals who 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 shall 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 shall be cited in addition to paragraph (c). These should normally be classified as serious violations.

The content of the Exposure Control Plan shall 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.

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) shall 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 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 shall 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 expands 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 [See 56 Fed. Reg. 64114-15 (1991).] 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: 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.

**NOTE:** 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 F (Engineering Control Evaluation Forms) and Appendix A (Web Site Resource List) have been provided to assist in the evaluation of these devices.

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 (FDA Safety Alert, April 16, 1992 and Draft Supplementary Guidance on the Content of Premarket Notification 520(K) Submissions for Medical Devices with Sharps Injury Prevention Features, March 1995) 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;
d. The safety feature is as simple as possible, and requires little or no training to use effectively.

INSPECTION GUIDELINES: OSHIs shall 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 records can better direct the OSHI to areas that are more likely to be sites of exposure incidents. Data from the Uniform Needlestick and Sharp Object Injury Report, 77 Hospitals, 1993-1995 (Exposure Prevention Information Network EPINet at http://www.med.virginia.edu/-epinet/soio.html) show that injuries occurred, in order of frequency, in patient rooms, operating rooms, 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. Furthermore, the report finds that an overwhelming majority (93%) of the injuries were caused by items that were not a safe design with a shielded, recessed, or retractable needle.

The OSHI shall 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 shall 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-FDA-1088. 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 shall 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).

CITATION GUIDELINES: Paragraph (d)(2) shall be cited for failure to use engineering/work practice controls to eliminate or minimize employee exposure. While employers do not automatically have to institute the most sophisticated engineering controls (e.g., needleless IV connectors, shelf-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. OSHIs shall 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. Appendix F provides some examples of forms an employer might use for evaluation of engineering controls.

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 are required for the engineering control to be effective. The OSHI shall evaluate the training in accordance with paragraph (g)(2)(vii). A citation for the appropriate paragraph of (g)(2)(vii) should be grouped with paragraph (d)(2)(i) if the OSHI determines that employees were not using effective engineering controls because of inadequate
training. Examples of effective engineering controls can be found in several resources linked on Federal OSHA’s Needlestick Injuries page: http://www.osha-slc.gov/SLTC/needlestick/index.html.

**CITATION GUIDELINES:** Citations for paragraph (d)(2)(i) shall be issued when these criteria are met:

If no engineering controls are being used to eliminate or minimize exposure, a citation shall be issued.

If a combination of engineering and work practice controls used by the employer does not eliminate or minimize exposure, the employer shall be cited for failing to use engineering and work practice controls.

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.

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) shall 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 hematron splash shield is broken or missing, paragraph (d)(2)(ii) shall be cited if an effective monitoring system would have uncovered the deficiency.

Additionally, if there is unprotected employee exposure, paragraph (d)(2)(i) shall 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) shall be cited unless the employer demonstrates that handwashing facilities are not feasible. If infeasibility is demonstrated, paragraph (d)(2)(iv) shall 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) shall be cited. This may be grouped with the pertinent training paragraphs of (g)(2) if employees have not been adequately trained in handwashing procedures.

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) shall 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.

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.

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.

CITATION GUIDELINES: Deficiencies of paragraphs (d)(2)(iv) through (x) shall be cited in conjunction with the appropriate paragraph of (g)(2) if inadequate training exists.
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 shall normally be issued for paragraph (d)(2)(xi) if cleaning procedures unnecessarily cause splashing, spraying, spattering, and generation of droplets of blood or OPIM.

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.

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 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 must 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.

**INSPECTION AND CITATION GUIDELINES:** OSHIs shall 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 shall document that equipment is being shipped and/or serviced.

OSHIs shall 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)].

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 these devices shall be cited as a violation of paragraph (d)(3)(ii). In addition, paragraph (g)(2)(vii)(G) which requires employees to be trained in the types, proper use, location, etc., of the PPE shall be cited if inadequate training exists. 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-F1819-98, ASTM-F-1671-97b, and ASTM-F1670-97).

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:

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 shall 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) shall be cited if PPE is not being used properly. Improper use would include wearing the wrong PPE (e.g., wearing a laboratory coat with a rubber apron is needed) or wearing the wrong size PPE.

In addition, paragraph (g)(2)(vii)(G) shall be cited if the employees have not been adequately trained.
Unless all elements of the exemption, including the documentation requirement are met, the employer shall not receive the benefit of this exemption and paragraph (d)(3)(ii) shall 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 and must be approved by the FDA for use as a medical glove (e.g., surgical glove, examination glove, etc.). OSHIs shall 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 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" (Publication No. 97-135) published in June 1997; Directorate of Technical Support, Technical Information Bulletin: Potential for Allergy to Natural Rubber Latex Gloves and other Natural Rubber Products," http://www.osha-slc.ogv/html/hotfoias/tib/TIB19990412.html.

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) shall 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 other potentially infectious material, 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 other potentially infectious materials 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) shall 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 shall 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)\ shall not be cited. Rather, the other paragraphs of \(d)(3)\ shall 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