

BLOODBORNE PATHOGEN EXPOSURE CONTROL



NAVY AND MARINE CORPS PUBLIC HEALTH CENTER
BUREAU OF MEDICINE AND SURGERY

BLOODBORNE PATHOGEN EXPOSURE CONTROL

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FOREWORD

CAPT Mark Hammett, MC, USN, served as Department Head of Occupational and Environmental Medicine during the preparation of this Manual. John Muller, MD, MPH, served as primary author of the Manual. Loraine O'Berry, RN, COHN-S, also contributed to the authoring and editing of this Manual.

This document will be regularly updated. The latest version may be found on the Navy and Marine Corps Public Health Center Web site at the following Internet address:

http://www-nmcphc.med.navy.mil/Occupational_Health/

Reviewed and Approved

A handwritten signature in cursive script that reads "M. J. Macinski". The signature is written in black ink and is positioned above a horizontal line.

M. J. MACINSKI
Captain, Medical Service Corps
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Notification of Changes

Changes were made to this Manual on February 28, 2011. Loraine O’Berry was given due credit on the signature page. To facilitate locating a document difficult to find on the CDC Web site, a link was added to reference (k).

Changes were made to this Manual on March 3, 2011. Paragraph 3.2.4 “physician” was changed to “operator.” Paragraph 3.2.6 single use items will not be re-used. Paragraph 3.3.1.2 disposal of single use items was clarified. Paragraph 3.3.3.4 was amended to add personnel overseeing large spills rather than only housekeeping who may be contacted after a large spill. Paragraph 3.5.4.1 wording was added to clarify. Paragraph 3.5.3 wording was added to clarify that those sign standards only apply to certain research laboratories.

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Chapter 1. Definitions

- a. **Blood.** Blood, blood components, and unsterile products made from blood.
- b. **Bloodborne Pathogens.** Pathogenic viruses and microorganisms that may be present in human blood and that may cause disease in humans. These pathogens include, but are not limited to, human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV).
- c. **Blood or Other Potentially Infectious Material (BOPIM).** Any potentially infectious tissue or biological waste, including blood and any part or fluid of the human body other than sweat and dry skin, including amniotic fluid, body tissues, cerebrospinal fluid, organs, pericardial fluid, peritoneal fluid, pleural fluid, saliva (in dental procedures), semen, synovial fluid, vaginal secretions, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
- d. **Contaminated.** The presence or the reasonably anticipated presence of BOPIMs on an item or surface.
- e. **Contaminated Laundry.** Laundry or linens that have been soiled with BOPIMs.
- f. **Contaminated Sharps.** Any devices contaminated with BOPIMs having points or edges acute enough to pose a puncture or laceration hazard.
- g. **Decontamination.** The physical or chemical removal, inactivation, or destruction of bloodborne pathogens from a surface or item to the point where it is no longer capable of transmitting infectious particles.
- h. **Designated Emergency Department.** The predetermined, identified location where any health care worker (HCW) exposed to BOPIMs is to receive initial care.
- i. **Disinfection.** The killing or inactivating of pathogenic microorganisms.
- j. **Engineering Controls.** Systems (e.g., the use of safety needles or sharps disposal containers) that reduce or remove the potential for exposure to bloodborne pathogens.
- k. **Exposure Incident.** Eye, mucous membrane, non-intact skin, or parenteral contact with BOPIMs from another person.
- l. **Health Care Worker (HCW).** Anyone, including paid staff, volunteer and student, that has the potential to be exposed to BOPIMs during the course of performing his duties.
- m. **Occupational Exposure.** Eye, mucous membrane, non-intact skin or parenteral contact with BOPIMs resulting from the performance of required duties.

- n. Personal Protective Equipment (PPE). Specialized clothing or equipment worn by personnel for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) are not intended to function as protection against hazards and are not considered to be personal protective equipment.
- o. Post-exposure Point of Contact (PEPOC). This is the one person or place that is designated as the first stop for any personnel exposure to BOPIM. At the discretion of the MTF, it may be an emergency room, a clinic, or a person; however, the PEPOC must be able to fulfill the responsibilities laid out in Section C3.8.1.2.
- p. Regulated Waste. Liquid or semi-liquid BOPIMs, contaminated items that would release BOPIMs in a liquid or semi-liquid state if compressed, items that are caked with dried BOPIMs and are capable of releasing these materials during handling, contaminated sharps, pathological and microbiological wastes containing blood or other potentially infectious waste materials, and discarded live virus vaccines (e.g., polio vaccine), whether expired or not.
- q. Safe Pass Zone. A designated area where sharps are passed from one HCW to another.
- r. Sharps. Any object that can penetrate the skin, including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.
- s. Source Individual. Any individual, living or dead, whose BOPIMs may be a source of occupational exposure to personnel.
- t. Standard Precautions. Hand hygiene, use of gloves, gown, mask, eye protection or face shield, depending on the anticipated exposure, and safe injection practices to prevent skin and mucous membrane transmission of microorganisms resulting from contact with blood and body fluids. All human blood and certain human body fluids are treated as if infectious for HIV, HBV and other bloodborne pathogens. (Standard Precautions combine the major features of what are called “Universal Precautions” and “Body Substance Isolation.”)
- u. Sterilize. The destruction of all microbes and spores on an object.
- v. Work Practice Controls. Procedures that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting the recapping of needles by a two-handed technique).

Chapter 2. Procedures

C2.1. Risk/Exposure Determination

It is required that employers perform a risk assessment identifying which HCWs may incur occupational exposure to BOPIMs. This assessment will include all job classifications in which active duty, civilian, students, and volunteers may be expected to incur such occupational exposure, regardless of frequency (e.g., surgeons, housekeeping, etc.). This exposure determination shall be made without regard to the use of personal protective equipment.

Chapter 3. Implementation

The bloodborne pathogens program will consist of primary prevention (preventing exposure from occurring) and secondary prevention (preventing development of disease in the event of an exposure). All blood or potentially infectious material will be considered infectious. Standard precautions will be observed to minimize the potential for contact with BOPIMs. Engineering and work practice controls will be utilized where practical to eliminate or minimize exposure of HCWs. When the potential for occupational exposure remains unavoidable after institution of these controls, PPE and HCW vaccination shall also be utilized. In the event of an exposure, a structured response plan will be immediately implemented.

C3.1. Engineering Controls

Engineering controls will be examined and maintained on a regular schedule. Infection Control inspections will be conducted in all departments by department and command staff (e.g., Infection Control and/or Safety), with results being reviewed for performance improvement initiatives at the department level.

C3.1.1. Sharps Disposal Containers

Sharps containers will be puncture resistant, leak proof on the sides and bottom, closable, labeled with the biohazard symbol or color-coded red, easily accessible to personnel and located as close as feasible to the immediate area (e.g., in every room and next to every bed) where sharps are used or can be reasonably anticipated to be found (including laundries), maintained upright throughout use, and replaced routinely and not be allowed to overfill (no more than $\frac{3}{4}$ full). The inlet opening of wall-mounted sharp disposal containers shall be 52-56 inches above the standing surface of the user or 38-42 inches above the floor on which the chair of a seated user rests. Containers must be in holders or brackets as recommended by the manufacturer to ensure safety. For disposal, sharps containers will be sealed shut with heavy duty tape and placed inside a hard-sided container lined with a red biohazard bag. Further guidance is available in reference (a).

C3.1.2. Mechanical Devices

Mechanical devices such as brush and dustpan, tongs or forceps will be used for picking up broken glass. Picking up broken glassware directly with hands is strictly prohibited.

C3.1.3. Safety Needle Systems

In accordance with reference (b), input will be solicited from non-managerial HCWs responsible for direct patient care, who are potentially exposed to injury from contaminated sharps, in the identification, evaluation and selection of effective engineering and work practice controls. In all situations and clinical settings where needles and related devices are being used, safety-type needles and devices will be mandatory.

C3.1.4. Hand Washing Facilities

Hand soap and running water will be readily accessible (i.e., in every room where sharps are handled) to all HCWs with potential exposure to BOPIMs. Alcohol-based

waterless hand cleaners may supplement, but not replace, hand washing facilities, except where hand washing with soap and running water is not feasible (e.g., combat field conditions with inadequate water supply).

C3.1.5. Disinfectants

All disinfectants must be approved by the Hazardous Materials (HAZMAT) Manager, Safety Manager, and Infection Control Coordinator. If hospital disinfectant is not available and with approval of the HAZMAT manager and Infection Control Coordinator, a solution of 1:10 bleach mixed within the prior 24 hour period may be used as a disinfectant. Bleach solution bottles will be labeled with date and time of mixture; unlabeled bleach solutions should not be used.

C3.1.6. Designated Emergency Department

The Designated Emergency Department, if at all possible, is to be a single location, rather than a clinic during certain hours and the emergency room at other hours. While the Designated Emergency Department is not necessarily the emergency room of the facility, it must be operational during all working hours (i.e., at all times when a HCW may experience an exposure to BOPIMs). Thus, the emergency room is usually the best choice for the Designated Emergency Department (rather than a clinic with limited hours).

C3.1.7. Exposure Protocol

Each facility will establish a Bloodborne Pathogen Exposure Protocol that meets or exceeds all requirements in references (b) and (c), and is consistent with paragraph C3.7.

C3.2. Work Practice Controls

Work practice controls will be the primary means of eliminating or minimizing HCW exposures.

C3.2.1. Hand Washing

HCWs with potential exposure to BOPIMs will wash their hands with soap and running water immediately and thoroughly in the following circumstances:

- a) before and after direct contact with patients,
- b) immediately after protective gloves are removed,
- c) after any contaminated procedure,
- d) before and after performing minor or invasive procedures, and
- e) before eating.

C3.2.2. Alcohol-Based Waterless Hand Cleaner

Per reference (d), alcohol-based waterless hand cleaner may be used when hands are not visibly soiled or known to be contaminated with BOPIMs.

C3.2.3. Sharps

Contaminated needles and other contaminated sharps will not be bent, removed from hubs, sheared, or purposely broken. Recapping is permitted only if there is no

alternative, such as medication titration, nuclear medicine isotope injection or blood gas analysis. If needle recapping is required, a one-handed "scoop" technique or a mechanical device must be used.

C3.2.4. Safe Pass Zones

Operating rooms, labor and delivery and treatment areas where sharps are frequently passed from operator to assistant or technician shall designate and clearly label areas where transfer of sharps is always done (e.g., over a dedicated table, a marked-off corner of the room, etc.).

C3.2.5. Reusable Sharp Instruments

Contaminated sharp instruments that are designed to be reusable will be placed as soon as possible after use into an appropriate container prior to cleaning and transport. This container must be puncture resistant, leak proof, and labeled or color-coded.

C3.2.6. Single Use Instruments

Instruments which have been designated by the manufacturer as single use items will not be processed for re-use.

C3.2.7. Work Area Restrictions

HCWs are prohibited from eating, drinking, applying cosmetics, smoking, or handling contact lenses in any work area where there is a reasonable likelihood of exposure to BOPIMs. Food and beverages are not to be kept in refrigerators, freezers, cabinets, or on shelves, counter tops or bench tops where BOPIMs are present. Refrigerators in such areas are to be labeled as not for storage of food or drink (e.g., "No food or drink").

C3.2.8. Procedure Restrictions And Other Restrictions

C3.2.8.1. Mouth pipetting or mouth suctioning

Mouth pipetting or mouth suctioning of blood or body fluids (BBFs) is prohibited.

C3.2.8.2. Splashing or droplet generation

All procedures will be conducted in a manner that will minimize splashing, spraying, splattering and the generation of droplets of BBFs. Methods which will be employed to accomplish this include, but are not limited to:

- a) covering of all centrifuges
- b) utilization of dental dams in dental procedures that generate aerosols, and
- c) the use of barrier shields in the laboratory where splashing is reasonably anticipated.

C3.2.8.3. Storage of items under sinks

Only cleaning supplies will be permitted to be stored under sink areas. No patient care items or paper products will be stored under sinks.

C3.2.9. Dental

Dentistry and dental procedures will follow the guidelines set forth in reference (e).

C3.2.10. Specimens

C3.2.10.1. Containers (primary containers)

BOPIMs will be in containers suitable to prevent leakage during the collection, handling, processing, storage, and transport of the specimen. Containers that are breakable or that cannot be securely closed will be placed in secondary containers (e.g., lock-type bags, foam boxes), not in lab coat pockets or rolling freely on transport tables. Containers will be labeled with the biohazard symbol or color-coded red.

C3.2.10.2. Secondary containers

Any specimen that could puncture the primary container will be placed within a secondary, puncture-resistant container. If contamination of the outside of the primary container occurs, this container should be placed in a secondary container which prevents leakage during the handling, processing, storage, transport, or shipping of the specimen. The secondary container will be labeled or color-coded as well.

C3.3. Cleaning, Decontaminating, and Disinfecting

C3.3.1. Contaminated Equipment

C3.3.1.1. All items

Prior to servicing, re-use, shipment, or transfer, equipment that has become contaminated with BOPIMs shall be decontaminated by department personnel. Any equipment that cannot be fully decontaminated prior to shipment or transfer will be tagged with a biohazard label and a description of the circumstances.

C3.3.1.2. Single-use items

All single-use sharps that have been exposed to BOPIMs will be handled as regulated waste (see below). Other single-use items soaked with BOPIMs or that could release BOPIMs when compressed are also considered regulated waste and will be disposed of according to reference (g) instructions for infectious waste. Single-use gloves, gowns, sheets and towels not soaked with BOPIMs will be discarded as general waste.

C3.3.1.3. Disinfecting or sterilizing of reusable equipment and supplies

Soiled instruments will be rinsed and scrubbed in cold water and soaked in an approved disinfectant detergent solution for the specified manufacturer's time recommendations before sterilizing.

C3.3.2. Decontamination Location

Decontamination will be performed in a soiled utility area in the respective department. Cleaning of contaminated instruments must not be performed in sinks designated for washing hands. Disinfection is a clean procedure. It will be completed in a clean controlled area, never in the contaminated area, the dirty utility room or at the nurse's station.

C3.3.3. Area And Surface Decontamination

C3.3.3.1. Workspaces

Department Heads are responsible for maintaining their workspaces in a clean and sanitary condition.

C3.3.3.2. Decontamination procedures

Decontamination procedures will be written by the individual with oversight of housekeeping, in coordination with the Infection Control Coordinator. Specific procedures will be based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks being performed.

C3.3.3.3. Disinfectants

A disinfectant will be used to decontaminate all contaminated surfaces after completion of a procedure, and immediately (or as soon as feasible) after any spill of BOPIMs.

C3.3.3.4. Large volume spills

If a large volume (> 2 liters) of BOPIM's is spilled, secure the area immediately and contact housekeeping or personnel designated to oversee large spills.

C3.3.3.5. After hours spills

After housekeeping working hours, BOPIMs spills will be cleaned by the personnel on duty where the spill occurred who have been appropriately trained in clean-up procedures.

C3.3.3.6. Supplies

All supplies used during decontamination will be discarded as regulated waste.

C3.3.4. Bed Linen

Soiled linen will be handled as little as possible, with minimal agitation to prevent gross contamination to patients and/or persons handling the linen. Linen heavily contaminated or saturated with BOPIMs will be placed into an appropriately labeled laundry container. Transport of soiled linen to the linen department will be in a leak-proof container and handled using Standard Precautions. Clean linen will be stored and transported to each department in such a manner as to ensure that it is separate from soiled linen and that minimal microbial contamination from surface contact or airborne deposition is maintained. For further information, see reference (f).

C3.4. Regulated Waste Management

C3.4.1. Management of Regulated Waste

Management of regulated waste will be in accordance with reference (g).

C3.4.2. Regulated Waste Containers

Regulated waste containers will be identified by the international biological hazard symbol and/or be red in color. Outer containers will be rigid, leak-resistant and

puncture-resistant. Reusable outer containers shall be constructed of smooth, easily cleaned materials, and shall be decontaminated after each use.

C3.4.3. Waste Container Storage

Containers will be stored in a soiled utility room that will be labeled with the biohazard symbol and has restricted access. Regulated waste will be removed from the work site at least every 24 hours or more often as needed. Disposal of regulated waste will be done in accordance with all appropriate regulations.

C3.5. Labels and Signs

C3.5.1. Labels

Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material, and other containers used to store, transport or ship blood or other potentially infectious materials. Such labels shall have the following characteristics:

- a) label color shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color,
- b) labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal, and
- c) labels required for contaminated equipment shall be in accordance with this section and shall also state which portions of the equipment remain contaminated.

C3.5.2. Label substitutions, exemptions and exceptions

Red bags or red containers may be substituted for labels. Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from these labeling requirements. Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement. Regulated waste that has been decontaminated need not be labeled or color-coded.

C3.5.3. Signs (only applies to certain facilities)

The employer shall post signs at the entrance to work areas of research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV, which shall bear the following legend (reference (b)).

- (Name of the Infectious Agent)
- (Special requirements for entering the area)
- (Name, telephone number of the laboratory director or other responsible person.)

These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

C3.5.4. Training

C3.5.4.1. Personnel requiring training

Employers shall ensure that all HCWs with potential for occupational exposure to BOPIMs participate in a training program which must be provided at no cost to the HCW and during working hours (reference (b)).

C3.5.4.2. Timing of training

All staff members will receive adequate training at the time of initial assignment to tasks where occupational exposure may take place and prior to performing any task with potential exposure to BOPIMs; staff members will receive annual refresher training thereafter. Housekeeping staff are specifically included.

C3.5.4.3. Annual training

Annual training for all HCWs shall be provided within one year of their previous training.

C3.5.4.4. Additional training

Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the HCW's occupational exposure. The additional training may be limited to addressing the new exposures created.

C3.5.4.5. Training format

Material appropriate in content and vocabulary for the education, literacy, language and hearing capability of HCWs shall be used.

C3.5.4.5.1. Language

If English is the second language of staff members, employers shall ensure that training is completely understood (by questioning staff members or by providing translation).

C3.5.4.5.2. Hearing-impaired

Employers shall ensure that hearing-impaired staff receive training tailored to their need (e.g., using subtitles, written materials, increased volume, etc.).

C3.5.5. Training Content

Training will be done by an instructor knowledgeable on the subject matter as it relates to the workplace that the training will address and immediately available for questions and will include the following items:

- a) the epidemiology of bloodborne diseases, including modes of transmission and a general overview of prevalence, incidence, symptoms, treatment, and prognosis,
- b) an explanation of the modes of transmission of bloodborne pathogens, including procedures which might cause exposure to BOPIMs at the facility,
- c) this exposure control plan and the means to obtain a copy,

- d) an explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to BOPIMs,
- e) the signs, labels and color-coding of BOPIMs and sharps waste containers at the facility,
- f) personal protective equipment available at the facility,
- g) an explanation of the use and limitations of methods that will prevent or reduce exposure to BOPIMs, including appropriate engineering controls, work practices, and personal protective equipment,
- h) an explanation of the basis for selection of PPE, including information on the types, proper use, location, removal, handling, decontamination and disposal of PPE,
- i) information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge,
- j) information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials,
- k) 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,
- l) information on the post-exposure evaluation and follow-up that the employer is required to provide for the HCW following an exposure incident,
- m) an opportunity for interactive questions and answers with the person conducting the training session, and
- n) an explanation of the signs and labels and/or color-coding required by paragraph C3.5.

C3.5.6. Training Records

Training records shall be maintained for 3 years from the date on which the training occurred and shall include the following information:

- a) the dates of the training sessions,
- b) the contents or a summary of the training sessions,
- c) the names and qualifications of persons conducting the training, and
- d) the names and job titles of all persons attending the training sessions.

Per reference (b) , HCW training records required by this instruction shall be provided upon request for examination and copying to HCWs, to HCW representatives, to the Director of the National Institute for Occupational Safety and Health and to the Assistant Secretary of Labor for Occupational Safety and Health or their designated representatives.

C3.5.7. Laboratory And Production Facilities Workers

HCWs in HIV or HBV research laboratories and HIV or HBV production facilities shall have these additional requirements.

C3.5.7.1. Proficiency

The employer shall assure that HCWs demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

C3.5.7.2. Experience

The employer shall assure that HCWs have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

C3.5.7.3. Progression of training

The employer shall provide a training program to HCWs who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that HCWs participate in work activities involving infectious agents only after proficiency has been demonstrated.

C3.5.8. Contractors

Training requirements and documentation for contractors performing tasks with potential exposure to BOPIMs will be the same as for HCWs. Responsibility for completion and documentation of training rests with the contractor, unless specified in the contract.

C3.6. Personal Protective Equipment

C3.6.1. Gloves

C3.6.1.1. Use of gloves

Disposable (single-use) gloves must be changed between all patient contacts. If gloves become contaminated, torn, or punctured, they must be changed, and hands must be washed. Gloves will be worn for all vascular access procedures and for all other procedures with potential exposure to BOPIMs, and when handling soiled linen. After each procedure, gloves will be removed and discarded in a labeled contaminated medical waste receptacle. After glove removal, hands will be washed with soap and running water or alcohol-based hand cleaner.

C3.6.1.2. Cleaning, decontamination, and sterilization of gloves

Gloves impermeable both to BOPIMs and the disinfectant shall be worn whenever decontamination procedures are being conducted. Heavier, puncture-resistant gloves will be used for cleaning of all potentially contaminated multi-use sharp instruments prior to their sterilization. These heavier utility gloves may be reused after proper decontamination, provided the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or compromised ability to function as a barrier.

C3.6.2. Masks And Eye Protection.

Masks, in combination with eye protection devices (such as splash goggles, glasses with solid side shield, or chin length face shields) will be worn whenever

splashes, spray, splatter, or droplets of BOPIMs may be generated and eye, nose, or mouth contamination can be reasonably anticipated. These procedures include, but are not limited to:

- a) autopsy,
- b) changing linens soaked with BOPIMs,
- c) cleaning large spills of BOPIMs,
- d) cleaning whirlpool equipment,
- e) dental procedures,
- f) endoscopies,
- g) hemorrhage control,
- h) lab procedures with a potential for splashing,
- i) labor and delivery,
- j) paracentesis,
- k) suctioning,
- l) surgery, and
- m) thoracentesis or thoracotomy.

C3.6.3. Protective Coats, Gowns And Aprons

Procedures requiring a mask and eye protection that reasonably can be anticipated to result in splashing sufficient to penetrate unprotected clothing also require use of leak-proof barrier clothing. After use, such clothing shall be removed by the HCW, handled using Standard Precautions, and discarded as contaminated waste (if disposable) or laundered by the employer (not sent home with the HCW).

C3.6.4. Scrubs

Scrubs do not provide a leak-proof barrier, and should be covered with leak-proof barrier clothing. If any clothing becomes contaminated, it should be removed in such a way as to minimize exposure potential. All hospital-owned scrubs will be laundered by the facility.

C3.6.5. Personal Clothing

Personal clothing that has become contaminated by BOPIMs will be handled as contaminated and placed into an appropriate bag for laundry or dry cleaning. The HCW will be reimbursed for the cost of the clothing if cleaning is not feasible. Hospital scrubs or other suitable clothing will be made available to HCWs on a loan-out basis.

C3.6.5.1. Minor spills and splashes

If an HCW prefers, minor spills and splashes of BOPIMs on personal clothing (resulting in an area of dampness or soiling less than two inches in greatest diameter) may be treated with a clothing-safe disinfectant prior to leaving the workplace. While this does not eliminate the possibility of exposure of the HCW or his household to BOPIMs, the actual risk is thought to be minimal, per reference (h).

C3.6.5.2. Providing scrubs

The most effective method to reduce risk of exposure to BOPIMs from soiled clothing leaving the MTF is for all HCWs with potential BOPIMs exposure to change into/out of scrubs on arriving/departing from work. Facilities with adequate resources should consider such a possibility if there is significant risk of clothing contamination by BOPIMs with more aggressive pathogens (e.g., methicillin-resistant *staph. aureus*, variola, etc.).

C3.7. Immunization

C3.7.1. Hepatitis B Vaccine

Hepatitis B vaccine shall be offered to all HCWs as a condition of employment and prior to performing any task with potential exposure to BOPIMs, unless the HCW has documentation of a completed hepatitis B immunization series or has a positive Hepatitis B surface antibody. Immunity testing will be offered to HCWs who do not have documentation of a completed hepatitis B immunization series (reference (i)).

C3.7.2. Hepatitis B Vaccine Declination

HCWs without documentation of hepatitis B immunity or of previous vaccination that decline hepatitis B vaccination shall be required to sign a statement with the text in Appendix A: Hepatitis B Immunization Declination Form.

C3.8. Closed Loop Post-exposure Planning

Each MTF should establish, in writing, a system wherein all aspects of post-exposure care and follow-up are clearly described and roles are designated.

C3.8.1. Post-exposure Point of Contact (PEPOC)

C3.8.1.1. Designating the PEPOC

Each MTF will designate, in writing, a PEPOC that meets the requirements of definition (o).

C3.8.1.2. Responsibilities of the PEPOC

- a) The PEPOC will be available at all times that the MTF is rendering patient care.
- b) The PEPOC is responsible to be knowledgeable of all aspects of bloodborne pathogens exposure control programs applicable to the MTF (i.e., this manual as well as local and national programs and requirements).
- c) The PEPOC is responsible to ensure that all initial elements of the post-exposure response plan in C3.9.3. are followed (particularly that the injured worker immediately goes to the designated emergency department, laboratory specimens are obtained and analyzed stat, and the decision to begin PEP is made within 4 hours), and that the Occupational Health Clinic is notified of the incident.
- d) The PEPOC is responsible to have or provide contact information of the infectious disease specialist on call to the treating physician if requested.

- e) The PEPOC is responsible to ensure that all initial evaluations, lab work, and consent forms are completed in a confidential manner.

C3.8.2. Source Patient Contact

Each MTF should designate, in writing, the person responsible to inform the source patient of the incident and the necessity to obtain the patient's blood as soon as possible. For example, the MTF could designate a single individual (such as the Infection Control Coordinator or the Nursing Supervisor), or the worker's supervisor, or, when a worker from a non-clinical department such as housekeeping is exposed, the cognizant nursing supervisor. This person will be responsible to contact the source individual, obtain consent from the patient (if not already obtained), and see that a rapid HIV test on the source patient's blood is done stat. All persons so designated must be adequately trained so that rapid HIV results are available as soon as possible.

C3.8.3. Follow-up Tracking

It is recommended that a follow-up system be established to track exposures and verify that Occupational Health Clinic follow-up was done. As Safety and the Infection Control Committee (if one exists) are likely to be involved, one or both of them are suggested to be considered for that role.

C3.9. Post-exposure Response Plan

In accordance to reference (b), following a report of an exposure incident, the employer shall make immediately available to the exposed HCW a confidential medical evaluation and follow-up, including at least the elements in the following sub-paragraphs. Local policies must reflect the worker's requirements to immediately report an exposure and the local procedures for risk assessment and treatment. It is recommended that exposed HCWs be seen in the Emergency Department. For facilities where an Emergency Department is not available arrangements should be made with nearby medical facilities to ensure assessments are conducted in compliance with this policy.

C3.9.1. Initial Reporting

HCWs with an actual or suspected exposure to BOPIMs are required to report immediately (within 20 minutes) to the Designated Emergency Department for initial evaluation and treatment. The Post-exposure Coordinator will be notified immediately and the Occupational Health Clinic will be notified as soon as possible.

C3.9.2. Bloodborne Pathogen Exposure Protocol

All HCWs exposed to BOPIMs will be entered into the Bloodborne Pathogen Exposure Protocol.

C3.9.3. Evaluation And Treatment

The evaluation and treatment of HCWs exposed to BOPIMs will include the following.

- a) The route of exposure, the circumstances under which the exposure incident occurred and the type of sharp device used (if applicable) shall be documented.

- b) The source individual shall be identified, unless identification is not feasible or is prohibited by state or local law.
- c) Unless the source individual is already known to be positive, his or her blood shall be tested as soon as possible (within 1 hour) after the exposure. Testing shall include rapid HIV as well as non-rapid HIV, HBV, and HCV.
- d) Consent for testing will be obtained from all civilian “source” individuals. If consent is not obtained, the employer shall document that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.
- e) If the source individual refuses testing, the source will be considered to be positive.
- f) The results of the tests of the source individual will be made available to the exposed HCW, and the HCW shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
- g) The exposed HCW’s blood will be collected as soon as feasible. After consent is obtained, the collected blood will undergo baseline testing for HBV, HCV and HIV, unless the status is already known (i.e., by previously testing positive).
- h) If a civilian HCW consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the HCW elects to have the baseline sample tested, such testing shall be done as soon as feasible.
- i) The blood of military HCWs will be tested (consent is unnecessary).
- j) If the source is known to be infected with other pathogens that potentially may be bloodborne (e.g., parasites such as *Trypanosoma cruzi* and *Leishmania sp.*, viruses such as human T-lymphotropic virus type I/II, etc.), expert consultation should be sought regarding the appropriate modifications to baseline and serial testing and consideration should be given to testing the exposed HCW for these at baseline.
- k) The HCW will be offered post-exposure prophylaxis (PEP) as available in accordance with current guidelines as recommended by the U.S. Public Health Service or as modified by expert Infectious Disease consultation within 4 hours after the exposure. Assistance is available from the National Clinicians’ Post-Exposure Prophylaxis Hotline (PEpline) is 888-448-4911 (reference (j)).
- l) Unless the exposure is determined to be low-risk for hepatitis B (either because the source is known to be negative or because the event was unlikely to involve the actual transfer of infectious particles to mucous membranes or broken skin), if the exposed person’s HBV immunity or immunization status is not known, he /she will be offered hepatitis B immune globulin and the initial dose of hepatitis B vaccine. If HBV testing of the exposed person

subsequently confirms no evidence of immunity, the full series of hepatitis B vaccination will be offered (reference (j)).

- m) The HCW will be given appropriate counseling concerning post-exposure precautions. The HCW will also be given information on potential illnesses to be alert for, with instructions to report any related symptoms to appropriate personnel.
- n) All exposed HCWs will be given the Web address of reference (k) or its update, or, if they have no ready Internet access, the printed form of that document.
- o) All exposed HCWs will be scheduled for follow-up with the Occupational Health Clinic within 7 days. (In no case shall initiating PEP be delayed until the follow-up visit.)

C3.9.4. Information Given To Healthcare Providers

The healthcare providers performing the emergent and follow-up evaluations of exposed HCWs should be given the following information:

- a) a copy of this regulation,
- b) a description of the exposed HCW's duties as they relate to the exposure incident,
- c) documentation of the route of exposure and circumstances under which they occurred,
- d) results of blood tests of the source individual, if available, and
- e) all medical records relevant to appropriate treatment of the individual which are the employer's responsibility to maintain, including vaccination status.

C3.9.5. Employer Responsibility

The employer shall ensure that the healthcare professional responsible for the HCW's Hepatitis B vaccination is provided a copy of this regulation.

C3.9.6. Occupational Health Clinic Follow Up

Occupational Health Clinic follow up of BOPIMs exposure will include a healthcare professional's written opinion. This will be provided to the HCW and to the employer within 15 days of completion of the evaluation. The written opinion shall be limited to the following statements:

- a) that the HCW has been informed of the results of the evaluation,
- b) that the HCW has been informed of any work restrictions resulting from the exposure,
- c) that the HCW has been informed about any medical conditions arising from this exposure which requires further evaluation and treatment, and
- d) in the case of the healthcare professional's written opinion for Hepatitis B vaccination, whether Hepatitis B vaccination is indicated for an HCW, and if the HCW has received such vaccination.

All other findings or diagnoses shall remain confidential and shall not be included in the written report. Follow-up care should be in accordance with references (b) and (c).

C3.10. Medical Records

C3.10.1. Medical Record Contents

In accordance with references (l) and (m), a confidential medical record will be maintained for each HCW with occupational BOPIMs exposure. The record will include:

- a) the name and identification number of the HCW,
- b) a copy of the HCW's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the HCW's ability to receive vaccination as required,
- c) results of all examinations, medical tests, and follow-up procedures related to BOPIMs exposure,
- d) the employer's copy of the healthcare provider's written opinion as required, and
- e) a copy of the information provided to the healthcare provider as required.

C3.10.2. Medical Record Confidentiality

The employer shall ensure that HCW medical records are kept confidential and not disclosed or reported without the HCW's express written consent to any person within or outside the workplace except as required by law.

C3.10.3. Medical Record Longevity

The employer shall maintain the records required for at least the duration of employment plus 30 years.

C3.10.4. Medical Record Release

HCW medical records required by this instruction shall be provided upon request for examination and copying to the subject HCW, to anyone having written consent of the subject HCW, to the Director of the National Institute for Occupational Safety and Health and to the Assistant Secretary of Labor for Occupational Safety and Health or their designated representatives in accordance with references (b) and (l).

C3.11. Sharps Injury Log

The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps (reference (b)). The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured HCW. The sharps injury log shall contain, at a minimum:

- a) the type and brand of device involved in the incident,
- b) the department or work area where the exposure incident occurred, and
- c) an explanation of how the incident occurred.

Chapter 4. References

- (a) DHHS (NIOSH) Publication No. 97-111 Selecting, Evaluating and Using Sharps Disposal Containers. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. Atlanta, Georgia. January, 1998.
- (b) United States Occupational Safety and Health Administration, 29 CFR 1910.1030, Occupational Exposure to Bloodborne Pathogens.
- (c) Centers for Disease Control and Prevention. Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for Post-exposure Prophylaxis. MMWR 2005;54 (No. RR-9).
- (d) Centers for Disease Control and Prevention. Guideline for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. MMWR 2002;51 (No. RR-16).
- (e) Centers for Disease Control and Prevention. Guidelines for Infection Control in Dental Health-Care Settings — 2003. MMWR 2003;52 (No. RR-17).
- (f) United States Center for Disease Control Division of Healthcare Quality Promotion (DHQP) National Center for Preparedness, Detection, and Control of Infectious Diseases. Laundry: Washing Infected Material. November 18, 2000.
- (g) BUMEDINST 6280.1A Management of Infectious Waste.
- (h) U.S. Department of Health and Human Services Centers for Disease Control and Prevention (CDC). Guidelines for Environmental Infection Control in Health- Care Facilities, Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), 2003.
- (i) MCHO-CL-W (OASD/5 Nov 96) (40) 2d End. Hepatitis B Immunization Policy for Department of Defense Medical and Dental Personnel. 27 Mar 1997.
- (j) Centers for Disease Control and Prevention. Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis. MMWR 2001; 50 (No. RR11);1-42.

- (k) Centers for Disease Control and Prevention, National Center for Infectious Diseases, Division of Healthcare Quality Promotion and Division of Viral Hepatitis. Exposure to Blood – What Health-Care Workers Need to Know, 2003. http://www-nehc.med.navy.mil/downloads/occmcd/BBP_tech_manual_11-2010.pdf (Note that the dash “-” is not part of the Web address.)
- (l) United States Occupational Safety and Health Administration, 29 CFR 1910.1020, Access to employee exposure and medical records.
- (m) DOD 6025.18-R., Health Insurance Portability Accountability Act (HIPAA).

Appendix A: Hepatitis B Immunization Declination Form

(This form must be completed by HCWs without documentation of immunity or of previous vaccination that decline hepatitis B vaccination.)

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

Signature

Date

Name (print)