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Aerospace Medicine

**BLOODBORNE PATHOGENS EXPOSURE
CONTROL PLAN**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction establishes procedures for the base Bloodborne Pathogen Program. It implements 29 Code of Federal Regulations (CFR) 1910.1030, *Bloodborne Pathogens*, and AFRPD 48-1, *Aerospace Medical Program*. It applies to all 914th Airlift Wing personnel, which are occupationally exposed to bloodborne pathogens.

1. Objectives. This instruction is established to protect workers and prevent bloodborne pathogen infections. This is done by limiting occupational exposure to blood and other potentially infectious materials, since any exposure could result in transmission of bloodborne pathogens, which could lead to disease or death.

2. Definitions:

- 2.1. Blood - Human blood, human blood components, and products made from human blood.
- 2.2. Bloodborne Pathogens - Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
- 2.3. Contaminated - The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
- 2.4. Contaminated Laundry - Laundry that has been soiled with blood or other potentially infectious materials or may contain sharps.
- 2.5. Contaminated Sharps - Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes and exposed ends of dental wires.
- 2.6. Decontamination - The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious articles and the surface or item is rendered safe for handling, use or disposal.

- 2.7. Engineering Controls - Controls (e.g. sharps disposable containers, shelf-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.
- 2.8. Exposure Incident - A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee's duties.
- 2.9. Occupational Exposure - Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.
- 2.10. Other Potentially Infectious Materials:
- 2.10.1. The following human body fluids. Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.
 - 2.10.2. Any unfixed tissue or organ (other than intact skin) from a human (living or dead).
 - 2.10.3. HIV-containing cell or tissue cultures, organ cultures, HIV or HBV-containing culture medium or other solutions, blood, organs, or other tissue from experimental animals infected with HIV or HBV.
- 2.11. Parenteral - Piercing mucous membranes or the skin barrier through such events as needle stick, human bites, cuts, and abrasions.
- 2.12. Personal Protective Equipment - Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. Uniforms, pants, shirts, or blouses) not intended to function, as protections against a hazard are not considered to be personal protective equipment.
- 2.13. Regulated Waste - Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.
- 2.14. Source Individual - Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.
- 2.15. Sterilize - The use of physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.
- 2.16. Universal Precautions - An approach to infection control. According to the concept of universal precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.
- 2.17. Work Practice Controls - Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g. prohibiting recapping of needles by a two-handed technique).

3. Responsibilities:

3.1. Bioenvironmental Engineering Services:

- 3.1.1. Develop and review the Exposure Control Plan (ECP).
- 3.1.2. Coordinate with units to determine which job classifications may have potential exposure.
- 3.1.3. Ensure that job classifications identify tasks and methods of compliance.
- 3.1.4. Maintain documentation for 3 years in accordance with administrative procedures for all units within the wing.

3.2. Unit Commanders:

- 3.2.1. Identify tasks of each job classification that put individuals at risk for exposure to blood-borne pathogens
- 3.2.2. Identify methods of compliance for each task to protect against bloodborne pathogen exposure.
- 3.2.3. Provide appropriate annual training and personal protective equipment.
- 3.2.4. Report training accomplished to the Bioenvironmental Engineering Office.
- 3.2.5. Maintain training documentation for 3 year in accordance with administrative procedures.

3.3. Employees:

- 3.3.1. Receive training annually.
- 3.3.2. Use appropriate methods of compliance when performing tasks with potential exposure to bloodborne pathogens.
- 3.3.3. Report exposure to bloodborne pathogens to the full-time Bioenvironmental Engineering Office.

4. Exposure Determination:

4.1. Tasked Organizations:

- 4.1.1. The following units have employees, which have an occupational exposure to bloodborne pathogens.
 - 4.1.1.1. 914th Aero Patient Staging Squadron.
 - 4.1.1.2. 914th Aero Evac Squadron.
 - 4.1.1.3. 914th Civil Engineering Squadron.
- 4.1.2. All exposure determinations are made without regard to the use of personal protective equipment.
- 4.1.3. Good Samaritan acts which result in the exposure to blood or other potentially infectious materials from assisting a fellow employee (i.e. giving first aid) are not included in the standard. The 914th Airlift Wing, however, will provide post-exposure evaluation and follow-up in such cases.

4.2. Job Classifications. The following are job classifications and tasks/procedures, in which occupational exposures may occur.

4.2.1. Medical Personnel: Personnel who maintain an Air Force Specialty Code (AFSC) beginning with the number 4. The following task/procedures cause potential occupational exposure to bloodborne pathogens: immunizations; drawing blood and handling urine samples in the clinical laboratory; dental exams; physicals; first aid and medical support for deployments; and patient care during off-site training.

4.2.2. Firefighters: A member of the fire department whose duties require the performance of essential fire-fighting functions or substantially similar functions.

5. Methods of Compliance:

5.1. Universal Precautions: Effective immediately, universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials. Supervisors of employees working in job classifications who encounter occupational exposure to blood or other potentially infectious materials (listed in the exposure determination section) are responsible for ensuring that employees observe universal precautions at all times.

5.2. Engineering and Work Practice Controls: Engineering and work practice controls shall be utilized as a primary method for eliminating or controlling exposure to blood or other potentially infectious materials. The following work practice controls will be utilized and enforced by supervisors.

5.2.1. Employees must wash their hands and any other exposed skin with soap and water, or flush mucous membranes with water immediately, or as soon as feasible, following contact of such body areas with blood or other potentially infectious materials.

5.2.2. Employees must wash their hands before and after using the restroom.

5.2.3. Employees must wash their hands immediately, or as soon as possible, after removal of gloves or other personal protective equipment.

5.2.4. Employees are required to wash their hands with soap and running water as soon as feasible after using an appropriate antiseptic. Hand cleaners or towelettes are acceptable only where hand-washing facilities are not feasible.

5.2.5. Contaminated needles and other sharps shall not be bent, recapped, or removed unless no alternative is feasible or such action is required by a specific medical procedure. Such recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique. Shearing or breaking of contaminated needles is prohibited.

5.2.6. Contaminated reusable sharps (i.e. scalpels) shall be placed in appropriate containers immediately or as soon as possible after use.

5.2.7. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

5.2.8. Food and drink shall not be kept in refrigerators, freezers, shelves, and cabinets or on countertops or bench tops where blood or other potentially infectious materials are present.

5.2.9. All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, splattering, and generation of droplets of these substances.

5.2.10. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

5.2.11. Specimens of blood or other potentially infectious materials shall be placed in a container, which prevents leakage during collection, handling, processing, storage, transport, or shipping.

5.2.12. Equipment, which may become contaminated with blood or other potentially infectious materials, shall be examined prior to servicing or shipping and decontaminated as necessary. If decontamination is not feasible, a readily observable label in accordance with 29 CFR 1910.1030 must be attached to the equipment stating which portions remain contaminated.

5.2.13. If outside contamination of a primary specimen container occurs, that container is placed within a second leak-proof container, appropriately labeled, for handling and storage. If the specimen can puncture the primary container, the secondary container must be puncture-resistant as well.

5.3. Personal Protective Equipment (PPE). Where occupational exposure remains after institution of engineering and work practice controls, appropriate PPE will be used. PPE will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to reach employees work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use. PPE is provided at no cost to the employee. Supervisors will be responsible for ensuring that employees wear appropriate PPE. The following also applies to PPE.

5.3.1. PPE must be cleaned, laundered, repaired, and/or replaced as needed to maintain its effectiveness.

5.3.2. If blood or other potentially infectious material penetrates a garment, this garment must be removed immediately or as soon as feasible.

5.3.3. All PPE must be removed prior to leaving the work area.

5.3.4. When PPE is removed, it must be placed in an appropriately designated covered container for storage, washing and decontamination, or disposal. The biohazard disposal site is building 802, room 138.

5.3.5. As a minimum, protective equipment shall consist of the following:

5.3.5.1. Gloves. When the employees hands have the potential for direct skin contact with blood or other potentially infectious materials whether on surfaces, linen, or the body. Replace gloves if torn, punctured, contaminated, or if their ability to function as a barrier is compromised. Utility gloves may be decontaminated for reuse if their integrity is not compromised. Discard utility gloves when they show signs of cracking, peeling, tearing, puncturing, or deterioration. Never wash or decontaminate disposable gloves for reuse or before disposal.

5.3.5.2. Mask, Eye Protection, or Chin Length Face Shield: When droplets, splashes, splatters, sprays, or aerosols of blood or other potentially infectious materials may be generated and pose a hazard to the eye, nose, or mouth.

5.3.5.3. Gowns, Lab coats, Aprons, and other Similar Clothing. If clothing may become

soiled with blood or other potentially infectious materials, or if blood or other potentially infectious materials penetrate a garment, the garment(s) must be removed immediately or as soon as feasible. If a pullover scrub (as opposed to scrubs with snap closures) become minimally contaminated, employees should be trained to remove 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 exposure. It may be prudent to train employees to cut off such a contaminated scrub to aid removal and prevent exposure to the face.

5.4. Housekeeping. In keeping with the concept of universal precautions, supervisors will ensure that the worksite is maintained in a clean and sanitary condition. The fire department will be responsible for cleaning up incidents concerning spilled blood/body fluids not in the medical facility.

5.4.1. Equipment: All equipment and environmental surfaces shall be cleaned and decontaminated with an appropriate disinfectant after contact with blood or other potentially infectious materials by shift personnel.

5.4.2. Work Surfaces. Contaminated work surfaces shall be decontaminated with an appropriate disinfectant (e.g., solution of 5.25 percent sodium hypochlorite (bleach) diluted between 1:10 and 1:100 with water) after completion of procedures or as soon as feasible when surfaces are obviously contaminated, after any spill of blood or other potentially infectious material, and at the end of the work shift. Please consult with 914th SPTG/SGPB exposure control program coordinator, for a list of registered sterilants for your specific cleaning and decontamination application.

5.4.3. Protective Coverings. Protective coverings such as plastic wrap, aluminum foil, or impervious back absorbent paper used to cover equipment or environmental surfaces shall be removed and replaced as soon as feasible when they become obviously contaminated.

5.4.4. Trash Cans. All bins, pails, cans, and similar receptacles which have a reasonable likelihood of becoming contaminated with blood or other potentially infectious materials will be inspected, cleaned, and decontaminated as soon as feasible upon visible contamination.

5.4.5. Sharps. Contaminated sharps shall be discarded immediately or as soon as feasible in approved containers. Broken glassware, which may be contaminated, shall not be picked up directly with the hands even if gloves are worn. It must be cleaned up using mechanical means such as a brush and dustpan, tongs, or forceps. Furthermore, any mechanical device, which is contaminated, must be decontaminated following use as soon as feasible. Reusable sharps (i.e. scalpels) that are contaminated with blood or other potentially infectious materials will be stored or processed so that employees do not have to reach by hand into containers where these sharps have been placed.

5.4.6. Sharp Containers. Sharp containers will be inspected to ensure they do not become over-filled. Sharp containers must be closable, puncture resistant, leakproof on sides and bottom, and labeled or color-coded in accordance with paragraph (g)(1)(i) of the bloodborne pathogen standard. Never manually open, empty, or clean reusable contaminated sharps disposable containers. Additionally, sharps containers will be located as close as feasible to the immediate area where sharps are used.

5.4.7. Laundry. Contaminated laundry must be bagged or containerized at the location where it was used in an approved bag or container. Contaminated laundry must not be sorted or rinsed in the location of use.

5.4.8. Waste. Discard all regulated waste according to federal, state, and local regulations. For example, liquid or semi-liquid blood or other potentially infectious material; items contaminated with blood or other potentially infectious material that would release these substances in a liquid or semi-liquid state if compressed; items caked with dried blood or other potentially infectious material and capable of releasing these materials during handling; containing blood or other potentially infectious materials.

6. Hepatitis B Vaccination (HBV):

6.1. The Hepatitis B vaccine and vaccination series shall be made available to all employees with occupational exposure at no cost to the employee. 914 ASTS and 914 AES will provide the HBV to all reservists with occupational exposure. The assigned contract medical facility will provide HBV to all civilians with occupational exposure.

6.2. All employees who may be working in areas with occupational exposure are allowed the chance to receive the Hepatitis B vaccination after the employee has received the training required and within 10 working days of initial assignments. Employees who decline the Hepatitis B vaccination will be required to sign a declination statement. All reservists exposed must receive the vaccine. If an employee initially declines the Hepatitis B vaccine but later decides to accept, 914 Airlift Wing will make available the Hepatitis B vaccine at that time, assuming employees still has an occupational exposure.

7. Post-Exposure Evaluation and Follow Up:

7.1. Due to potentially severe consequences resulting in exposure incidents, the circumstances regarding these incidents will be investigated with the utmost priority. Any time an exposure incident occurs, employees must notify their immediate supervisor within 3 hours of the incident to ensure the proper evaluation and follow-up. The medical evaluation and follow-up will include the following elements (within 24 hours).

7.1.1. Documentation and evaluation by a physician of the route(s) of exposure and the circumstances under which the exposure incident occurred.

7.1.2. Identification and documentation of the source individual, unless infeasible or prohibited by state or local law. If consent is obtained (where required), the source individual's blood shall be tested and the results documented. If the source individual is known to be infected with HIV or HBV, this shall be documented without a repeat test.

7.1.3. Results of the source individual's testing shall be made available to the exposed employee, along with applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

7.1.4. The exposed employee's blood shall be tested as soon as feasible after consent is obtained.

7.1.5. If the employee consents to baseline blood collection but does not give consent at the time for HIV serologic testing, the sample shall be preserved for 90 days. If, within 90 days of the

exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

7.1.6. When medically indicated, post exposure prophylaxis will be provided, as recommended by the U.S. Public Health Service.

7.1.7. Counseling will be made available to the employee upon request.

7.1.8. Evaluation of reported illness.

7.2. Within 15 days of completion, a copy of the evaluating healthcare professional's written opinion shall be obtained and provided to the employee. This written opinion will be limited to the following information.

7.2.1. That the employee has been informed of the results of the evaluation.

7.2.2. That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment. Other findings or diagnoses shall remain confidential and not be included in the written report.

7.3. Bioenvironmental Engineering is responsible for providing the following information to the healthcare professional following an exposure incident and prior to medical evaluation.

7.3.1. A copy of 29 CFR 1910.1030.

7.3.2. A description of the exposed employee's duties as they relate to the exposure incident.

7.3.3. Documentation of the routes of exposure and circumstances under which exposure occurred.

7.3.4. Results of the source individual's blood testing, if available.

7.3.5. All medical records relevant to the appropriate treatment of the employee including vaccination status.

8. Communication of Hazard to Employees:

8.1. Labeling. Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious materials, and other containers used to store, transport, or ship blood or other potentially infectious materials. These labels shall include the following legend; BIOHAZARD, (WORD AND SYMBOL).

8.1.1. These signs shall be fluorescent orange or orange-red or predominantly so, with lettering or symbols in contrasting color. Alternately, red bags or containers may be substituted for labels.

8.2. Training. All employees with occupational exposure will be expected to participate in a training session that will be provided at the time of initial assignment to tasks where occupational exposure takes place, every year thereafter, and whenever changes such as modifications of tasks or procedures or institution of new tasks or procedures affect the employee's exposure. Personnel shall have Cardiopulmonary Resuscitation (CPR) training before they receive bloodborne pathogen training. This training shall include the use of the resuscitator. The 914 SPTG/SGPB will designate an individual to coordinate and conduct this required training. The training will consist of the following.

8.2.1. An explanation of the bloodborne pathogen standard (29 CFR 1910.1030) and the fact that a copy of the text of this standard will be accessible to employees at all times.

- 8.2.2. A general explanation of the epidemiology and symptoms of bloodborne diseases.
- 8.2.3. An explanation of the modes of transmission of bloodborne pathogens.
- 8.2.4. An explanation of the exposure control plan and the means by which employees can obtain a copy of the written plan.
- 8.2.5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- 8.2.6. An explanation of the use and limitations of methods that will prevent or reduce exposure, including engineering controls, work practice, and personal protective equipment.
- 8.2.7. Information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment.
- 8.2.8. An explanation of the basis of selection of personal protective equipment.
- 8.2.9. Information on the hepatitis B vaccine and a statement that the vaccine will be offered free of charge.
- 8.2.10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- 8.2.11. An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- 8.2.12. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following the incident.
- 8.2.13. An explanation of the signs and labels and/or color coding that is used in the facility.
- 8.2.14. An opportunity for interactive questions and answer with the person conducting the training session.
- 8.2.15. The training coordinator will keep a record on file, and send a copy to 914 SPTG/SGPB, concerning all training sessions. This documentation will include name, signature, social security number, date and time of training, and information covered. Training should also be documented on the workers AF Form 55, *Employee Health and Safety Record* or a computerized equivalent.

9. Recordkeeping:

- 9.1. Medical records must be kept for each employee with occupational exposure to bloodborne pathogens. Civilian medical records will be maintained in accordance with established civil service procedures. The following records will be kept on file.
- 9.2. A file for each employee with occupational exposure to blood or other potentially infectious materials including the name and social security number of the employee, a copy of the employee's hepatitis B vaccination status, any medical records relative to the employee's ability to receive vaccination.
- 9.3. A copy of all results of examination, medical testing, and follow-up procedures following an exposure incident.
- 9.4. The employer's copy of the healthcare professional's written opinion regarding post-exposure evaluation and follow-up.

9.5. Declination statement of civilian workers will be filed in medical records and Tab F of the industrial hygiene case files.

9.6. The above records will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by the bloodborne pathogens standard or by law. Additionally, these records will be maintained for at least the duration of the employment plus thirty (30) years.

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