BY ORDER OF THE COMMANDER
315TH AIRLIFT WING

315TH AIRLIFT WING INSTRUCTION 48-102

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EXPOSURE CONTROL FOR BLOODBORNE PATHOGENS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 48-1, *Aerospace Medical Program,* and has been developed in conjunction with the 315 Aeromedical Evacuation Squadron, Aerospace Medicine Council (AMC) and Occupational Health Working Group (OHWG) to eliminate or minimize employee exposure to blood or other potentially infectious materials and is intended to comply with the requirements of OSHA Standard 29 CFR 1910.1030, *Occupational Exposure to Bloodborne Pathogens*. It applies to all 315 Airlift Wing personnel with reasonably anticipated occupational exposure to blood or other potentially infectious materials. To ensure compliance with OSHA Standard 29 CFR 1910.1030 this publication shall be reviewed and updated annually. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-af61a/afrims/afrims/rims.cfm**. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 to 315 AMDS/ SGPM, Charleston AFB, SC 29404.

1. Methods of Compliance.

1.1. The Exposure Control Plan shall be reviewed and updated at least annually 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. The review and update of such plans shall also reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens and annually document consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

1.2. An employer, who is required to establish an Exposure Control Plan, shall solicit input from non-managerial employees responsible for direct patient care. These individuals, who are potentially exposed to injuries from contaminated sharps, are responsible for the identification, evaluation, and

selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

1.3. Standard Precautions. Standard precautions shall be observed to prevent contact with blood or other potentially infectious materials. According to the concept of standard precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. 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 are responsible for ensuring that employees observe standard precautions at all times.

1.4. Engineering and Work Practice Controls. Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

1.4.1. 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.

1.4.2. Employees must wash their hands and any other exposed skin immediately, or as soon as possible, after removal of gloves or other PPE.

1.4.3. Employees are required to wash their hands and any other exposed skin with soap and water as soon as feasible after using an approved antiseptic. Hand cleaners or towelletes are acceptable only where hand-washing facilities are not feasible.

1.4.4. 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.

1.4.5. 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.

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

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

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

1.4.9. 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.

1.4.10. Equipment that 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. The Infection Control Officer within each unit is responsible for informing affected employees, the servicing representative, and/or the manufacturer prior to handling, servicing, or shipping so that appropriate precautions can be taken.

1.5. Sharps Injury Log.

1.5.1. Each unit shall establish and maintain a sharps injury log for the recording of peramucocutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1.5.1.1. The type and brand of device involved in the incident, the department or work area where the exposure incident occurred, and an explanation of how the incident occurred.

1.5.2. The sharps injury log shall be maintained for the period required by 29 CFR 1904.8, in accordance with recording criteria for needle stick and sharps injuries. In addition, all sharps injuries shall be documented on the OSHA Form 300, *Log of Work Related Injuries and Illness*, consistent with 315 AW/SE reporting guidelines. Where the risk of 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. Employers must provide appropriate gloves when exposure to blood or other potentially infectious materials (OPIM) exists. Alternatives shall be readily accessible to those employees who are allergic to latex (gloves for example). 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.

Table 1. Exposure Determination.

UNIT	WHO	HBV	RATIONALE	TASK #
315 CES Fire Department	Fire fighter	Required	Emergency response	4-11
315 AMDS Laboratory	Lab technician	Required	Processing blood/tissue specimen	1
315 AMDS Optometry	Optometrist Optometry technician	Required	Medical care	6, 8, 9
315 AMDS Flight Medicine	Physician Nurse practitioner Physician Assistant Nurse Medical technician	Required	Medical care	1-12
315 AMDS Dental	Dentist Dental technician	Required	Medical care	2, 4-12
315 AES	Nurse Medical technician	Required	Medical care	1-12
315 SVS Volunteers	Search and Recovery Team	Required	Exposure to human remains	12
315 SFS	Security police officers	Required	Emergency response	4, 5, 7-9, 11, 12
Note: Exposure determination has been made without regard to the use of PPE. The				

following are job classifications in which employees have reasonably anticipated occupational exposure to bloodborne pathogens.

2. PPE.

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

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

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

2.4. When PPE is removed, it must be placed in an appropriately designated covered container for storage, washing and decontamination, or disposal.

Table 2. Tasks with Recommended PPE.

#	TASK	GLOVES	EYE PROTECTION	MASK	GOWN
1	Drawing blood	Yes	No	No	No
2	Giving injection	Yes	No	No	No
3	Starting IV	Yes	No	No	No
4	Bleeding control with minimal bleeding	Yes	No	No	No
5	Bleeding control with spurting blood	Yes	Yes	Yes	Yes
6	Peramucocutaneous exposure while providing medical care	Yes	No, unless splashing	No, unless splashing	No, unless splashing
7	Childbirth	Yes	Yes	Yes	Yes
8	Disinfecting contaminated equipment	Yes	Yes	No	Yes
9	Contact with contaminated equipment	Yes	No	No	No
10	Suctioning	Yes	No, unless splashing	No, unless splashing	Yes
11	Administering CPR	Yes	No	Mouth to mouth mask with one-way valve	No
12	Contact with human remains	Yes	Yes	No	Yes-coverall

3 Housekeeping. In keeping with the concept of standard precautions, supervisors will ensure that the worksite is maintained in a clean and sanitary condition.

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

3.2. Work Surfaces. Contaminated work surfaces shall be decontaminated with an appropriate disinfectant 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.

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

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

3.5. Sharps. Contaminated sharps shall be discarded immediately or as soon as feasible in approved containers. Caution: Broken glassware that may be contaminated shall not be picked up directly with the hands. 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 or as soon as feasible).

3.6. Sharps Containers. Sharps containers will be inspected to ensure they do not become overfilled. Sharps containers must be closeable, puncture resistant, leak proof on sides and bottom, and labeled or color-coded in accordance with paragraph (g)(1)(i) of 29CFR 1910.1030. Additionally, sharps containers will be located as close as feasible to the immediate area where sharps are used.

3.7. Disposal. All contaminated waste, properly bagged and labeled, will be given to the 315 AMDS within 24 hours of being generated. The only organizations that would routinely generate "potentially infectious material" are the 315 AMDS and 315 AES.

4. Hepatitis B Vaccination and Post-Exposure Evaluation/Follow Up. The Hepatitis B vaccine and vaccination series shall be made available at no cost to all employees identified in Table 1. 315 AMDS will provide the HBV to all required reservists, with occupational exposure as identified in **Tables 1** and **2**. Identified individuals will receive the vaccine either from the 315 AMDS. All reservists with potential occupational exposure must receive the vaccine.

5. Post Exposure Evaluation/Follow-Up.

5.1. Due to the potentially severe consequences resulting from exposure incidents, the circumstances regarding these incidents will be investigated with high priority. It is imperative that potentially exposed individuals, supervisors, and/or emergency response personnel notify the 315 AMDS/SGPM (Public Health) to ensure compliance with regulatory guidance. In addition, the 315 AMDS/Flight Medicine must also be notified to initiate follow-up actions and reporting requirements. As soon as possible after the incident the employee must notify their supervisor, and complete a 315 AW *Exposure Incident Statement*.

5.2. The individual must be evaluated in an approved emergency medical center or contract facility. If it occurs after normal duty hours, the supervisor will notify 315 AMDS Air Reserve Technician

and 315 AMDS/SGPM the next duty day. If an exposure incident has occurred, 315 AMDS/SGPM will submit exposure to 315 AW/SEG via OSHA 300 log.

5.3. The medical evaluation and follow-up will include the following elements (within 24 hours):

5.3.1. Evaluation and routes of exposure will be made by a medical physician; as well as the circumstances under which the exposure occurred. This should occur within one hour of exposure.

5.3.2. Identification and documentation of the source individual, unless infeasible or prohibited by state or local law. If consent (where required) is obtained 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.

5.3.3. 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.

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

5.3.5. 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.

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

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

5.3.8. 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:

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

5.3.8.2. 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).

5.3.9. The 315 AMDS/SGPM is responsible for providing the following information to the healthcare professional following an exposure incident:

5.3.9.1. A copy of the 315 AW Exposure Control Plan.

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

5.3.9.3. Documentation of the route(s) of exposure and circumstances under which exposure occurred.

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

6. Labeling.

6.1. 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).

6.2. 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.

7. Training. All employees with reasonably anticipated 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. Each unit is responsible for conducting training IAW 29 CFR 1910.1030. 315 AMDS/SGPM is available to provide technical assistance upon request. All documentation will be maintained by the unit and available for review by 315 AMDS/SGPM. Training will consist of the following:

7.1. An explanation of the Bloodborne Pathogens Standard (29CFR 1910.1030) and the fact that a copy of the text of this standard will be accessible to employees at all times.

7.2. A general explanation of the epidemiology and symptoms of bloodborne diseases.

7.3. An explanation of the modes of transmission of bloodborne pathogens.

7.4. An explanation of the exposure control plan and the means by which employees can obtain a copy of the written plan.

7.5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

7.6. An explanation of the use and limitations of methods that will prevent or reduce exposure, to include engineering controls, work practice, and PPE.

7.7. Information on the types, proper use, location, removal, handling, decontamination, and disposal of PPE.

7.8. An explanation of the basis for selection of PPE.

7.9. Information on the hepatitis B vaccine and a statement that the vaccine will be offered free of charge to those identified.

7.10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

7.11. 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.

7.12. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.

7.13. An explanation of the signs and labels and/or color coding that is used in the facility.

7.14. An opportunity for interactive questions and answers with the person conducting the training session.

7.15. The organization will keep a record of the training on file. This documentation will include unit, trainer, trainer's qualifications, trainee, job title, SSN (last four), date of training, and information covered.

8. Recordkeeping. Medical records must be kept for each employee with occupational exposure to bloodborne pathogens. Reserve medical records will be maintained in accordance with established procedures. These records will be kept in accordance with the privacy act. The following records will be kept on file:

8.1. 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 (maintained in individuals medical record and AFCITA – Air Force Immunization Tracking Application).

8.2. A copy of all results of examinations, medical testing, and follow-up procedures following an exposure incident (to be maintained in medical record).

8.3. The employer's copy of the healthcare professional's written opinion regarding post-exposure evaluation and follow-up (to be maintained in medical record).

8.4. **Note:** The above records will not be disclosed or reported without the employee's expressed 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 employment plus thirty years.

TIMOTHY J. WRIGHTON, Colonel, USAFR
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFMAN 33-363, *Management of Records,* 1 March 2008
AFPD 48-1, *Aerospace Medical Program*, 3 October 2005,
OSHA Standard 29 Code of Federal Regulation (CFR) 1910.1030, *Occupational Exposure to Bloodborne Pathogens*, January 2007

Abbreviations and Acronyms

ASIMS—Aerospace Information Management System

CDC—Center for Disease Control and Prevention

CPR—Cardiopulmonary Resuscitation

EPA—Environmental Protection Agency

HBV—Hepatitis "B" Virus

HCV—Hepatitis "C" Virus

HIV—Human Immunodeficiency Virus

Terms

Blood—Human blood, human blood components, and products made from human blood.

Bloodborne Pathogens (BBP)— Pathogenic microorganisms that are present in human blood and can cause disease in humans. These include Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV).

Contaminated— The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Engineering Controls— Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the BBP hazard from the workplace.

Exposure Incident—A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious material that results from the performance of an employee's duties.

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.

Personal Protective Equipment (PPE)— 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 protection against a hazard is not considered to be personal protective equipment.

Titer— is a measure of concentration. Titer testing employs serial dilution to obtain approximate quantitative information from an analytical procedure that inherently only evaluates as positive or negative.

Attachment 2

ACCEPTABLE METHODS OF DECONTAMINATION

A2.1. STERILIZATION: Allows for no microbial life to exist.

A2.1.1. Destroys: All forms of microbial life including high numbers of bacterial spores.

A2.1.2. Methods: Steam under pressure (autoclave), dry heat or immersion in EPA-approved chemical "sterilant: for prolonged period of time; e.g., 10 hours or according to manufacturers' instructions. **NOTE**: Liquid chemical "sterilants" should be used only on those instruments that are impossible to sterilize or disinfect with heat.

A2.1.3. Use: For those instruments or devices that penetrate skin or contact normally sterile areas of the body; e.g., scalpels, needles, etc. Disposable invasive equipment eliminates the need to process these types.

A2.2. INTERMEDIATE LEVEL DISINFECTION:

A2.2.1. Destroys: Mycobacterium tuberculosis, vegetative bacteria, most viruses, and most fungi, but does not kill bacterial spores.

A2.2.2. Methods: EPA-registered "hospital disinfectant" chemical germicides that have a label claim for tuberculocidal activity; commercially available hard surface. Germicides or solutions containing at least 500 ppm (parts per million) free available chlorine (a 1:100 dilution of common household bleach - approximately 1/4 cup bleach per gallon of tap water) A2.2.3. Use: For those surfaces that come into contact only with intact skin, e.g., stethoscopes, blood pressure cuffs, splints, etc. Clean visible material from surface before applying disinfectant.

A2.3. LOWER LEVEL DISINFECTION:

A2.3.1. Destroys: Most bacteria, some viruses, some fungi, but not Mycobacterium tuberculosis or bacterial spores.

A2.3.2. Methods: EPA-registered "hospital disinfectants" (no label claim for tuberculodial activity)

A2.3.3. Use: These agents are excellent cleaners and can be used for routine housekeeping or removal of soiling in the absence of visible blood contamination.

A2.4. ENVIRONMENTAL DISINFECTION:

A2.4.1. Environmental surfaces which have become soiled should be cleaned and disinfected using any cleaner or disinfectant agent which is intended for environmental use. Such surfaces include floors, woodwork, ambulance seats, counter tops. Important: To assure the effectiveness of any sterilization or disinfection process, equipment and instruments must first be thoroughly cleaned of all visible debris.

Attachment 3

OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS POST EXPOSURE EVALUATION AND FOLLOW UP

A3.1. The following is an exposure incident resulting in a peramucocutaneous injury from contaminated sharps or other reasonably anticipated bloodborne pathogen exposure as described in **Table 1**, the following procedures are to be followed. It is imperative that potentially affected individuals, supervisors, and/or emergency response personnel notify the 315 AMDS/SGPM (Public Health) and 315 AMDS Air Reserve Technician to ensure compliance with regulatory guidance. In addition, the 315 AMDS/Flight Medicine must also be notified if the exposed individual is a military member to initiate follow-up actions and reporting requirements.

A3.2. If not already done so by emergency response personnel, immediately cleanse wound and notify supervisor who will, in turn, notify 315 AMDS/SGPM and 315 AMDS Air Reserve Technician at extension 6785/6787 on the day of incident. If after hours, report the incident the following morning.

A3.3. With supervisor, complete 315 AW Exposure Incident Statement including source individual's name.

A3.4. Obtain consent from source individual for testing for HIV, HBV and HCV. Reservists must comply with testing. If source is already known to be positive, no further testing is indicated.

A3.5. Depending on the incident, the appropriate POC, Emergency Response personnel, supervisor or 315 AMDS Air Reserve Technician, will direct individual to proceed to an approved medical facility for evaluation and documentation of the incident by a medical doctor. The medical evaluation and follow-up shall be completed within 24 hours.

A3.6. Testing shall be accomplished ASAP. Results of the source individual's testing shall be made available to the exposed individual.

A3.7. The exposed individual's blood shall also be tested as soon as feasible. Exposed reservists are required to comply with testing.

A3.8. When medically indicated, post exposure prophylaxis will be provided as recommended by the US Public Health Service. Counseling will be provided.

A3.9. Within 15 days of completion, a copy of the evaluating healthcare provider's written opinion will be provided to exposed individual and will include documentation that member has been notified and information regarding any medical conditions which may result from the exposure which could require further evaluation or treatment.

A3.10. The 315 AMDS/SGPM will provide the healthcare professional following the exposure incident with a copy of the 315 AWI 48-102 Exposure Control Plan and 315 AW Exposure Incident Statement and other pertinent medical record information, including vaccination status.