BLOODBORNE PATHOGENS

Purpose: Exposure Control Plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with the OSHA bloodborne pathogen standard.

Responsibilities: The UMDNJ/RWJMS Laboratory Director is responsible for overseeing the implementation of this ECP. The site coordinator is responsible for ensuring that each employee is trained and disinfectants and/or personal protective equipment are available and used. The Rapid HIV testing coordinator is responsible to have a post exposure control plan. If your facility does not provide one, one must be created and submitted to the Rapid HIV Support team.

Universal Precautions: All facilities and their employees will utilize universal precautions as the base of their bloodborne pathogen safety program. Universal precautions is an infection control method which dictates that all human blood and body fluids be treated as if they were infectious for HIV, HBV and other bloodborne pathogens regardless of patient location, age, diagnosis, quantity of blood or other body fluids. Potentially infectious materials include but are not limited to: human blood, body fluid (saliva, urine, vaginal secretions), tissue cultures, and infected culture medium.

Clinical Significance: Healthcare workers incur risk of infection and subsequent illness from bloodborne pathogens with each occupational exposure. By following universal precautions, that risk of occupational exposure and subsequent illness will be minimized. Unprotected (unvaccinated) healthcare workers have up to a 12 times greater risk of becoming infected with the Hepatitis B Virus (HBV) than members of the population at large, 2% of which are asymptomatic carriers of that virus. It is estimated that 1 in every 250 Americans is infected with Human Immunodeficiency Virus (HIV) and as many as 88% of these individuals are unaware of their infection and infectious status. These statistics underscore the necessity for adherence to the principles of “Universal Precautions” in which all human blood, blood products and other potentially infectious materials are treated as if they were KNOWN to be infectious.

Work Practice: Work practice controls include but are not limited to the following:

- No food or drink shall be kept in the refrigerator, freezer, or testing area where testing or supplies are kept. At non-fixed site (ie, mobile collection sites), food or drink may be placed no less than an arm’s length from the testing area.

- Eating, drinking, smoking, applying cosmetics, lip balm, and handling of contact lenses are **not** permitted where there is a reasonable likelihood of exposure to blood and other body substances. As above, the rule in rapid HIV testing is all items must not be within arm’s reach of the testing area.

- All procedures are to be performed in such a way that splashing, spattering, or droplet formation is minimized.

- Wash hands immediately or as soon as possible after removal of gloves. On the mobile vans or satellites that do not have hand washing facilities available, interim hand washing measures, such as antiseptic towelettes, waterless antiseptic soaps, and paper towels may be used but must be followed as soon as possible with hand washing measures

- Wash all body parts as soon as possible after skin contact with blood or other potentially infectious materials occur. Personnel will flush mucous membranes with water immediately following contact with blood or other potentially infectious materials. Report all exposures that require medical treatment to employee services or Emergency Department immediately after exposure.
- Place all specimens of blood or other potentially infectious material in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

Personal Protective Equipment (PPE): Personal protective equipment protects you against potentially infectious material. Examples of the equipment are gloves, gowns, laboratory coats, face shields or masks, eye protection, and splash shield. All personal protective equipment must be removed and hands washed prior to leaving the laboratory area.

Gloves: Gloves are worn whenever it can reasonably be anticipated that there will be contact with blood or other potentially infectious materials or when handling or touching contaminated surfaces. This includes, but is not limited to: performing a fingerstick or venipuncture, opening a tube for any reason, pipetting a sample, or introducing a specimen into an instrument or test system in any way. Disposable gloves are replaced between client testing and as soon as practically possible when they become contaminated, or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Gloves should not be washed or decontaminated for re-use. Gloves should be discarded into regular trash unless saturated with blood or other potentially infectious material.

Protective Clothing: Clothing such as lab coats or jackets, aprons, or gowns are worn in occupational exposure situations. The type and characteristics of such protective clothing must be appropriate to the task and degree of exposure anticipated. This includes, but is not limited to: performing a fingerstick or venipuncture, performing a rapid HIV test on an oral or blood sample, or introducing a specimen into an instrument or test system. Lab coats or jackets, aprons, or gowns are replaced as soon as practically possible when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Disposables should be discarded into regular garbage unless saturated with 30cc or more of blood. The presence of 30cc or more of blood requires disposal in a red biohazard waste bag.

Eye Protection and Shields: Face shields or goggles, and masks are worn whenever it can reasonably be anticipated that there will be contact with blood or other potentially infectious materials or when handling or touching contaminated surfaces. This includes performing a fingerstick, performing a rapid HIV test, and drawing a tube of blood or introducing a specimen into an instrument. Face shields, masks, goggles and splash guards are to be decontaminated as soon as practically possible when they become contaminated or as soon as feasible if they are damaged, or when their ability to function as a barrier is compromised. Disposables should be discarded into regular waste.

Housekeeping: Work areas are maintained in a clean and sanitary condition. Phones and computer keyboards are not to be touched while the individual is wearing gloves. All equipment, environmental and working surfaces are cleaned and decontaminated after contact with blood or other potentially infectious material.

Testing Equipment Handling: Any testing equipment in the lab may accidentally become contaminated with blood or other potentially infectious materials. Follow each individual manufacturer's instructions on how to decontaminate. If decontamination of the equipment or portions of it is not feasible, clearly label the portion of the equipment that remains contaminated and call the manufacturer's hotline to place a service call or for further instructions.

Cleaning and Disinfecting: Contamination is described as the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface. All work areas will be wiped clean with a 1:10 dilution of bleach at the beginning and end of each shift. Any accidental spill of blood or other potentially infectious materials should be disinfected immediately by applying a 1:10 dilution of bleach for 10 minutes to the area and then wiping up. The bench top must be wiped clean with 10% bleach and then 70% ethanol to remove any bleach residue.

Regulated Medical Waste:

Definition: Regulated medical waste is liquid waste human blood; products of blood; items saturated and or dripping with human blood that are caked with dried human blood; including serum, plasma, and other blood components, and their container, which were used or intended for use in either patient care, testing and laboratory analysis or the development of pharmaceuticals. Contaminated sharps must be place in a sharps container marked regulated medical waste.

> **For Rapid HIV Testing Sites, used reagent test kits, external controls and sharps are the items considered to be regulated medical waste. All other items are to be disposed as non-regulated medical waste in regular garbage. If any of your PPE is saturated in blood or if the amount of blood or potential infectious material amounts to 30cc or greater, the PPE must be placed in regulated medical waste.**

Other Regulated Waste Containment: Regulated waste is placed in containers that are constructed to prevent leakage, appropriately labeled as a biohazard, and can be closed prior to removal. If the regulated waste to be disposed does not fit in a biohazard container, it must be disposed of in a red biohazard bag. Disposal of regulated waste is the responsibility of the facility in accordance with all federal, state and local standards.

Biohazard Warning Labeling:

Labels for biohazard warnings contain the word “BIOHAZARD” and the following symbol:

They are fluorescent orange or orange-red with symbols with lettering in a contrasting color, either as an integral part of the container or affixed to it in such a fashion as to prevent its loss or unintentional removal.

Biohazard warnings are affixed to:

- Containers of regulated waste, refrigerators and freezers containing blood or potentially infectious material.
- All containers used to store, transport or ship blood or other potentially infectious materials, except individual containers of blood or other potentially infectious materials are placed in a labeled container during storage, transport, shipment or disposal.

General Guidelines:

- Universal precautions should be used with regard to all blood and body fluids.
- All specimens of blood and body fluids should be placed in a secure, closed, leak-proof container. Care should be taken to avoid contamination of the outside of the container or its label.
- All personnel processing specimens of blood or other body fluid must wear gloves. Protective eyewear or splash guards should be used if mucous membrane contact may be anticipated. Gloves should be changed and hands washed with soap and water after completion of handling specimens.
- Working surfaces should be disinfected using an appropriate disinfectant following work completion.
- Contaminated materials and equipment should be appropriately decontaminated or labeled, and appropriately disposed of.
- Remove protective wear and wash hands upon completion of laboratory duties.

References:

(1) NCCLS, *Clinical Laboratory Technical Procedure Manual-Third Edition; Approved Guideline.* NCCLS document GP2-A3 (ISBN 1-56238). NCCLS Wayne, PA. 1996.

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(4) Fischbach, Frances ed., *A Manual of Laboratory & Diagnostic Tests,* 5th Edition, Lippencott, Philadelphia, PA. 1987.

(5) Jacobs,D.S., Kasten,Jr., B.L., Demott, W.R., Wolfson, W.L., ed., *Laboratory Test Handbook,* 2nd Edition, Lexi-Comp Inc., Stow, OH 44224

Written By: Evan Cadoff, MD/Eugene Martin, PhD Date 2005

Approved by: Evan Cadoff, M.D. Date: 3/13/2008

Revised by: Patricia A. Ribeiro, MT (ASCP) Date: 4/12/13

Reviewed by: Joanne Corbo, MBA, MT (ASCP) Date: 4/12/13

Approved by: Gratian Salaru, M.D. Date: 4/12/13

Approved by: Parisa Javidian, M.D. Date: 4/12/13