MONTGOMERY COUNTY FIRE AND RESCUE SERVICE

INFECTION CONTROL PLAN

Rev: January 2015

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APPENDICES

FACILITY NAME:	
DEPARTMENT NAME:	Montgomery County Fire and Rescue Service
DATE OF PREPARATION:	
DATES OF LAST REVIEW and UPDATE:*	

** Must be revised annually.*

MISSION STATEMENT

Montgomery County Fire and Rescue Service is committed to providing a safe and healthful work environment for all personnel. The Infection Control Plan (ICP) has been developed and implemented to eliminate or minimize the risk of occupational exposure to communicable diseases such as Blood-Body Fluid Contact Diseases, Airborne Diseases, and Droplet Diseases, in accordance with the OSHA standard titled "Occupational Exposure to Bloodborne Pathogens," codified at 29 CFR 1910.1030 and NFPA 1581, *Fire Department Infection Control Program.*

The ICP is a key document to ensure compliance with the standard and to protect our employees. This Infection Control Plan includes:

- Determination of employee exposure,
- Implementation of various methods of exposure control including:
  - Universal precautions,
  - Engineering and work practice controls,
  - Personal protective equipment,
  - Housekeeping,
- Hepatitis B vaccination,
- Post-exposure evaluation and follow-up,
- Communication of hazards to employees and training,
- Recordkeeping,
- Procedures for evaluating circumstances surrounding an exposure incident, and
- Procedures for applying the plan to Volunteer employees.

DEFINITIONS

Important terms used in this document are listed below. Additional definitions are available in the Bloodborne Pathogens standard. A copy of the standard is available on the OSHA web site at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051.

AIRBORNE PATHOGENS - is any disease that is caused by pathogens and transmitted through the air, which can include emerging infectious diseases.

BLOOD- is defined as human blood human blood components and products made from human blood.

BLOODBORNE PATHOGENS - is defined as pathogenic microorganisms that are present in human blood and can cause disease in humans, which can include emerging infectious diseases.

CMF- Acronym for Central Maintenance Facility

EMERGING INFECTIOUS DISEASE (EID)- is an infectious disease whose incidence has increased in the recent past and is likely to continue in the near future.

EMPLOYEE- All operational and administrative individuals of the Montgomery County Fire and Rescue Services

EMS- Acronym for Emergency Medical Service

ENGINEERING CONTROL- is defined as a means of implementing a control measure to isolate or remove a specific hazard from the workplace.

EXPOSURE INCIDENT or **EXPOSURE-** is defined as a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

FROMS- Acronym for Fire and Rescue Occupational Medical Services

HAND_WASHING- performing hand hygiene after handling contaminated equipment, and clothing, and before and after taking off gloves during patient contact will reduce the exposure risks to blood borne pathogens

MCFRS- Acronym for Montgomery County Fire & Rescue Service

OCCUPATIONAL EXPOSURE- means 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.

OTHER POTENTIALLY INFECTIOUS MATERIALS (OPIM) means: (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) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue, cultures, organ cultures, and HIV- or HBV-containing culture, medium, or other solutions; and blood organs or other tissues from experimental animals infected with HIV or HBV.

PSTA- Acronym for Public Safety Training Academy

REGULATED WASTE means 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.

SCBA- Acronym for Self-Contained Breathing Apparatus

UNIVERSAL PRECAUTIONS - is a risk assessment size up that all providers take prior to making patient contact. All patients' body fluids and blood will be treated as being infectious. This risk analysis helps the provider determine what minimum level of BSI (gloves, gowns, face shield, N95 Mask, goggles, hair covering, shoe covers,) will be used.

WORK PRACTICE CONTROL is defined as a means of implementing a control measure which will reduce employee exposure by altering the manner in which a task is performed in the workplace.

PROGRAM ADMINISTRATION

- The MCFRS along the Montgomery County Department of Finance Division of Risk Management and in collaboration with Medical Access or other Licensed Healthcare Provider Occupational Medical Services (OMS) and Fire and Rescue Occupational Medical Service (FROMS for Fire and Rescue Services only) are responsible for the implementation of the ICP. **Contact location/phone numbers: FROMS at (240) 777-5083.**

- The MCFRS Division of Risk Reduction & Training Services will maintain, review, and update the ICP at least annually and whenever necessary to include new or modified tasks and procedures**. Contact location/phone numbers: Safety Chief at (240) 777-2219 / Wellness Battalion Chief at (240) 777-5083.**

- The employees who Risk Management and/or FROMS have determined to be "high risk" or to have reasonably anticipated occupational exposure to blood or Other Potentially Infectious Materials (OPIM) must comply with the procedures and work practices outlined in this ICP.

- The MCFRS EMS Section Logistics (EMS Logistics) personnel will maintain and provide all necessary Personal Protective Equipment (PPE) and engineering controls (e.g., sharps containers, labels, and red bags as required). **Contact Location/Phone Number: EMS Resource Manager at (240) 777-2401.**

- EMS Logistics will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes. **Contact Location/Phone Number: EMS Resource Manager at (240) 777-2401.**

- FROMS or the Licensed Healthcare Provider of Choice is responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained. **Contact location/phone number: FROMS at (240) 777-5185.**

- The MCFRS Division of Risk Reduction and Training will be responsible for training and the documentation of training.

The MCFRS will ensure that the written ICP is available to employees and to representatives of the US Occupational Safety and Health Administration (OSHA), the Maryland Occupational Safety and Health Administration (MOSH) and the National Institute of Occupational Safety and Health (NIOSH). **Contact location/phone number: MCFRS/Risk Mgmt. at (240) 777-8920.**

Bloodborne Pathogens Standard Employer Requirements	
1910.1030(c)(1)(iv)(A):	The employer's sharps and engineering controls must reflect **changes in technology that eliminate or reduce exposure** to Bloodborne Pathogens.
1910.1030(c)(1)(iv)(B):	The employer shall document **annual** consideration and implementation of **appropriate commercially available and effective safer medical devices** designed to **eliminate or minimize** occupational exposure.
1910.1030(c)(1)(v):	An employer shall **solicit input from non-managerial employees** responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification evaluation and selection of effective engineering and work practice controls.
Methods to Document Non-Managerial Employee Solicitation:	Joint labor and management safety committees, Informal problem-solving groups, Safety meetings and audits, Employee surveys, Worksite inspections, Suggestion box, or other means to obtain written employee comments, Pilot testing of devices, or use of bargaining agent.
Other Employer Requirements:	1. The employees selected must represent the range of exposure situations encountered in the workplace. 2. The employer must document the process used and identify the employees or the positions involved in the exposure control plan.

EMPLOYEE EXPOSURE DETERMINATION:

The following is a list of **all** job classifications in our service in which all employees have occupational exposure:

JOB TITLE	DEPARTMENT/LOCATION
Firefighter/Rescuer I or EMS Provider I	MCFRS
Firefighter/Rescuer II or EMS Provider II	MCFRS
Firefighter/Rescuer III or EMS Provider III	MCFRS
Master Firefighter/ Rescuer or EMS Master Provider	MCFRS
Lieutenant or EMS Lieutenant	MCFRS
Captain or EMS Captain	MCFRS
Battalion Chief or Certified EMS Chief	MCFRS
Assistant Chief & Deputy Chief Division Chief	MCFRS
Fire Chief	MCFRS

The following is a list of job classifications in which **some** employees at our establishment have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals:

JOB TITLE	DEPARTMENT/LOCATION	TASK/PROCEDURE
Example: Secretary	Health Clinic A – Admin. Aid	Secures Lab Specimens
Nurse Clinicians	PSTA	Administer injections; Start IV's
Inspectors	Fire Code Compliance	May provide first aid
SCBA Technicians	SCBA Shop	Decontaminate respiratory protection equipment
Mechanics	CMF	Exposure to contaminated equipment
Couriers	Logistics	Transport contaminated PPE

Part-time, temporary, contract, and per diem employees are covered by the standard.

METHODS OF IMPLEMENTATION AND CONTROL

UNIVERSAL PRECAUTIONS

All employees will utilize universal precautions. The term "universal precautions" refers to a concept of infectious disease control which requires that **all** human blood and OPIM be treated as if known to be infectious for HIV, HBV, HCV, or other bloodborne pathogens regardless of the perceived "low risk" status of a patient or patient population.

Alternative concepts in infection control are called Body Substance Isolation (BSI) and Standard Precautions. These methods define all body fluids and substances as infectious. These methods incorporate not only the fluids and materials covered by this standard but expand coverage to include all body fluids and substances.

These concepts are acceptable alternatives to universal precautions provided that facilities utilizing them adhere to all other provisions of the Bloodborne Pathogens standard.

INFECTION CONTROL PLAN (ICP)

Employees covered by the Bloodborne Pathogens standard will receive an explanation of this ICP during their initial training session. The plan will also be reviewed in the employee's annual refresher training. All employees will have an opportunity to review this plan at any time during the work shift by contacting: The Safety Chief or by going on-line to the FROMS website. If requested, MCFRS will provide an employee with a copy of the ICPICP free of charge and within 15 days of the request.

The MCFRS is responsible for reviewing and updating the ICP annually or more frequently, if necessary, to reflect **any new or modified tasks and procedures** that affect risks of occupational exposure and to reflect new or revised employee positions with risks of occupational exposure.

ENGINEERING AND WORK PRACTICE CONTROLS

Engineering and work practice controls will be used to prevent, or minimize, occupational exposure to bloodborne pathogens.

The Bloodborne Pathogens standard requires the employer to institute engineering controls or work practices controls as the primary means of eliminating or minimizing employee exposure (see paragraph 1910.1030(d)(2)(i)). **OSHA has always required employers to use engineering and work practice controls that eliminate occupational exposure or reduce it to the lowest feasible extent.** Preventing exposure requires a comprehensive program including the use of engineering controls which such as: needleless systems, shielded needle devices, and plastic capillary tubes.

Safer Sharps Evaluation Forms are located in Appendix B and examples of safer needle devices are contained in Appendix C "Reference Material."

Examples of "Work Practice Controls" include:

1. **Institution of a restrictive duty clause in employee policy**. An example of restrictive duty clause includes: Universal Precautions - Treatment of all human blood and certain body fluids as infectious for Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), and other Bloodborne Pathogens.

2. **Prevention of the consumption of food of drink within clinical areas.** This will reduce the potential for contamination upon contact with contaminated surfaces, specimen containers, or activities with potential to expose personnel to blood, bodily fluids, or OPIM.

3. **Prohibition of needle recapping** unless an emergency alternative is required and then only with properly performed one-hand scoop (scoop-up cap of needle from a flat surface using a one-handed technique).

No one medical device is appropriate to use in all circumstances. Employers must implement the safer medical devices that are appropriate, commercially available, and effective. This is stated in the OSHA Instruction "Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens" (CPL 02-02-069 [formerly CPL 2-2.69] published on November 27, 2001).

The Bloodborne Pathogens standard requires examination of engineering controls for maintenance and/or replacement on a regular scheduled basis to ensure their effectiveness (see paragraph 1910.1030(d)(2)(ii)). **It is the employer's responsibility to regularly examine repair and/or replace engineering controls (as often as necessary).** This will ensure that each engineering control is maintained and provides the protection intended. Safer Sharps Evaluation forms are located in Appendix B "Safer Sharps Evaluation Forms."

The specific engineering controls and work practice controls used are listed below:
(**For example:** *non-glass capillary tubes SESIPs needless systems)*

Annual Fit Test for respiratory protection, Needless Access IV Drip Sets, Sharps Containers, Pre-filled Saline Flushes, Waterless Hand Cleaner and Antiseptic Towelettes, Universal Precautions, BD Safety Needles, Jelco Protective Plus-W Safety IV Catheter, Plastic Capillary Tubes, Eating and Drinking is prohibited in work areas where there is a risk of an occupational exposure.

Sharps disposal containers are inspected and maintained or replaced by Montgomery County Fire and Rescue Service personnel and also by the vendor, Environmental Waste Services. All stations/facilities are on a set schedule for pick up. If you should need a special pick up, please contact the EMS Section Administrative Specialist at 240-777-2411.

This facility identifies the need for changes in engineering control and work practices through the following measures:
(**Examples**: Nurse Advisory Committee meetings for investigation and evaluation of safer engineered devices employee sharps survey OSHA record review employee interviews committee activities etc.)
The Station/Facilities Risk Consultation Program will be scheduled by the Station Commander/Site Coordinator with the Shift Safety Officer. The inspection and evaluation includes but is not limited to personnel, equipment, apparatus, and building facilities.

The following staff is involved in this process: (**Describe how employees will be involved**)
The MCFRS Training Academy staff members, Site Coordinator, and the employee's supervisor will oversee the annual training for all personal in bloodborne pathogens and airborne disease exposures.

The MCFRS Safety Section will ensure effective implementation of these recommendations and will collaborate with the Joint Health & Safety Committee and EMS Section on an annual basis to effectively implement state, federal, and local regulatory requirements.

FOR DEPARTMENTS UTILIZING SAFER SHARPS DEVICES

Has the department/division performed an annual **Needlestick Risk Assessment**?
Yes ☐ No ☐ Not Applicable ☐

We evaluated new procedures or new products by utilizing the following process. (**Describe the process**)
All new clinical equipment is evaluated by a joint labor/management EMS Equipment committee.

If not, please provide an explanation:

Please see Appendix B "Safer Sharps Evaluation Forms" for sample forms with evaluation criteria for selection of safer sharps devices and engineering controls.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is provided to our employees at no cost to them. Training is provided by MCFRS in the use of the appropriate PPE for the tasks or procedures employees will perform.

The types of PPE available to employees are as follows:
(Examples - gloves eye protection etc.)
Simple Mask with face shield, disposable non-latex gloves, N95 Mask, Ear Loop Procedure Mask,
Personal Protection Infection Control Kit (gowns, head covering, shoe covers, and eye protection)

PPE is located in stations/facilities and may be obtained through the EMS Logistics process.
(Specify how employees are to obtain PPE and who is responsible for ensuring that it is available):

EMS PPE is located in all stations/facilities. PPE may be obtained through the EMS Logistics process.

All employees using PPE must observe the following precautions:

- Wash hands immediately, or as soon as feasible, after removal of gloves or other PPE. Handwashing signs that demonstrate proper handwashing techniques are located in Appendix C "Reference Material."
- Remove PPE after it becomes contaminated and before leaving the work area.
- Used PPE must be disposed of in red bio-hazard-labeled bags located throughout the facility.
- Wear appropriate gloves when it can be reasonably anticipated that there may be hand contact with blood or OPIM and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured, or contaminated or if their ability to function as a barrier is compromised.
- Disposable gloves must be changed in-between patients. Never wash or decontaminate disposable gloves for reuse.
- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- Remove immediately, or as soon as feasible, any garment contaminated by blood or OPIM in such a way as to avoid contact with the outer surface.

The procedure for handling used PPE is as follows: For example, how and where to decontaminate face shields eye protection or resuscitation equipment.
EMS PPE is disposable. Non disposable PPE equipment that has been contaminated with blood or OPIM shall be cleaned and disinfected as soon as possible. CDC recommends a 1:10 bleach solution.
(The employer may refer to specific agency procedure by title or number and last date of review)

The employer is responsible for providing PPE. If laboratory coats or uniforms are intended to protect the employee's body from contamination they are to be provided by the employer **at no cost to the employee**.

- **Uniforms/Scrubs**: If used as PPE, they must be laundered by the employer and not sent home with the employee for cleaning.

- **Scrubs**: If worn in a manner similar to street clothing and would normally be covered by appropriate gowns, aprons, or lab coats when splashes to skin or clothes are reasonably anticipated, then they will be laundered by the employee.

- **Resuscitator devices**: Are accessible to employees who can reasonably be expected to perform resuscitation procedures and emergency ventilation devices for use in resuscitation (e.g., masks mouthpieces resuscitation bags shields/overlay barriers).

- **Gloves**: "Hypoallergenic"* gloves, glove liners, powderless gloves, or other similar alternatives must be readily available and accessible at no cost to those employees who are allergic to the gloves normally provided.

  * **NOTE**: The Federal Register Volume 62, No. 189, effective September 30, 1998 states that the FDA currently requires labeling statements for medical devices containing "natural rubber" and prohibits the use of the word "hypoallergenic" to describe such products.

- **Specimens** should be collected with gloved hands, placed in a bio-hazard labeled, leak-proof container, and enclosed in a sealed bag for transport with the request form in the outer sleeve pocket of the plastic bag to prevent contamination.

- **Protective eyewear**: "Goggles, glasses, or face shields" must be worn during procedures likely to cause splattering, splashing, or spraying of blood or body fluids. Eyewear should be shielded at the side, close fitting, and cleaned after each use (if not disposed).

- **N95 Respirator Mask**- a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles.

For additional information on latex, see the following articles:

- NIOSH Alert Preventing Allergic Reactions to Natural Rubber Latex in the workplace (Publication No. 97-135) published in June 1997.
  http://www.cdc.gov/niosh/latexalt.html

- Directorate of Technical Support Technical Information Bulletin: Potential for Allergy to Natural Rubber Latex Gloves and other Natural Rubber Products.
  http://www.osha.gov/dts/tib/tibdata/tib19990412.html.

HOUSEKEEPING

DISPOSAL OF REGULATED WASTE

Regulated waste is placed in containers which are closable, constructed to contain all contents and to prevent leakage, appropriately labeled bio-hazard or color-coded (**please see "Labels"**), and closed prior to removal to prevent spillage or protrusion of contents during handling. Brush and dustpan kits, along with an absorbent medium, are used for cleanup. No broken glassware is directly touched and only those trained on the Bloodborne Pathogens standard and Universal Precautions are permitted to clean up broken glassware.

HANDLING AND DISPOSAL OF BROKEN AND CONTAMINATED GLASSWARE OR OTHER BROKEN ITEMS

- **Broken glassware** (e.g., glass capillary tubes, lab specimen dishes, phlebotomy tubes) is capable of inflicting percutaneous injury and direct inoculation of bloodborne pathogens into the bloodstream.
- The Bloodborne Pathogens standard requires that broken glassware, or broken items, must be picked up using mechanical means, e.g., **brush and dust pan forceps, etc.**, (see paragraph 1910.1030(d)(4)(ii)(D)). These items also require decontamination or disposal after usage.

The procedure for handling and disposal of contaminated sharps and glassware is:
Contaminated sharps will be placed in appropriate labeled sharps containers. Activate the safety feature on the device and discard in the container. Do not bend, break, or recap needles.

HANDLING AND DISPOSAL OF SHARPS CONTAINERS

- Contaminated sharps are discarded immediately, or as soon as possible, in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and labeled or color-coded appropriately.

- Sharps disposal containers are available at the following locations: Sharps Containers are located in all areas where sharps devices are used.
  (NOTE: They **must** be easily accessible and as close as feasible to the immediate area where sharps are used).

- The Bloodborne Pathogens standard requires that sharps containers must be replaced routinely to prevent overfilling. Overfilling is associated with selection of containers that are too small to accommodate the volume of sharps, limited ability to (visually) see the contents and to determine the remaining capacity, and lax procedures for container maintenance (see paragraph 1910.1030(d)(4)(iii)(A)(2)(iii)).

  For example, sharps containers can be examined to determine requirements for replacement by selecting containers with transparent windows and installation of containers at a height for routine visibility.

- The Bloodborne Pathogens standard also requires that if a sharps container can not be sealed to prevent leakage it must be placed in a secondary container (see paragraph 1910.1030(d)(4)(iii)(A)(2)(iii)).

The procedure for handling and disposal of sharps containers is:

To prevent the risk of needle sticks or cuts, sharps containers will only be filled ¾ of the way.

All stations/facilities are on a set schedule for pickups. If you should need a special pick up, please contact the EMS Section Administrative Specialist at (240-777-2411).

HANDLING AND DISPOSAL OF OTHER REGULATED WASTE

- The Bloodborne Pathogens standard requires both the inspection and decontamination **on a regularly scheduled basis** of cans bins pails and so forth which are intended for reuse (see paragraph 1910.1030(d)(4)(iii)(A)(2)(iii)).

- The Bloodborne Pathogens standard also requires that regulated waste containers be closable; simply being closed does not ensure that waste will be contained (see paragraph 1910.1030(d)(4)(iii)(B)). Waste-containing bags may break and spill their contents including liquid blood.

For example, medical offices generating only a small volume of regulated waste may place that waste in a large holding container until the container is filled. In such a case, the container must be either color coded or labeled with a bio-hazard symbol. Also, the container must be leak-proof, puncture resistant, closeable, and designed to retain waste until pickup by a licensed contractor.

The procedure for handling and disposal of other regulated waste is:

Our current vendor is Environmental Waste Service, Inc. of Rockville. All stations/facilities are on a set schedule for pickups. If you should need a special pick up, please contact the EMS Section Administrative Specialist at (240-777-2411).

HANDLING OF CONTAMINATED WASTE PRIOR TO DISINFECTION OR STERILIZATION

- The Bloodborne Pathogens standard also affirms that proper decontamination of reusable equipment such as glassware or hand instruments can not be achieved in the presence of organic debris (e.g., blood) because it interferes with the efficacy of the disinfecting or sterilizing process (see paragraph 1910.1030(d)(4)(ii)).

The procedure for informing housekeeping (employees or contractors, etc.) performing required duties (in clinical lab areas, etc.) to maintain a safe distance from sharps, bio-hazard waste containers, and other areas of known or potential exposure to Bloodborne Pathogens is:
See DFRS Policy #814 Employee Right to Know Hazard Communication Program. Warning labels shall be affixed to containers of bio hazard waste, or OPIM.

CLEANING SCHEDULE AND METHODS

- The Bloodborne Pathogens standard allows for the cleaning schedules and methods to vary (see paragraph 1910.1030(d)(4)(i)). While extraordinary attempts to disinfect or sterilize environmental surfaces such as walls or floors are rarely indicated, routine cleaning and removal of soil is required. A "Cleaning and Decontamination Schedule" form is located in Appendix D.

  The employer must determine and implement "**an appropriate written schedule of cleaning and decontamination**" based upon the location within the facility (e.g., interior cab of ambulance versus dental clinic), type of surface to be cleaned (e.g., hard-surfaced flooring versus carpeting), type of soil present (e.g., gross contamination versus minor splattering), and tasks and procedures being performed (e.g., laboratory analyses versus routine patient care).

  The particular disinfectant used, as well as the frequency with which it is used, will depend upon the circumstances in which the housekeeping task occurs.

- The Bloodborne Pathogens standard requires the cleaning of contaminated work surfaces **after completion of procedures** to ensure that employees are not unwittingly exposed to blood or OPIM remaining on a surface from previous procedures (see paragraph 1910.1030(d)(4)(ii)(A)). This paragraph also requires contaminated work surfaces to be cleaned with an "appropriate disinfectant."

NOTE: Appropriate disinfectants include: "a diluted bleach solution and EPA registered tuberculocides (List B), sterilants registered by EPA (List A), products registered against HIV/HBV (List D), or Sterilants/High Level Disinfectants cleared by FDA." Links to the current lists are located in Appendix C "Reference Material."

NOTE: Please complete the "Cleaning and Decontamination Schedule" provided specifically for use by your department or division as required by MOSH/OSHA in Appendix D "Cleaning and Decontamination Schedule."

LAUNDRY

The following contaminated articles will be laundered by this company:
(If N/A, please indicate below).

Company	Articles
Maryland Fire Equipment Corporation 12284 Wilkins Avenue Rockville, MD 20852 (301) 881-2713	NFPA 1971 Structual Firefighting PPE, pants, coat, boots, and helmet.
Maryland Fire Equipment Corporation 12284 Wilkins Avenue Rockville, MD 20852 (301) 881-2713	NFPA 1999 EMS PPE, pant, coat, boots, and helmet

The following laundering requirements must be met:

- Handle contaminated laundry as little as possible with minimal agitation
- Place wet contaminated laundry in leak-proof labeled or color-coded containers before transport. Use red bags or bags marked with biohazard symbol for this purpose.
- Wear the following PPE when handling and/or sorting contaminated laundry:
    - Gloves

Note:
The Bloodborne Pathogens standard states that it is the **employer's responsibility** not only to provide PPE, but to clean, maintain and/or dispose of it (see paragraph 1910.1030(d)(3)(iv)). **Home laundering by employees is not permitted**.

BBP contaminated station uniforms must be laundered in the station's designated washing machine for contaminated articles or disposed of following outlined procedures if it cannot be decontaminated.

CENTERS FOR DISEASE CONTROL (CDC)
HEALTH TOPICS – LAUNDRY
http://www.cdc.gov/ncidod/dhqp/bplaundry.html

Although soiled linen may harbor large numbers of pathogenic microorganisms, the risk of actual disease transmission from soiled linen is negligible. Rather than rigid rules and regulations, common-sense hygienic practice for processing and storage of linen are recommended.

Soiled linen should be handled as little as possible and with minimum agitation to prevent gross microbial contamination of the air and of persons handling the linen. All soiled linen should be bagged or placed in containers at the location where it was used and should not be sorted or rinsed in the location of use. Linen heavily contaminated with blood or other bodily fluids should be bagged and transported in a manner that will prevent leakage. Soiled linen is generally stored in the laundry before washing.

Gloves and other appropriate protective apparel should be worn by laundry personnel while sorting soiled laundry.

Commercial laundry facilities often use water temperatures of at least 160 degrees Fahrenheit and 50-150 ppm of chlorine bleach to remove significant quantities of microorganisms from grossly contaminated linen. Studies have shown that a satisfactory reduction of microbial contamination can be achieved at water temperatures lower than 160 degrees Fahrenheit if the laundry chemicals suitable for low-temperature washing are used at proper concentrations. In the home, normal washing and drying cycles including "hot" or "cold" cycles are adequate to ensure patient safety. Instructions of the manufacturer's of the machine and the detergent or wash additive should be followed closely.

Commercial dry cleaning of fabrics soiled with blood also renders these items free of the risk of pathogen transmission. Clean linen should be handled transported and stored by methods that will ensure its cleanliness.

LABELING

The following labeling methods are used in this facility:

Item	Bio-hazard Label		Red Container
Examples: 1. Centrifuge staged in clinic with both bio-hazard label 2. Labeled regulatory contaminated waste bag	 X X	 or or	 X
Regulated waste container (e.g., contaminated sharps containers)	X	or	X
Re-usable contaminated sharps container (e.g., surgical instruments soaking in tray)			
Refrigerator/freezer holding blood or other potentially infectious material (OPIM)			
Containers used for storage transport or shipping of blood			
Blood/blood products for clinical use			
Individual specimen containers of blood or OPIM in facility			
Contaminated equipment needing service (e.g., dialysis equipment, suction apparatus)			
Specimens and regulated waste shipped from the primary facility to another facility for service or disposal			
Contaminated laundry or other (please specify) ** Items soiled in blood bodily fluids or OPIM are disposed of in a bio-hazard labeled red waste bag.*			

Mark method used within facility with an "X" (Bio-hazard or Red Container). See above.

The FROMS will ensure warning labels are affixed, or red bags are used, as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify the Wellness Battalion Chief if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment etc., without proper labeling.

Note: "Food or drink" and/or related utensils will **not** be brought into, or consumed in, clinical or lab areas. In addition, food and drink will not be stored in refrigerators, freezers, or other cold storage units provided for storage of medicine, blood, bodily fluids, or other potentially infectious materials within clinical or lab areas.

HEPATITIS B VACCINATION

FROMS staff will provide information to employees on Hepatitis-Hepatitis B vaccinations addressing the safety, benefits, efficacy, and methods of administration of this vaccine. A *Hepatitis B Fact Sheet* is available in Appendix C "Reference Material" to provide additional information on the benefits of being vaccinated.

The Hepatitis B vaccination series is available **at no cost** to employees identified in the exposure determination section of this plan. Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series, 2) antibody testing reveals that the employee is immune, or 3) medical evaluation shows that vaccination is contraindicated.

If an employee chooses to decline the vaccination the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is maintained within the medical records. The "Hepatitis B Vaccination Declination Form" is located in Appendix E.

Employees who have previously received the HBV vaccination should provide a copy of his or her vaccination record, or obtain a statement from the provider to the effect that the employee has been vaccinated for HBV and the inoculation dates. An authorization to release medical information directly to FROMS is provided in Appendix F. Montgomery County Public School students may request a copy of his/her immunization records from the school to provide to FROMS, or they may use the "Authorization to Release Medical Information" form in Appendix F to have the information transmitted directly to FROMS.

Following a Bloodborne Pathogens exposure at the workplace "post-exposure" vaccinations will be provided to employees by FROMS, located at 255 Rockville Pike, Suite 135, Rockville, MD 20852, Phone 240-777-5185

Employees may receive vaccinations from FROMS/Occupational Medical Services (OMS), 255 Rockville Pike, Suite 125, Rockville, MD 20850, or from a personal private physician of choice.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

1. Immediately following a Bloodborne Pathogens "exposure incident," the exposed employee shall immediately seek medical treatment. Following the initial medical treatment the employee should notify his/her immediate supervisor and the EMS Duty Officer.

2. The immediate supervisor should refer to the MCFRS Bloodborne Pathogens Exposure Procedures Checklist as a guideline for exposure incident reporting protocol. This includes contacting the **Montgomery County Claims Reporting Service at 1-888-606-2562** to file the First Report of Injury.

3. The immediate supervisor will then instruct employees involved in the exposure incident to report to FROMS and/or the nearest Emergency Room.

4. If FROMS is not the Licensed Healthcare Provider of choice the supervisor will refer to the instructions in the Supervisor's Bloodborne Pathogens Guideline/Forms and follow the MCFRS Bloodborne Pathogens Exposure Procedures Checklist.

5. The supervisor must then complete a "First Report of Injury" documenting circumstances surrounding the exposure incident.

6. The MCFRS supervisor must submit a copy of the "First Report of Injury," a copy of the "Medical Evaluation of Work Status Form", and a copy of the OSHA Standard to the exposed employee. These forms are provided for the exposed employee to take with them to the Licensed Healthcare Provider of their choice for evaluation treatment counsel and follow-up.

7. The MCFRS Safety Section will complete the exposure investigation through RMAP .

The MCFRS Supervisor's Bloodborne Pathogens Exposure Section contains the following information:

- MCFRS Supervisor's Bloodborne Pathogens Exposure Checklist
- Medical Evaluation of Work Status Form
- Healthcare Professional's Evaluation Report (also known as the "Blood/Body Fluid Exposure" Report)
- Copy of the Bloodborne Pathogen standard – 29 CFR 1910.1030

If FROMS is the Licensed Healthcare Provider of choice during normal business hours please contact FROMS at (240) 777-5185. If the incident occurs after business hours, employees should obtain treatment at the nearest hospital emergency room.

ADMINISTRATION OF POST-EXPOSURE EVALUATION AND FOLLOW-UP WITH PRIVATE PROVIDER.

Employees who seek treatment with a private provider (not FROMS) should take the Medical Evaluation of Work Status form and the Healthcare Professional's Evaluation Report to be completed by the private provider. The completed forms must then be submitted to FROMS to be added to the employee's medical record.

Post Exposure Follow-up treatment will include, as appropriate, the CDC's recommendations available in these documents.

Standards Hepatitis B Care

1. MMWR November 22, 1991 (post-exposure)
2. MMWR December 26, 1997 immunization (pre-exposure)

Standards HIV Post-Exposure Care

1. MMWR May 15, 1998 public health service for the management of healthcare worker exposures to HIV and recommendations to post-exposure prophylaxis.

The "Healthcare Professional's Evaluation Report" will be limited to whether the employee requires the Hepatitis-Hepatitis B vaccine and whether the vaccine was administered. The written opinion is maintained as part of the medical record.

- Montgomery County Fire and Rescue Service Employees who have reasonably anticipated workplace exposure to blood or OPIM will receive annual BBP training and will follow Montgomery County Fire and Rescue Service Policy mandated for all bloodborne pathogens exposure incidents.

- Training at the Montgomery County Fire and Rescue Service Training Academy will reinforce the ability to distinguish between the signs and symptoms of Hepatitis-Hepatitis B and transmission.

- The Montgomery County Fire and Rescue Service Training Academy will train and inform employees of the circumstances and the conditions in which they may be protected against the Hepatitis-Hepatitis B virus and as a result (in the event of a bloodborne pathogens exposure incident) the affected employee can then inform his or her licensed health care provider so appropriate care is provided.

- Hepatitis B immunoglobulin (HBIG) given within a week after the "Exposure Incident" provides 70%-75% protection from HBV.

PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

The employee's immediate on-duty supervisor, in conjunction with the affected employee, will provide a detailed written statement outlining the exposure to the MCFRS Safety Section to be included in the Risk Map Report that outlines the circumstances of the bloodborne pathogens and/or airborne pathogen exposure incident.

This report will aid in the determination of:

- Engineering controls in use at the time work practices followed.
- A description of the device being used.
- Protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.).
- Location of the incident (O.R., E.R., patient room etc.).
- Procedure being performed when the incident occurred.
- Employee's training.

If the report results indicate that revisions need to be made, Wellness Battalion Chief /FROMS will ensure that appropriate changes are made to this ICP. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.)

The MCFRS Safety Section, in conjunction with the immediate supervisor, will review the first report of injury and aid in the evaluation of circumstances regarding the exposure, as required, ensuring effective protocol for future occurrences.

THE FOLLOWING PROCEDURES ARE MANDATED BY OSHA/MOSH

- The employer of the exposed employee and a licensed healthcare provider will document the source individual (unless the employer can establish that identification is infeasible or prohibited by state or local law).

- If possible, the licensed healthcare provider should obtain consent from the source individual. The healthcare provider collects the employee's blood and makes arrangements to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; also, the licensed healthcare provider should document that the source individual's test results were conveyed to the employee.

- If the source individual is already known to be HIV, HCV, and/or HBV positive, new testing need not be performed.

- The licensed healthcare provider should assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).

- After obtaining consent, the licensed healthcare provider collects the exposed employee's blood as soon as feasible after exposure incident and test blood for HBV and HIV serological status.

- If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, the licensed healthcare provider must arrange for an accredited lab to preserve the baseline blood sample for at least 90 days. If the exposed employee elects to have the baseline sample tested during this waiting period the healthcare provider must arrange to perform testing as soon as feasible.

AFTER-HOURS BLOODBORNE PATHOGENS EXPOSURE INCIDENT TREATMENT

Employees who are involved in an exposure incident after normal business hours should obtain treatment at their nearest Emergency Room, Urgent Care Center, or other provider of the employee's choice. In addition to treatment, the employee shall contact their EMS Duty Officer and Station Officer to ensure that MCFRS Policy and Procedures are being followed. Employees must follow up with FROMS the next business day. Employees are **strongly** encouraged to take the Medical Evaluation Work Form with them and return the completed form to FROMS for review and follow-up, if necessary.

EMPLOYEE TRAINING

All employees who have occupational exposure to Bloodborne Pathogens receive training conducted by MCFRS Training Academy staff with the assistance of the Safety Section on annual basis.

All employees who have occupational exposure to Bloodborne Pathogens receive training on the epidemiology, symptoms, and transmission of Bloodborne Pathogens diseases.

In addition, the training program covers at a minimum the following elements:

- A copy and explanation of the standard.
- An explanation of our ICP and how to obtain a copy.
- An explanation of methods to recognize tasks and other activities that may involve exposure to blood, airborne pathogens, and OPIM, including what constitutes an exposure incident.
- An explanation of the use and limitations of engineering controls, work practices, and PPE.
- An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE.
- An explanation of the basis for PPE selection.

- Information on the Hepatitis-Hepatitis B vaccine including information on it's efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge.
- Information on the appropriate actions to take and persons to contact in an emergency involving a Bloodborne pathogen, an airborne pathogen, or OPIM.
- 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.
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- An explanation of the signs, labels, and/or color coding required by the standard and used at different facilities.

RECORDKEEPING

TRAINING RECORDS

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years on: PCAP for Career personnel and PIMS for volunteer personnel

The training records include:

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

Employee training records are provided upon request to the employee, or the employee's authorized representative. Such requests should be addressed to: PSTA, 9710 Great Seneca Highway, Rockville, MD 20850.

MEDICAL RECORDS

Medical records are maintained for each employee with occupational exposure in accordance with "Access to Employee Exposure and Medical Records" codified at 29 CFR 1910.1020.

FROMS is responsible for the maintenance of the required medical records. These confidential records are kept at OMS for at least the duration of employment plus 30 years.

In order to maintain a complete Employee Medical Record, employees who seek treatment with a private provider (**not** OMS or Medical Access) should request a copy of the medical record and submit it to FROMS for retention.

Employee medical records are provided upon request of the employee, or to anyone having written consent of the employee, within 15 working days. Such requests should be sent to OMS. An appointment will be scheduled for the employee, or employee representative, to review and copy the requested records.

OSHA RECORDKEEPING

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by the Division of Risk Management and/or designee. Please see Appendix G "Exposure Incident Investigation Report."

A revision to the Recordkeeping Regulation (29 CFR Part 1904) was published January 19, 2001 and became effective January 1, 2002. The standard at paragraph 1904.8 requires all work-related injuries from needlesticks and cuts, lacerations, punctures, and scratches from sharp objects contaminated with another person's blood or OPIM to be recorded on the OSHA 300 Log as an injury. Paragraphs 1904.29(b)(6) thru (b)(9) discuss privacy concerns.

Employers must keep a separate confidential list of the case numbers and employee names so they can update the cases or provide them if asked by the government. If the employee develops a bloodborne disease the entry must be updated and recorded as an illness.

SHARPS INJURY LOG

The Bloodborne Pathogens standard requires employers to establish and maintain a *Sharps Injury Log* for the recording of percutaneous injuries from contaminated sharps. This log is separate from the *Log of Injuries and Illnesses* kept under Part 1904. The Sharps Injury Log must include the type and brand of device involved with the incident.

The Sharps Injury Log also requires identifying the department or work area where the "exposure incident" occurred and an explanation as to how the "exposure incident" resulted. This will help identify the intended evaluation of risk and the device's effectiveness.

More information may be included; however, the confidentiality of the employee must be maintained throughout the process. The purpose of the Sharps Injury log is to aid in the evaluation of devices being used in the workplace and to quickly identify problem areas in the facility. The log should be reviewed regularly and during the review and update of the ICP.

NOTE: If the data is made available to other parties (e.g., supervisor's safety committees, employees, and employee-representatives) any information that directly identifies an employee, or any information that could reasonably be used to identify the employee, must be withheld. Sharps Injury Logs must be saved for at least five years following the end of the calendar year that they cover. The format of the sharps injury log is not specified.

Please see Appendix B "Safer Sharps and Engineering Controls Review and Evaluation Forms" for the mandatory forms and Appendix H for a "Sharps Injury Log." Please complete review and utilize as required within your department or division.

APPENDIX A
Bloodborne Pathogens Information & Training

Objectives

- To understand what bloodborne pathogens are.
- How to reduce your risk as well as reduce the risk of others to an exposure.
- To comply with OSHA MOSHA and Montgomery County standards for bloodborne pathogens training.

Overview

Bloodborne pathogens (BBP) are bacteria, viruses, and other germs that are carried in the bloodstream. In 1992, OSHA announced a workplace standard entitled "Occupational Exposure To Bloodborne Pathogens." The purpose of implementing this standard was to remove or diminish exposure to pathogens for anyone who may face risk from exposure to blood and other potentially infectious material. Anyone who is expected to provide first aid or CPR in the course of the job, even if this is a rare or occasional occurrence, is required by OSHA, MOSH, and County policy to have bloodborne pathogens training **annually**.

Bloodborne pathogens that cause the biggest threat are:

- Hepatitis B Virus (HBV)
- Hepatitis C Virus (HCV)
- Human Immunodeficiency Virus (HIV)

Hepatitis B Virus (HBV)

Hepatitis is an inflammation of the liver. HBV spreads by contact with blood or an infected person or by having sex with an infected person. Hepatitis B affects more Americans than Hepatitis C or HIV.

1. You cannot receive HBV by:
    - Coughing
    - Kissing
    - Sharing utensils
    - Food or water
    - Informal contact

2. HBV symptoms include:
    - Joint pain
    - Stomach aches
    - Yellow skin or eyes
    - Tiredness

3. A blood test can tell you if you have HBV.

4. Ways to protect yourself from getting infected with HBV:
    - Get vaccinated
    - Do not have sexual contact
    - Do not share anything that might have blood on it

Hepatitis C Virus (HCV)
Hepatitis C is a liver disease caused by the Hepatitis C virus (HCV). Hepatitis C virus enters the body through direct blood exposure. Common examples of transmission events include receiving a blood transfusion from an infected source or sharing intravenous drug needles with an infected individual.

Because there **is no treatment or vaccine for HCV,** preventing exposures through dedicated use of universal precautions is the most effective way to reduce transmission of HCV in the workplace. Hepatitis C Virus (HCV) is **not** spread by:

- Coughing
- Kissing
- Sharing utensils
- Food or water
- Informal contact

Human Immunodeficiency Virus (HIV)
HIV (human immunodeficiency virus) is the virus that causes AIDS. This virus may be passed from one person to another when infected blood semen or vaginal secretions come in contact with an uninfected person's broken skin or mucous membranes.

1. HIV **Is** Spread by:
   - Infected blood or bodily fluids into an open cut
   - Contaminated needles
   - Tattoos or piercing from contamination needles
   - Sexual contact
   - Transfusions (rarely happens)

2. You **cannot** get HIV from:
   - Toilet seats
   - Touching an infected person
   - Mosquito, tick bite, or flea bites
   - Being sneezed or coughed on by an infected person

Means of Transmission
HIV and HBV bloodborne pathogens may be transmitted from the infected individual to other individuals by blood or other infectious sources such as:

- Body fluids
- Any detached body tissue or organ from a human

HIV and HBV are transmitted through:

- Sexual contact
- Sharing needles
- Puncture wounds
- Contact between broken skin and the infected body fluids
- From mothers to their children

HCV is transmitted through direct blood exposure:

- Blood transfusion from an infected source
- Sharing intravenous drug needles with an infected source

Standards
"*Universal Precautions*" is the name used to describe a prevention strategy in which all blood and potentially infectious materials are treated as if they are infectious regardless of the perceived status of the source individual. On every EMS call, the EMS provider should conduct an initial and ongoing evaluation of the risk for a possible exposure to an infectious disease. The initial and ongoing evaluation will determine the type of PPE measures the provider will take.

By using Universal Precautions and following these simple engineering and work practice controls you can protect yourself and prevent transmission of bloodborne pathogens.

- Treat all human blood and body fluids as if they are known to be infectious for HIV, HBV, HCV and other bloodborne pathogens.
- Protect yourself; it is crucial to have a barrier between you and the potential infectious material. All cuts and sores should be covered with a bandage before applying pressure with disposable gloves.
- Always wear personal protective gear in exposure circumstances.
- Use a freshly made solution of ¼ cup bleach to 1 gallon of water (1:10), to clean a blood or body fluid spill area.
- Use disposable towels. Everything must be placed in a biohazard container and disposed of properly.
- Remove or replace any personal protective gear that is torn or punctured.
- Remove personal protective gear before leaving your work area.
- Handle and dispose of any sharp items that may be contaminated with extreme caution. Never use bare hands.
- Wash hand immediately or as soon as possible after removal of glove or other personal protective gear. Hand sanitizers may be used if immediate hand washing isn't possible.

Personal Protective Equipment (should be readily accessible)
Gloves – Gloves should be single-use and made of latex or nitrile and worn during patient contact (i.e. body/bloody fluids, mucous membranes, non-intact skin, or other potentially infectious disease

- Gloves
- Protective eyewear
- Face shields
- Aprons
- Patient mask
- Caps and booties
- N95 Respirator Mask
- CPR mask
- Caps and booties
- Disposable head Cover
- Disposable shoe cover
- Disposable Isolation Gowns
- Surgical Mask

Decontamination- All equipment and work surfaces must be cleaned and decontaminated with an appropriate EPA approved disinfectant after contact with blood, body fluids, or other potentially infectious material. Providers must insure adequate cleaning of the equipment and vehicle after every patient transport. The cleaning should include disinfecting any reusable equipment used on the patient (B/P cuff, stethoscope, monitor, stretcher, etc.), soiled surfaces, and frequently touched surfaces.

The first step in the cleaning process is removing gross contamination, debris, and soil with a towel or germicidal disinfectant wipes and properly disposing of the cleaning wipes in a red biohazard bag. After a surface has been cleaned it can be decontaminated. Germicidal disinfectant wipes such as Sani-Cloth Plus are easy and efficient to use on reusable equipment. One minute contact is all that is needed on most surfaces. One of the most effective disinfectants is a simple bleach and water solution. A ratio of 1:10 is the preferred mixture. The mixture works out to be a quarter cup of bleach for every gallon of water. The shelf life for this solution is one day so it needs to be labeled properly.

Airborne Pathogens Information & Training

Objectives

- **To understand what airborne diseases are.**
- **How to reduce your risk as well as reduce the risk of others to an exposure**

Airborne disease- An **airborne disease** is any disease that is caused by pathogens and transmitted through the air. In 1992, OSHA announced a workplace standard entitled "Occupational Exposure to Bloodborne Pathogens." The purpose of implementing this standard was to remove or diminish exposure to pathogens for anyone who may face risk from exposure to blood and other potentially infectious material. Anyone who is expected to provide first aid or CPR in the course of the job, even if this is a rare or occasional occurrence, is required by OSHA, MOSH, and County policy to have bloodborne pathogens training **annually**.

Airborne diseases that cause the biggest threat are:

- Influenza (Flu)
- Meningitis (Bacterial / Viral)
- Chickenpox
- Tuberculosis (TB)

Influenza (Flu)
Influenza, commonly known as the "flu," is an extremely contagious respiratory illness caused by influenza A or B viruses. Flu appears most frequently in winter and early spring. The flu virus attacks the body by spreading through the upper and/or lower respiratory tract.

Means of Transmission
The flu virus is spread from person to person through respiratory secretions and typically sweeps through large groups of people who spend time in close contact, such as daycare facilities, classrooms, college dormitories, military barracks, offices, and nursing homes.

Flu is spread when you inhale droplets in the air that contain the flu virus, make direct contact with respiratory secretions through sharing drinks or utensils, or handle items contaminated by an infected person. In the latter case, the flu virus on your skin can infect you when you touch or rub your eyes, nose, or mouth. That's why frequent and thorough handwashing is a key way to limit the spread of influenza. Flu symptoms start to develop from one to four days after infection with the virus.

Meningitis

Bacterial Meningitis
Meningitis is a relatively rare infection that affects the delicate membranes -- called meninges that cover the brain and spinal cord.

Means of Transmission
The germs that cause bacterial meningitis can be contagious. Some bacteria can spread through the exchange (e.g., by kissing) of respiratory and throat secretions (e.g., saliva or mucus). **Fortunately, most of the bacteria that cause meningitis are not as contagious as viruses that cause the common cold or the flu.** Also, the bacteria are not spread by casual contact or by simply breathing the air where a person with meningitis has been

Viral Meningitis
Another form of meningitis that is often less severe than bacterial meningitis and usually resolves without specific treatment.

Means of Transmission
Enteroviruses, the most common cause of viral meningitis, are most often spread from person to person through fecal contamination (which can occur when changing a diaper or using the toilet and not properly washing hands afterwards). Enteroviruses can also be spread through respiratory secretions (saliva, sputum, or nasal mucus) of an infected person. Other viruses, such as mumps and varicella-zoster virus, may also be spread through direct or indirect contact with saliva, sputum, or mucus of an infected person. Contact with an infected person may increase your chance of becoming infected with the virus that made them sick; however, you are not likely to develop meningitis as a complication of the illness.

Chickenpox (VZV)

Chickenpox (varicella) is a viral infection that causes an itchy, blister-like rash. Chickenpox is highly contagious to people who haven't had the disease nor been vaccinated against it.

Means of Transmission
It spreads easily from infected people to others who have never had chickenpox or received the chickenpox vaccine. Chickenpox spreads in the air through coughing or sneezing. It can also be spread by touching or breathing in the virus particles that come from chickenpox blisters.

Signs & Symptoms
The classic symptom of chickenpox is a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs. The rash may first show up on the face, chest, and back then spread to the rest of the body, including inside the mouth, eyelids, or genital area. It usually takes about one week for all the blisters to become scabs.

Other typical symptoms that may begin to appear 1-2 days before rash include:

- high fever
- tiredness
- loss of appetite
- headache

Tuberculosis (TB)
Tuberculosis (TB) is a multi-systemic infectious disease caused by *Mycobacterium tuberculosis*, a rod-shaped bacterium.

Means of Transmission
TB is spread through the air from one person to another. The TB bacteria are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected.

Signs and Symptoms of TB Disease
Symptoms of TB disease depend on where in the body the TB bacteria are growing. TB bacteria usually grow in the lungs (pulmonary TB). TB disease in the lungs may cause symptoms such as:

- a bad cough that lasts 3 weeks or longer
- pain in the chest
- coughing up blood or sputum (phlegm from deep inside the lungs)
- Other symptoms of TB disease are
- weakness or fatigue
- weight loss
- no appetite
- chills
- fever
- sweating at night

Infection Control Standards and Practices

"*Universal Precautions*" is the name used to describe a prevention strategy in which all blood, airborne, and potentially infectious materials are treated as if they are infectious regardless of the perceived status of the source individual. On every EMS call, the EMS provider should conduct an initial and ongoing evaluation of the risk for a possible exposure to an infectious disease. The initial and ongoing evaluation will determine the type of PPE measures the provider will take.

By using Universal Precautions and following these simple engineering and work practice controls you can protect yourself and prevent transmission of bloodborne pathogens.

- Treat all human blood and body fluids as if they are known to be infectious for HIV, HBV, HCV and other bloodborne pathogens.
- Protect yourself; it is crucial to have a barrier between you and the potential infectious material. All cuts and sores should be covered with a bandage before applying pressure with disposable gloves.
- Always wear personal protective gear in exposure circumstances.
- Use a freshly made solution of ¼ cup bleach to 1 gallon of water (1:10), to clean a blood or body fluid spill area.
- Use disposable towels. Everything must be placed in a biohazard container and disposed of properly.
- Remove or replace any personal protective gear that is torn or punctured.
- Remove personal protective gear before leaving your work area.
- Handle and dispose of any sharp items that may be contaminated with extreme caution. Never use bare hands.

- Wash hand immediately or as soon as possible after removal of glove or other personal protective gear. Hand sanitizers may be used if immediate hand washing isn't possible.

Personal Protective Equipment (should be readily accessible)

- Gloves
- Protective eyewear
- Face shields
- Aprons
- Patient mask
- Caps and booties
- N95 Respirator Mask
- CPR mask
- Caps and booties
- Disposable head Cover
- Disposable shoe cover
- Disposable Isolation Gowns
- Surgical Mask

The rule of thumb is the 3-foot rule. A provider will don a mask within three feet of the patient. Using this distance for donning mask has been effective in preventing droplet transmission of infectious diseases. All contaminated gear and materials must be handled with extreme caution and placed in an appropriate labeled container until it is decontaminated or properly disposed of.

A surgical mask should be used to protect the mouth and nose from splashes of blood/body fluids or respiratory secretions. They can also be placed on patients who are coughing/sneezing to reduce the spread of a disease (ex. TB, Measles, Pneumonia, Influenza, etc.). If a patient is unable to wear a mask, provide tissues and instructions on when to use them (coughing, sneezing, and controlling nasal secretions).

Decontamination- All equipment and work surfaces must be cleaned and decontaminated with an appropriate EPA approved disinfectant after contact with blood, body fluids, or other potentially infectious material. Providers must insure adequate cleaning of the equipment and vehicle after every patient transport. The cleaning should include disinfecting any reusable equipment used on the patient (B/P cuff, stethoscope, monitor, stretcher, etc.), soiled surfaces, and frequently touched surfaces.

The first step in the cleaning process is removing gross contamination, debris, and soil with a towel or germicidal disinfectant wipes and properly disposing of the cleaning wipes in a red biohazard bag. After a surface has been cleaned it can be decontaminated. Germicidal disinfectant wipes such as Sani-Cloth Plus are easy and efficient to use on reusable equipment. One minute contact is all that is needed on most surfaces. One of the most effective disinfectants is a simple bleach and water solution. A ratio of 1:10 is the preferred mixture. The mixture works out to be a quarter cup of bleach for every gallon of water. The shelf life for this solution is one day so it needs to be labeled properly.

Infection Control Practices

SIGNS/SYMPTOMS	POSSIBLE INFECTIOUS DISEASE	PRECAUTIONS
Chickenpox Rash, fever, draining lesions, photosensitivity	Herpes Zoster	Minimum BSI- Gloves Surgical mask on patient Providers Wear N95 Mask Avoid contact with drainage from lesions
Hemorrhagic Fever Marked Fever, fatigue, nausea, coughing, dizziness, vomiting, bleeding under the skin, internal organs, or body orifices.	Viral Hemorrhagic Fever	Minimum BSI-Full PPE. Head cover, gloves, gown, shoe covers, N95 Mask, Goggles. Surgical mask on patient. For suspected EVD patient please refer to the following link: http://mcemsops.blogspot.com/2014/10/mcfrs-evd-response-information.html
Influenza Fever, fatigue, nausea, vomiting, diarrhea, cough, chills, Sneezing	Influenza	Minimum BSI- Gloves Surgical mask on patient Providers wear N95 Mask Good airflow in the patient compartment of the EMS Unit.
Measles Rash, fever, headache,	Rubella	Minimum BSI- Gloves Surgical mask on patient Providers wear N95 Mask
Meningitis Intense headache, sensitive to light, vomiting, stiff neck, rash-pink	Neisseria Meningitidis	Minimum BSI- Gloves Surgical Mask on patient
Risk of Drug Resistant Microorganism History of infection or colonization with drug resistant organisms or skin, wound, or urinary tract infection in a patient with a recent hospital or nursing home stay in a facility where multi drug resistant organisms are prevalent	MRSA, VRE, or other drug resistant bacteria.	Minimum BSI- Gloves. A gown, face shield, and/or shoe covers can be used if the provider anticipates body contact with contaminated fluids, or bandages from infected wounds.
Tuberculosis Persistent cough for 3 weeks or more. Weight loss, fever, night sweats, coughing up blood, chest pain. High risk patients (foreign born, homeless, drug user).	Tuberculosis	Minimum BSI- Gloves Surgical mask on patient Providers wear N95 Mask

APPENDIX B
SAFER SHARPS AND ENGINEERING CONTROLS EVALUATION FORMS

GUIDELINES FOR THE USE OF SAFETY FEATURE EVALUATION SHEETS

Coordinators:

Determine which products are to be evaluated and provide at least four or more test samples for each individual evaluating the product. (Each evaluator should have enough samples to disassemble and examine the design thoroughly.)

Set up a testing station for each type of device which allows testers to evaluate products in a simulated patient procedure. Provide training dummies (injection pads, oranges, etc.) as necessary.

Provide visual instructions and demonstrate proper use of each device.

Review the instructions and rating system with each evaluator.

Encourage each evaluator to comment on the sheets and prioritize the questions at the end of the evaluation. This will provide a useful decision making tool and will help alert you to specific areas of concern which may not have been covered by the questionnaire.

Evaluators:

Re-enact all steps of intended or possible procedures performed with the device being tested.

Attempt to misuse the device and circumvent or disable the safety feature.

Answer each question including the short answer section at the end. If you do not understand a question, please write comments directly on the sheets.

NOTE: The utility of these criteria is for initial screening of devices and NOT for clinical assessment/pilot testing. Certain assumptions have been made in the development of these forms based on information about currently available products. We recognize the likelihood that the ideal product may not exist. Safety Section welcomes your comments on the use of these tools.

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SAFETY FEATURE EVALUATION FORM
SAFETY SYRINGES

Date:		Department:		Occupation:	
Product:			Number of times used:		

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree → Disagree
DURING USE:	
1. The safety feature can be activated using a one-handed technique.	1 2 3 4 5 N/A
2. The safety feature **does not** obstruct vision of the tip of the sharp.	1 2 3 4 5 N/A
3. Use of this product requires you to use the safety feature.	1 2 3 4 5 N/A
4. This product **does not** require more time to use than a non-safety device.	1 2 3 4 5 N/A
5. The safety feature works well with a wide variety of hand sizes.	1 2 3 4 5 N/A
6. The device is easy to handle while wearing gloves.	1 2 3 4 5 N/A
7. This device does not interfere with uses that do not require a needle.	1 2 3 4 5 N/A
8. This device offers a good view of any aspirated fluid.	1 2 3 4 5 N/A
9. This device will work with all required syringe and needle sizes.	1 2 3 4 5 N/A
10. This device provides a better alternative to traditional recapping.	1 2 3 4 5 N/A
AFTER USE:	
11. There is a clear and unmistakable change (audible or visible) that occurs when the safety feature is activated.	1 2 3 4 5 N/A
12. The safety feature operates reliably.	1 2 3 4 5 N/A
13. The exposed sharp is permanently blunted or covered after use and prior to disposal.	1 2 3 4 5 N/A
14. This device is no more difficult to process after use than non-safety devices.	1 2 3 4 5 N/A
TRAINING:	
15. The user **does not** need extensive training for correct operation.	1 2 3 4 5 N/A
16. The design of the device suggests proper use.	1 2 3 4 5 N/A
17. It is **not** easy to skip a crucial step in proper use of the device.	1 2 3 4 5 N/A
Of the above questions which three are the most important to **your** safety when using this product?	
Are there other questions which you feel should be asked regarding the safety/utility of this product?	

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SAFETY FEATURE EVALUATION FORM
I.V. ACCESS DEVICES

Date:		Department:		Occupation:	
Product:			Number of times used:		

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree → Disagree
1. The safety feature can be activated using a one-handed technique.	1 2 3 4 5 N/A
2. The safety feature does not interfere with normal use of this product.	1 2 3 4 5 N/A
3. Use of this product requires you to use the safety feature.	1 2 3 4 5 N/A
4. This product does not require more time to use than a non-safety device.	1 2 3 4 5 N/A
5. The safety feature works well with a wide variety of hand sizes.	1 2 3 4 5 N/A
6. The device allows for rapid visualization of flashback in the catheter or chamber.	1 2 3 4 5 N/A
7. Use of this product does not increase the number of sticks to the patient.	1 2 3 4 5 N/A
8. The product stops the flow of blood after the needle is removed from the catheter (or after the butterfly is inserted) and just prior to line connections or hep-lock capping.	1 2 3 4 5 N/A
9. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.	1 2 3 4 5 N/A
10. The safety feature operates reliably.	1 2 3 4 5 N/A
11. The exposed sharp is blunted or covered after use and prior to disposal.	1 2 3 4 5 N/A
12. The product does not need extensive training to be operated correctly.	1 2 3 4 5 N/A
Of the above questions which three are the most important to **your** safety when using this product?	
Are there other questions which you feel should be asked regarding the safety/utility of this product?	

Source: *Reprinted with permission of Training for Development of Innovative Control Technology Project*

SAFETY FEATURE EVALUATION FORM
SHARPS DISPOSAL CONTAINERS

Date:		Department:		Occupation:	
Product:			Number of times used:		

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree → Disagree
1. The container's shape, its markings, or its color imply danger.	1 2 3 4 5 N/A
2. The implied warning of danger can be seen from the angle at which people commonly view it (e.g., very short people, people in wheel chairs, children, etc).	1 2 3 4 5 N/A
3. The implied warning can be universally understood by visitors, children, and patients.	1 2 3 4 5 N/A
4. The container's purpose is self-explanatory and easily understood by a worker who may be pressed for time or unfamiliar with the hospital setting.	1 2 3 4 5 N/A
5. The container can accept sharps from any direction desired.	1 2 3 4 5 N/A
6. The container can accept all sizes and shapes of sharps.	1 2 3 4 5 N/A
7. The container allows single handed operation. (Only the hand holding the sharp should be near the container opening).	1 2 3 4 5 N/A
8. It is difficult to reach in and remove a sharp.	1 2 3 4 5 N/A
9. Sharps can go into the container without getting caught on the opening.	1 2 3 4 5 N/A
10. Sharps can go into the container without getting caught on any molded shapes in the interior.	1 2 3 4 5 N/A
11. The container is puncture resistant.	1 2 3 4 5 N/A
12. When the container is dropped or turned upside down (even before it is permanently closed) sharps stay inside.	1 2 3 4 5 N/A
13. The user can determine easily from various viewing angles when the container is full	1 2 3 4 5 N/A
14. When the container is to be used free-standing (no mounting bracket) it is stable and unlikely to tip over.	1 2 3 4 5 N/A
15. It is safe to close the container. (Sharps should not protrude into the path of hands attempting to close the container).	1 2 3 4 5 N/A
16. The container closes securely (e.g., if the closure requires glue it may not work if the surfaces are soiled or wet.).	1 2 3 4 5 N/A
17. The product has handles which allow you to safely transport a full container.	1 2 3 4 5 N/A
18. The product does not require extensive training to operate correctly.	1 2 3 4 5 N/A
Of the above questions which three are the most important to **your** safety when using this product?	
Are there other questions which you feel should be asked regarding the safety/utility of this product?	

Source: *Reprinted with permission of Training for Development of Innovative Control Technology Project*

SAFETY FEATURE EVALUATION FORM
I.V. CONNECTORS

Date:		Department:		Occupation:	
Product:			Number of times used:		

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree → Disagree
1. Use of this connector eliminates the need for exposed needles in connections.	1 2 3 4 5 N/A
2. The safety feature does not interfere with normal use of this product.	1 2 3 4 5 N/A
3. Use of this product requires you to use the safety feature.	1 2 3 4 5 N/A
4. This product does not require more time to use than a non-safety device.	1 2 3 4 5 N/A
5. The safety feature works well with a wide variety of hand sizes.	1 2 3 4 5 N/A
6. The safety feature allows you to collect blood directly into a vacuum tube eliminating the need for needles.	1 2 3 4 5 N/A
7. The connector can be secured (locked) to Y-sites hep-locks and central lines.	1 2 3 4 5 N/A
8. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.	1 2 3 4 5 N/A
9. The safety feature operates reliably.	1 2 3 4 5 N/A
10. The exposed sharp is blunted or covered after use and prior to disposal.	1 2 3 4 5 N/A
11. The product does not need extensive training to be operated correctly.	1 2 3 4 5 N/A
Of the above questions which three are the most important to **your** safety when using this product?	
Are there other questions which you feel should be asked regarding the safety/utility of this product?	

Source: *Reprinted with permission of Training for Development of Innovative Control Technology Project*

SAFETY FEATURE EVALUATION FORM
VACUUM TUBE BLOOD COLLECTION SYSTEMS

Date:		Department:		Occupation:	
Product:			Number of times used:		

Please circle the most appropriate answer for each question. Not applicable (N/A) may be used if the question does not apply to this particular product.

	Agree → Disagree
1. The safety feature can be activated using a one-handed technique.	1 2 3 4 5 N/A
2. The safety feature does not interfere with normal use of this product.	1 2 3 4 5 N/A
3. Use of this product requires you to use the safety feature.	1 2 3 4 5 N/A
4. This product does not require more time to use than a non-safety device.	1 2 3 4 5 N/A
5. The safety feature works well with a wide variety of hand sizes.	1 2 3 4 5 N/A
6. The safety feature works with a butterfly.	1 2 3 4 5 N/A
7. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.	1 2 3 4 5 N/A
8. The safety feature operates reliably.	1 2 3 4 5 N/A
9. The exposed sharp is blunted or covered after use and prior to disposal.	1 2 3 4 5 N/A
10. The inner vacuum tube needle (rubber sleeved needle) does not present a danger of exposure.	1 2 3 4 5 N/A
11. The product does not need extensive training to be operated correctly.	1 2 3 4 5 N/A
Of the above questions which three are the most important to **your** safety when using this product?	
Are there other questions which you feel should be asked regarding the safety/utility of this product?	

Source: *Reprinted with permission of Training for Development of Innovative Control Technology Project*

APPENDIX C
REFERENCE MATERIAL

HEPATITIS C STANDARDS

MMWR RECOMMENDATIONS and REPORTS OCTOBER 16, 1998
RECOMMENDATIONS FOR PREVENTION AND CONTROL OF HEPATITIS C VIRUS (HCV) INFECTION AND CHRONIC DISEASE

STANDARDS FOR HEPATITIS B CARE

1. MMWR NOVEMBER 22, 1991 (POST-EXPOSURE)
2. MMWR DECEMBER 26, 1997 IMMUNIZATION (PRE-EXPOSURE)

STANDARDS FOR HIV POST EXPOSURE CARE

MMWR MAY 15, 1998 PUBLIC HEALTH SERVICE FOR THE MANAGEMENT OF HEALTH –CARE WORKER EXPOSURES TO HIV AND RECOMMENDATIONS TO POST-EXPOSURE PROPHYLAXIS

GUIDELINE FOR HAND HYGIENE IN HEALTHCARE SETTINGS.

MMWR 51 (RR16); OCTOBER 25, 2002
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a1.htm

APPROPRIATE DISINFECTANT LISTS

EPA Listing Of Appropriate Disinfectants - Sterilants Registered By EPA (List-A) EPA Registered Tuberculocides (List-B) Products Registered Against HIV/HBV (List-D)
http://nain.orst.edu/ or at (800) 447-6349

Sterilants/High Level Disinfectants Cleared By FDA
http://www.fda.gov/cdrh/ode/germlab.html

GUIDELINES FOR HANDWASHING AND REMOVAL OF GLOVES

Excerpted from The Centers for Disease Control (CDC) Hand Hygiene Guidelines
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5116a1.htm

USE OF ALCOHOL BASED HAND RUBS

Hand washing, or use of alcohol-based hand rubs, has been shown to terminate outbreaks in health care facilities to reduce transmission of antimicrobial resistant organisms (e.g., methicillin resistant staphylococcus aureus, MRSA), and reduce overall infection rates.

When using an alcohol-based hand rub, apply product to palm of one hand and rub hands together covering all surfaces of hands and fingers until hands are dry. Note that the volume needed to reduce the number of bacteria on hands varies by product. Alcohol-based hand rubs significantly reduce the number of microorganisms on skin are fast acting and cause less skin irritation.

When evaluating hand hygiene products for potential use in health care facilities, administrators or product selection committees should consider the relative efficacy of antiseptic agents against various pathogens and the acceptability of hand hygiene products by personnel. Characteristics of a product that can affect acceptance, and therefore its usage, include its smell, consistency, color, and the effect of dryness on hands.

Allergic contact dermatitis due to alcohol hand rubs is very uncommon. However, with increasing use of such products by health care and other personnel, it is likely that true allergic reactions to such products will occasionally be encountered.

Alcohol-based hand rubs take less time to use than traditional hand washing. In an eight-hour shift an estimated one hour of an ICU nurse's time will be saved by using an alcohol-based hand-rub.

CDC is releasing guidelines to improve adherence to hand hygiene in health care settings. In addition to traditional hand washing with soap and water, CDC is recommending the use of alcohol-based hand-rubs by health care personnel for patient care because they address some of the obstacles that health care professionals face when taking care of patients.

USE OF SOAP AND WATER FOR HAND WASHING

Hand washing with soap and water remains a sensible strategy for hand hygiene in non-health care settings and is recommended by CDC and other experts. When health care or other affected personnel's hands are visibly soiled they should wash with soap and water.

The recommended hand washing technique depends on the purpose of the hand washing. The ideal duration of hand washing is not known, but washing times of 15 seconds or less have been reported as effective in removing most transient contaminants from the skin. Therefore, for most activities, a vigorous and brief (at least 10 seconds) rubbing together of all surfaces of lathered hands followed by rinsing under a stream of water is recommended. If hands are visibly soiled, more time may be required for hand washing.
The absolute indications for hand washing with plain soaps and detergents versus hand washing with antimicrobial-containing products are not known because of the lack of well-controlled studies comparing infection rates when such products are used. For most routine activities, hand washing with

plain soap appears to be sufficient since soap will allow most transient microorganisms to be washed off. As part of these recommendations, CDC is asking health care facilities to develop and implement a system for measuring improvements in adherence to these hand hygiene recommendations.

These include: periodic monitoring of hand hygiene, adherence, and providing feedback to personnel regarding their performance, monitoring the volume of alcohol-based hand-rub used/1000 patient days, monitoring adherence to policies dealing with wearing artificial nails, and focused assessment of the adequacy of health care personnel hand hygiene when outbreaks of infection occur.

THE USE AND REMOVAL OF GLOVES

The use of gloves does not eliminate the need for hand hygiene. Likewise, the use of hand hygiene does not eliminate the need for gloves. Gloves reduce hand contamination by 70 percent to 80 percent, prevent cross-contamination, and protect patients and health care personnel from infection. Hand-rubs should be used before and after each patient just as gloves should be changed before and after contact with affected persons.

The convenient placement of sinks, hand washing products, and paper towels is often suggested as a means of encouraging frequent and appropriate hand washing. Sinks with faucets that can be turned off by means other than the hands (e.g., foot pedals) and sinks that minimize splash can help personnel avoid immediate recontamination of washed hands.

Although hand washing is considered the most important single procedure for preventing nosocomial infections, two reports showed poor compliance with hand washing protocols by personnel in medical intensive care units, especially by physicians and personnel taking care of patients on isolation precautions. Failure to wash hands is a complex problem that may be caused by lack of motivation or lack of knowledge about the importance of hand washing.

It may also be caused by obstacles such as understaffing, inconveniently located sinks, absence of paper towels, an unacceptable hand washing product, or the presence of dermatitis caused by previous hand washing. More study is needed to identify which of these factors alone or in combination contribute significantly to the problem of poor compliance with hand washing recommendations.

NOTE: Health care personnel should avoid wearing artificial nails and keep natural nails less than one quarter of an inch long if they care for patients at high risk of acquiring infections (e.g., Patients in intensive care units or in transplant units).

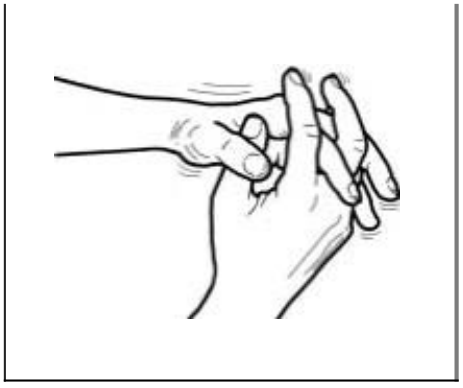
FOR ADDITIONAL INFORMATION ON HAND WASHING AND HYGIENE PLEASE REVIEW THE OCT. 25, 2002 (CDC) MMWR 51 (RR16); 1-44 -GUIDELINE FOR HAND HYGIENE IN HEALTHCARE SETTINGS

PROPER HAND WASHING TECHNIQUE

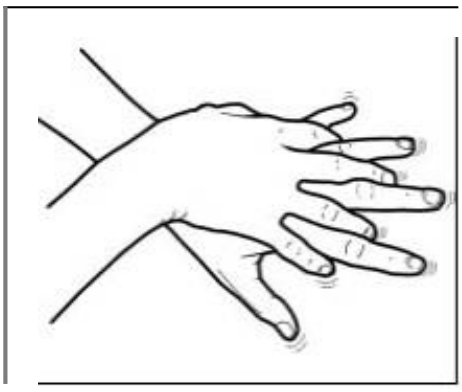
Hand Washing Technique

1. Use soap and water
2. Vigorously wash hands for 20 to 30 seconds, using the following pictures as guides
3. Rinse hands with water
4. Dry hands thoroughly

1. Wcuh *palms*



z. *wash oerween fingers*



3. *Wash back of hands*

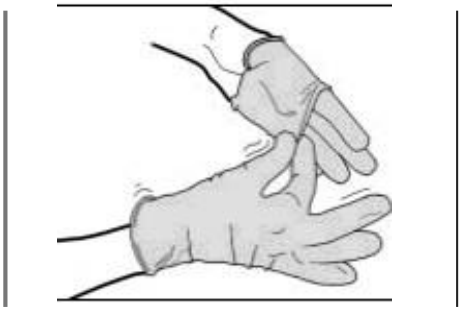
4. *Wash wrists*

Photocopy. p&bcin plastJ(sle-ev(Ot laminate) and position on the wall above handbasins.

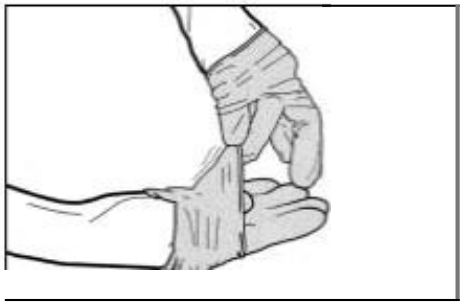
PROPER REMOVAL OF GLOVES TECHNIQUE

Removal of Gloves Technique

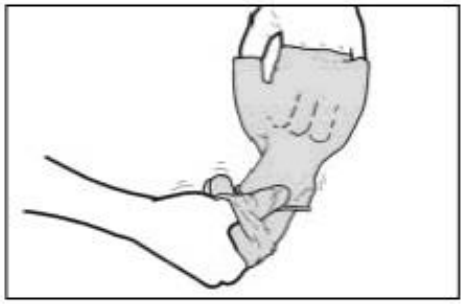
1. Use the following pictures as a guide to help you remove gloves safely
2. Avoid touching the outside of the gloves. Only touch the inside
3. Wash hands after removing and disposing of gloves in a sealable bag



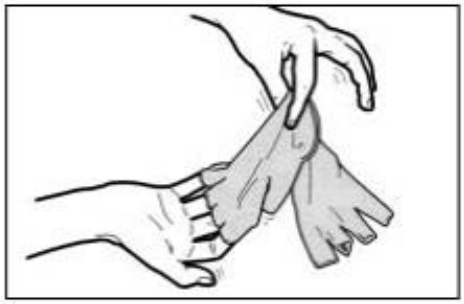
1. *Grasp one glove at wrist and pull down to knuckles*



2. *Grasp other glove at wrist and pull down to knuckles*

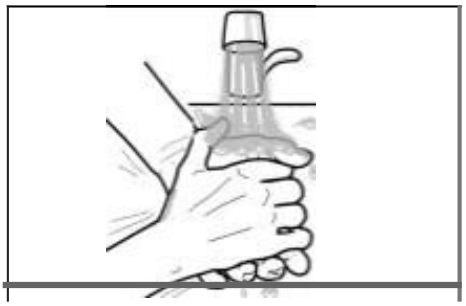


3. *Grasp wrist end of one glove and pull it off completely*



4. *Remove other glove in a similar way, touching only the inside of gloves*

5. *Dispose of gloves in a sealable plastic bag*



6. *Wash hands after removing and disposing of gloves*

Photocopy. place In plastk sleeve (or laminate) and posttion on the wall in first atd areas.

Hepatitis B Fact Sheet

First Anti-cancer Vaccine

Hepatitis B vaccine prevents Hepatitis B disease and its serious consequences like hepatocellular carcinoma (liver cancer). Therefore, this is the first anti-cancer vaccine.

Safe and Effective

- Medical, scientific, and public health communities strongly endorse using Hepatitis B vaccine as a safe and effective way to prevent disease and death.
- Scientific data show that Hepatitis B vaccines are very safe for infants, children, and adults.
- There is no confirmed evidence which indicates that Hepatitis B vaccine can cause chronic illnesses.
- To assure a high standard of safety with vaccines, several federal agencies continually assess and research possible or potential health effects that could be associated with vaccines.

Contraindications to Vaccine

A serious allergic reaction to a prior dose of Hepatitis B vaccine or a vaccine component is a contraindication to further doses of Hepatitis B vaccine. The recombinant vaccines that are licensed for use in the United States are synthesized by Saccharomyces cerevisiae (common bakers' yeast) into which a plasmid containing the gene for HBsAg has been inserted. Purified HBsAg is obtained by lysing the yeast cells and separating HBsAg from the yeast components by biochemical and biophysical techniques. Persons allergic to yeast should not be vaccinated with vaccines containing yeast.

Vaccine Schedule

- Printable childhood and adolescent immunization schedules (http://www.cdc.gov/nip/recs/child-schedule.htm): National Immunization Program, CDC.
- Adult Immunization Schedule (http://www.cdc.gov/nip/recs/adult-schedule.htm): National Immunization Program, CDC.
- If the vaccination series is interrupted after the first dose, the second dose should be administered as soon as possible. The second and third doses should be separated by an interval of at least 2 months. If only the third dose is delayed it should be administered when convenient.
- Recommended dosages and schedules of Hepatitis B vaccines (http://www.immunize.org/catg.d/2081ab.htm).

Booster Doses

- Current data show that vaccine-induced Hepatitis B surface antibody (anti-HBs) levels may decline over time; however immune memory (anamnestic anti-HBs response) remains intact indefinitely following immunization. Persons with declining antibody levels are still protected against clinical illness and chronic disease.
- For health care workers with normal immune status who have demonstrated an anti-HBs response following vaccination, booster doses of vaccine are not recommended, nor is periodic anti-HBs testing.

Post-vaccination Testing

- After routine vaccination of infants, children, adolescents, or adults, post-vaccination testing for adequate antibody response is not necessary.
- Post-vaccination testing IS recommended for persons whose medical management will depend on knowledge of their immune status.
- This includes persons who:
  - are immunocompromised (e.g., hemodialysis patients),
  - received the vaccine in the buttock,
  - are infants born to HBsAg (Hepatitis B surface antigen)-positive mothers,
  - are healthcare workers who have contact with blood, and
  - are sex partners of persons with chronic Hepatitis B virus infection.
- Post-vaccination testing should be completed 1-2 months after the third vaccine dose for results to be meaningful. A protective antibody response is 10 or more milli-international units (greater than or equal to 10mIU/mL).

Adverse Events

- Case reports of unusual illnesses following vaccines are most often related to other causes and not related to a vaccine. Whenever large numbers of vaccines are given some adverse events will occur coincidentally after vaccination and be falsely attributed to the vaccine.
- Anyone believing they have had a possible reaction or adverse health effect from a vaccine should report it to their health care provider. The Vaccine Adverse Events Reporting System (1-800-822-7967) receives reports from health care providers and others about vaccine side effects.

Combined Hepatitis A and Hepatitis B Vaccine

Combinations using Hepatitis A and/or Hepatitis B vaccines (http://www.immunize.org/catg.d/2081ab.htm).

Additional Information

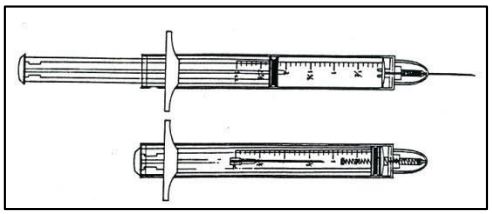
VFC language regarding Hepatitis B vaccines (http://www.cdc.gov/nip/vfc/default.htm).

EXAMPLES OF "ENGINEERING CONTROLS"

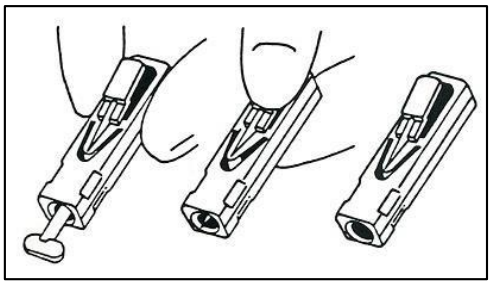
1. **Needleless Systems** - Sharps with Engineered Sharps Injury Protections (SESIPS). These include non-needle sharps or needleless devices used for withdrawing fluids or administering medications, etc., which contain built-in safety features or mechanisms that effectively reduce the risk of an exposure incident.

   - Examples of SESIPS include: retractable needles-needles that retract into a syringe; shielded/sheathed needle devices - a sliding or movable sheath shields the attached needle; and blunt technology - a blunt needle within a hollow-bore creates a blunt tip point upon activation.

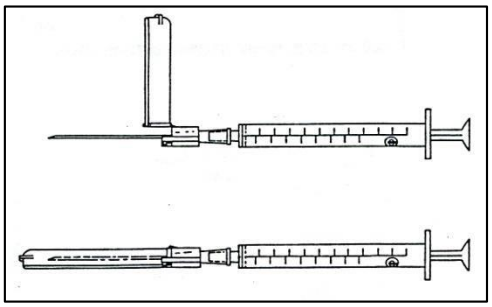
View of Retractable Needle



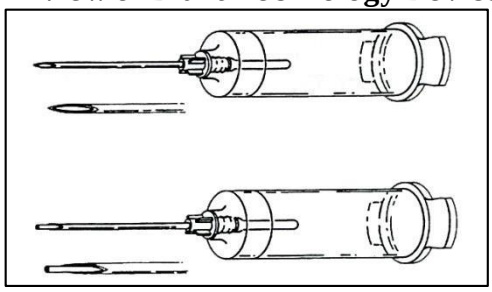
View of Retractable Lancet



View of Shielded Needle Device



View of Blunt Technology Device



The Food and Drug Administration (FDA) is responsible for clearing medical devices for marketing, although this clearance alone is not enough to guarantee the device will be effective in the workplace. The employer must rely on further evidence to ensure its effectiveness in the situations in which the devices will be used. There are specific design features for recessed needle systems that the FDA has published and agrees are important in preventing percutaneous injury.

These design features include:

a. A fixed safety feature providing a barrier between the hands and the needle after use. The safety feature should allow or require the worker's hand to remain behind the needle at all times.
b. The safety feature is an integral part of the device and not an accessory.
c. The safety feature is in effect before disassembly and remains in effect after disposal to protect users and trash handlers and for environmental safety.
d. The safety feature is as simple as possible and requires little or no training to use effectively.

2. **Sharps disposal containers** - used to contain contaminated sharps (e.g., needles, razors) after use.

3. **Plastic capillary tubes (versus glass)** - used to collect blood and reduce the risk of (hand, fingers, etc.) injuries resulting from exposure to shards broken glass from the breakage of capillary tubes.

The Food and Drug Administration (FDA), NIOSH, and OSHA recommend that users consider blood collection devices less prone to accidental breakage. These include:

- Capillary tubes that are not made of glass,
- Glass capillary tubes wrapped in puncture-resistant film,
- Products that use a method of sealing that does not require manually pushing one end of the tube into putty to form a plug, or
- Products that allow the blood hematocrit to be measured without centrifugation.

APPENDIX D

CLEANING and DECONTAMINATION SCHEDULE

NOTE: Provide Method of Decontamination for Determined Surfaces at Worksite.

Type of Surface	Type of Soil	Method of Decontamination	Schedule
Hard Smooth Non-porous (e.g., tables, chairs)	Blood Body Fluid or OPIM containing	All visual fluids or materials will be removed by: EPA approved disinfectant solution. Resulting towels or absorbent materials will be disposed of in: Appropriate container Decontamination will occur: As soon as possible	Upon occurrence of spill
Contamination gloves	Blood Body Fluid or OPIM containing	Disposal of gloves will occur within: After use or a breach in the gloves' integrity.	Upon occurrence of contamination

APPENDIX E

Occupational Medical Services, Hepatitis B Vaccine Declination Form Hepatitis B disease is so infectious that one drop of blood from a Hepatitis B carrier can have 100 million infectious doses of the virus. Once infected, the disease can result in a mild infection, a chronic (lasting) infection, liver damage such as cirrhosis of the liver, liver cancer, or death due to liver failure.

Hepatitis B Vaccine is available to employees who are most at risk of blood/body fluid exposures. This is a voluntary program. Occupational Medical Services is administering the vaccine which consists of a series of three injections. The first two injections are given a month apart and the third, six months after the first. The vaccine produces protective levels in approximately 90% of healthy adults.

The vaccine, prepared from yeast cultures, ordinarily produces little or mild adverse effects, chiefly soreness at the site of injection. Other less commonly observed reactions have included redness, swelling, and hardness at the vaccination site. Infrequently, headache, nausea, muscles or joint aches occur.

I have read the above and have received the answers to my questions. My decision is indicated below:

_____ **I have already had the vaccine series.**
If you have received the vaccination series you will be asked to provide this documentation to OMS to be included as part of your employee medical record.

_____ **I decline the vaccine.**
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.

_____ **I will contact OMS to schedule my vaccine by _____.**

Signature		Date
Printed Name		Job Title
Social Security Number		Department

APPENDIX F

Montgomery County Government
Occupational Medical Services
Authorization To Disclose Health Information

255 Rockville Pike Suite 125 Rockville MD 20850
Phone (240) 777-5118 Fax (240) 777-5132

Name:
Address:
S.S. #
Birth Date:
Telephone No:

Consent To Release Medical Information:

I hereby authorize and request that you release:

TO: Montgomery County, Occupational Medical Services Manager of OMS	
From:	
Address	
Phone	

☐ I will pick up this record.
☐ I give my permission to fax records
☐ I would like the information mailed directly to Montgomery County Government Occupational Medical Services.

Medical Information Requested:

The type and amount of information to be used or disclosed is as follows: (include dates where appropriate)

☐ Hepatitis B immunization record _____
☐ other _____

Please specify reason for release of information: Employee medical record maintenance and verification.

Authorization:

This authorization will automatically expire 60 days from the date of signature.

At that time no express revocation shall be needed to terminate my consent but I understand that I may revoke this consent at any time by sending a written notice to the Montgomery County Government Occupational Medical Services at 255 Rockville Pike, Suite 125, Rockville, MD 20850. I understand that any information which was released prior to my revocation was in compliance with this authorization and shall not constitute a breach of my rights to confidentiality.

Signature of Patient or Legal Representative		Date
If Signed by Legal Representative Signature of Witness		Date

APPENDIX G

SUPERVISOR'S BLOODBORNE PATHOGENS FORMS AND INFORMATION SECTION

MCFRS Bloodborne Pathogens Exposure Procedures Checklist

Medical Evaluation of Work Status Form

Healthcare Professional's Evaluation Report

Summary Sheet for Post-Exposure Medical Follow-up for Employees

Copy of Bloodborne Pathogens standard – 29 CFR 1910.1030

Note: Please provide the exposed employee with a copy of their Job Description for submission to his/her Licensed Healthcare Provider of choice.

(i) Montgomery County Fire and Rescue Services
(ii) Blood Borne Pathogens Exposure Supervisor's Checklist

In the event of exposure, conduct the following immediately:

- Provide immediate first aid (wash the exposed area without delay with soap and water. If blood is splashed in the eye or mucous membrane, flush the affected area with running water for at least 15 minutes)
- Notify hospital staff of exposure
- Notify the EMS Duty Officer and immediate supervisor
- Notify on-duty Safety Officer to investigate exposure / injury

Please note the following information:

- Report details of exposure to FROMS at 240-777-5185.
- After hours and weekends, report details of exposure by calling the FROMS exposure hotline at 240-777-5085 and leave details regarding the exposure.
- If FROMS is closed, seek immediate treatment in the ED. Personnel must register as a patient.
- First Report of Injury Report must be filed by the employee's supervisor online at www.mcsip.org or by calling 1-888-606-2562.
- Termination of Resuscitation Scenario: If blood can be drawn, please draw TWO serum separator tubes (aka tiger top or marble top).
- Label the tubes with "Source Patient" (not the name of the patient), the date and the PCR Report Number.
- Deliver to FROMS as soon as possible. Blood may be stored at room temperature but refrigeration is preferred.

1) **Please click the link below to access the MCFRS Blood/Body Fluids/Airborne Exposure Information Form and Notification Process:**

MCFRS Blood/Body Fluids/Airborne Exposure Procedures and Notification Process

Termination of Resuscitation Scenario: If blood can be drawn, please draw TWO serum separator tubes (aka tiger top or marble top). Label the tubes with "Source Patient" (not the name of the patient), the date and the PCR Report Number. Deliver to FROMS as soon as possible. Blood may be stored at room temperature but refrigeration is preferred

Montgomery County Hospitals

Holy Cross Hospital
1500 Forest Glen Road
Silver Spring, MD 20910
301-754-7000

Holy Cross Hospital / Germantown
19801 Observation Drive
Germantown, MD 20876
Phone: 301-557-6000

Medstar Montgomery Medical Center
18101 Prince Philip Drive
Olney, MD 20832
301-774-8882

Shady Grove Adventist Hospital
9901 Medical Center Drive
Rockville, MD 20850
301-279-6000

Shady Grove Adventist Emergency Center
19731 Germantown Road
Germantown, MD 20874
301-441-8000

Suburban Hospital
8600 Old Georgetown Road
Bethesda, MD 20814
301-896-3100

Washington Adventist Hospital
7600 Carroll Avenue
Takoma Park, MD 20912
301-891-7600

Treatment After Normal Business Hours (Medical Access hours)

If treatment is required after hours, the emergency physician will administer the necessary medication. However if this is not possible and there are immediate pharmaceutical needs, the supervisor should visit the Montgomery County Self-Insurance Program website www.mcsip.org. Within the website there is a link for First Script, MCI's team partner managing Workers' Compensation Drug Plans.

To assist the employee, the supervisor should print a First Fill Card (temporary pharmacy card). Providing a First Fill Card eliminates the need for out-of-pocket expenses thus making the process convenient for the employee. Alternatively, if preferred there is also the option to call First Script's toll free (866) 445-7344 for a pharmacy location.

24-Hour Pharmacy Locations

First Script has several locations within Montgomery County and surrounding areas. Please visit www.mcsip.org, select the link to First Script and follow instructions for pharmacy locator. Representatives are also available by phone 24-hours a day at (866) 445-7344.

The following locations provide 24-hour pharmacy services:

CVS Locations	
1580 Rockville Pike Rockville, MD 20852	Front Store Phone: (301) 881-6070 Pharmacy Phone: (301) 881-6070 Front Store Hours: Open 24 hours Pharmacy Hours: Open 24 Hours
7955 Tuckerman Lane Rockville, MD 20854	Front Store Phone: (301) 299-3717 Pharmacy Phone: (301) 299-3717 Front Store Hours: Open 24 hours Pharmacy Hours: Open 24 Hours
9920 Key West Avenue Rockville, MD 20850	Front Store Phone: (301) 251-0024 Pharmacy Phone: (301) 251-0024 Front Store Hours: Open 24 hours Pharmacy Hours: Open 24 Hours

Walgreens Locations	
25 High Street Waldorf, MD 20602	301-932-9826 SEC of St Ignatius Dr & St Charles Pkwy
7953 Crain Hwy-S Glen Burnie, MD 21061	410-969-3417 NEC of Robert Crain Highway (SH 3) & Crainmont Drive
6700 Ritchie Hwy Glen Burnie, MD 21061	443-848-0245 SWC of Gov Ritchie Hwy & Ordnance

5657 Baltimore National Pike **Catonsville, MD 21228**	410-788-1207 SEC of Ingleside & Route 40
8050 Liberty Road **Baltimore, MD 21244**	410-496-2117 NEC of Milford Mill Road & Liberty Road (S.H. 26)
4025 W Northern Pkwy **Baltimore, MD 21215**	410-764-9570 SEC of Reisterstown Road & Northern Parkway
276 W. Lee Hwy **Warrenton, VA 20186**	540-347-5917 SEC of Winchester & Lee Hwy
4020 Eastern Ave **Baltimore, MD 21224**	410-534-8656 NWC of Haven Street & Eastern Avenue
9616 Harford Rd **Baltimore, MD 21234**	410-663-7957 NWC of Harford & Joppa
9621 Belair Road **Baltimore, MD 21236**	410-529-2864 NEC of Belair Road & Chapel Road
401 Compass Rd E **Baltimore, MD 21220**	410-780-4770 NEC of Compass Rd & Martin Blvd (S R 70)

MEDICAL EVALUATION OF WORK STATUS

DEPARTMENT OF FIRE AND RESCUE SERVICES
MONTGOMERY COUNTY, MARYLAND

PLEASE TYPE OR PRINT ALL INFORMATION CLEARLY

DATE OF THIS REPORT	EMPLOYEE'S NAME	JOB TITLE:
/ /	_____ ____ _____ LAST MI FIRST	

DIAGNOSIS (OMS USE ONLY):

CURRENT TREATMENT & PROGNOSIS (FOR OMS ONLY):

DATE OF NEXT APPOINTMENT (RE-EVALUATION):

FOR LICENSED HEALTH CARE PROVIDER'S USE ONLY- PLEASE CHECK ONE BOX ONLY.

☐ **FULL DUTY:** Employee is qualified to work in FULL DUTY status, without physical restrictions. Note: Duty status in this category includes all activities listed in the Firefighter/Rescuer Position Description on the back of this form.

☐ **LIGHT DUTY:** Employee is not qualified for full duty at this time. Employee can work in a temporary, Light Duty capacity for Montgomery County Fire Rescue Services, at the discretion of the employer. Light Duty positions are not permanent positions. Light Duty assignments are generally clerical or administrative in nature, and include working either 4-10 hour days or 5-8 hour days.

___ May only lift/carry up to ____lbs.
___ May not push/pull objects
___ May not use fingers (poor dexterity)
___ May not stand/walk
___ May not climb ladders/ropes
___ May not be exposed to excessive heat
___ May not be exposed to excessive cold
___ May not be exposed to excessive humidity
___ May not be exposed to excessive noise
___ May not be exposed to intense light
___ May not work in enclosed, cramped spaces
___ May not sit for extended periods of time
___ May not reach above shoulder
___ May not use right hand/arm
___ May not use left hand/arm
___ May not climb stairs/ramps
___ May not bend, stoop, lean, crawl on hands and knees
___ May not drive vehicles with automatic transmission
___ May not drive vehicles *with* manual transmission
___ May not be exposed to excessive dryness
___ May not be exposed to contact vibrations
___ May not be exposed to fumes, smoke, gasses, odors
___ May not be exposed to the elements (outdoor, weather)

___ Employee is taking medications with the following side effects:_____ .

Other:_____

Date of anticipated improvement so that employee may start full duty: _____

*IF **"NO DUTY"** STATUS IS NECESSARY, PLEASE FILL OUT THE NEXT SECTION COMPLETELY:*

☐ **NO DUTY:** Employee is temporarily incapacitated and unable to perform any work.
Employee is on home rest/hospital rest for _____ days
Date of anticipated improvement so that employee may start light duty _____
Date of anticipated improvement so that employee may start full duty _____

REMARKS_____
_____

THIS REPORT IS:	LICENSED HEALTH CARE PROVIDER (LHCP):	LHCP PHONE#
☐ INITIAL ☐ EXTENSION	I have read and understand the information on position descriptions for full and light duty as described on the front and back of this page. _____ _____	(____) ___-_____

SUPERVISOR'S EXPOSURE INCIDENT INVESTIGATION REPORT

This section is to be completed by supervisor. Fax to Risk Management/Safety: (240) 777-8914

Department/Division:	Date of Incident:	Time of Incident: ☐ A.M. ☐ P.M.
Location (Indicate By Building, Room, Worksite, Or In Relation To Known Fixed Object):		
Employee(s) Exposed:		Job Title(s):
Potentially Infectious Materials Involved: Type:		Source:
Circumstances (work being performed, etc.):		
Has Employee Received Bloodborne Pathogens Training? ☐ Yes, if yes include by whom? ☐ No		
How Incident Was Caused (accident equipment malfunction etc): ☐ Unsafe Act ☐ Unsafe Condition: Device Description:		
Corrective Actions Taken (decontamination clean-up reporting etc.):		
Engineering Controls/Personal Protective Equipment In Use:		
Supervisor's Comments/Recommendations:		
Supervisor/Manager:	Date:	

Montgomery County Government
Occupational Medical Services

255 Rockville Pike, Suite 125, Rockville, MD 20850
Phone (240) 777-5118, Fax (240) 777-5132

To comply with the Bloodborne Pathogens standard (29 CFR 1910.1030), Montgomery County Government requests the evaluating healthcare professional send a copy of his/her written opinion upon the completion of the evaluation, preferably within 10 calendar days, but no later than 14 days after providing treatment for the exposed employee. Please mail or fax the completed report to Occupational Medical Services. A copy of the Bloodborne Pathogens standard (29 CFR 1910.1030) has been provided to you (evaluating healthcare professional) along with the exposure report.

Healthcare Professional's Evaluation Report (also known as the "Blood/Body Fluid Exposure" Report)

Employee's Name: SS #: _____

Address - Work: Home: _____

Phone - Work: Home: _____

Date of Exposure: _____ Date of Evaluation: _____

Hepatitis B vaccination is indicated: ☐ Yes ☐ No

Hepatitis B Vaccine given at this facility: ☐ Yes ☐ No

☐ Yes ☐ No **The employee has been informed of the results of the evaluation.**

☐ Yes ☐ No **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.**

☐ Yes ☐ No **All other findings or diagnoses remain confidential and are not included in this written opinion.**

A copy of this report has been provided to the employee? ☐ Yes ☐ No [MUST STATE WHY]

Other comments : _____

Healthcare Professional's Printed Name: _____

Healthcare Professional's Signature: _____ Date: _____

SUMMARY SHEET FOR POST-EXPOSURE MEDICAL FOLLOW-UP FOR EMPLOYEES

This summarizes three options for employees who seek medical attention following a work-related Bloodborne Pathogens exposure.

1. **Fire and Rescue Occupational Medical Services (FROMS)** – specializes in occupational injuries
    - Physician – Board Certified in Infectious Disease, Internal Medicine, Occupational Medicine, or Emergency Medicine, or designee will consult with exposed employee to determine if the event is an exposure.
    - If so, FROMS will advise as to the level of risk and the level of care indicated.
    - If after hours care is indicated, FROMS will contact the local emergency room with treatment and testing recommendations in advance of the employee's arrival and will discuss initiating Post-Exposure Prophylaxis. The local emergency room physician will initiate the Prophylaxis if indicated.
    - **Will** advise emergency room physician as to the need for Hepatitis B titer or vaccine if possible.
    - FROMS will perform all follow-up testing.
    - FROMS conducts the post-exposure counseling.
    - FROMS maintains record of Medical Evaluation of Work Status and conducts all follow-up visits and treatment.
    - FROMS, upon notification from OMS, will contact the source patient and perform testing or arrange source testing at another site if the employee requests it.

2. **Local Emergency Room or Urgent Care Center`**
    - Will initiate Post-Exposure Prophylaxis if indicated by the circumstances of the event.
    - May administer HBIG.
    - Should complete Medical Evaluation of Work Status form and give to employee to return to FROMS.
    - Maintains record of emergent or urgent treatment.
    - Will initiate post exposure counseling to the employee.
    - Will conduct source testing.

3. **Private Provider**
    - May test for HIV, Hepatitis B, and Hepatitis C.
    - May initiate Post-Exposure Prophylaxis if indicated by the event.
    - May administer HBIG.
    - May advise you as to the need for, or administer the Hepatitis B vaccine.
    - Should complete Medical Evaluation of Work Status form and the Healthcare Professional's Evaluation Report and give to the employee to return to FROMS.
    - Maintains records of treatment.
    - May do post-exposure counseling and follow up tests and visits.
    - May not conduct source testing.

Note: Employee should take copy of OSHA standard if electing treatment with private provider to assure awareness of OSHA requirements.

Regulations (Standards - 29 CFR)
Bloodborne pathogens. - 1910.1030

1910.1030(a) Scope and Application. This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

1910.1030(b) Definitions. For purposes of this section, the following shall apply:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogens means 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).

Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

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

Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps means 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.

Decontamination means 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 particles and the surface or item is rendered safe for handling, use, or disposal.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Engineering Controls means 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.

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

Handwashing Facilities means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV means Hepatitis B virus.

HIV means human immunodeficiency virus.

Needleless systems means a device that does not use needles for: (1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) The administration of medication or fluids; or (3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure means 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.

Other Potentially Infectious Materials means (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) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment is 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 are not considered to be personal protective equipment.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means 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.

Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharps with engineered sharps injury protections means a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual means 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.

Sterilize means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions is 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.

Work Practice Controls means 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).

1910.1030(c) Exposure Control --

1910.1030(c)(1) Exposure Control Plan.

1910.1030(c)(1)(i) Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

1910.1030(c)(1)(ii) The Exposure Control Plan shall contain at least the following elements:

1910.1030(c)(1)(ii)(A) The exposure determination required by paragraph (c)(2),

1910.1030(c)(1)(ii)(B) The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

1910.1030(c)(1)(ii)(C) The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

1910.1030(c)(1)(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).

1910.1030(c)(1)(iv) 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:

1910.1030(c)(1)(iv)(A) Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

1910.1030(c)(1)(iv)(B) Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

1910.1030(c)(1)(v) An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

1910.1030(c)(1)(vi) The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

1910.1030(c)(2) Exposure Determination.

1910.1030(c)(2)(i) Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

1910.1030(c)(2)(i)(A) A list of all job classifications in which all employees in those job classifications have occupational exposure;

1910.1030(c)(2)(i)(B) A list of job classifications in which some employees have occupational exposure, and

1910.1030(c)(2)(i)(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

1910.1030(c)(2)(ii) This exposure determination shall be made without regard to the use of personal protective equipment.

1910.1030(d) Methods of Compliance --

1910.1030(d)(1) General. 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.

1910.1030(d)(2) Engineering and Work Practice Controls.

1910.1030(d)(2)(i) Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.

1910.1030(d)(2)(ii) Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

1910.1030(d)(2)(iii) Employers shall provide handwashing facilities which are readily accessible to employees.

1910.1030(d)(2)(iv) When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.

1910.1030(d)(2)(v) Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

1910.1030(d)(2)(vi) Employers shall ensure that employees wash hands and any other 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.

1910.1030(d)(2)(vii) Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

1910.1030(d)(2)(vii)(A) Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

1910.1030(d)(2)(vii)(B) Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

1910.1030(d)(2)(viii) Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

1910.1030(d)(2)(viii)(A) Puncture resistant;

1910.1030(d)(2)(viii)(B) Labeled or color-coded in accordance with this standard;

1910.1030(d)(2)(viii)(C) Leakproof on the sides and bottom; and

1910.1030(d)(2)(viii)(D) In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.

1910.1030(d)(2)(ix) 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.

1910.1030(d)(2)(x) Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

1910.1030(d)(2)(xi) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

1910.1030(d)(2)(xii) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

1910.1030(d)(2)(xiii) 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.

1910.1030(d)(2)(xiii)(A) The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

1910.1030(d)(2)(xiii)(B) If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

1910.1030(d)(2)(xiii)(C) If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

1910.1030(d)(2)(xiv) Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

1910.1030(d)(2)(xiv)(A) A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

1910.1030(d)(2)(xiv)(B) The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

1910.1030(d)(3) Personal Protective Equipment --

1910.1030(d)(3)(i) Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

1910.1030(d)(3)(ii) Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

1910.1030(d)(3)(iii) Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

1910.1030(d)(3)(iv) Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

1910.1030(d)(3)(v) Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

1910.1030(d)(3)(vi) If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

1910.1030(d)(3)(vii) All personal protective equipment shall be removed prior to leaving the work area.

1910.1030(d)(3)(viii) When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

1910.1030(d)(3)(ix) Gloves. Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

1910.1030(d)(3)(ix)(A) Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

1910.1030(d)(3)(ix)(B) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

1910.1030(d)(3)(ix)(C) Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

1910.1030(d)(3)(ix)(D) If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

1910.1030(d)(3)(ix)(D)(1) Periodically reevaluate this policy;

1910.1030(d)(3)(ix)(D)(2) Make gloves available to all employees who wish to use them for phlebotomy;

1910.1030(d)(3)(ix)(D)(3) Not discourage the use of gloves for phlebotomy; and

1910.1030(d)(3)(ix)(D)(4) Require that gloves be used for phlebotomy in the following circumstances:

1910.1030(d)(3)(ix)(D)(4)(i) When the employee has cuts, scratches, or other breaks in his or her skin;

1910.1030(d)(3)(ix)(D)(4)(ii) When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

1910.1030(d)(3)(ix)(D)(4)(iii) When the employee is receiving training in phlebotomy.

1910.1030(d)(3)(x) Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

1910.1030(d)(3)(xi) Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

1910.1030(d)(3)(xii) Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopedic surgery).

1910.1030(d)(4) Housekeeping --

1910.1030(d)(4)(i) General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

1910.1030(d)(4)(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

1910.1030(d)(4)(ii)(A) Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

1910.1030(d)(4)(ii)(B) Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

1910.1030(d)(4)(ii)(C) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

1910.1030(d)(4)(ii)(D) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.

1910.1030(d)(4)(ii)(E) Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

1910.1030(d)(4)(iii) Regulated Waste --

1910.1030(d)(4)(iii)(A) Contaminated Sharps Discarding and Containment.

1910.1030(d)(4)(iii)(A)(1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

1910.1030(d)(4)(iii)(A)(1)(i) Closable;

1910.1030(d)(4)(iii)(A)(1)(ii) Puncture resistant;

1910.1030(d)(4)(iii)(A)(1)(iii) Leakproof on sides and bottom; and

1910.1030(d)(4)(iii)(A)(1)(iv) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

1910.1030(d)(4)(iii)(A)(2) During use, containers for contaminated sharps shall be:

1910.1030(d)(4)(iii)(A)(2)(i) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

1910.1030(d)(4)(iii)(A)(2)(ii) Maintained upright throughout use; and

1910.1030(d)(4)(iii)(A)(2)(iii) Replaced routinely and not be allowed to overfill.

1910.1030(d)(4)(iii)(A)(3) When moving containers of contaminated sharps from the area of use, the containers shall be:

1910.1030(d)(4)(iii)(A)(3)(i) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

1910.1030(d)(4)(iii)(A)(3)(ii) Placed in a secondary container if leakage is possible. The second container shall be:

1910.1030(d)(4)(iii)(A)(3)(ii)(A) Closable;

1910.1030(d)(4)(iii)(A)(3)(ii)(B) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

1910.1030(d)(4)(iii)(A)(3)(ii)(C) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

1910.1030(d)(4)(iii)(A)(4) Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.

1910.1030(d)(4)(iii)(B) Other Regulated Waste Containment --

1910.1030(d)(4)(iii)(B)(1) Regulated waste shall be placed in containers which are:

1910.1030(d)(4)(iii)(B)(1)(i) Closable;

1910.1030(d)(4)(iii)(B)(1)(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

1910.1030(d)(4)(iii)(B)(1)(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and

1910.1030(d)(4)(iii)(B)(1)(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

1910.1030(d)(4)(iii)(B)(2) If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

1910.1030(d)(4)(iii)(B)(2)(i) Closable;

1910.1030(d)(4)(iii)(B)(2)(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

1910.1030(d)(4)(iii)(B)(2)(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

1910.1030(d)(4)(iii)(B)(2)(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

1910.1030(d)(4)(iii)(C) Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

1910.1030(d)(4)(iv) Laundry.

1910.1030(d)(4)(iv)(A) Contaminated laundry shall be handled as little as possible with a minimum of agitation.

1910.1030(d)(4)(iv)(A)(1) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

1910.1030(d)(4)(iv)(A)(2) Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

1910.1030(d)(4)(iv)(A)(3) Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

1910.1030(d)(4)(iv)(B) The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

1910.1030(d)(4)(iv)(C) When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

1910.1030(e) HIV and HBV Research Laboratories and Production Facilities.

1910.1030(e)(1) This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

1910.1030(e)(2) Research laboratories and production facilities shall meet the following criteria:

1910.1030(e)(2)(i) Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

1910.1030(e)(2)(ii) Special Practices.

1910.1030(e)(2)(ii)(A) Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

1910.1030(e)(2)(ii)(B) Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

1910.1030(e)(2)(ii)(C) Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

1910.1030(e)(2)(ii)(D) When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

1910.1030(e)(2)(ii)(E) All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

1910.1030(e)(2)(ii)(F) Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

1910.1030(e)(2)(ii)(G) Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

1910.1030(e)(2)(ii)(H) Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

1910.1030(e)(2)(ii)(I) Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

1910.1030(e)(2)(ii)(J) Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

1910.1030(e)(2)(ii)(K) All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly

trained and equipped to work with potentially concentrated infectious materials.

1910.1030(e)(2)(ii)(L) A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

1910.1030(e)(2)(ii)(M) A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

1910.1030(e)(2)(iii) Containment Equipment.

1910.1030(e)(2)(iii)(A) Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

1910.1030(e)(2)(iii)(B) Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

1910.1030(e)(3) HIV and HBV research laboratories shall meet the following criteria:

1910.1030(e)(3)(i) Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

1910.1030(e)(3)(ii) An autoclave for decontamination of regulated waste shall be available.

1910.1030(e)(4) HIV and HBV production facilities shall meet the following criteria:

1910.1030(e)(4)(i) The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

1910.1030(e)(4)(ii) The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

1910.1030(e)(4)(iii) Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

1910.1030(e)(4)(iv) Access doors to the work area or containment module shall be self-closing.

1910.1030(e)(4)(v) An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

1910.1030(e)(4)(vi) A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

1910.1030(e)(5) Training Requirements. Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

1910.1030(f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up --

1910.1030(f)(1) General.

1910.1030(f)(1)(i) The employer shall make available the Hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

1910.1030(f)(1)(ii) The employer shall ensure that all medical evaluations and procedures including the Hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

1910.1030(f)(1)(ii)(A) Made available at no cost to the employee;

1910.1030(f)(1)(ii)(B) Made available to the employee at a reasonable time and place;

1910.1030(f)(1)(ii)(C) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

1910.1030(f)(1)(ii)(D) Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

1910.1030(f)(1)(iii) The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

1910.1030(f)(2) Hepatitis B Vaccination.

1910.1030(f)(2)(i) Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

1910.1030(f)(2)(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving Hepatitis B vaccination.

1910.1030(f)(2)(iii) If the employee initially declines Hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available Hepatitis B vaccination at that time.

1910.1030(f)(2)(iv) The employer shall assure that employees who decline to accept Hepatitis B vaccination offered by the employer sign the statement in Appendix A.

1910.1030(f)(2)(v) If a routine booster dose(s) of Hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

1910.1030(f)(3) Post-exposure Evaluation and Follow-up. Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

1910.1030(f)(3)(i) Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

1910.1030(f)(3)(ii) Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

1910.1030(f)(3)(ii)(A) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish 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.

1910.1030(f)(3)(ii)(B) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

1910.1030(f)(3)(ii)(C) Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

1910.1030(f)(3)(iii) Collection and testing of blood for HBV and HIV serological status;

1910.1030(f)(3)(iii)(A) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

1910.1030(f)(3)(iii)(B) If the employee 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 employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

1910.1030(f)(3)(iv) Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

1910.1030(f)(3)(v) Counseling; and

1910.1030(f)(3)(vi) Evaluation of reported illnesses.

1910.1030(f)(4) Information Provided to the Healthcare Professional.

1910.1030(f)(4)(i) The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

1910.1030(f)(4)(ii) The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

1910.1030(f)(4)(ii)(A) A copy of this regulation;

1910.1030(f)(4)(ii)(B) A description of the exposed employee's duties as they relate to the exposure incident;

1910.1030(f)(4)(ii)(C) Documentation of the route(s) of exposure and circumstances under which exposure occurred;

1910.1030(f)(4)(ii)(D) Results of the source individual's blood testing, if available; and

1910.1030(f)(4)(ii)(E) All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

1910.1030(f)(5) Healthcare Professional's Written Opinion. The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

1910.1030(f)(5)(i) The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

1910.1030(f)(5)(ii) The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

1910.1030(f)(5)(ii)(A) That the employee has been informed of the results of the evaluation; and

1910.1030(f)(5)(ii)(B) 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.

1910.1030(f)(5)(iii) All other findings or diagnoses shall remain confidential and shall not be included in the written report.

1910.1030(f)(6) Medical Recordkeeping. Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

1910.1030(g) Communication of Hazards to Employees --

1910.1030(g)(1) Labels and Signs --

1910.1030(g)(1)(i) Labels.

1910.1030(g)(1)(i)(A) 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, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

1910.1030(g)(1)(i)(B) Labels required by this section shall include the following legend:

1910.1030(g)(1)(i)(C) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

1910.1030(g)(1)(i)(D) 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.

1910.1030(g)(1)(i)(E) Red bags or red containers may be substituted for labels.

1910.1030(g)(1)(i)(F) 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 the labeling requirements of paragraph (g).

1910.1030(g)(1)(i)(G) 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.

1910.1030(g)(1)(i)(H) Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

1910.1030(g)(1)(i)(I) Regulated waste that has been decontaminated need not be labeled or color-coded.

1910.1030(g)(1)(ii) Signs.

1910.1030(g)(1)(ii)(A) The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

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

1910.1030(g)(1)(ii)(B) These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

1910.1030(g)(2) Information and Training.

1910.1030(g)(2)(i) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

1910.1030(g)(2)(ii) Training shall be provided as follows:

1910.1030(g)(2)(ii)(A) At the time of initial assignment to tasks where occupational exposure may take place;

1910.1030(g)(2)(ii)(B) At least annually thereafter.

1910.1030(g)(2)(iii) [Reserved]

1910.1030(g)(2)(iv) Annual training for all employees shall be provided within one year of their previous training.

1910.1030(g)(2)(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

1910.1030(g)(2)(vi) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

1910.1030(g)(2)(vii) The training program shall contain at a minimum the following elements:

1910.1030(g)(2)(vii)(A) An accessible copy of the regulatory text of this standard and an explanation of its contents;

1910.1030(g)(2)(vii)(B) A general explanation of the epidemiology and symptoms of bloodborne diseases;

1910.1030(g)(2)(vii)(C) An explanation of the modes of transmission of bloodborne pathogens;

1910.1030(g)(2)(vii)(D) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;

1910.1030(g)(2)(vii)(E) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

1910.1030(g)(2)(vii)(F) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

1910.1030(g)(2)(vii)(G) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

1910.1030(g)(2)(vii)(H) An explanation of the basis for selection of personal protective equipment;

1910.1030(g)(2)(vii)(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;

1910.1030(g)(2)(vii)(J) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

1910.1030(g)(2)(vii)(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;

1910.1030(g)(2)(vii)(L) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

1910.1030(g)(2)(vii)(M) An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

1910.1030(g)(2)(vii)(N) An opportunity for interactive questions and answers with the person conducting the training session.

1910.1030(g)(2)(viii) The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

1910.1030(g)(2)(ix) Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

1910.1030(g)(2)(ix)(A) The employer shall assure that employees 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.

1910.1030(g)(2)(ix)(B) The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

1910.1030(g)(2)(ix)(C) The employer shall provide a training program to employees 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 employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

1910.1030(h) Recordkeeping --

1910.1030(h)(1) Medical Records.

1910.1030(h)(1)(i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

1910.1030(h)(1)(ii) This record shall include:

1910.1030(h)(1)(ii)(A) The name and social security number of the employee;

1910.1030(h)(1)(ii)(B) A copy of the employee's Hepatitis B vaccination status including the dates of all the Hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

1910.1030(h)(1)(ii)(C) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

1910.1030(h)(1)(ii)(D) The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

1910.1030(h)(1)(ii)(E) A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

1910.1030(h)(1)(iii) Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are:

1910.1030(h)(1)(iii)(A) Kept confidential; and

1910.1030(h)(1)(iii)(B) Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

1**910.1030(h)(1)(iv)** The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.

1910.1030(h)(2) Training Records.

1910.1030(h)(2)(i) Training records shall include the following information:

1910.1030(h)(2)(i)(A) The dates of the training sessions;

1910.1030(h)(2)(i)(B) The contents or a summary of the training sessions;

1910.1030(h)(2)(i)(C) The names and qualifications of persons conducting the training; and

1910.1030(h)(2)(i)(D) The names and job titles of all persons attending the training sessions.

1910.1030(h)(2)(ii) Training records shall be maintained for 3 years from the date on which the training occurred.

1910.1030(h)(3) Availability.

1910.1030(h)(3)(i) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

1910.1030(h)(3)(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

1910.1030(h)(3)(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

1910.1030(h)(4) Transfer of Records.

1910.1030(h)(4)(i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

1910.1030(h)(4)(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

1910.1030(h)(5) Sharps injury log.

1910.1030(h)(5)(i) The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1910.1030(h)(5)(i)(A) The type and brand of device involved in the incident,

1910.1030(h)(5)(i)(B) The department or work area where the exposure incident occurred, and

1910.1030(h)(5)(i)(C) An explanation of how the incident occurred.

1910.1030(h)(5)(ii) The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.

1910.1030(h)(5)(iii) The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

1910.1030(i) Dates --

1910.1030(i)(1) Effective Date. The standard shall become effective on March 6, 1992.

1910.1030(i)(2) The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

1910.1030(i)(3) Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.

1910.1030(i)(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g)(1) Labels and Signs, shall take effect July 6, 1992.

[56 FR 64004, Dec. 06, 1991, as amended at 57 FR 12717, April 13, 1992; 57 FR 29206, July 1, 1992; 61 FR 5507, Feb. 13, 1996; 66 FR 5325 Jan., 18, 2001; 71 FR 16672 and 16673, April 3, 2006]

APPENDIX H

MONTGOMERY COUNTY GOVERNMENT

Sharps Injury Log

DIVISION/DEPARTMENT: _____

SUPERVISOR: _____

YEAR: _____

Date	**Case/ Report No.** (from 300 Log)	**Type of Device** (e.g., syringe, suture, needle)	**Brand Name of Device**	**Work Area where injury occurred** (e.g., Geriatrics, Lab, patient room)	**Brief description of how the incident occurred** (e.g. procedure being done, action being performed-disposal, injection; body part injured)

OSHA's-Bloodborne Pathogens Standard at 1910.1030(h)(5) requires an employer to establish and maintain a Sharp Injury Log for recording all percutaneous injuries in a facility occurring from contaminated sharps. The purpose of the Log is to aid in the evaluation of devices being used in healthcare and other facilities and to identify problem devices or procedures requiring additional attention or review. This Log must be kept in addition to the *Injury And Illness Log* required by 29 CFR 1904. The Sharps Injury Log should include all sharps injuries occurring in a calendar year. The log must be retained for five years following the end of the year to which it relates. The Log must be kept in a manner that preserves the confidentiality of the affected employee.