

Rutgers Environmental Health and Safety (REHS)

Program Name:	Bloodborne Pathogens Guide		
Responsible Executive:	Executive Director of REHS		
Adopted:	July 6, 1993	Reviewed/Revised:	January 14, 2019

1. Program Statement

It is the policy of Rutgers University to provide a safe and healthful workplace, including minimizing risks associated with bloodborne pathogens (BBP).

2. Reason for Program

This program describes the procedures for preventing the transmission of BBP at Rutgers in order to protect the faculty, staff, students, visitors, contractors and the general public. It is also designed to ensure compliance with the following regulatory standards and policies:

- [Occupational Exposure to Bloodborne Pathogens](#) – 29 CFR 1910.1030 (Occupational Safety and Health Administration/Public Employees Occupational Safety and Health)
- [Rutgers University Biological and Medical Waste Disposal Policy](#)

3. Who Should Read this Program

This program applies to all employees who may have reasonably anticipated contact with blood or other potentially infectious materials (OPIM) as a result of performing their job duties. It does not cover an employee performing a "good Samaritan" act such as assisting a co-worker with a nosebleed. Rutgers University job titles covered by the standard are listed in Section IV. A.

4. The Program

I. Background

On July 6, 1993 the New Jersey Public Employees Occupational Safety and Health Program (PEOSH) adopted the federal Occupational Safety and Health Administration standard "Occupational Exposure to Bloodborne Pathogens". The intent of the standard is to prevent the transmission of BBP in the workplace. The basic premise for infection control is the use of universal precautions. Protection is made available in the form of work practice controls, engineering controls, personal protective equipment (PPE), administrative controls, and immunization where possible. The standard achieves its goal by requiring employers to do the following:

- Develop a written Exposure Control Plan (ECP)
- Provide methods to prevent exposure
- Offer Hepatitis B vaccinations
- Provide medical evaluation and follow-up

- Provide employee training
- Retain appropriate records
- Develop special precautions for HIV and HBV research laboratories

The purpose of this guide is to establish practices which minimize occupational exposure to BBP at Rutgers University. These practices may involve the safe handling, transport, manipulation, and disposal of blood and OPIM. Because no single guide is applicable to all work environments, this document must be amended and modified for each specific work location. A Unit Specific Exposure Control Plan (ECP) is attached as Appendix 1 and 1-A (for clinical areas). The Unit Specific ECP gives each work location the opportunity to enter information that is specific for that location. In compiling this guide REHS has endeavored to gather the most current information from a variety of sources in order to present a sound BBP program to the Rutgers community.

II. Roles and Responsibilities

A. Clinical Representative

- 1) A Nurse Manager/Coordinator for a clinical site who has been designated by Practice Operations to help implement the ECP in their respective sites.

B. Employees

- 1) Follow safe work practices, attend required training and be familiar with the Rutgers BBP Program including the Unit Specific ECP.

C. Unit Supervisor

- 1) Identifies employees with occupational exposure to BBP and develops, within the framework of this guide, a written Unit Specific Exposure Control Plan to minimize or eliminate occupational exposure to BBP.
- 2) Ensures that eligible employees follow the safety practices described in this guide and in the Unit Specific ECP.
- 3) Interacts with REHS to schedule employee training and to meet other regulatory requirements, e.g., coordinating with Rutgers Health Services to ensure that eligible employees receive the Hepatitis B vaccination.
- 4) Informs REHS of changes of employees with occupational exposure, e.g., hiring of new eligible employees, and changing of job tasks which may result in occupational exposure prior to such changes taking effect.

D. University Biological Safety Officer

- 1) Reviews, updates, and audits the BBP Program on an annual basis.
- 2) Interprets applicable federal, state and local biosafety regulations
- 3) Interacts with Unit Supervisors to schedule training to assist in meeting their requirements.

E. University Occupational Safety and Health Committee

- 1) Approves the BBP Program on an annual basis and may set additional requirements to ensure the protection of Rutgers employees, students and the general public.

III. Definitions

<i>Assistant Secretary</i>	Assistant Secretary of Labor for Occupational Safety & Health, or designated representative
<i>Blood</i>	Human blood, human blood components, and products made from human blood
<i>Bloodborne Pathogens</i>	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)
<i>Clinical Laboratory</i>	A workplace where diagnostic or other screening procedures are performed on blood or other potential infectious materials
<i>Clinic</i>	A healthcare facility that is primarily devoted to the care of outpatients (non-resident patients)
<i>Contaminated</i>	The presence or the reasonably anticipated presence of blood or OPIM on an item or surface
<i>Decontamination</i>	The use of physical or chemical means to remove, inactivate, or destroy BBP 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
<i>Director</i>	The Director of the National Institute for Occupational Safety & Health (NIOSH), U.S. Department of Health & Human Services, or designated representative
<i>Engineering Controls</i>	Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the BBP hazard from the workplace
<i>Exposure Incident</i>	A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM that results from the performance of an employee's duties
<i>Handwashing Facilities</i>	A facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines
<i>Licensed Healthcare Professional</i>	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 & Follow-Up.
<i>HBV</i>	Hepatitis B virus

<i>HIV</i>	Human immunodeficiency virus
<i>Occupational Exposure</i>	Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or OPIM that may result from the performance of an employee's duties
<i>Other Potentially Infectious Materials (OPIM)</i>	1) 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.
<i>Percutaneous</i>	Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions
<i>Personal Protective Equipment (PPE)</i>	Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard is not considered to be PPE
<i>Production Facility</i>	A facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV
<i>Regulated Medical Waste (RMW)</i>	Solid, liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM
<i>Research Laboratory</i>	A laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HVB but not in the volume found in production facilities
<i>Safety Needle Evaluation Committee</i>	Ad hoc committees comprised of Clinical Representatives, including non-managerial clinical staff, from patient care areas that participate in the selection, evaluation and approval of safety needle devices. Nurse Managers will be responsible for forming the Committee for their respective practices. The Committee may be comprised of multiple clinical practices based on geographical area, as applicable

<i>Source Individual</i>	Any individual, living or dead, whose blood or OPIM 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
<i>Utilize</i>	The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores
<i>Universal Precautions</i>	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 BBP
<i>Work Practice Controls</i>	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)

IV. Procedures

The BBP standard requires that the written ECP be capable of protecting eligible employees from the hazards associated with BBP. The Rutgers BBP guide and the Unit Specific ECP must be made available to all eligible employees and must contain the following elements.

- A. Identification of job classifications in which all or some employees have occupational exposure to BBP.

Employees are considered to have occupational exposure if it can be reasonably anticipated that they may come in contact with blood or OPIM while performing their assigned duties. There are two categories of occupational exposure to blood and OPIM as defined by OSHA, 1) those job classifications in which all employees have occupational exposure and 2) those job classifications in which some employees have occupational exposure.

Job Classifications in which All Employees May Have Exposure to BBP

Department: Police
Job Classifications: Security Guard
Police Officer
Sergeant
Tasks: Assistance in emergency situations

Department: Fire and Emergency Services
Job Classifications: Emergency Medical Technicians
(full and part time)
Tasks: Emergency medical services

Department: University Health Services

Job Classifications: Physician
Nurse
Technologist
Tasks: Health care delivery

Department: Occupational Medicine/Employee Health Services

Job Classifications: Physician
Nurse
Medical Technologist
Tasks: Health care delivery

Department: Intercollegiate Athletics

Job Classifications: Physicians
Athletic Trainer
Tasks: Health care delivery
First Aid and CPR

Department: Recreation

Job Classifications: Full/Permanent Lifeguard
Tasks: First Aid and CPR

Department: Douglass Developmental Disability Center

Job Classifications: Teacher
Assistant Teachers
Tasks: Care of autistic children

Department: Clinics, Various

Job Classifications: Physician
Physician Assistant
Dentist
APN/RN/LPN
Dental Hygienist/Assistant
Medical Assistant/Health Technologist
Outreach/Community Home Aid
Phlebotomist
Mental Health Specialist
Tasks: Health care delivery

Department: Anatomical Association

Job Classifications: Morticians
Tasks: Transport cadavers to affiliated morgues
Preparation of cadavers for embalming (removal of body fluids)

Job Classifications in which Some Employees May Have Exposure to BBP

Department: Police
Job Classifications: Detective
Lieutenant
Captain
Chief
Tasks: Assistance in emergency situations

Department: Fire and Emergency Services
Job Classifications: Deputy Chief
Chief
Tasks: Emergency medical services

Department: University Health Services
Job Classifications: Ancillary staff
Tasks: Sample accession

Department: Occupational Health Clinic
Job Classifications: Ancillary staff
Tasks: Sample accession

Department: Clinics, Various
Job Classifications: Clinical Service Representative, Instructor/Faculty
Tasks: Reception, Classroom instruction

Department: Intercollegiate Athletics
Job Classifications: Gymnasium Supervisor
Student Athletic Trainer
Tasks: First Aid and CPR

Department: Recreation
Job Classifications: Building Manager
Supervisor
Tasks: First Aid and CPR

Department: Auxiliary Services
Job Classifications: Food Service Manager
Assistant Food Service Manager
Director of Residence Life
Asst. Dir. of Residence Life
Housing Security Guards
Housing Mechanics
Tasks: First Aid

Job Classifications in which Employees May Have Exposure to BBP as a Collateral Duty

In some instances it cannot be reasonably anticipated that an employee will come in contact with blood or OPIM. However, some employees may come in contact with blood or OPIM, in rare instances, as an ancillary duty that is not specified in their job description. These individuals will be provided with all necessary training, personal protective equipment, and post exposure medical evaluation and follow-up, if required. Examples of job classifications in this exposure category include:

Department: Recreation

Job Classifications: Director
Assistant Director
Coordinator
Student Lifeguard
Student Managers
Intramural Supervisors
Outdoor Sport Supervisor
Tasks: First Aid and CPR

Department: Auxiliary Services

Job Classifications: Residence Hall Director
Housing Manager
Tasks: First Aid

- B. Identification of tasks and procedures involving blood or OPIM performed by employees identified above.
- C. Specific safety practices designed to eliminate or minimize occupational exposure of eligible employees.
 - 1) The Unit Specific Exposure Control Plan is attached to this guide as Appendix 1. The plan will be updated by Unit Supervisors annually or whenever necessary to reflect changes in regulations or job tasks. The unit's plan will then be forwarded to REHS and approved by the University Biological Safety Officer.

V. **Infection Control**

- A. Transmission of Infectious Agents - Any route by which an infectious agent is spread from one source or reservoir to a susceptible individual. Microorganisms may be transmitted by several different routes. The four main routes of transmission are 1) contact, 2) vehicleborne, 3) airborne, and 4) vectorborne.
 - 1) Contact Transmission may be divided into three subgroups.
 - a. Direct Transmission – The transfer of the infectious agents directly into the body.
 - i. Personal contact: e.g., touching, biting, kissing or sexual intercourse. In these cases the agent enters the body through the skin, mouth, an open cut or sore or sexual organs.

- ii. Droplet contact: e.g., large droplets/aerosols of spray directly into the conjunctiva or the mucus membranes of the eye, nose or mouth during sneezing, coughing, spitting, singing or talking (although usually this type of spread is limited to about within one meter's distance).
 - b. Indirect Transmission - Personal contact of a susceptible person with a contaminated inanimate material or object (fomite).
 - i. Vehicleborne Transmission - Transfer of an infectious agent to a susceptible host via contaminated *object*. Examples of vehicleborne transmission include percutaneous needle stick injury or cut from contaminated sharp object.
 - ii. Vectorborne Transmission - The transfer of infectious microorganisms from an infected host to a susceptible individual via an *infected arthropod or insect*. The transfer may be simple mechanical transmission, e.g., soiled feet of a flying insect, or more complex biological transfer involving the propagation and/or development of the microorganism within the vector prior to transmitting an infective form of the agent to man.
 - c. Airborne Transmission - The dissemination of microbial aerosols to a susceptible host via the respiratory tract. Microbial aerosols are generally of two types.
 - i. Droplet Nuclei - The small residues of dried respiratory droplets resulting from the evaporation of fluid from droplets emitted by an infected host (see contact transmission, above). Droplet nuclei are generally 1 to 5 microns in size. Their small size allows them to remain airborne for long periods of time, to be transported by mechanical ventilation systems, and to penetrate into the alveoli of the lung where infection may occur. An example of a disease transmitted by infectious droplet nuclei is tuberculosis.
 - ii. Dust - Small particles of various sizes contaminated with an infective agent may arise from clothes, bedding, contaminated floors, or soil, e.g., fungus spores separated from dry soil by wind or mechanical agitation.
- B. Transmission of the Hepatitis B Virus (HBV) and the Human Immunodeficiency Virus (HIV)

The most frequent routes of transmission for HIV and HBV are via direct (e.g., sexual contact) and indirect (e.g., percutaneous) transmission.

In the workplace, both viruses have been transmitted only by percutaneous inoculation (e.g., needle stick) or contact of an open wound, non-intact skin, or mucous membranes with contaminated blood, body fluids, or concentrated virus. There are documented cases of HBV being transmitted by human bites or contact of contaminated saliva with non-intact skin or mucous membranes. Although HIV has occasionally been isolated in saliva, tears, urine, and bronchial secretions there have been no known or reported cases transmitted after contact with these secretions. Blood is the most important source of HIV and HBV in the occupational setting.

C. Environmental Survivability

HIV and HBV are not capable of reproducing outside the human body, unlike bacteria which may do so under suitable conditions. In laboratory studies of HIV and HBV it is necessary for these viruses to infect specific human or primate cells in order to complete their life cycles and thereby reproduce.

One milliliter (ml) of blood from a HBV infected person may contain more than 100 million infectious viral particles. In a dried state, HBV may remain viable on surfaces for 1 week or longer. In contrast, one ml of blood from an HIV infected individual may contain several hundred to 10,000 infectious viral particles. Experiments conducted by the Centers for Disease Control and Prevention (CDC) have shown that viral concentrations of HIV have been reduced by drying by up to 99% within several hours.

D. Needle Sticks

The CDC defines occupational exposure to HIV and HBV as:

- Needle stick or cut with sharp instrument contaminated with blood
- Contact of Infected blood with mucous membrane
- Broken skin in contact with infected blood, semen, vaginal fluids, or other body fluids containing visible blood
- In the case of HBV only, via contaminated saliva.

Of the occupational exposures described above, Needle Sticks have been determined to be the most significant. As of December 31, 1994 there have been 42 documented occupational HIV seroconversions among healthcare workers nationwide reported to the CDC. Of these 42 seroconversions, 36 resulted from Needle Sticks or cuts (percutaneous exposure), 4 from mucous membrane and/or skin exposure, 1 from a combination of percutaneous and mucous membrane exposure, and 1 from an unknown route of exposure. Fortunately, only one infection occurs out of 250 infected Needle Sticks resulting in a 0.4% chance of becoming infected.

The number of workers who are infected with HBV is much greater than those who are infected with HIV. Every year more than 18,000 American workers are infected with HBV on the job resulting in approximately 600 hospitalizations and 200 deaths. Approximately 10% of these occupationally acquired cases become chronic carriers and can therefore infect others. HBV is much more concentrated in the blood of an infected individual than is HIV. The chance of becoming HBV infected from a contaminated needle stick is 6 - 30%.

VI. Methods of Compliance, Exposure Control

A. Universal Precautions

In 1983 the CDC introduced the concept of "Universal Blood and Body Fluid Precautions" (Universal Precautions) to be applied in the care of all patients and in the handling of blood and body fluid specimens. This approach is based on the concept that all patients, blood, and body fluid specimens are to be handled as if they are known to be infected with HIV, HBV, or other BBP. Universal Precautions require that adequate safeguards, e.g., barrier precautions, be taken to eliminate or minimize any occupational exposure to blood and body fluids. Universal Precautions are intended to prevent parenteral, mucous membrane, and non-intact skin exposure to BBP. The concept of

Universal Precautions has now been extended beyond the traditional healthcare setting. The OSHA Bloodborne Pathogen Standard requires the use of Universal Precautions in occupational settings where contact with blood or OPIM may be reasonably anticipated.

2) Body Fluids to Which Universal Precautions Apply

Blood is the single most important source of HIV, HBV, and other BBP in the occupational setting. Universal Precautions also apply to the following 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
- All body fluids in situations where it is difficult to differentiate between body fluids.

3) Body Fluids to Which Universal Precautions Do Not Apply

Unless visibly contaminated with blood, the following body fluids are not considered as potentially infectious materials under the standard:

- Saliva
- Urine
- Feces
- Vomit

B. Handwashing

Handwashing is an important and basic component to any sound infection control program. Proper handwashing may be defined as a vigorous, brief (at least 30 seconds) rubbing together of all surfaces of the lathered hands, followed by rinsing under a stream of clean water. The purpose of handwashing is to remove any transient bacteria and other pathogens that are commonly found on the surface of the skin.

Standard soap is adequate for all handwashing activities at the University. If bar soap is to be used, it should be placed on a rack that allows water to drain. Hands should be washed before and after each patient contact and after contact with any blood or OPIM. Hands should also be washed each time gloves are removed, even if the gloves appear intact. The daily use of hand cream is recommended to prevent overly dry skin due to repeated handwashing.

Hand sanitizers are available for use in areas where soap and water are not immediately available. 60% alcohol-based hand-sanitizers can quickly reduce the number of microbes on hands in *some situations* but they are NOT effective against all types of germs (e.g., Norovirus, *Clostridium difficile*). Handwashing with soap and water is the most effective method especially when hands are visibly dirty or greasy.

If any skin comes into contact with blood, body fluids, or OPIM the skin should be washed immediately. In the case of a biological exposure, care should be taken not to scrub the skin vigorously as this may cause small breaks in the skin's surface and increase the chance of disease transmission. For more information see section entitled Needle stick and Mucous Membrane Exposure Policy.

1) Handwashing Technique

- a. Remove rings and watches before washing.
- b. Hands should be positioned lower than arms to prevent back flow C. contamination.
- c. Wet hands with warm running water. Running water is necessary to carry away dirt and debris.
- d. Apply soap, lather well.
- e. Rub hands together in a circular motion applying light friction. Include front and back of both hands, between fingers and knuckles, around and under fingernails, and the wrist area.
- f. Rinse hands under running water.
- g. Dry hands with clean dry paper towel.
- h. Avoid direct contact of washed hands with faucet. If foot, elbow, or knee controls are unavailable, drape paper towel over faucet handle prior to turning off.
- i. Discard soiled paper towel in waste receptacle.

C. Field Settings

All procedures that are applicable to clinical, laboratory, and other "housed" settings are desirable in the field. Field staff, e.g., Fire, Emergency Services, and Police, should wash their hands using hand sanitizers or antiseptic towelettes and dry them with clean paper towels after removing disposable gloves and after contact with blood or OPIM. Do not re-use towelettes. Field staff should properly wash their hands with soap and running water at the first opportunity.

D. Hepatitis B Vaccination

Although the potential for occupational exposure to HBV is much higher than HIV, HBV infection is preventable by vaccination. A safe and effective vaccine to prevent HBV has been available since 1982. The original vaccine was plasma derived; made from the pooled sera of positive carriers. Currently, the vaccine most often used for protection against HBV is a genetically engineered yeast based vaccine called Recombivax. Vaccines produced through recombinant DNA technology are termed subunit vaccines. There is no risk of infection with subunit vaccines. Typically, the hepatitis B vaccine protects 90% of those who receive it for approximately 7 years.

The Hepatitis B vaccine is available to all eligible Rutgers employees through University Health Services under the supervision of the medical director. Unit supervisors will ensure that all eligible employees are offered the hepatitis B vaccine at no cost to them.

The vaccine is to be given after eligible employees receive initial training (described below) and sign the "Hepatitis B Vaccine Consent Form" (Appendix 2) but no later than one month from the consent date. The vaccine will be given to new eligible employees within 10 days of the new assignment of duties with occupational exposure.

An eligible employee may decline the vaccine by signing the "Hepatitis B Vaccine Declination Form" (Appendix 2). An eligible employee who initially declined the

vaccination may change their mind at any time and request the vaccination by signing the "Hepatitis B Vaccine Consent Form".

E. Engineering Controls

Engineering controls refer to devices, mechanical or otherwise, that may be used to eliminate, minimize, or reduce occupational exposure to BBP. Engineering controls are usually designed to control contamination at the source thereby preventing the release of the contaminant into the workers environment. Additionally, engineering controls may be designed to minimize the effect of an accidental release of a contaminant into the work environment. Examples of engineering controls include:

- 1) Sharps Container - A closable, leak-proof, puncture-resistant container into which sharps are deposited for disposal. Please refer to section entitled "Handling of Sharps" and the [Rutgers University Policy for the Disposal of Regulated Medical Waste](#) for additional information.
- 2) Safety Sharps –Sharps with engineered sharps injury protections and needleless systems (safety sharps) that can be effectively used to eliminate or minimize the risk of exposure to blood and other body fluids. Clinical areas will follow the Safety Needle Implementation Plan as outlined in Appendix 4.
- 3) Steam Autoclave – Steam autoclaves will be used to sterilize (i.e. kill most spores) on re-usable medical devices and equipment that may be used for normally sterile parts of the human body (e.g., cystoscopes, specula). It is important to consider appropriate load characteristics and autoclave operating parameters in order to determine adequate sterilization time. Biological indicators should be used regularly to ensure the autoclave is properly functioning.

F. Work Practice Controls

Work practice controls refer to practices and procedures which reduce or eliminate the chance of occupational exposure to BBP. Examples of work practice controls include:

- Always wear the appropriate personal protective equipment for the task being performed (see Personal Protective Equipment, below).
- Wash hands promptly after removal of gloves, between patient contact, and after handling blood or OPIM.
- Discard used needles and other sharps in appropriate sharps container (see Handling of Sharps, below).
- Do not recap, bend, or break used needles.
- Do not eat, drink, smoke, apply lip balm or makeup, and handle contact lenses in areas where occupational exposure to blood or OPIM may occur.
- Never store food or drink in refrigerators, freezers, cabinets, or on shelves, countertops, and bench tops, where blood and OPIM may be present.
- Always use methods that prevent the splashing, splattering, spraying, or aerosolizing of blood or OPIM. Examples of these methods may include covering the top of a vacutainer with a gauze pad prior to opening or substituting a screw top container for those with rubber septum.
- Use leak proof containers for the collection, handling, processing, storing, and shipping blood specimens or OPIM.
- Use secondary containers when transporting or shipping blood specimens or OPIM.
- Properly label all containers, refrigerators, freezers, incubators, and other units where blood and OPIM is stored (see Hazard Communication, below).

- Promptly decontaminate any work surfaces or equipment following exposure to blood or OPIM (see Cleaning, Disinfection, and Sterilization, below).

G. Handling of Sharps

Contaminated sharps such as needles, scalpel blades, broken test tubes, and other sharp instruments present the greatest risk of transmission of BBP in the workplace. Disposable syringes (with and without needles), scalpel blades, and other sharp items must be deposited into an appropriate leak-proof, puncture-resistant, and labeled sharps container immediately after use. Disposable needles should never be recapped, bent, broken, sheared or removed from disposable syringes. Follow the steps outlined in the Section P, 'Needle stick and Mucous Membrane Exposure Policy' if an employee or co-worker sustains a needle stick injury.

Sharps containers should be located in all work locations where it is reasonably anticipated that sharps are used. Sharps containers should only be filled to within one inch of the top of the container. Sharps containers should never be overfilled. Never attempt to force additional material into a full container. For more information, please refer to [Rutgers Biological and Medical Waste Disposal Policy](#).

H. Personal Protective Equipment (PPE)

Personal protective equipment are items that are worn to protect workers from exposure to blood and OPIM. Personal protective equipment is especially important when exposure cannot be prevented by other means, e.g., engineering and work practice controls. These items provide protection by establishing a barrier between the employee and the blood or OPIM. Adequate personal protective equipment shall be provided by the employer to all eligible employees at no cost to the employee. Personal protective equipment must be accessible and available in sizes which fit all employees. Personal protective equipment will be repaired or replaced as needed. Examples of personal protective equipment worn to protect workers from occupational exposure to blood and OPIM include:

- 1) Gloves - Non-sterile single-use examination gloves are appropriate for most, if not all, activities and procedures related to BBP performed at the university. This guide does not discuss gloves worn for purposes other than protection from BBP, e.g., chemicals. Gloves must be worn when there is the potential for exposure to blood or OPIM. Additionally, gloves should be changed after covering your mouth to sneeze or cough, before and after using the toilet and diaper changing, after contact with other body secretions, e.g., mucous and vomitus, before eating, drinking, smoking, applying make-up or lip balm, handling contact lenses or if torn/damaged.

Gloves must be changed after every patient/client interaction. Hands must be washed each time gloves are removed. Employees with non-intact skin should cover affected area with a suitable bandage prior to donning gloves. Hypoallergenic gloves, glove liners, powderless gloves or other alternatives shall be made available to those eligible employees who are allergic to the normal gloves provided. Certain gloves, such as utility gloves used by housekeeping departments, may be decontaminated and reused as long as the integrity of the gloves have not been compromised. However, even utility gloves have a finite service life. Utility gloves must be disposed of as soon as they begin to crack, peel, puncture, or show any other sign of deterioration.

To Remove Potentially Contaminated Disposable Gloves:

- a. Pinch with two fingers the outside of one glove (near the inner wrist) with the other gloved hand.
 - b. Turn the glove inside out as it is pulled off.
 - c. Hold removed glove loosely in the still gloved hand.
 - d. Reach inside second glove with two fingers of the bare hand and pinch it.
 - e. Turn the glove inside out as it is removed, enclosing the first glove.
 - f. Properly discard the entire package.
 - g. Wash hands.
- 2) Protective Eyewear - Protective eyewear must be worn during procedures which generate aerosols or splatter or splash blood or OPIM. In the laboratory, safety glasses must be worn at all times. Protective eyewear includes items such as safety glasses with solid side shields, goggles, and full length face shields. The level of necessary protection shall be determined by the procedure being performed. In certain instances, e.g., emergency response and spill clean-up, a combination of protective eyewear, e.g., safety glasses and face shield, may be necessary. Protective eyewear must be properly cleaned after each exposure with blood or OPIM. When not in use, protective eyewear shall be stored in a clean and appropriate manner which prevents accidental contamination. REHS recommends that reusable protective eyewear meets the American National Standard Institute Standard Z87.1-1989 entitled Practice for Occupational and Educational Eye and Face Protection.
 - 3) Surgical Masks - Similar to protective eyewear, surgical masks must be worn during procedures which generate aerosols or splatter or splash blood or OPIM and may include single use disposable surgical masks or combination masks with eye protection. Higher levels of respiratory protection may require medical evaluation and respirator fit testing. Please consult with REHS to determine adequate levels of respiratory protection for specific tasks.
 - 4) Gowns - Protective gowns, aprons, lab coats, clinic jackets or similar outer garments must be worn during procedures which generate aerosols or splatter or splash blood or OPIM. Any gown or other protective outer garment that is visibly soiled with blood or OPIM should be immediately removed and properly disposed of (See [Rutgers University Policy for the Disposal of Regulated Medical Waste](#)). Gowns, lab coats and other protective outer garments should not be worn out of the clinic, lab, or other applicable work location. Reusable cloth gowns or other protective outer garment shall be cleaned and laundered on a regular basis at no cost to the employee.
 - 5) Field Settings - All procedures concerning personal protective equipment that are applicable in the clinic, laboratory, and other "housed" settings are desired in the field. All patrol and emergency vehicles must be equipped with the personal protective equipment, described above, necessary to protect eligible field employees from occupational exposure to blood or OPIM. Examples of additional personal protective equipment which may be appropriate for field personnel include mouthpieces, resuscitation bags, and other ventilation devices used for CPR.
- I. Cleaning, Disinfection and Sterilization
- 1) Cleaning refers to the physical removal of organic material or soil from objects. Cleaning is generally considered to be the first step when disinfecting or sterilizing reusable instruments or equipment. Organic materials may contain high concentrations of microorganisms. Additionally, organic materials may protect the microorganisms from the decontamination or sterilization process. The preferred method of cleaning is soap and water. A brush may be used to help remove foreign

matter adhering to the surface being cleaned. An example of items requiring periodic cleaning include reusable personal protective equipment such as safety glasses, goggles, and face shields.

- 2) Disinfection refers to the destruction of most pathogenic organisms but not bacterial spores. Surfaces which come into contact with skin (e.g., stethoscopes, sphygmomanometer cuffs, otoscopes) rarely transmit diseases. However, the surfaces of these items should be periodically disinfected. Prior to disinfection, the surfaces of these items should be thoroughly cleaned. Commercial germicides approved for use and EPA registered as "hospital disinfectants", which are also tuberculocidal, are recommended by the CDC for disinfecting environmental surfaces. A 10% solution of household bleach: approximately 1 1/2 cups of household bleach in 1 gallon of tap water, may also be used for disinfection. Household bleach contains 5.25% sodium hypochlorite by weight. Once the bleach solution is mixed, the container should be affixed with a label stating the ingredients, the concentration, and the date. Reusable personal protective equipment soiled by blood or OPIM shall be cleaned and disinfected prior to reuse.
- 3) Sterilization refers to the destruction of all microbial life, including a high percentage of bacterial spores. Sterilization is necessary for instruments, equipment, or objects that penetrate skin, come into contact with the bloodstream or other normally sterile areas of the body. Autoclaving is the preferred method of sterilization. Autoclave tape, bacterial culture vials, and chemical indicator strips may be used to assure adequate sterilization. Dry heat and immersion in EPA approved chemical sterilants are alternative sterilization methods that may be acceptable. Disposable (single-use) items have eliminated the need to reprocess and sterilize equipment in most instances.

J. Housekeeping

Environmental surfaces such as walls, floors, and ceilings are not normally associated with the transmission of infections to patients and employees because they do not routinely come into contact with susceptible tissue (e.g., mucous membranes, conjunctiva of the eye) However, since dirt is a reservoir for disease and a potential vehicle for the transmission of infection, cleaning and removal of dust, dirt, and soil should be done routinely. Cleaning schedules and methods of decontamination will be determined by the type of area, the type of surface being cleaned, and the level of dirt or contamination present. However, all work environments will be maintained in a clean and sanitary condition.

Work surfaces contaminated by blood or OPIM shall be cleaned and decontaminated as soon as possible after the completion of the procedure. Protective coverings such as paper liners used on patient beds shall be removed and replaced as soon as possible after each use or sooner if visibly dirty. Additionally, these materials will be removed and replaced on a regular basis (e.g., after each shift, daily, or weekly) depending on the frequency of contamination. Bins, pails, cans, and other similar receptacles which may become contaminated and are intended for reuse shall be frequently inspected, cleaned and decontaminated as required.

Broken glass which may be contaminated shall never be picked up by hand. Rather, mechanical means such as forceps will be used. When picking up this type of material care must be taken not to aerosolize the blood or other potentially infectious contaminant. Additionally, adequate personal protective equipment shall be worn to protect the employee from accidental contamination. Spills of blood or OPIM will be cleaned and decontaminated immediately. Procedures for cleaning spills of blood or OPIM are provided in Appendix 3.

K. Regulated Medical Waste (RMW) Disposal

The University currently meets all state and federal guidelines and regulations concerning the disposal of regulated medical waste. The definition of regulated medical waste as well as specific management and disposal techniques can be found in the [Rutgers Biological and Medical Waste Disposal Policy](#).

L. Hazard Communication

In order to communicate the existence of a potential biological hazard to others all containers of RMW must be labeled with the international biohazard symbol, see legend below. These labels shall be fluorescent orange or orange-red with lettering and symbols printed in a contrasting color. These labels are commercially available from a variety of sources.

Biohazard warning labels shall also be affixed to refrigerators, freezers, incubators, and other containers used to store, transport, and ship blood or OPIM.

Entrance doors to work areas in clinical, academic, and research laboratories where blood and OPIM are in use shall be posted with the biohazard warning label. In addition to the biohazard symbol, these labels shall include the name of the infectious agent in use, any special requirements for entrance to the area, and the name and telephone number of the laboratory director or other responsible person, see label below.

VII. HIV and HBV Research Laboratories and Production Facilities

All research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV or HBV shall meet the criteria set forth in 29 CFR 1910.1030(e) (Section (e) of the Bloodborne Pathogen Standard). Additionally, these laboratories shall conform with biosafety level 2 standards, practices, equipment and facilities established by the U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health in Biosafety in Microbiological and Biomedical Laboratories, HHS Publication No. (CDC) 93-8395, 3rd Edition, May 1993. Further, these laboratories will follow operational guidelines established by the Centers for Disease Control and Prevention's Agent Summary Statement for Human Immunodeficiency Virus and Report on Laboratory-Acquired Infection with Human Immunodeficiency Virus, MMWR, April 1, 1988, Vol. 37, No. S-4. In some instances, depending on the concentration of the virus being grown, biosafety level 3 standards, practices, equipment, or facilities may be required.

VIII. Needlestick and Mucous Membrane Exposure Policy

A needlestick may be defined as a skin puncture with a needle or other sharp object that has been used to inject a patient, draw blood from a patient, or penetrate a patient's skin or mucous membrane. Alternatively, a needle stick may be defined as a skin puncture with a needle or other sharp object that has been used to manipulate blood or OPIM in the laboratory or other setting. Needle sticks with an unused sterile needle or needles used to draw up medications are not considered needle sticks in the context of the Bloodborne Pathogen Standard, however, needlesticks of this type should be reported to the employee's supervisor. A mucous membrane exposure may be defined as a splash, spray, or aerosolization of blood or OPIM that comes into direct contact with an employee's eyes, nose, or mouth or penetrates an employee's open wound or sore.

In the event of a needle stick or mucous membrane exposure the following procedures shall be followed:

A. Employee

- 1) Immediately clean the exposed area. The skin should be thoroughly washed with soap and running water. Vigorous scrubbing should be avoided as this may damage the skin and increase the chance of disease transmission. Exposed mucous membranes should be thoroughly rinsed with copious amounts of running water.
- 2) Immediately after cleaning the exposed area, notify the unit supervisor. All information concerning the exposure incident, including the name of the source patient, if applicable, should be reported.
- 3) Report to University Health Services for medical evaluation and follow up by the Occupational Health Physician.
 - a. **New Brunswick:** Hurtado Health Center – College Avenue Campus
11 Bishop Place
New Brunswick, NJ 08901
(848) 932-8254
 - b. **Piscataway:** RBHS Employee Health Services
170 Frelinghuysen Road
Piscataway, NJ 08854
(848) 445-0123
 - c. **Newark:** RBHS Occupational Medicine Services
150 Bergen Street, UH Room H-251
Newark, NJ 07101-1709
(932) 972-5672
 - d. **Newark:** Blumenthal Hall
249 University Avenue
Newark, NJ 07102
(973)353-5231
 - e. **Camden:** Camden Health Center
326 Penn Street
Camden, NJ 08102
(856) 225-6005

If University Health Services is closed, or if you are at an off-campus location report to the nearest hospital emergency room or private physician for immediate medical care. The employee should report to University Health Services as soon as possible for medical evaluation and follow up by the Occupational Physician.

B. Supervisor

- 1) Assure that injured employee receives appropriate emergency medical attention.
- 2) Assure proper protocol is followed while maintaining appropriate medical confidentiality.

- 3) Notify University Health Services of the incident as well as the need for source patient testing/individual counseling, if applicable.
- 4) Clinical sites must make arrangements to obtain source patient samples for HIV, HBV/HCV testing.
- 5) Assure that injured employee promptly presents to University Health Services for medical evaluation and follow up.
- 6) Provide a description to University Health Service of the exposed employee's duties as they relate to the exposure incident.
- 7) Document the route(s) of exposure and circumstances under which the exposure occurred and provide that information to University Health Service.
- 8) Complete the [Rutgers University Online Accident / Incident Report](#) within the shift the incident occurred.

C. University Health Service

- 1) Assures confidentiality of all medical information.
- 2) Inspects contact site of exposed employee and ensures that proper immediate care is provided.
- 3) If applicable, counsels source patient/individual and obtains informed consent for HIV antibody testing and authorization for the use of confidential HIV related information. These procedures shall conform to established University Health Service protocols and New Jersey Department of Health guidelines.
- 4) Provide post-test counseling for exposed employee and source patient/individual, if applicable.
- 5) Provide the exposed employee with a confidential medical evaluation and follow-up including: Documentation of source individual's HIV and HBV status as determined by serological testing, if applicable.
- 6) Review of all medical records, including vaccination status, relevant to the appropriate treatment of the exposed employee.
- 7) Collection and testing of the exposed employee's blood for serological status.
- 8) Provide post-exposure prophylaxis, when necessary, as recommended by the U.S. Public Health Service.
- 9) Advise employee with respect to medical risks, treatment options, vaccination status, and results of medical evaluation and serological testing. Documentation to this effect shall be entered into employee's medical chart.
- 10) Provide the Unit Supervisor with documentation that the exposed employee has been evaluated at Occupational Health, and that the appropriate treatment and follow up has been offered.

IX. Training

All employees with reasonably anticipated occupational exposure will participate in a training program provided at no cost to the employee and conducted during normal working hours. The purpose of the training is to alert employees of the potential hazards posed by BBP and to assist employees in eliminating or minimizing occupational exposure to BBP in their work environment.

Training will be offered to eligible employees initially and upon assignment to new duties in which exposure to blood or OPIM may be reasonably anticipated. Refresher training will be offered to all eligible employees on an annual basis. Training can be provided by REHS or by individual departments with the assistance of REHS, if necessary.

At the end of a Bloodborne Pathogen training session an employee will be able to:

- 1) Obtain a copy of the Rutgers University Bloodborne Pathogen Guide including the regulatory text and the Unit Specific Exposure Control Plan.
- 2) Define bloodborne pathogen and cite examples.
- 3) Understand modes of transmission of BBP as well as basic epidemiology and symptoms of bloodborne diseases.
- 4) Identify tasks and situations that may involve exposure to blood or OPIM.
- 5) Take measures to eliminate, minimize, or reduce exposure to blood or OPIM by using appropriate work practice controls, engineering controls, and personal protective equipment. Demonstrate the limitations associated with each control method described above.
- 6) Recognize the benefits of the Hepatitis B vaccination for employees who have potential exposure to blood and OPIM. Additionally, employees will know how to obtain the HBV vaccination, understand information regarding its safety, efficacy, method of administration, and that it is offered at no cost.
- 7) Take appropriate measures in response to an exposure incident or a spill of blood or OPIM. Additionally, employees will understand the post-exposure medical evaluation and follow-up required after an exposure incident.
- 8) Recognize the international biohazard symbol as well as other signs and labels pertinent to this standard and understand their appropriate use.

X. Recordkeeping

The Bloodborne Pathogen Standard requires that employer's maintain medical records and training records for all eligible employees.

A. Medical Records

A medical record will be established and maintained for each eligible employee. Medical records will be maintained in a confidential manner by University Health Service for the

duration of the employee's employment plus 30 years. Medical records will not be disclosed or reported without the employee's written permission to any person within or outside Rutgers University. However, medical records may be made available, upon request, to the Assistant Secretary of Labor, U.S. Department of Labor. Medical records will include at least the following:

- 1) Employee's name, social security number, and job title.
- 2) The employee's HBV vaccination status including the dates of all vaccinations and all medical records relative to the employee's ability to receive the vaccine.
- 3) Results of medical examinations, medical testing, and post-exposure evaluation and follow-up.
- 4) University Health Service's written opinion limited to the information described above.

B. Training Records

REHS will maintain training records relative to the training requirements of the Bloodborne Pathogen Standard. Training records will be maintained for the duration of the employee's employment plus 30 years. Training records may be made available, upon request, to the Assistant Secretary of Labor, U.S. Department of Labor, or an authorized representative. Training records will include:

- 1) The employee's name, social security number and job title.
- 2) Dates and summaries of the training sessions.
- 3) Names and qualifications of persons conducting the training.

Appendix 1
Unit Specific Exposure Control Plan
(See Appendix 1-A for Patient Care Areas)

The Rutgers University Bloodborne Pathogens Guide is intended to establish practices that minimize occupational exposure to potentially infectious materials among employees at Rutgers University. The Bloodborne Pathogens Guide is not specific for all work locations. Information specific for each work location should be entered on the Unit Specific Exposure Control Plan that follows. The Unit Specific Exposure Control Plan should be updated on an annual basis or whenever necessary (e.g., new hire) to accurately depict each work location.

Department: _____

Location: _____

Supervisor: _____

Date: _____

Eligible Employee Listing - In the space below, please list the job titles and assigned duties of all eligible employees in this work location. Eligible employees are those who may be reasonably anticipated to come into contact with blood or other potentially infectious materials as a result of performing their job duties. **(May attach list on a separate page).**

Employee Name	Title	Assigned Duties

Work Practices and Engineering Controls - In the space below, please list all work practices and engineering controls, such as sharps containers, in use in this work location that serve to eliminate or minimize occupational exposure to blood and other potentially infectious materials.

Personal Protective Equipment (PPE) - Personal protective equipment (PPE) must be used if the potential for occupational exposure remains after engineering and work practice controls have been instituted, or if controls are not feasible. On-site training is provided to review the use of appropriate PPE for employees' specific job classifications and tasks/procedures.

In the space(s) below, please check all personal protective equipment made available to clinicians at this site that serve to protect workers from contact with blood and other potentially infectious materials:

- Gloves (non-powdered latex, preferably non-latex)
- Gowns
- Laboratory coats/gowns

- Face shields/Masks
- Eye protection (e.g., splash-proof goggles, safety glasses with side shields)
- Resuscitation bags and mouthpieces
- Other _____

Cleaning, Disinfection, and Sterilization - In the space below, please list and describe the frequency and method of cleaning, disinfection, and sterilization used in this work location:

Work Surfaces

Personal Protective Equipment

Waste Materials

Reusable Instruments, Equipment, Other

Emergency Response - In the space below, please list and note the location of all equipment on hand in this work location to safely and effectively clean and decontaminate a spill of blood or other potentially infectious material:

Equipment

Location

Emergency Contacts – The following are the campus-specific emergency contacts for this work location:

Police Departments:

New Brunswick RUPD

From Private and Pay Phones: Dial **911** or (732) 932-7111
From University Offices: Obtain an Outside Line then dial **911**
For Hearing Impaired: Dial (732) 932-6639 for TDD
For Non-Emergencies: Dial (732) 932-7211

Camden RUPD

From Private and Pay Phones: Dial **911** or (856) 225-6111
From any Campus Phone: Dial 8 or 6111
For non-emergencies call 856- 225 – 6009

Newark RUPD

From Private and Pay Phones: Dial **911** or (972) 353-5111
From Any Campus Phone: Dial 80 or 5111
For Non-Emergencies: Dial (973) 353-5581

Farms, Research Stations & Other Rutgers Facilities

Obtain an Outside Line and Dial **911**

University Health Services:

New Brunswick:

Hurtado Health Ctr., College Ave. Campus (848) 932-8254
Employee Health Svc, Busch Campus (848) 445-0123

Newark:

Blumenthal Hall (973) 353-5231
University Hospital (Occ. Medicine Svc.) (973) 972-5672

Appendix 1- A

**Unit Specific Exposure Control Plan (ECP) – Clinical Patient Care Areas
(see Appendix 1 for non-Patient Care Areas)**

The Rutgers University Bloodborne Pathogens Guide is intended to establish practices that minimize occupational exposure to potentially infectious materials among employees at Rutgers University. The Bloodborne Pathogens Guide is not specific for all work locations. Information specific for each work location should be entered on the Unit Specific Exposure Control Plan that follows. The Unit Specific Exposure Control Plan should be updated on an annual basis or whenever necessary (e.g., new hire) to accurately depict each work location.

Department: _____

Location: _____

Supervisor: _____

Date: _____

Annual Review of Exposure Control Plan (ECP) - The Clinical Representative (e.g., Nurse Care Coordinator/Nurse Manager), in conjunction with the Department of REHS, will be responsible for reviewing and updating Appendix 1-A of the ECP annually or sooner if necessary, to:

- 1) reflect any new or modified tasks, services and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure;
- 2) reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens, and
- 3) document annual consideration and implementation of appropriate commercially available and effective safe needle devices.

Safety Needle Evaluation Committee – An ad-hoc committee formed by the Nurse Manager(s) of respective clinical practices and comprised of non-managerial clinical staff responsible for the selection, evaluation and approval of safety needle devices for use throughout their respective clinical areas. Each Committee must be comprised of at least 50% non-managerial staff and may include representation from other departments such as Occupational Medicine/Employee Health and REHS. Completed Safety Needle Evaluation forms (Appendix 5, Form B) must be maintained with the Appendix 1-A of the Exposure Control Plan (ECP).

RU clinics with similar scope and function may choose to use safety devices previously evaluated and approved for use by other RU clinical areas. In such cases, device-specific evaluation forms (Appendix 5, Form B) must be made available to staff to document their satisfaction with the device and copies of completed device specific evaluation forms must be kept with Appendix 1-A. See Engineering Control below for list of approved devices in Rutgers University clinical areas. See Appendix 4 for details on the selection, evaluation and use of safety needle devices.

Eligible Employee Listing - In the space below, please list the job titles and assigned duties of all eligible employees in this work location. Eligible employees are those who may be reasonably anticipated to come into contact with blood or other potentially infectious materials as a result of performing their job duties. **(May attach list on a separate page).**

Employee Name	Title	Assigned Duties
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Engineering Controls – Engineering controls will be used to prevent or minimize exposure to bloodborne pathogens. The term engineering controls includes all control measures that isolate or remove a hazard, encompassing not only sharps with engineered sharps injury protections and needleless systems but also other devices designed to reduce the risk of percutaneous exposure to bloodborne pathogens (e.g., sharps disposal containers). Where there are commercially available safety needle devices that can be effectively used to eliminate or minimize the risk of exposure to blood and other body fluids must be used.

The following safety needle devices have been evaluated and approved for use at RU clinical sites:

- Smith Needle-Pro™
- Retractable Technology Vanish Point™
- Smith Medical Saf T Wingt™ blood collection sets
- BD Safety Glide™
- BD Safety-Lok™ Blood Collection Sets
- BD Safety-Lok™ syringe (conditionally approved for lidocaine use only)
- J&J Protectiv™ IV Catheter
- Deltec Gripper Plus™ protected Porta-Cath
- BD PhaSeal™ injectable for hazardous drugs
- Smith Point-Lok™ (for use with devices with no commercially available safety features such as biopsy needles)
- Other: _____

Work Practices and Personal Protective Equipment (PPE) - Personal protective equipment (PPE) must be used if the potential for occupational exposure remains after engineering and work practice controls have been instituted, or if controls are not feasible. On-site training is provided to review the use of appropriate PPE for employees' specific job classifications and tasks/procedures.

In the space(s) below, please check all personal protective equipment made available to clinicians at this site that serve to protect workers from contact with blood and other potentially infectious materials:

- Gloves (non-powdered latex, preferably non-latex)
- Gowns
- Laboratory coats/gowns
- Face shields/Masks
- Eye protection (e.g., splash-proof goggles, safety glasses with side shields)
- Resuscitation bags and mouthpieces
- Other: _____

Appropriate personal protective equipment is required for tasks that have the potential to expose personnel to blood/body fluids. The table below describes common work tasks at Rutgers clinical sites and identifies the minimum PPE that must be available and worn, as well as additional PPE available and worn, as determined by the clinician.

Check as applicable	Task	Minimum Required PPE for Task	PPE Worn as Determined by Clinician
<input type="checkbox"/>	Blood draw	Gloves	Eye/face protection, gown/lab coat
<input type="checkbox"/>	Body fluid aspirations	Gloves	Eye/face protection, gown/lab coat
<input type="checkbox"/>	Dental Procedures	Eye/face protection, gloves, gown/lab coat	Other:
<input type="checkbox"/>	Pelvic Exams	Gloves	Eye/face protection, gown/lab coat

<input type="checkbox"/>	Pelvic Procedures	Gloves	Eye/face protection, gown/lab coat
<input type="checkbox"/>	Procedural punctures and biopsies	Gloves	Eye/face protection, gown/lab coat
<input type="checkbox"/>	Resuscitation	Protective mouthpiece	Other:
<input type="checkbox"/>	Wound Care (e.g., injecting lidocaine into abscess)	Gloves	Eye/face protection, gown/lab coat
<input type="checkbox"/>	Disinfection/Sterilization of reusable equipment	Gloves	Eye/face protection, gown/lab coat
<input type="checkbox"/>	Other:		

Cleaning, Disinfection, and Sterilization - In the spaces below, please describe how contaminated work surfaces and items are disinfected, sterilized and/or disposed, as applicable.

Work Surfaces – list and describe the frequency and method of cleaning and disinfection (e.g., type of disinfectant wipe used, contact time and frequency of use).

Reusable Personal Protective Equipment - list and describe the frequency and method of cleaning, as applicable

Waste Materials – list and describe the items generated that may be saturated with blood/body fluids and disposed of as regulated medical waste, as applicable.

Reusable Instruments (e.g., microscopes, semi-critical medical devices) – list the equipment/devices and indicate how they are sterilized or disinfected, as applicable.

Emergency Response - In the space below, please list and note the location of all equipment on hand in this laboratory/work location to safely and effectively clean and decontaminate a spill of blood or other potentially infectious material:

Equipment	Location(s)
Blood/Body Fluid Clean-up Kit(s)	

Emergency Contacts – The following are the campus-specific emergency contacts for this work location:

Police Departments:

New Brunswick RUPD

From Private and Pay Phones: Dial **911** or (732) 932-7111

From University Offices: Obtain an Outside Line then dial **911**

For Hearing Impaired: Dial (732) 932-6639 for TDD

Farms, Research Stations & Other Rutgers Facilities

Obtain an Outside Line and Dial **911**

University Health Services:

For Non-Emergencies: Dial (732) 932-7211

Camden RUPD

From Private and Pay Phones: Dial **911** or (856) 225-6111

From any Campus Phone: Dial 8 or 6111

For non-emergencies call 856- 225 – 6009

Newark RUPD

From Private and Pay Phones: Dial **911** or (972) 353-5111

From Any Campus Phone: Dial 80 or 5111

For Non-Emergencies: Dial (973) 353-5581

New Brunswick:

Hurtado Health Ctr., College Ave. Campus (848) 932-8254

Employee Health Svc, Busch Campus (848) 445-0123

Newark:

Blumenthal Hall (973) 353-5231

University Hospital (Occ. Medicine Svc.) (973) 972-5672

Appendix 2

HEPATITIS B VACCINATION INFORMATION FORM

Name: _____

Date: _____ Department: _____

Job Title: _____

Campus Phone Number (s): _____

Cell Phone Number (s): _____

Email Address: _____

Supervisor's Name: _____ Supervisor's Phone Number(s) _____

- I have never received or completed the Hepatitis B vaccine series and wish to have it. **(Please call the Occupational Health Department at (848) 932-8254 to make an appointment)**
- I have already received the complete Hepatitis B vaccine series.
- I have not received the Hepatitis B vaccine and do not want it. **(Please read and complete the section below)**

HEPATITIS B VACCINATION DECLINATION

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

Signature: _____

Witness (Trainer's Signature): _____

Date: _____

Appendix 3

Rutgers University Procedures for Cleaning and Disinfecting Spills of Blood or Other Potentially Infectious Materials (OPIM)

All work locations covered under the standard (those where employees may be reasonably anticipated to come into contact with blood or other potentially infectious material) must have equipment available to safely and effectively clean-up spills of blood or other potentially infectious material. This equipment must include, at a minimum:

- Personal Protective Equipment (PPE)
 - Disposable Gloves
 - Protective Eyewear
 - Disposable Face Mask
 - Disposable Gown or Apron
 - Antiseptic Towelettes
- Spill Clean-Up Equipment
 - Disposable Absorbent Material (e.g., Paper Towels or Lab Table Soakers)
 - Red Medical Waste Bag for Disposal
 - Appropriate Germicidal Solution
 - Forceps or Other Mechanical Means for Picking-Up Broken Glass

Spill Kits may be assembled by eligible employees in various work locations. Alternatively, a variety of spill kits are currently available commercially. The pre-packaged spill kits are particularly well suited for use in police, fire, and other emergency service vehicles. Two examples of commercially available spill kits are the Clothing and Biosafety Spill Kit (item #23828 Lab Safety Supply Catalog) and the Vital 1 Emergency Response Pack (item #17-206-6 Fisher Scientific Catalog). Regardless of the type of spill kit used, the steps, described below, should be taken when cleaning and decontaminating spills of blood or OPIM:

A. Cleaning and Decontaminating Spills of Blood or Other Potentially Infectious Body Fluids

1. Put on appropriate personal protective equipment (PPE) including double gloves, gown, protective eyewear, and face mask.
2. Control access to area. Prevent people from walking through affected area and thereby tracking the blood or other potentially infectious material to other areas.
3. Contain spill. Use paper towels or other absorbent material to contain spill.
4. Use forceps, plastic scoop, or other mechanical means to remove any broken glass or other sharp objects from the spill area. Take care not to create aerosols. Place these items into a small cardboard box, thick walled plastic bag, or other container that will prevent them from puncturing the red bag (or your hand). Place the contained sharp items into the red bag for disposal. Do not seal bag.
5. Apply appropriate disinfectant. To avoid creating aerosols, never spray disinfectant directly into spilled material. Instead, gently pour disinfectant on top of paper towels covering the spill or gently flood affected area first around the perimeter of the spill, then work disinfectant slowly into spilled material.
6. Allow several minutes of contact time with disinfectant.
7. Pick-up all absorbent material and place carefully in red bag for disposal. Do not seal red bag.
8. Clean affected area again with disinfectant and new paper towels. Place used paper towels in red bag for disposal. Do not seal red bag.
9. Dry area. Place used paper towels in red bag for disposal. Do not seal red bag.
10. Many commercially available spill kits are equipped with a powder that solidifies the spill and a small plastic scoop used to pick-up the solidified spill. If you are using such a kit follow the directions that come with the kit. Avoid creating aerosols when cleaning blood spills regardless of the type of spill kit used.
11. Once spill is completely cleaned, place all used spill control equipment in the red bag for disposal. Do not seal red bag.
12. Remove PPE and place in red bag for disposal. Remove PPE in the following order:
 - a. Remove soiled gown.
 - b. Remove outer pair of disposable gloves.
 - c. Remove face mask and protective eyewear. Do not remove PPE from face with soiled gloves. Remove soiled outer gloves first and place them in the red bag for disposal. Use clean inner glove to remove PPE from face. This prevents the introduction of blood or other potentially infectious material to the mucous membranes of the face via a contaminated glove.

13. Once all used PPE, spill control equipment, and other potentially contaminated items are in the red bag seal bag securely for disposal. See the [Rutgers Policy for the Disposal of Biological Waste](#) for information concerning the proper disposal of regulated medical waste at Rutgers University.
14. Wash hands.

Appendix 4

Implementation of Safe Needle Devices in Rutgers University (RU) Clinical Patient Care Areas

OSHA requires that healthcare facilities use "safe medical devices," that have built-in safety features to prevent needlesticks. This requirement will also be enforced by NJ Public Employees Occupational Safety and Health (PEOSH). The Directive can be accessed at:

http://www.osha-slc.gov/OshDoc/Directive_data/CPL_2-2_44D.html#FEDERAL

To comply with the directive, RU Clinical Departments/Practices must do the following:

1. Appoint a Clinical Representative to participate in the Safety Needle Evaluation Committee which will meet periodically to provide oversight for activities related to safety needle devices. The Committee will periodically discuss implementation of the program including device evaluation, device availability, needlestick incidents and review of new safe medical products. Committee members will communicate actions and programs of the committees to their respective departments.
2. Determine which devices need to be evaluated and/or replaced. Needle and sharp devices include finger/heel-stick lancets, IV connectors, syringes and scalpels. Suture needles and other sharps may be covered in the future.

Numbers 3 - 5 will be coordinated through the designated Clinical Representative:

3. Review the list of devices being used throughout Rutgers clinical sites (see Appendix A-1), as well as at area hospitals such as RWJUH, Princeton University Medical Center, Jersey Shore Medical Center, as well as available vendor information which may be provided by REHS upon request. Select a sampling of safety needle and sharp devices to trial as a replacement for existing devices, as necessary.
4. Using product literature, samples, information from other institutions and additional data, select devices to trial. **Form A:** 'A Comparison of Commercially Available Devices' may be used to document that you considered at least 3 different models of each device (if commercially available).
5. Make arrangements for personnel to receive training on how to use each safety device before using it. In most cases the vendor or Occupational Medicine/Employee Health Services will provide hands-on training for devices selected for evaluation (see **Form C:** Documentation of Personnel Training).
6. Devices will be trialed with each user completing **Form B**, 'Staff Device Evaluation' for the specific device being evaluated. All completed forms will be sent to the respective Clinical Representative no later than 6 weeks from the start of the trial period. Form B may be used by clinical staff after the trial period to document their satisfaction or dissatisfaction with specific devices. Completed Form Bs will be reviewed by the Safety Needle Evaluation Committee and maintained in the Appendix A-1 of respective clinic's ECP.
7. The safety devices for on-going use will be selected based upon the trial results. All personnel must be provided with training before utilizing a new device. Use Form C to document the required hands-on employee training and maintain Form C with Appendix A-1 of the ECP.
8. There is no mechanism in the Standard for being excused from using a safety device. However, in the event that a safety needle device is not commercially available or if the medical provider has determined that the use of the safety device negatively impacts patient safety, a Waiver may be generated (see Form D). Completed Waivers must be reviewed and signed by the Clinical Representative and maintained with Appendix A-1 of the ECP.
9. All needlestick exposures must be documented using the RU Accident Database (supervisor uses NetID and password to access system).
10. The use and availability of safety needle devices will be accessed at least annually during regularly scheduled clinical safety inspections with REHS. Clinical Representatives may perform inspections more often, as needed.

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form A: Comparison of Commercially Available Devices

Name _____

Department/Division _____

Date _____

Device currently in use: _____

Devices being evaluated: _____

Device selected for use: _____

Reason for selection: _____

General Criteria for Devices Being Evaluated	Brand/Name	Brand/Name	Brand/Name
Does this device have a passive safety mechanism?			
Can the safety mechanism be activated with one hand ?			
Can the user tell when the safety mechanism has been activated?			
Are minimal changes in technique and use required?			
Is this product dependent upon other products or items? (Identify)			
Is the device compatible with products currently in use?			
Is the product available in typical size ranges?			
Does the manufacturer have adequate product and supply capability?			
Is the device used at affiliated institutions?			
Did the product get a good recommendation from facilities using the device (list institution(s))?			

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form B: Staff Device Evaluation
Safety Syringe/Needle

Date: _____ Facility: _____ Dept./Division: _____

Job Title: _____

Device Being Evaluated: _____

Number of times used: 0 1-5 6-10 11-25 26-50 More than 50

Circle the best answer.

Agree Disagree

1. Hand stays behind needle tip at all times.	1	2	3	4	5	N/A
2. Safety feature does not obstruct vision of the tip of the sharp.	1	2	3	4	5	N/A
3. Product does not require more time to use than a non-safety device.	1	2	3	4	5	N/A
4. Safety feature works well with my hand size.	1	2	3	4	5	N/A
5. Device is easy to handle while wearing gloves.	1	2	3	4	5	N/A
6. Safety feature can be activated using a one-handed technique.	1	2	3	4	5	N/A
7. Device offers a good a view of aspirated fluid.	1	2	3	4	5	N/A
8. Device is compatible with other products.	1	2	3	4	5	N/A
9. Device will work with different size/age patients.	1	2	3	4	5	N/A
10. It is easy to tell when the safety feature is activated.	1	2	3	4	5	N/A
11. Safety feature operates reliably.	1	2	3	4	5	N/A
12. Exposed sharp is permanently blunted or covered after use.	1	2	3	4	5	N/A
13. Device is no more difficult to dispose of than non-safety devices.	1	2	3	4	5	N/A
14. Device is easy to operate.	1	2	3	4	5	N/A
15. Does not increase patient discomfort.	1	2	3	4	5	N/A
16. It is not easy to skip a crucial step in proper use of the device.	1	2	3	4	5	N/A
17. Device is available in the sizes I need.	1	2	3	4	5	N/A

Would you recommend purchasing this device? YES NO

Is there a device you would rather use? YES NO

Did you receive instruction on the use of this device? YES NO

Comments:

Please forward completed Form B by email or fax to designated Nurse Manager

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form B: Staff Device Evaluation
Venipuncture Needle

Date: _____ Facility: _____ Dept./Division: _____

Job Title: _____

Device Being Evaluated: _____

Number of times used: 0 1-5 6-10 11-25 26-50 More than 50

Circle the best answer.

DURING USE

	Agree Disagree					
	1	2	3	4	5	
1. The safety feature can be activated using a one-handed technique.	1	2	3	4	5	NA
2. The safety feature does not interfere with ability to penetrate the skin.	1	2	3	4	5	NA
3. The product does not require more time to use than a non-safety device.	1	2	3	4	5	NA
4. The needle does not impede making slides for CBCs.	1	2	3	4	5	NA
5. The needle does not impair the integrity of the sample i.e. hemolysis, clot for CBC.	1	2	3	4	5	NA
6. The needle allows filling of tubes to maintain proper ratio of blood and anticoagulant.	1	2	3	4	5	NA
7. The needle does not require any additional sticks for the patient.	1	2	3	4	5	NA
8. The safety feature works well with a variety of hand sizes.	1	2	3	4	5	NA
9. Patients report no increase in pain with this product.	1	2	3	4	5	NA

AFTER USE

10. I can tell when the safety feature is activated.	1	2	3	4	5	NA
11. The safety feature operates reliably.	1	2	3	4	5	NA
12. The exposed sharp is blunted or covered after use and prior to disposal.	1	2	3	4	5	NA

TRAINING

13. The product does not need extensive training to be operated correctly.	1	2	3	4	5	NA
--	---	---	---	---	---	----

Would you recommend purchasing this device? YES NO
 Is there a device you would rather use? YES NO
 Did you receive instruction on the use of this device? YES NO

Comments:

Please forward completed Form B by email or fax to designated Nurse Manager

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form B: Staff Device Evaluation
Winged I.V. Needle

Date: _____ Facility: _____ Dept./Division: _____

Job Title: _____

Device Being Evaluated: _____

Number of times used: 0 1-5 6-10 11-25 26-50 More than 50

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

DURING USE: Agree Disagree

- | | | | | | | |
|---|---|---|---|---|---|----|
| 1. The safety feature can be activated using a one-handed technique. | 1 | 2 | 3 | 4 | 5 | NA |
| 2. The safety feature <u>does not</u> interfere with ability to penetrate the skin. | 1 | 2 | 3 | 4 | 5 | NA |
| 3. The product <u>does not</u> require more time to use than a non-safety device. | 1 | 2 | 3 | 4 | 5 | NA |
| 4. The device permits adequate visualization of flashback. | 1 | 2 | 3 | 4 | 5 | NA |
| 5. Use of this product does not increase the number of sticks to the patient. | 1 | 2 | 3 | 4 | 5 | NA |
| 6. The safety feature works well with a variety of hand sizes. | 1 | 2 | 3 | 4 | 5 | NA |

AFTER USE:

- | | | | | | | |
|--|---|---|---|---|---|----|
| 7. I can tell when the safety feature is activated. | 1 | 2 | 3 | 4 | 5 | NA |
| 8. The safety feature operates reliably. | 1 | 2 | 3 | 4 | 5 | NA |
| 9. The tubing does not drip blood while activating the safety feature. | 1 | 2 | 3 | 4 | 5 | NA |
| 10. The tubing does not coil during disposal. | 1 | 2 | 3 | 4 | 5 | NA |

TRAINING:

- | | | | | | | |
|---|---|---|---|---|---|----|
| 11. The product <u>does not</u> need extensive training to be operated correctly. | 1 | 2 | 3 | 4 | 5 | NA |
|---|---|---|---|---|---|----|

- | | | |
|---|------------------------------|-----------------------------|
| Would you recommend purchasing this device? | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| Is there a device you would rather use? | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| Did you receive instruction on the use of this device? | <input type="checkbox"/> YES | <input type="checkbox"/> NO |

Comments:

Please forward completed Form B by email or fax to designated Nurse Manager

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form B: Staff Device Evaluation
I.V. Safety Catheter

Date: _____ Facility: _____ Dept./Division: _____

Job Title: _____

Device Being Evaluated: _____

Number of times used: 0 1-5 6-10 11-25 26-50 More than 50

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

BEFORE USE:	Agree Disagree					
1. It is easy to align the insertion tab with catheter bevel.	1	2	3	4	5	NA

DURING USE:						
2. The safety feature can be activated using a one-handed technique.	1	2	3	4	5	NA
3. The safety feature <u>does not</u> interfere with ability to penetrate the skin or vessel.	1	2	3	4	5	NA
4. The device allows for rapid visualization of flashback.	1	2	3	4	5	NA
5. The product <u>does not</u> require more time to use than a non-safety device.	1	2	3	4	5	NA
6. The catheter is easy to thread using the push-off tab.	1	2	3	4	5	NA
7. The safety feature is easy to activate.	1	2	3	4	5	NA
8. Use of this product does not increase the number of sticks to the patient.	1	2	3	4	5	NA
9. The safety feature works well with a variety of hand sizes.	1	2	3	4	5	NA

AFTER USE:						
10. I can tell when the safety feature is activated.	1	2	3	4	5	NA
11. The safety feature operates reliably.	1	2	3	4	5	NA
12. The exposed sharp is blunted or covered after use and prior to disposal.	1	2	3	4	5	NA

TRAINING:						
13. The product does not need extensive training to be operated correctly.	1	2	3	4	5	NA

Would you recommend purchasing this device?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Is there a device you would rather use?	<input type="checkbox"/> YES	<input type="checkbox"/> NO (if yes, describe below)
Did you receive instruction on the use of this device?	<input type="checkbox"/> YES	<input type="checkbox"/> NO

Comments:

Please forward completed Form B by email or fax to designated Nurse Manager

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form C: Documentation of Hands-On Safety Device Training for Personnel

Date: _____

Department/Division: _____

Safety Devices Used (include type, manufacturer, brand)

CRITERIA	YES	NO	COMMENTS
To be Completed by Personnel			
1. I have completed the online 'Clinical Health and Safety Training' module and have received email confirmation from REHS.			
2. I was given sufficient time to evaluate the device(s).			
3. I was able to visually and audibly determine when the safety feature on the device(s) was engaged.			
4. I was instructed to use only those devices for which I have received hands-on training.			
5. I was instructed on post-exposure procedures for reporting needlestick/sharp object injuries.			
6. I understand that I may document my satisfaction/dissatisfaction with a specific device by using 'Form B: Staff Device Evaluation Form'.			
To be Completed by Trainer			
7. I demonstrated for personnel the proper use and activation of the device's safety feature.			
8. I instructed personnel to never by-pass or remove the safety feature on a sharp device.			
9. Personnel demonstrated to the Trainer that they were able to easily activate the safety feature(s) using a one-handed technique.			
10. Personnel confirmed that the device worked well with their hand size.			
11. Personnel was able to demonstrate the proper disposal method for activated sharps devices (i.e., immediate disposal in Sharps container).			
12. Personnel was informed they may document their satisfaction/dissatisfaction with a specific device by using 'Form B: Staff Device Evaluation Form'.			

 Personnel Name (please print)

 Personnel Signature

 Date

 Trainer Name (please print)

 Trainer Signature

 Date

Appendix 5
RU Bloodborne Pathogens Exposure Control Plan
Form D: Needle/Sharp Device Waiver

- 1. Specific Product: _____
- 2. Specific Medical Procedure: _____
- 3. Specific Class of Patients: _____
- 4. Reason for Waiver: _____

- 5. Individual Requesting: _____
(please print name)
- 5. Department/Division: _____

To be completed by Nurse Manager/Clinical Representative

<p>Name: _____</p> <p>Waiver Approved: <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If no, please provide details:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Signature: _____</p>
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