



Georgia Department of Public Health

Guidelines for Standard Precautions and Bloodborne Pathogen Occupational Exposure Control

February 2015

Department of Public Health

2 Peachtree St., N.W.

Atlanta, GA 30303

<http://dph.georgia.gov/>

Acknowledgements

Editors and Contributors: 2015 Edition

Rhonda Burton, MS – Syphilis Elimination Coordinator
LaTonya Clay, PhD – Emergency Preparedness, Georgia Public Health Laboratory
Michael Coker, MSN, RN, ACRN – Nurse Consultant – HIV Office
Gregory Felzien, MD, AAHIVS - Medical Advisor, Division of Health Protection/IDI-HIV
Elizabeth Franko, DrPH, HCLD – Laboratory Director – Georgia Public Health Laboratory
Ami Gandhi, MPH – Viral Hepatitis Prevention Coordinator
Harold Katner, MD – Medical Director – HOPE Center
Lynne Mercedes – Hepatitis Program Director, Acute Disease Epidemiology
Suresh Pai, PhD, Director, Emergency Preparedness, Georgia Public Health Laboratory
Tonia M. Parrott, PhD – Director, Microbiology, Georgia Public Health Laboratory
Pradnya Tambe, MD – STD Medical Consultant
John Warchol, Esq – Atlanta Legal Aid Society
Sean Webb – Training Manager - STD
Eva Williams, MSN, FNP, MPH, AACRN, Nurse Consultant – QM Team Lead – HIV Office

Editors and Contributors: 2011 Edition

Rosemary J. Donnelly, MSN, APRN, ACRN, Nurse Consultant, HIV Unit
Angela M. Guidry, PhD, APRN, CPNP, Assistant Chief Nurse, Office of Nursing
Lynne Mercedes, Hepatitis Program Director, Acute Disease Epidemiology
Stacy Muckleroy, MPH, Surveillance Liaison, Essential Preventive Clinical Services HIV Epidemiology Unit
Joe Norman, Public Health State Office Program Consultant, Capacity Building Team, HIV Unit
Anil T. Mangla, MS, PhD, MPH, FRIPH, Acting State Epidemiologist

Editor and Contributors: 2005 Edition

Editor

Rosemary J. Donnelly, MSN, ANP, Nurse Consultant, HIV Section

Contributors

Rosalyn K. Bacon, MPH, Acting Director, Prevention Services Branch and HIV Section
John Beltrami, MD, Section Chief, HIV/STD Epidemiology Section
Paul A. Blake, MD, MPH, Director, Epidemiology Branch
Stuart Brown, MD, Director, Division of Public Health
Michael Chaney, Program Manager, Immunization Program
Vandella Conyers, Hepatitis Coordinator, Immunization Program
Rosemary J. Donnelly, MSN, ANP, Nurse Consultant, HIV Section
Thomas Duval, DDS, Director, Oral Health Section
Elizabeth A. Franko, DrPH, Director, Georgia Public Health Laboratory
Diana Gaskins, MSN, RN, Nurse Consultant, Immunization Program
Carole Jakeway, RN, MPH, Chief Nurse, Office of Nursing
Harold Katner, MD, Medical Consultant, HIV Section
Linda L. Koskela, RDH, MPH, Director, Oral Health Prevention Program

Laine Lawler, Operations Manager, HIV Section
Lynne Mercedes, Director, Hepatitis Program, Notifiable Disease Epidemiology
Caminade Moscatiello, RN, MN, MPH, Nurse Consultant, Population Health, Office of Nursing
Joe Norman, Training Coordinator, HIV Section
Mahin M. Park, PhD, HCLD, Director, Clinical Microbiology, Georgia Public Health Laboratory
John Rogers, Care Manager, HIV Section
Luke Shouse, MD, MPH, Section Chief, HIV/STD Epidemiology Section
Lee Tanenbaum, MA, MPH, Communications Consultant, Prevention Services Branch
Theresa Turski, Hepatitis B Coordinator, Immunization Program
Julie Schuitema Wolthuis, MPH, MSW, Viral Hepatitis Program
2001-2002 Public Health Nursing Council
District Nursing and Clinical Coordinators
District HIV Coordinators

Table of Contents

| | |
|--|-------------|
| Introduction | 1 |
| Section 1. Exposure Determination | 2-3 |
| I. Introduction | 2 |
| II. Definitions | 2 |
| III. Job Classification Lists | 2 |
| IV. Tasks or Procedures Lists | 3 |
| Section 2. Infection Control Methods | 4-24 |
| I. Introduction | 4 |
| II. Overview of Standard Precautions | 4 |
| III. Personal Protective Equipment | 5 |
| IV. Handwashing | 7 |
| V. Sharps Injury Prevention | 8 |
| VI. Handling of Laboratory Specimens..... | 11 |
| VII. Other Infection Control Measures..... | 11 |
| VIII. Sharps and Biomedical Waste Management | 12 |
| IX. Environment and Equipment Maintenance | 13 |
| X. Respiratory Hygiene/Cough Etiquette | 16 |
| XI. Safe Injection Practices | 17 |
| XII. Precautions for Dental Procedures | 17 |
| XIII. Precautions for Laboratories | 19 |
| XIV. Hepatitis B Vaccination | 21 |

| | | |
|-------------------------|---|--------------|
| XV. | Hepatitis C Virus (HCV)..... | 23 |
| XVI. | Employee Health Issues | 24 |
| Section 3. | Employee Training and Training Records | 25-26 |
| I. | Employee Training..... | 25 |
| II. | Training Records..... | 26 |
| Section 4. | Occupational Exposure and Post-Exposure Management | 27-37 |
| I. | Definition of Occupational Exposure | 27 |
| II. | Immediate Treatment of the Exposure Site | 27 |
| III. | Exposure Report/Sharps Injury Log | 28 |
| IV. | Evaluation of Exposure and Exposure Source | 29 |
| V. | Post-Exposure Management | 31 |
| VI. | Post-Exposure Interventions During Bombings and Similar Mass-Casualty Events | 37 |
| VII. | Guidelines for Conducting Mass Vaccination Clinics | 37 |
| Appendices | | 38-67 |
| Appendix A. | Consent/Declination Forms..... | 38 |
| Appendix B. | Bloodborne Pathogen Occupational Exposure Report | 44 |
| Appendix C. | HIV Counseling and Education for Health Care Workers after an Occupational Exposure..... | 47 |
| Appendix D. | Additional Resources | 55 |
| Appendix E. | Summary of Selected Laws Regarding HIV/AIDS Issues..... | 60 |
| References | | 68-71 |

Introduction

The purpose of this manual is to establish workplace safety guidelines to protect both public health employees and patients from bloodborne pathogens. Bloodborne pathogens are defined as pathogenic microorganisms that are present in human blood and body fluids and can cause disease in humans, including hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). These guidelines are designed to assist employees in handling potentially infectious body fluids and materials; to minimize the danger of transmission to themselves or others; and to assist in developing local bloodborne pathogen exposure control plans.

This manual is based on the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen and Needlestick Prevention Standards, the Centers for Disease Control and Prevention (CDC) guidelines for management of occupational exposures to bloodborne pathogens and infection control, and Georgia legal code.

Each Public Health District and the Georgia Public Health Laboratory must develop local bloodborne pathogen exposure control plans. Plans must include exposure determination, methods of implementation and compliance (e.g., needleless systems and sharps with engineered sharps injury prevention devices, hepatitis B vaccination), post-exposure follow-up, communication to employees (including how they received input from frontline employees), and recordkeeping. Plans must be written, available to staff, and updated at least annually. Plans must also include quality improvement activities and changes in technology that eliminate or reduce exposures to bloodborne pathogens. Frontline staff must participate in the development of the local plan.

Districts may utilize the CDC guidelines entitled, *Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program*, February 2008 to assist in assessing the current sharps injury prevention program, developing, implementing, and evaluating prevention activities. Additional resources are located in Appendix D.

Appendix E is a new section provided as a reference and is titled *Summary of Some Laws Regarding HIV/AIDS Issues*

Note: This policy manual supersedes the Georgia Division of Public Health policy located in Chapter 1. “Bloodborne Pathogens, Infection Control Guidelines and Exposure Control Plan,” of the HIV/HBV Policy Manual, November 2000, as well as the 2005 Edition, and July 2011 Edition of this manual. The intent of this document is to provide guidance to Public Health employees working in the Georgia Department of Public Health system.

Please note that underlined content throughout the document are hyperlinks in the electronic version. All hyperlinks Uniform Resource Locators (URLs) are listed in the References of this document.

Section 1.

Exposure Determination

I. Introduction

The [OSHA Bloodborne Pathogens Standard](#) requires preparation of an *exposure determination* by employers who have employees with risk of occupational exposure. Districts must prepare an exposure determination as part of the exposure control plan to reduce or prevent transmission of bloodborne pathogens.

II. Definitions

- A. An *exposure determination* contains job classification lists based on risk of occupational exposure, and tasks or procedures in which occupational exposure may occur.
- B. *Occupational exposure* is defined as 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.
- C. *Potentially infectious materials* means (1) the following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, saliva in dental procedures, any body fluid contaminated with visible blood, and all body fluids when it is difficult or impossible to differentiate between body fluids; (2) any fixed tissue or organ (other than intact skin) from a human; and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV- containing culture medium or other solutions.

III. Job Classification Lists

Districts must prepare:

- A. A list of job classifications in which all employees in these classifications have risk of occupational exposures.
- B. A list of job classifications in which some employees in these classifications have risk of occupational exposures.

IV. Tasks or Procedures List

Districts must prepare a list of tasks or procedures which are performed by employees in the job classifications mentioned above, and in which occupational exposure may occur.

Section 2.

Infection Control Methods

I. Introduction

Avoiding exposure is the primary way to prevent transmission of bloodborne pathogens and therefore should be a priority for both employee and employer, but is not always possible. Other methods to reduce or prevent bloodborne pathogen exposure and transmission including *Standard Precautions*, personal protective equipment, hepatitis B vaccination, and engineering and work practice controls to minimize employee exposure must be included in the exposure control plan. The following section describes those methods.

II. Overview of Standard Precautions

- A. *Standard Precautions* synthesize the major features of *Universal Precautions* (i.e., blood and other body fluid precautions designed to reduce the risk of transmission of bloodborne pathogens) and *Body Substance Isolation* (designed to reduce the risk of transmission of pathogens from most body substances) and apply them to all persons at all times, regardless of their diagnosis or presumed infection status, in all healthcare settings.
- B. *Standard Precautions* apply to:
1. Blood
 2. All body fluids, secretions, and excretions except sweat, regardless of whether they contain visible blood
 3. Non-intact skin
 4. Mucous membranes
- C. *Standard Precautions* include:
- As of 2007, three new elements (8-10 below) were added to *Standard Precautions* that focus on infection control practices to protect patients.
1. Handwashing
 2. Use of personal protective equipment (PPE)
 3. Biomedical (biohazardous) waste management
 4. Handling of textiles and laundry, and soiled patient-care equipment to prevent transfer of microorganisms
 5. Environmental controls
 6. Patient placement
 7. Sharps injury prevention
 8. Respiratory hygiene/cough etiquette
 9. Safe injection practices

10. Use of face masks for insertion of catheters or injection material into spinal or epidural spaces via lumbar puncture
- D. Districts must ensure that employees follow *Standard Precautions*.
- E. Employees must follow *Standard Precautions* with all patients at all times.

III. Personal Protective Equipment

- A. *Personal protective equipment* (PPE) is specialized clothing or equipment used by employees to protect themselves from direct exposure to blood or other potentially infectious materials.
- B. Districts must:
 1. Ensure employees appropriately use PPE.
 2. Provide, at no cost to the employee, appropriate PPE (e.g., gowns, eye protections, mouthpieces, resuscitation bags, pocket masks or other ventilation devices) when there is a potential for exposure to blood or other potentially infectious materials. **Note:** PPE is only considered appropriate if it does not allow blood or other body fluids to pass through under normal conditions and use.
 3. Ensure that appropriate PPE is available and readily accessible in a variety of sizes. **Note:** If the employee is allergic to latex gloves, hypoallergenic gloves or other alternatives such as vinyl or nitrile gloves must be made available. Employees should be familiar with signs and symptoms of latex sensitivity (e.g., rash, swelling, hives, itching, redness, watery eyes, runny nose, wheezing, difficulty breathing, and anaphylaxis).
 4. Provide for the cleaning, laundering, or disposal of PPE.
 5. Repair or replace required PPE as needed to maintain its effectiveness.
 6. Ensure that mouthpieces, resuscitation bags, or other ventilation devices are available for use in areas in which the need for resuscitation is probable.
- C. Employees must:
 1. Use single-use disposable medical gloves (e.g., latex, vinyl, or nitrile gloves) for:
 - a. Touching blood and all body fluids, mucous membranes, or non-intact skin.
 - b. Handling items or surfaces soiled with blood or body fluids.
 - c. Performing venipuncture and vascular access procedures.
 - d. Performing any other activity that may expose employee to blood or potentially infectious materials.
 2. Maintain short fingernails, and minimize or eliminate hand jewelry to optimize glove integrity. Avoid wearing artificial nails or extenders, when having direct contact with patients. To help prevent the spread of germs and nail infections:

- Keep nails short and trim them often.
 - Keep natural nails tips less than 1/4-inch long.
 - Scrub the underside of nails with soap and water (or a nail brush) every time you wash your hands.
 - Clean any nail grooming tools before use.
 - Avoid biting or chewing nails.
 - Avoid cutting cuticles, as they act as barriers to prevent infection.
 - Never rip or bite a hangnail. Instead, clip it with a clean, sanitized nail trimmer.
3. Use intact gloves. Replace gloves with compromised integrity (e.g., torn or punctured during patient care) as soon as possible.
 4. Change gloves during patient care if moving from a contaminated body site to a clean body site.
 5. Remove gloves promptly after use, before touching disinfected items and environmental surfaces, and before going to another patient.
 6. Discard gloves in the appropriate container. **Note:** Do not reuse disposable gloves.
 7. Wash hands immediately after removing gloves. **Note:** If an alcohol hand rub was used, hands should be thoroughly dry before gloving.
 8. Use general-purpose utility gloves (e.g., rubber household gloves or nitrile utility gloves) for housekeeping chores involving potential blood, body fluid, or tissue contact, and for instrument cleaning and decontamination procedures. **Note:** These gloves may be decontaminated and reused, but must be discarded if they are peeling, cracking or discolored, or if they have punctures, tears or other evidence of deterioration.
 9. Wear heavy protective gloves (e.g., thick leather) when working with violent or potentially violent patients. Long-sleeved shirts or jackets may be appropriate. These items of clothing may help prevent being bitten or scratched.
 10. Wear masks with solid (i.e., not perforated) side shields and protective eyewear or chin-length face shields during procedures that are likely to generate splashes, spray aerosols, or droplets of blood or other body fluids. This prevents exposure of mucous membranes of the mouth, nose and eyes. **Note:** Personal eyeglasses and contact lenses are NOT considered adequate eye protection.
 11. Cover street clothes/uniforms with protective clothing (e.g., lab coat or disposable gown) to form an effective barrier when performing tasks with potential for exposure to blood or other body fluids.
 12. Wear fluid resistant gowns, aprons, or laboratory coats during procedures that are likely to generate splashes of blood or other body fluids. **Note:** Sleeves should cover the forearms when the gown is worn as PPE.
 13. Remove all PPE immediately, especially if soiled with blood or other body fluids, or as soon as possible upon leaving the work area, and place in an appropriately designated area or container for storage, washing, decontamination, or disposal.

14. Use mouthpieces, resuscitation bags, or other ventilation devices as an alternative to mouth-to-mouth resuscitation methods.

IV. Handwashing

- A. Districts must provide:
 1. Handwashing facilities and products, which are readily accessible to employees, including soap, running water, towels, and alcohol-based hand rubs.
 2. Efficacious hand-hygiene products that have a low irritancy potential. **Note:** Frontline staff should have input into the selection of hand-hygiene products to encourage use. Product information regarding interactions between products and gloves should be obtained and reviewed from the manufacturers before selecting products.
 3. Hand lotions or creams to minimize the occurrence of irritant contact dermatitis. **Note:** Petroleum-based lotion can weaken latex gloves and increase permeability. Therefore, use this lotion only at the end of the workday.

- B. Districts must ensure that employees adhere to handwashing practices (see Table 2-1 for sample handwashing performance indicators). **Note:** Districts should establish policies that do not allow employees to wear artificial nails or extenders when providing direct patient care.

| Table 2-1 Handwashing Performance Indicators Recommended By CDC |
|---|
| The number of hand-hygiene episodes performed by personnel per the number of hand hygiene opportunities by service or clinic. |
| The volume of alcohol-based hand rub or other hand-hygiene product used. |
| Adherence to policies related to artificial nails. |
| The adequacy of employee hand hygiene when outbreaks of infection occur. |

- C. Employees must:
 1. Wash hands and any other exposed skin with soap (non-antimicrobial or antimicrobial) and water immediately, or as soon as feasible, following contact with blood or other potentially infectious materials, or if visibly soiled.
 2. If hands are not visibly soiled, decontaminate hands with either antimicrobial soap and water, or an alcohol-based hand rub in the following situations:
 - a. Before direct contact with patients.
 - b. Before donning gloves.
 - c. Before using sterile gloves for any procedure.

- d. Before inserting any invasive device or performing an invasive procedure that does not require sterile gloves.
 - e. Immediately after removal of gloves.
 - f. After contact with a patient's intact skin or any other patient contact.
 - g. If moving hands from a contaminated body site to a clean body site during care.
 - h. After contact with inanimate objects including medical equipment in the immediate vicinity of the patient.
3. Wash hands with soap and water before eating and after using the restroom.
 4. Avoid wearing artificial nails or extenders when having direct contact with patients. **Note:** Natural nail tips should be less than ¼ inch long. Freshly applied nail polish on natural nails does not increase the microbial load. Chipped nail polish and nails longer than ¼ inch can harbor added bacteria.
 5. Follow the proper hand-hygiene techniques:
 - a. When using an alcohol-based hand rub:
 - 1) Apply product to one hand and rub hands together.
 - 2) Cover all surfaces and fingers.
 - 3) Allow hands to air dry.
 - b. When washing with soap and water:
 - 1) Wet hands with water first.
 - 2) Apply soap to hands.
 - 3) Rub hands vigorously for at least 15 seconds.
 - 4) Cover all surfaces and fingers.
 - 5) Rinse with water.
 - 6) Dry thoroughly with a disposable towel.
 - 7) Use towel to turn off faucet.

Note: Avoid using hot water because it may increase risk of dermatitis. Do not use a multiple-use cloth towel or roll type towel to dry hands.

V. Sharps Injury Prevention

A. Definitions

1. *Needleless systems*

Devices that do not utilize needles for:

- a. The withdrawal of body fluids after initial venous or arterial access is established.
- b. The administration of medication or fluids.
- c. Any other procedure involving the potential for an exposure incident.

2. *Sharp*

Any object used or encountered in a health care setting that can be reasonably anticipated to penetrate the skin or any other part of the body that results in an exposure incident, including, but not limited to:

- a. Needles and devices with needles
- b. Scalpels
- c. Lancets
- d. Broken glass

e. Broken capillary tubes

Note: This definition does not include pre-filled syringes or other drugs or biologics prepackaged with an administration system requiring federal Food and Drug Administration (FDA) approval for changes to packaging, labeling or product.

3. *Sharps with engineered sharps injury protection (ESIP)*

Either:

- a. A physical attribute built into or used with a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, which effectively reduces the risk of an exposure incident by a mechanism such as barrier creation, blunting, encapsulation, withdrawal, retraction, destruction or other effective mechanisms, or
- b. A physical attribute built into or used with any other type of needle device or into a non-needle sharp, which effectively reduces the risk or an exposure incident.

B. Device Evaluation Committee

1. Districts must:

- a. Establish and maintain at least one evaluation committee, of which at least 50% are front-line staff, to identify and select needleless systems, sharps with ESIP and other devices that reduce exposure to bloodborne pathogens; and to update the written exposure control plan.
- b. Document the following information on each committee member:
 - 1) Name
 - 2) Job title
 - 3) Front-line status (e.g., nurse who routinely performs direct patient care or laboratory services)
- c. Update the committee membership and front-line status at least annually and as needed.
- d. Ensure that committee members are trained in how to evaluate products (i.e., evaluation criteria) prior to the commencement of any product evaluation.
- e. Document the date, type, and content of committee members' training, including the names and affiliations of trainers and trainees.
- f. Develop a procedure for identifying and selecting needleless systems and sharps with ESIP through the evaluation committee.

2. The evaluation committee must:

- a. Utilize existing credible lists of safety devices for recommended devices (see Appendix D. for device lists URLs on page 58).
- b. Determine product selection criteria (e.g., identified problem or risk procedure, innovations and technological developments that reduce the risk of exposure incidents, type of product, product characteristics and cost).
- c. Evaluate devices using predetermined product evaluation criteria, which includes safety/utility of the product and staff training requirements.

Note: Product evaluation forms are available online from the CDC at <http://www.cdc.gov/OralHealth/infectioncontrol/forms.htm> and <http://www.cdc.gov/sharpssafety/pdf/AppendixA-13.pdf> and/or from the Training for Development of Innovative Control Technology (TDICT) Project at <http://www.tdict.org/evaluation2.html>.

- d. Recommend selected devices to the district for adoption.
- e. Document the required information for the exposure control plan as outlined in section C. 2. below on page 10.
- f. Review information from available databases, websites and other resources on a yearly and as needed basis for the latest advancements, products and cautionary statements.

C. Districts must ensure that:

1. Employees/clinics utilize needleless systems and sharps with ESIP selected by the committee and that other devices are not in use.
2. The following is documented in the exposure control plan annually and/or as needed:
 - a. Description of the devices identified as candidates for adoption.
 - b. Method or methods used to evaluate devices and the results of evaluations.
 - c. Justifications for selection decisions.
 - d. Changes in technology that eliminate or reduce exposures to bloodborne pathogens.
 - e. Progress in implementing and effectiveness of needleless systems and sharps with ESIP.
3. The most effective available needleless systems and sharps with ESIP are included in engineering and work practice controls in each facility. There are two exceptions:
 - a. No such devices or systems are available in the marketplace.
 - b. The evaluation committee determines by objective product evaluation criteria that use of such devices in specific medical procedures will jeopardize patient or employee safety.
4. Reusable sharps contaminated with blood or other potentially infectious materials are not stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.
5. Reusable sharps are placed in appropriate containers until properly reprocessed. Containers must be puncture resistant, labeled biohazard or color-coded red, and leakproof on the sides and bottom.

D. Employees must:

1. Utilize the provided needleless systems and sharps with ESIP whenever feasible and as recommended.
2. Inform supervisors/managers and/or the evaluation committee if there are problems with a safety device or if a safety device is needed for a procedure.

3. If using sharps, take precautions to prevent injuries caused by sharps during procedures, when cleaning contaminated instruments, during disposal of used needles, and when handling sharp instruments after procedures.
4. Refrain from recapping, purposely bending or breaking by hand, removing from disposable syringes, or otherwise manipulating by hand contaminated needles and other sharps.
5. Discard disposable sharps immediately, or as soon as feasible into containers that are closable, puncture-resistant, leakproof and are located convenient to the work station (see Section 2. VIII. Sharps and Biomedical Waste Management on pages 12-13).

VI. Handling of Laboratory Specimens

- A. Districts must ensure that specimens of blood or other potentially infectious materials are placed in a container, which prevents leakage during collection, handling, processing, storage, or transport within a facility <http://www.cdc.gov/biosafety/publications/bmbl5/bmbl.pdf>
- B. When shipping samples outside of the laboratory, samples should be triple packaged according to Department of Transportation/International Air Transport Association hazardous material shipping regulations <http://www.fmcsa.dot.gov/regulations/hazardous-materials/how-comply-federal-hazardous-materials-regulations>
- C. Employees must:
 1. Place blood and body fluid specimens in a well-constructed, double-walled container with a secure lid to prevent leaking during transport. The container must be color-coded red or have a biohazard label. If the specimen could puncture the primary container, place it in a secondary container.
 2. When collecting a specimen, avoid contaminating the outside of the container and the laboratory form accompanying the specimen.
 3. Use mechanical pipetting devices for manipulating laboratory specimens or potentially infectious materials. **Note:** Mouth pipetting/suctioning is not a safe or acceptable technique and must not be done.

VII. Other Infection Control Measures

Districts must ensure that:

- A. Employees do not eat, drink, smoke, apply cosmetics or lip balm, and/or handle contact lenses in work areas where there is a reasonable likelihood of an occupational exposure.
- B. Food and drink are not kept in refrigerators, freezers, shelves, cabinets, or on countertops where blood or other potentially infectious materials are present.

- C. Employees avoid or limit the use of cell phones or other mobile devices in work areas where there is likelihood of contamination. Devices should be frequently decontaminated. **Note:** One study showed that cell phones of health care workers may be contaminated with bacteria and may result in the spread of nosocomial pathogens. http://wwwnc.cdc.gov/eid/article/11/7/05-0221_article.htm

VIII. Sharps and Biomedical Waste Management

Districts must ensure the following:

- A. Containers for discarding sharps are:
 - 1. Closable, puncture-resistant, leak proof on bottom and sides, and located convenient to the workstation.
 - 2. Labeled with a biohazard sign or red in color.
 - 3. Maintained upright throughout use.
 - 4. Replaced routinely and not allowed to overfill (e.g., replace container when 3/4 full).
 - 5. Closed immediately prior to removal to prevent spillage or protrusion of contents during handling, storage, transport or shipping. **Note:** Tape may be used to secure the lid of a sharps container as long as the tape does not serve as the lid itself.
 - 6. Placed in a second container if leakage is possible. Second container must be:
 - a. Closable.
 - b. Constructed to contain all contents and prevent leakage.
 - c. Labeled biohazard or color-coded red.
 - d. Closed prior to removal.
- B. All other non-sharps biomedical waste is:
 - 1. Placed in containers that are:
 - a. Closable.
 - b. Constructed to contain all contents and prevent leakage.
 - c. Labeled biohazard or color-coded red.
 - 2. Closed immediately prior to removal to prevent spillage or protrusion of contents during handling, storage, transport or shipping.
 - 3. Placed in a second container if leakage is possible. Second container must be:
 - a. Closable.
 - b. Constructed to contain all contents and prevent leakage.
 - c. Labeled biohazard or color-coded red.
 - d. Closed prior to removal.
- C. Reusable containers are not opened, emptied, or cleaned manually or in any other manner, which would expose employees to the risk of percutaneous injury.

- D. All biomedical waste is disposed of according to the rules set forth by the Georgia Department of Natural Resources, Environmental Protection Division: Specifically rules 391-3-4 regarding Solid Waste Management which also includes rule 391-3-4-.15 Biomedical Waste, Amended.
<http://www.dca.ga.gov/development/EnvironmentalManagement/programs/downloads/EPDSolidWasteRules.pdf>
- E. Employees dispose of biomedical waste including sharps in the appropriate container, as outlined above.

IX. Environment and Equipment Maintenance

A clean and sanitary worksite is a necessary component of infection control. The district/county must determine and implement a written schedule for cleaning and methods of decontamination based on the facility, environment, and procedures performed at the site.

Districts/counties must ensure that:

- A. Environmental surfaces (e.g., walls and floors) are routinely cleaned and soil is removed.
 - 1. Clean walls, blinds, and window curtains in patient-care areas when visibly soiled.
 - 2. Disinfect or clean environmental surfaces regularly (e.g., three times per week) and when surfaces are visibly soiled.
 - 3. Use detergent and water to clean non-patient care areas (e.g., administrative offices).
 - 4. Follow manufactures' instructions for proper use of disinfecting or detergent products.
- B. Surfaces contaminated with blood or other potentially infectious materials are cleaned prior to decontaminating.
- C. Contaminated surfaces are decontaminated with an appropriate disinfectant after completion of a procedure, immediately or as soon as feasible when surfaces are overtly contaminated, or after a spill of blood or other potentially infectious materials, and at the end of the workday. Decontaminate spills of blood or other potentially infectious materials as follows:
 - 1. Use protective gloves and other PPE.
 - 2. If sharps are involved, use forceps to pick-up sharps and discard in appropriate puncture resistant container.
 - 3. Disinfect contaminated areas with an EPA-approved tuberculocidal agent, a registered germicide on the EPA Lists D and E (i.e., products for HIV or HBV or freshly diluted hypochlorite solution).
See <http://www.epa.gov/oppad001/chemregindex.htm> for lists of EPA-registered disinfectants.

4. If using sodium hypochlorite (household bleach) solutions, use 1:100 dilution for nonporous surfaces after a small spill (e.g., less than 10 mL). For large spills or culture spills in a laboratory, use a 1:10 dilution for the first application of hypochlorite solution to decrease risk of infection if exposure occurs during cleaning process. Follow this decontamination process with a terminal disinfection, using a 1:100 dilution of sodium hypochlorite.

Note: Certain medical devices might be corroded by repeated exposure to a 1:10 dilution of sodium hypochlorite. Do not use sodium hypochlorite solution on metal devices or on medical equipment with metallic parts. If chlorine solution is not prepared fresh daily, it can be stored at room temperature for up to 30 days in a capped, opaque plastic bottle with a 50% reduction in chlorine concentration after 30 days.

- D. Reusable patient-care devices or equipment are thoroughly cleaned (with water and detergent or water and enzymatic cleaners) prior to decontamination and are disinfected or sterilized appropriately.
 1. Reusable devices that enter sterile tissue or the vascular system of the patient are sterilized prior to reuse. **Note:** Sterilization completely eliminates or destroys all microorganisms through physical or chemical means.
 2. Reusable devices that contact intact mucous membranes are sterilized or undergo high-level disinfection before reuse. **Note:** High-level disinfection will destroy all microorganisms except some bacterial spores. It usually is accomplished through chemical disinfectants.
 3. Reusable metal devices (e.g., instruments) are decontaminated via an autoclave.
 4. Reusable patient-care devices or items that contact intact skin (e.g., blood pressure cuffs) are disinfected with an appropriate EPA-registered hospital disinfectant with HIV and HBV claim following the label's safety precautions. Devices must be disinfected when visibly soiled and on a regular basis.
 5. Reusable cleaning equipment (e.g., mop, bucket) is thoroughly soaked and rinsed in disinfectant and allowed to dry between uses. Use disposable mop heads when practical. **Note:** No special handling is required for dry vacuuming equipment. If a wet vacuum is used, immediately remove the bag/filter and dispose of as contaminated waste. If the wet vacuum does not have a bag/filter, decontaminate with the appropriate disinfectant.
 6. Reusable bins, pails, cans, and similar receptacles, which have a reasonable likelihood for becoming contaminated with blood or potentially infectious materials, are inspected and decontaminated on a regularly scheduled basis and cleaned or decontaminated immediately or as soon as feasible upon visible contamination.

Note: Antimicrobial products that are registered with the EPA as “sterilants” may be used either for sterilization or for high-level disinfection depending on contact time.

- E. An instrument processing area is established with 4 distinct areas:
 - 1. Receiving, cleaning, and decontamination
 - 2. Preparation and packaging
 - 3. Sterilization
 - 4. Storage
- F. Difficult to clean clinical contact surfaces are protected with surface barriers, which are changed between patients.
- G. Clinical contact surfaces that are not barrier-protected are cleaned and disinfected with [EPA-registered disinfectants](#) after each patient.
- H. Carpets and cloth furnishings are not used in areas that may become contaminated with blood and body fluids such as dental settings, laboratories, instrument processing areas, and examination rooms.
- I. Protective coverings (e.g., plastic wrap) used to cover equipment and surfaces are removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workday if they may have become contaminated.
- J. Equipment, which may have become contaminated with blood or other potentially infectious materials, is inspected prior to receiving service or shipping, and decontaminated if necessary. If the equipment cannot be decontaminated, place a biohazard label on the contaminated portions and inform all relevant employees and other persons (e.g., service technician).
- K. Employees who perform housekeeping tasks wear appropriate PPE, including utility gloves during all cleaning of blood or other potentially infectious materials, and during decontaminating procedures.
- L. Broken glassware or other sharps, which may be contaminated, are not picked up directly with the hands. Use a mechanical means to clean up broken glass/sharps, such as a brush and dustpan, tongs, or forceps.
- M. Disposable cleaning materials, used to clean and/or decontaminate supplies or equipment, are discarded in the appropriate biomedical waste container (see Section 2. VIII. Sharps and Biomedical Waste Management on pages 11-12).
- N. If there are child play toys in waiting areas, toys are cleaned and disinfected on regular intervals. The following principles apply:
 - 1. Select toys that can be easily cleaned and disinfected.
 - 2. Do not allow use of stuffed fabric toys, if they will be shared.
 - 3. Clean and disinfect large stationary toys at least weekly and whenever visibly soiled.

4. If toys are likely to be mouthed, rinse with water after disinfection or wash in a dishwasher if the manufacture deems the toy(s) to be dishwasher safe.
5. If the toy requires cleaning and disinfection, do so immediately or place in a labeled separate container away from clean toys.

X. Respiratory Hygiene/Cough Etiquette

Because of respiratory illnesses, such as severe acute respiratory syndrome (SARS), there is a need for infection control measures at the point of entry into the healthcare facility (e.g., reception and triage areas in emergency departments, outpatient clinics, and health care provider offices). Therefore, the strategy, *Respiratory Hygiene/Cough Etiquette*, is now a component of *Standard Precautions*. This strategy targets patients and family members/friends with undiagnosed transmissible respiratory infections.

- A. Elements of *Respiratory Hygiene/Cough Etiquette* include:
 1. Education of healthcare workers, patients, and visitors.
 2. Posting signs with instructions to patients and accompanying family members/friends.
 3. Source control measures including covering mouth/nose with a tissue when coughing and disposal in no-touch receptacles, and using surgical masks on the coughing person. If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands.
 4. Hand hygiene after contact with respiratory secretions.
 5. Separation, ideally greater than 3 feet, of persons with respiratory infections in common waiting areas when possible.
- B. *Respiratory Hygiene/Cough Etiquette* applies to any person with signs of illness including:
 1. Cough
 2. Congestion
 3. Rhinorrhea
 4. Increased production of respiratory secretions
- C. Healthcare workers should observe *Droplet Precautions* (i.e., wear a mask) and hand hygiene when examining and caring for persons with signs and symptoms of a respiratory infection.
- D. Healthcare workers who have respiratory infections should avoid direct patient contact. If this is not possible, then the healthcare worker should wear a mask while providing care.
- E. Districts must ensure that:
 1. *Respiratory Hygiene/Cough Etiquette* is reinforced during staff training.
 2. Posters educating staff, patients, and visitors on *Respiratory Hygiene/Cough Etiquette* are placed at reception areas of all health departments/clinics and

- other strategic locations (For free “Cover Your Cough” posters, see <http://www.cdc.gov/flu/protect/covercough.htm>)
3. Policies include *Respiratory Hygiene/Cough Etiquette* and that these policies are monitored for adherence.

XI. Safe Injection Practices

As a result of HBV and HCV outbreaks in ambulatory care facilities in the United States, *Standard Precautions* now include *safe injection practices*. Adherence to basic principles of aseptic technique for the preparation and administration of parenteral medications could have prevented these outbreaks.

- A. Healthcare workers must adhere to the following *safe injection practices*:
 1. Use aseptic technique to avoid contamination of sterile injection equipment.
 2. Use of a sterile, single-use, disposable needle and syringe for each injection given. **Note:** NEVER reuse needles, cannulae, and syringes for subsequent patients or to access a medication or solution that might be used for another patient.
 3. Avoid administering medications from a syringe to multiple patients.
 4. Whenever possible, use single-dose vials instead of multiple-dose vials.
 5. If a multi-dose vial must be used:
 - a. Access the vial only with a sterile needle, cannula, and syringe.
 - b. Do not keep the vial in the immediate patient treatment areas.
 - c. Store according to the manufacturer’s recommendations.
 - d. Discard if sterility is compromised or questionable.
 6. Do not use bags or bottles of intravenous solutions as a common source of supply for multiple patients.
 7. Prevent contamination of injection equipment and medication (e.g., separate clean and dirty work areas).
- B. Districts must ensure that:
 1. Principles of infection control and aseptic technique are reinforced during staff training.
 2. Policies include infection control and aseptic technique and that these policies are monitored for adherence.

XII. Precautions for Dental Procedures

Blood, saliva, and gingival fluid from all dental patients are considered infectious. Dental employees must adhere to the precautions listed throughout this document. In addition, Districts must place special emphasis on certain precautions for preventing transmission of bloodborne pathogens in dental practice in both institutional and non-institutional settings. For more information on a comprehensive infection control plan for dental settings, see [CDC, “Guidelines for Infection Control in Dental Health-Care Settings – 2003,” *MMWR*, Vol. 52, No. RR-17, December 19, 2003.](#)

Districts must ensure that all dental employees:

- A. Utilize appropriate PPE as outlined in Section 2. III. Personal Protective Equipment on pages 5-7 and below:
 1. Wear single-use disposable medical gloves for contact with oral mucous membranes of all patients. **Note:** During dental procedures, gloves commonly contact various chemicals and materials that can compromise the integrity of the glove. Consult glove manufacturers regarding chemical compatibility of glove material.
 2. During dental procedures in which splashing or splattering of blood, saliva or gingival fluids is likely:
 - a. Wear surgical masks that cover nose and mouth, and
 - b. Wear protective eyewear with solid side shields (i.e., non-perforated) or chin-length plastic face shields.
Note: Masks should be changed when visibly soiled or wet. Masks should be worn under face shields that do not have masks as part of the shield unit to provide maximum protection to the mucous membranes of the nose and mouth.
 3. Wear finger guards while suturing.
 4. Remove PPE when leaving the patient care area.
 5. Clean reusable PPE (e.g., protective eyewear or face shields) with soap and water or if visibly soiled, and disinfect between patients, according to the manufacturer's instructions.
- B. Utilize rubber dental dams, high-velocity air evacuation, and proper patient positioning to minimize dissemination of aerosol, droplets, or splatter.
- C. Avoid contact with objects, such as charts, telephones, and cabinets during patient treatment procedures.
- D. Utilize dental instruments and devices with engineered safety features (see Section 2. V. Sharps Injury Prevention on pages 8-10).
- E. Remove burs before disassembling the handpiece from the dental unit.
- F. Restrict use of fingers in tissue retraction or palpation during suturing or administering anesthesia.
- G. Minimize potentially uncontrolled movement of instruments such as scalers or laboratory knives.
- H. For procedures involving multiple injections with a single needle, recap needle between injections by using a one-handed technique or use a device with a needle resheathing mechanism.
- I. Do not administer medications from a syringe to multiple patients.

- J. Use single-dose vials for parenteral medications when possible.
- K. If multi-dose vials are used, maintain sterility and discard if sterility is compromised.
- L. Use disposable dental items where possible.
- M. Place barrier protective coverings over noncritical clinical contact surfaces that are touched frequently with gloved hands during the delivery of patient care, that are likely to become contaminated with blood or body substances, or that are difficult to clean.
- N. Place barrier protection over noncritical clinical contact surfaces (e.g., countertops, switches) or disinfect between patients with an [EPA-registered hospital disinfectant](#) with a tuberculocidal claim.
- O. Sterilize after each use or discard after single use dental instruments that penetrate soft tissue or bone (e.g., extraction forceps, scalpel blades, and periodontal scalers – see Section 2, VIII. Sharps and Biomedical Waste Management on pages 11-12).
- P. Sterilize dental instruments that are not intended to penetrate oral soft tissue or bone (e.g., amalgam condensers, air-water syringes), but might come into contact with oral tissues and are heat-tolerant. Clean and high-level disinfect instruments that are heat-sensitive.

Note: For more information on sterilization, disinfection, and other infection control recommendations in dental settings see [the CDC, “Guidelines for Infection Control in Dental Health-Care Settings – 2003,” MMWR, Vol. 52, No. RR-17, December 19, 2003.](#)

XIII. Precautions for Laboratories

Safety of laboratory employees requires additional precautions to limit occupational exposure to bloodborne pathogens. Laboratory employees must adhere to the other precautions listed throughout this document and the following additional precautions.

Georgia PH Laboratories must ensure that laboratory employees:

- A. Utilize the appropriate PPE as outlined in Section 2. III. Personal Protective Equipment on pages 5-6 and below:
 1. Wearing medical gloves (e.g., latex, vinyl, or nitrile gloves) when handling or processing blood and body fluid specimens.
 2. Wearing N95 respirators (for which you have been respirator fit tested) and protective eyewear with solid non-perforated side shields, or chin-length face

shields, if mucous membrane contact with blood or body fluids is a potential hazard. Note: Respirator fit testing is required on an annual basis

- B. Change gloves and wash hands with antimicrobial soap after completion of specimen processing.
- C. Use biological safety cabinets (Class I or II) whenever procedures are conducted that have a high potential for generating aerosols or droplets. These include activities such as blending, sonicating, and vigorous mixing.
- D. Use mechanical pipetting devices for manipulating all liquids in the laboratory. Mouth pipetting is not a safe or acceptable technique and must not be done.
- E. Limit the use of needles and syringes to situations in which there is no alternative, and follow the recommendations for preventing injuries with needles outlined in Section 2. V. Sharps Injury Prevention on pages 8-10. Consider use of sharps with ESIP and other safety devices. (See Section 2. VIII. Sharps and Biomedical Waste Management on pages 11-12 for disposal of sharps.)
- F. Decontaminate laboratory work surfaces with an [appropriate EPA approved antimicrobial chemical product](#) such as freshly prepared 10% bleach solution after a spill of blood or other body fluids and when work activities are completed. **Note:** Appropriate PPE must be worn when cleaning. Clean-up material becomes biomedical waste and must be disposed of appropriately. **Note:** With large spills of cultured or concentrated infectious agents in the laboratory, cover the contaminated area with an absorbent germicide before cleaning, then decontaminate with fresh germicidal chemical. The used absorbent germicide and cleaning materials are now biomedical waste.
- G. Disinfect contaminated materials used in laboratory tests using an acceptable method before reprocessing. Place used clean-up materials in biomedical waste (i.e., with the international biohazard symbol or red bags) and dispose of appropriately.
- H. Clean and decontaminate according to manufacturer's instructions, equipment that has been contaminated with blood or other body fluids before reusing, or before being repaired in the laboratory, or transported to the manufacturer. Equipment that cannot be cleaned must be marked with the international biohazard label and packaged according to the Department of Transportation and manufacturer's guidelines. Equipment that cannot be cleaned must be marked with a proper biohazard label.
- I. Wash hands with water and antimicrobial soap after completing laboratory activities and remove protective clothing before leaving the laboratory.

XIV. Hepatitis B Vaccination

- A. Districts must:
1. Assess employees who have risk for occupational exposure for previous hepatitis B vaccination.
 2. Ensure that hepatitis B screening is not a prerequisite to receiving hepatitis B vaccination. **Note:** The decision of pre-vaccination testing should be based on whether the costs of testing balance the costs of vaccine saved by not vaccinating already-infected persons. Cost-effectiveness depends on the cost of vaccination, the cost of testing for susceptibility, the expected prevalence of immune persons and individual history. If the decision is made to conduct prevaccination testing, test the person for hepatitis B surface antigen (HBsAg), hepatitis B core antibody (anti-HBc) and hepatitis B surface antibody (anti-HBs). See Table 2-2 Interpretation of Hepatitis B Profile on page 22.
 3. Ensure all medical evaluations, laboratory tests, and procedures related to hepatitis B vaccine and vaccination series are:
 - a. Provided at no cost to the employee.
 - b. Provided at a reasonable time and place.
 - c. Performed under the supervision of a licensed physician, Nurse Practitioner, or Physician's Assistant.
 4. Offer and provide the hepatitis B vaccination series to all employees who have risk for occupational exposure, within 10 working days of initial assignment unless the employee has previously received the complete hepatitis B vaccination series, or antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons. **Note:** Neither pregnancy nor lactation should be considered a contraindication to vaccination of women. Also, vaccine is not indicated if the employee has a history of chronic hepatitis B infection.
 5. Provide the hepatitis B vaccination series to employees who initially had declined hepatitis B vaccination, but at a later date decide to accept the vaccination, if the employee is still at risk for occupational exposure.
- B. If the employee agrees to the hepatitis B vaccination series, the district must:
1. Ensure that the hepatitis B vaccination schedule is as follows:
 - a. Three intramuscular injections in the deltoid muscle.
 - b. The second dose administered no less than one month after the first dose.
 - c. The third dose administered a minimum of 4-6 months after the first dose and no less than two months after the second dose.
Note: Optimal spacing of 4 to 12 months between the second and third doses of hepatitis B vaccine confers higher anti-HBs titers at post-vaccination testing. In some instances, it may be necessary to use the minimum spacing allowed between vaccine doses. Minimum spacing requirements for adults receiving hepatitis B vaccine are as follows: There must be a minimum of one month (e.g., 28 days) between the first and second doses. There must be a minimum of 2 months (e.g., 8 weeks)

- between the second and third doses. There must be no less than 4 months between the first and third doses.
2. Determine the employee's immune status with post-vaccination testing no less than one month (4 weeks) after completion of the 3-dose series. If the employee did not respond to the primary vaccine series, he/she should complete a second 3-dose series or be evaluated to determine if he/she is HBsAg-positive. Revaccinated employees should be retested at the completion of the second series. **Note:** Nonresponders to vaccination who are HBsAg-negative after a second series should be considered susceptible to HBV infection and counseled on HBV prevention and the need to obtain hepatitis B immune globulin (HBIG) prophylaxis if exposure occurs.
- C. Employees who have risk for occupational exposure (e.g., certain health-care and public safety workers) must be offered the HBV vaccine and advised to take it, but the final decision about vaccination is the employee's. Employees who refuse the vaccine must sign a declination of consent form (see forms in Appendix A).
- D. For new employees who have been previously vaccinated, follow the guidelines below.
1. If the newly hired employee was previously vaccinated and post-vaccination serology has shown immunity to HBV, no further testing is indicated.
 2. If the newly hired employee has been previously vaccinated never received post-vaccination serology, periodic testing to monitor antibody status is not recommended. Instead, employee should:
 - a. Follow *Standard Precautions*.
 - b. Get tested after an exposure occurs and then follow post-exposure prophylaxis guidelines (see Section 4. V. Post-Exposure Management on pages 31-32). **Note:** If HBV prophylaxis (i.e., HBIG and a booster dose of vaccine) is indicated, perform post-vaccination testing 3-6 months after the dose, because testing earlier might measure passive antibody derived from HBIG. Once presence of anti-HBs is documented in healthcare and other high-risk personnel, future hepatitis B testing is not needed.

Table 2-2: Interpretation of Hepatitis B Serologic Test Results and Recommendations

| Tests | Results | Interpretation | Recommendations |
|---|--|--|---|
| HBsAg Anti-HBc Anti-HBs | Negative Negative Negative | Susceptible | Vaccinate |
| HBsAg Anti-HBc Anti-HBs | Negative Positive Positive | Immune due to natural infection | Vaccination not indicated |
| HBsAg Anti-HBc Anti-HBs | Negative Negative Positive | Immune due to hepatitis B vaccination | Vaccination not indicated |
| HBsAg Anti-HBc IgM anti-HBc Anti-HBs | Positive Positive Positive Negative | Acutely infected | Vaccination not indicated |
| HBsAg Anti-HBc IgM anti-HBc Anti-HBs | Positive Positive Negative Negative | Chronically infected | Vaccination not indicated |
| HBsAg Anti-HBc Anti-HBs | Negative Positive Negative | Interpretation unclear; four possibilities: 1- Resolved infection (most common) 2- False-positive anti-HBc, thus susceptible 3- "Low level" chronic infection 4- Resolving acute infection | Repeat serology; vaccinate if determined to be susceptible |

<http://www.cdc.gov/hepatitis/hbv/pdfs/serologicchartv8.pdf>

XV. Hepatitis C Virus (HCV)

- A. HCV is mainly transmitted via contact with blood of an infected person. Direct percutaneous exposure to infected blood (i.e., needlestick, sharing contaminated needles, syringes or other injection drug equipment) is the most common transmission route. The risk for HCV infection from a needlestick exposure among healthcare workers is approximately 1.8% (range: 0-7%). Transmission rarely occurs from mucous membrane exposures to blood. Therefore, other exposures such as blood splashes to the eye are considered very low risk of HCV transmission to healthcare personnel. Avoiding occupational exposure to blood is the primary way to prevent transmission of bloodborne pathogens, such as hepatitis C, among healthcare personnel.
- B. Currently, there is no vaccine to prevent hepatitis C infection. Immune globulin and antiviral drugs are not recommended for post-exposure prophylaxis after exposure to HCV-positive blood. Adherence to *Standard Precautions* and other risk reduction measures are critical in the prevention of occupational HCV exposure and transmission. All human blood and certain body fluids should be

treated as potentially infectious for HBV, HCV, HIV and other bloodborne pathogens. Depending on the medical procedure involved, *Standard Precautions* may include use of personal protective equipment such as gloves, masks, and/or protective eyewear.

- C. The CDC does not have recommendations to restrict HCV-infected healthcare workers from work. The risk of transmission from an infected healthcare worker to a patient appears to be very low. All healthcare personnel, including those who are HCV positive, should follow strict aseptic technique and *Standard Precautions*, including appropriate hand hygiene, use of protective barriers, and safe injection practices as discussed throughout this document. All cuts and sores on the skin must be covered.

XVI. Employee Health Issues

- A. Pregnant employees are not known to be at greater risk of contracting HBV, HCV or HIV than workers who are not pregnant; however, some infections can be particularly harmful to the unborn infant (e.g., cytomegalovirus [CMV], measles, rubella), the susceptible pregnant woman (e.g., HBV) or the newborn infant (e.g., HBV, varicella). All employees, including pregnant employees, must follow the exposure control plan.
- B. Employees with uncovered, open exudative lesions or weeping dermatitis must refrain from all direct patient care and from handling patient-care equipment until the condition resolves.
- C. Health care workers with skin abrasions/cuts must wear gloves or protective clothing when providing patient care and handling patient care equipment and use precautions until condition resolves.
- D. Healthcare workers who have respiratory infections should avoid direct patient contact. If this is not possible, then the healthcare worker should wear a mask while providing care. Those workers who develop fever and respiratory symptoms should be instructed not to report to work.

Section 3.

Employee Training and Training Records

I. Employee Training

- A. Districts must ensure that:
1. All employees participate in a training and education program prior to initial assignment to tasks or procedures where occupational exposure may occur.
 2. Training is provided during work hours at no cost to the employee.
 3. An individual knowledgeable in the subject content conducts the training.
 4. Materials are used, which are appropriate in content and vocabulary to the educational level, literacy, and language background of employees.
 5. Annual refresher training is conducted.
 6. Training is provided on use of new devices or products prior to implementation of the device/product.
- B. The training agenda must include, at a minimum:
1. Explanation of [OSHA Bloodborne Pathogen and Needlestick Prevention Standards](#) and the latest [CDC Guidelines and Recommendations: Prevention of Healthcare Associated Infections](#) including management of occupational exposure to bloodborne pathogens.
 2. Epidemiology and symptomatology of bloodborne diseases, specifically HIV, HBV and HCV.
 3. Modes of transmission of bloodborne pathogens and description of occupational exposure risks.
 4. Introduction to this manual, the Georgia Department of Public Health, *Guidelines for Standard Precautions and Bloodborne Pathogen Occupational Exposure Control*.
 5. Detailed orientation to the agency's exposure control plan, which includes infection control policies and procedures, and an action plan for injuries/incidents involving blood or other potentially infectious materials.
 6. Information on the hepatitis B vaccination series, including efficacy, safety, and the benefits of being vaccinated.
 7. Use of all engineering controls including needleless systems and sharps with engineered sharps injury protection (ESIP).
 8. Respiratory Hygiene/Cough Etiquette including: the importance of source control measures especially during seasonal outbreaks of viral respiratory infections.
 9. Safe injection practices.
 10. Explanation of the procedure to follow if an exposure incident occurs, methods of reporting the incident, and the medical follow-up that will be

made available including options for post-exposure prophylaxis (PEP). (See Section 4. Occupational Exposure and Post-Exposure Management).

11. Signs, labels or other coding systems used by the county/district.
12. The opportunity for employees to interact (e.g., question & answer period) with the instructor during the training session.

II. Training Records

- A. Districts must maintain training records for seven years from the date on which the training occurred.
- B. Training records must include:
 1. The dates of the training sessions.
 2. The contents or a summary of the training sessions.
 3. The names, job titles and affiliations of all persons attending the training session.
 4. The names, qualifications, and affiliations of persons conducting the training.

Section 4.

Occupational Exposure/Post-Exposure Management

I. Definition of Occupational Exposure

An *occupational exposure* is defined as 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. For the purposes of this section occupational exposure is specifically defined as:

- A. A percutaneous or parenteral injury (e.g., a needlestick or cut with a sharp object).
- B. Contact of mucous membranes or contact of nonintact skin (especially when the exposed skin is chapped, abraded or afflicted with dermatitis or the contact is prolonged or involving an extensive area) with blood, tissues, or other potentially infectious materials.
- C. Direct contact without barrier protection to concentrated virus in a laboratory or production facility, which is considered an exposure that requires clinical evaluation.
- D. A human bite. **Note:** During the clinical evaluation, consider possible exposure of both the bite recipient and the person who inflicted the bite.

Note: See the [CDC, "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis," *MMWR*, Vol. 50, No. RR-11, June 29, 2001](#) and the US Public Health Service, "Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis, *Infection Control and Hospital Epidemiology*, Vol. 34, No. 9, (September 2013), pp. 875-892 . In this section these guidelines will be referred to as the USPHS Occupational Exposure Management Guidelines.

II. Immediate Treatment of the Exposure Site

An employee who has had an occupational exposure must immediately:

- A. Wash exposed areas, needlestick sites, and cuts, with soap and water.
- B. Flush the nose, mouth or skin with water, if exposed.

- C. Irrigate exposed eyes with clean water, saline, or sterile solutions for 15-30 minutes.
- D. Report exposure to his/her supervisor.

Note: The application of caustic agents (e.g., bleach) or the injection of antiseptics or disinfectant into the wound is not recommended.

III. Exposure Report/Sharps Injury Log

Districts must ensure that:

- A. When an occupational exposure occurs, the following information, as relevant to the exposure incident, is recorded on an exposure report (see Section 4. III. B. concerning the Bloodborne Pathogen Occupational Exposure Report) and maintained as a sharps injury log for the county/district. **Note:** The sharps injury log can be an assembly of individual exposure reports or a separate form.
 - 1. Date and time of exposure.
 - 2. Details about the exposed person.
 - a. Job classification of the exposed employee.
 - b. Hepatitis B vaccination and vaccine-response status.
 - 3. Details about the exposure source.
 - a. Whether or not the source person is infected with HBV, HCV, and/or HIV.
 - b. If the source person is HIV-infected, the stage of disease, history of antiretroviral therapy, viral load and antiretroviral resistance information, if known.
 - 4. Description of the exposure incident including the following:
 - a. Type and amount of fluid or material, and the severity of the exposure.
 - b. Body part involved in the incident.
 - c. Use of relevant personal protective equipment.
 - d. Procedure that the exposed worker was performing at the time of the incident.
 - e. Where (i.e., work area where the incident occurred) and how the incident happened including any unusual situation (e.g., violent patient).
 - 5. Type and brand of the device (i.e., sharp) involved in the exposure incident.
 - 6. If the sharp had engineered sharps injury protection (ESIP):
 - a) Whether the protective mechanism was activated.
 - b) Whether the injury occurred before the protective mechanism was activated, during activation of the mechanism or after activation of the mechanism, if applicable.
 - 7. If the sharp had no ESIP, the injured employee's opinion as to whether and how such a mechanism could have prevented the injury, as well as the basis for the opinion.

8. The employees' opinion about whether any other engineering, administrative, or work practice control could have prevented the injury, as well as the basis for the opinion.
 9. Details about counseling, post exposure management and follow-up, which must be kept in the employee's medical file, not personnel file.
- B. The *Bloodborne Pathogen Occupational Exposure Report* is completed. (See hard copy in Appendix B.)
1. A report must be initiated locally within 48 hours of the exposure incident.
 2. The employee and supervisor must complete the report within 14 working days of the exposure incident. **Note:** The supervisor is responsible for ensuring the information is reported.
 3. A copy of the report must be kept locally, and signed and dated by the exposed employee and a witness.
 4. The report shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee and kept on file for 30 years after termination of employment.
- C. The Workers' Compensation policy is followed. After ensuring proper medical care for the employee, the supervisor or designee must report the exposure.
- D. A local procedure for completing and submitting exposure reports is developed and shared with staff.

IV. Evaluation of Exposure and Exposure Source

Districts must ensure that:

- A. The exposure is evaluated for potential to transmit HBV, HCV, and HIV based on the type of body substance involved and the route and severity of the exposure. The following exposures to blood or other potentially infectious body fluids require further evaluation:
1. Percutaneous or parenteral exposures (i.e. needlestick or other penetrating sharps-related injury).
 2. Mucous membrane exposures.
 3. Non-intact skin exposures.
 4. Direct contact with concentrated virus in a research laboratory.
 5. Human bites resulting in blood exposure to either person involved.
- B. The exposure source is evaluated for evidence of HBV, HCV, and HIV infections.
1. Review information available in the source patient's medical record at the time of exposure to determine HBV, HCV, and/or HIV status.
 2. Inform the source patient or his/her legal guardian/authorized representative of the incident.

3. Interview the source patient or his/her legal guardian/authorized representative for information that might confirm or exclude HBV, HCV, and HIV infections.
4. If the HBV, HCV, and/or HIV status of the source patient is unknown, ensure that the source patient or his/her legal guardian/authorized representative is:
 - a. Given the opportunity to voluntarily consent to test(s). **Note:** Exception: If the source patient is unconscious, and physician documentation is available.
 - b. Provided pretest counseling.
 - c. Informed that if the source patient or legal guardian/authorized representative refuse the HIV antibody test, two physicians may order an HIV antibody test. The physicians must document the order. Source: O.C.G.A. §31-22-9.2 (g)
 - d. Informed that his/her test result(s) will be disclosed to the exposed health care worker and, if positive, will be placed in his/her medical file.
 - e. Tested, with consent, for HBsAg, antibodies to hepatitis C virus (anti-HCV), and HIV antibodies.
 - f. Provided post-test counseling when test results are available.

Note: Whenever possible, an FDA-approved rapid HIV antibody test kit should be used in the HIV antibody testing of an exposure source, particularly if the testing of enzyme immunoassay (EIA) cannot be completed within 24-48 hours. Repeatedly reactive results by EIA or rapid HIV-antibody tests are considered to be highly suggestive of infection, whereas a negative result is an excellent indicator of the absence of HIV antibody. A positive supplemental test that differentiates HIV-1 and HIV-2 or reactive HIV-1 RNA Qualitative may be used to confirm HIV disease. Confirmation is not necessary for making initial decisions about post-exposure management, but should be done to complete the testing process and before informing the source patient.

5. The source patient is not charged for testing.
6. The patient's care is not discontinued or adversely affected, even if the patient refuses to cooperate.
7. If the exposure source is unknown or cannot be tested, information about where and under what circumstances the exposure occurred should be assessed for the likelihood of transmission of HBV, HCV, or HIV. Consider the source patient's medical diagnoses, clinical symptoms, and history of risk behaviors.

Note: If the source patient is not infected with a bloodborne pathogen, baseline testing or further follow-up of the exposed person is not necessary.

V. Post-Exposure Management

A. General Management

Districts must ensure that:

1. The latest United States Public Health Service (USPHS) Occupational Exposure Management Guidelines are followed.
2. A confidential medical evaluation and follow-up is immediately available to the exposed employee. A plan for medical evaluation must be established and well known to employees. **Note:** According to the USPHS, to assure timely access to HIV post-exposure prophylaxis, an occupational exposure should be regarded as an urgent medical concern and PEP started as soon as possible after the exposure (i.e., preferably within one to two hours post-exposure).
3. A medical file is established for the exposed employee.
 - a. Medical files must include:
 - 1) A copy of the exposure report.
 - 2) Laboratory results.
 - 3) Post-exposure counseling/education.
 - 4) Medical evaluation(s).
 - 5) Follow-up plans.
 - 6) Immunizations and PEP provided.
 - 7) Other records related to the exposure.
 - b. Confidentiality of all employee medical files must be maintained.
 - c. Medical files must be kept in a locked cabinet and separated from personnel files. **Note:** The Georgia Archives and OSHA require employers to maintain employee medical records for at least the duration of employment plus 30 years.
4. All susceptible/unvaccinated employees exposed to any blood or body fluid must be encouraged to initiate the hepatitis B vaccine series.
5. The physician evaluating the employee after an exposure is provided with the following information:
 - a. A copy of the district's exposure control plan.
 - b. A copy of the exposure report.
 - c. HBV, HCV, and HIV status of the source patient and other relevant health information about the source.
 - d. If the source patient is known to have HIV infection, available information about the person's stage of infection, CD4 count, HIV viral load results, current and previous antiretroviral therapy, and results of any genotypic or phenotypic viral resistance testing.
 - e. All medical records relevant to the appropriate treatment of the employee including hepatitis vaccination and anti-HBs response status, any current or underlying medical conditions or circumstances including a current medication list and list of allergies, and pregnancy status, which may influence post-exposure prophylaxis and counseling.
 - f. The latest USPHS Occupational Exposure Management Guidelines.
6. The prophylactic treatment or immunizations ordered by the physician are provided to the employee.

B. Management of Exposures or Potential Exposures to HBV

Districts must ensure that:

1. The source patient's HBsAg status is evaluated (see Section 4. IV. Evaluation of the Exposure and Exposure Source on pages 29-30).
2. The hepatitis B vaccination and vaccine-response status of the exposed employee is reviewed.
3. The employee is tested for HBsAg and anti-HBs, if indicated, with consent.
 - a. If the employee was properly tested with a post-vaccination serology when the hepatitis B series was initially administered and had evidence of immunity, it is unnecessary to test the employee for current antibody status.
 - b. For employees who refuse hepatitis B testing, have him/her sign a refusal to consent form (see Appendix A. for form).
4. The prophylactic treatment or immunizations ordered by the physician are provided to the employee (See USPHS Occupational Exposure Management Guidelines for the latest recommendations for post-exposure prophylaxis to hepatitis B virus).
 - a. If indicated, HBIG and/or hepatitis B vaccine should be administered as soon as possible after exposure (i.e., preferably within 24 hours, but no later than 7 days).
 - b. If the employee refuses post-exposure treatments or immunizations, have him/her sign a refusal to consent form (see Appendix A. for form).
5. Follow-up anti-HBs testing of employees who receive hepatitis B vaccine is performed 1-2 months after the last dose of vaccine. **Note:** If HBIG was given in the previous 3-4 months, accurate anti-HBs response to the vaccine cannot be determined (wait at least 9 months after HBIG administration to test for anti-HBs). Also, do not collect blood for post-vaccination testing sooner than 4 weeks after a dose of hepatitis B vaccine, to avoid a transient antigenemia result (appears as a positive HBsAg, but is only a temporary result and not indicative of infection).
6. Employees exposed to HBV are counseled on measures to reduce potential secondary transmission during the follow-up period. According to the CDC Occupational Exposure Management Guidelines, healthcare workers exposed to viral hepatitis:
 - a. Do not need to take special precautions to prevent secondary transmission during the follow-up period.
 - b. Should refrain from donating blood, plasma, organs, tissue or semen.
 - c. Do not need to modify sexual practices or refrain from becoming pregnant.
 - d. Do not need to discontinue breastfeeding. **Note:** If a pregnant woman is HBV infected, she can begin breastfeeding immediately after birth, with the caveat that her infant receives both HBIG and the first dose of hepatitis B vaccine within 12 hours of birth.
 - e. Do not need to modify patient-care responsibilities. Continue to follow *Standard Precautions* and strict aseptic technique.

C. Management of Exposures or Potential Exposures to HCV

Districts must ensure that:

1. The source patient is tested for anti-HCV as indicated (See Section 4. IV Evaluation of the Exposure and Exposure Source).
2. After percutaneous or mucosal exposures to an anti-HCV positive source patient, employees are monitored, with consent, for HCV infection through:
 - a. Baseline serologic testing for anti-HCV, and alanine aminotransferase (ALT) level.

Note: If the employee tests positive for anti-HCV immediately after the exposure, it is not from the recent exposure, but rather from a current HCV infection, a past HCV infection that has resolved, or a biologic false positivity for HCV antibody. (Refer to Table 4-1 for Interpretation of HCV laboratory results) The employee should be referred to a specialist for follow up.
 - b. Follow-up (e.g., 4-6 months) serologic testing for anti-HCV and ALT levels. If earlier diagnosis of HCV infection is desired, testing for HCV RNA may be performed at 4–6 weeks post-exposure.

Note: If the employee refuses monitoring, have him/her sign a declination to consent form (See Appendix A. for form).
3. Confirm all anti-HCV results reported as repeatedly reactive by serologic enzyme immunoassays (EIA) using polymerase chain reaction [PCR] technique. **Note:** If anti-HCV signal to cut-off ratio (s/co) test is performed, supplemental testing is not necessary. Samples with high s/co ratios usually confirm positive (greater than 95%) when supplemental testing is performed. Less than 5 of every 100 might represent false-positives. For positive anti-HCV samples, a polymerase chain reaction [PCR] technique can be used to confirm current infection status. (See Table 4-1 Interpretation of HCV Test Results below.)
4. Employees exposed to HCV are counseled on measures to reduce potential secondary transmission during the follow-up period. According to the CDC Occupational Exposure Management Guidelines, healthcare workers exposed to viral hepatitis:
 - a. Do not need to take special precautions to prevent secondary transmission during the follow-up period.
 - b. Should refrain from donating blood, plasma, organs, tissue or semen.
 - c. Do not need to modify sexual practices. **Note:** Data indicate that HCV can be sexually transmitted, but it is inefficiently spread through this manner. HCV-positive persons with one long-term steady sex partner do not need to change their sexual practices. They should discuss the risk, which is low but not absent, with their partner. If they want to lower the limited chance of spreading HCV to their partner, they may decide to use barrier precautions (e.g., latex condoms).
 - d. Do not need to refrain from becoming pregnant. **Note:** Approximately 5 out of every 100 infants born to HCV-infected women become infected.
 - e. Do not need to discontinue breastfeeding. **Note:** According to CDC, HCV-infected women do not need to avoid breastfeeding. However, they

should consider abstaining from breastfeeding if nipples are cracked or bleeding.

- f. Do not modify patient-care responsibilities. Continue to follow *Standard Precautions* and strict aseptic technique.
5. If HCV infection is identified, the employee is referred for medical management by a gastroenterologist, infectious disease specialist or other specialists experienced in treating HCV infection. HCV can be cured with treatment. Employees should be encouraged to seek medical attention and discuss treatment options.

Note: Immune globulin and antiviral agents are not recommended for PEP after exposure to HCV-positive blood. In addition, currently there are no guidelines for administration of therapy during the acute phase of HCV infection. However, recent studies indicate that early treatment for HCV may increase rates of viral clearance.

Table 4-1: Interpretation of Results of Tests for HCV Infection and Further Actions

| TEST OUTCOME | INTERPRETATION | FURTHER ACTIONS |
|---|---------------------------|--|
| HCV antibody nonreactive | No HCV antibody detected | Sample can be reported as nonreactive for HCV antibody. No further action required. If recent exposure in person tested is suspected, test for HCV RNA.* |
| HCV antibody reactive | Presumptive HCV infection | A repeatedly reactive result is consistent with current HCV infection, or past HCV infection that has resolved, or biologic false positivity for HCV antibody. Test for HCV RNA to identify current infection. |
| HCV antibody reactive, HCV RNA detected | Current HCV infection | Provide person tested with appropriate counseling and link person tested to care and treatment.† |
| HCV antibody reactive, HCV RNA not detected | No current HCV infection | No further action required in most cases. If distinction between true positivity and biologic false positivity for HCV antibody is desired, and if sample is repeatedly reactive in the initial test, test with another HCV antibody assay. In certain situations,‡ follow up with HCV RNA testing and appropriate counseling. |

* If HCV RNA testing is not feasible and person tested is not immunocompromised, do follow-up testing for HCV antibody to demonstrate seroconversion. If the person tested is immunocompromised, consider testing for HCV RNA.

† It is recommended before initiating antiviral therapy to retest for HCV RNA in a subsequent blood sample to confirm HCV RNA positivity.

‡ If the person tested is suspected of having HCV exposure within the past 6 months, or has clinical evidence of HCV disease, or if there is concern regarding the handling or storage of the test specimen.

CDC (2014). Interpretation of results of tests for HCV infection and further actions. Retrieved from http://www.cdc.gov/hepatitis/hcv/pdfs/hcv_graph.pdf

D. Management of Exposures or Potential Exposures to HIV

Districts must ensure that employees exposed to HIV are:

1. Encouraged to have a medical evaluation and follow-up immediately.
2. Provided with initial HIV counseling and education (See Appendix C.).
3. Offered baseline blood collection for HIV antibody testing or for storage.
 - a. If the baseline HIV antibody test is negative, offer to repeat the test at six weeks, and at three and six months, if test continues to be negative. If fourth-generation combination p24 antigen-HIV antibody (Ag/Ab) tests are used, HIV testing may be concluded at 4 months after exposure. Provide appropriate pre-test and post-test counseling for each test.
 - b. If the employee consents to the collection of a baseline blood sample but declines the HIV antibody test, centrifuge the blood, remove the serum, being careful to avoid contamination with other blood specimens, and label with the employee identification and the date. Store the frozen specimen for at least 90 days to allow time for the employee to consent to testing.
 - c. If the employee declines the HIV antibody test, a statement to this effect (see Appendix A. for form) must be signed by the employee and placed in the employee's medical record.
Note: Consider using an FDA-approved rapid HIV test (e.g., OraQuick or Clearview).
4. Provided post-test counseling when test results are available (See Appendix C.).
5. Informed that, if the source patient or legal guardian/authorized representative refuse the HIV antibody test, the exposed employee may request that the source patient's physician or attending physician counsel the patient about the need for the test and seek permission to conduct one.
6. Informed that the source patient's care and confidentiality must be maintained.
7. Evaluated for PEP. **Note:** PEP is recommended when occupational exposures to HIV occur. PEP medication regimens should contain 3 or more antiretroviral drugs for all occupational exposures to HIV. (See Appendix A. for consent/declination form, and see latest USPHS Management of HIV Occupational Exposure guidelines for specific recommendations). Because of the complexity of selection of HIV PEP regimens, consultation with an expert is recommended. However, expert consultation should not delay timely initiation of PEP.
8. Provided PEP as ordered by the physician. (See USPHS Occupational Exposure Management Guidelines for recommended PEP regimens.)
 - a. Districts should select drugs for initial management of an HIV exposure and have the drugs readily available.
 - b. PEP should be initiated as soon as possible (i.e., within 1 – 2 hours).
 - c. Prior to initiation of PEP, the employee should have the following baseline labs drawn: complete blood count (CBC), and hepatic and renal function.
 - d. Offer pregnancy testing to all women of childbearing age not known to be pregnant.

- e. Expert consultation is advised in the following situations:
 - 1) Delayed (i.e., later than 72 hours) exposure report.
 - 2) Unknown source.
 - 3) Resistance of the source virus to antiretroviral agents.
 - 4) Employee experiences toxicity of the initial PEP regimen.
 - 5) Pregnancy or suspected pregnancy in the exposed employee.
 - 6) Breastfeeding in exposed employee.
 - 7) Serious medical illness in the exposed employee.

Note: If a local expert is not available, contact the National Clinicians' Post-exposure Prophylaxis Hotline (PEPline) at 1-888-448-4911.
 - f. PEP should be administered for 4 weeks, if tolerated. Side effects can often be managed with treatment targeting specific symptoms (e.g., antimotility agents).
 - g. The HIV-exposed employee taking PEP should be reevaluated within 72 hours after exposure.
 - h. If the source patient is determined to be negative, PEP should be discontinued. **Note:** Investigation of whether a source patient might be in the window period is unnecessary for determining whether HIV PEP is indicated unless acute retroviral syndrome is clinically suspected.
9. Monitored for drug toxicity, if taking PEP, as ordered by the physician. Minimally, laboratory monitoring for drug toxicity should include a CBC, and renal and hepatic function tests at baseline and 2 weeks after exposure; further testing is indicated if abnormalities are detected or if clinically indicated based on the individual's symptoms while on PEP.
10. Provided the following counseling, if the employee chooses to take PEP:
- a. Stress the importance of completing the prescribed regimen and the need for adherence. Stress the need to take the medications as prescribed, minimize any gaps in therapy and notify the prescribing provider for any side effects.
 - b. Provide information about the potential drug-drug or drug-food interactions, drugs that should not be taken with PEP, the side effects of the drugs that have been prescribed, measures to minimize these effects, and the methods of clinical monitoring for toxicity during the follow-up period.
 - c. Advise that the evaluation of certain symptoms should not be delayed (e.g., rash, fever, back or abdominal pain, pain on urination or blood in the urine or symptoms of hyperglycemia [i.e., increased thirst and/or frequent urination]).
11. Provided follow-up regardless of whether or not the exposed employee receives PEP including follow-up counseling (see Appendix C); post-exposure testing at 6 weeks, 12 weeks, and 6 months, or concluding at 4 months if a fourth-generation combination HIV p24 antigen-HIV antibody test is used for follow-up testing; and medical evaluation. **Note:** If the source is co-infected with HIV and HCV, extended post-exposure testing (e.g., 12 months) is recommended.

VI. Post-Exposure Interventions During Bombings and Similar Mass-Casualty Events

In the setting of a bombing or other mass-casualty event, both the extent of exposed disrupted skin and the volume of blood contributing to the exposure might greatly exceed that of usual occupational exposures. District and other Public Health Emergency Preparedness staff should:

- A. Provide Hepatitis B PEP liberally to all unvaccinated personnel after exposure to blood in mass-casualty situations. Unlike hospital settings, testing of source persons is not needed in such settings where wounds, nonintact skin, or intact mucous membranes might have been exposed to blood or body fluids from another person or persons. (See Section VII. below.)
- B. Consider baseline and follow-up HCV testing for persons who have had contact with blood or body fluids from victims with penetrating injuries or nonintact skin.
- C. Work with Public Health experts to assess the need for HIV PEP.
 - 1. In most mass-casualty events, PEP is not indicated because the risk of exposure to HIV-infected materials probably is low.
 - 2. In rare situations where PEP is recommended:
 - a. Initiate as soon as possible after exposure
 - b. Collect blood specimen from exposed person for baseline HIV testing

Note: For more information refer to [CDC, “Recommendations for Post-exposure Interventions to Prevent Infection with Hepatitis B Virus, Hepatitis C Virus, or Human Immunodeficiency Virus, and Tetanus in Persons Wounded During Bombings and Other Mass-Casualty Events - United States, 2008,”](#) *MMWR*, Vol. 57, RR-6, August 1, 2008.

VII. Guidelines for Conducting Mass Vaccination Clinics

Any mass vaccinating effort in response to a bioterrorism, naturally occurring, or other mass-casualty event will require planning and coordination of vaccines, personnel, communication, and other support activities. State and local health officials will need to:

- A. Assess the number of persons in need of vaccination, whether hepatitis B or other.
- B. Follow the standards as outlined in the current Georgia DPH, Immunization Section, Chapter 14, “Standard Operating Guidelines for Conducting Mass Vaccination Clinics,” *Georgia Immunization Program Manual*.

Appendix A.

Consent and Declination of Consent Forms



Employee Statement of Declination of Consent to HBV Vaccination

I understand that, due to my occupational exposure to blood or 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 at no charge to me. However, I decline HBV 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 material(s) and I would like to be vaccinated with hepatitis B vaccine, I understand that I can receive the vaccination series at no charge to me.

I decline hepatitis B vaccination at this time for the following reason (check the appropriate response):

- I have already received 3 doses of hepatitis B vaccine in the past.
- I have a history of HBV infection (diagnosed in the past).
- I choose not to receive hepatitis B vaccination now, but understand I may request it in the future.

Employee Name (Please Print)

Employee Signature

Date

Witness Name (Please Print)

Witness Signature

Date



Employee Statement of Declination of Consent to HBV Testing (HBsAg and anti-HBs) or HBIG and/or Hepatitis B Vaccine After an Exposure

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, a serious disease. I have been advised that it is recommended that I receive HBIG and/or hepatitis B vaccine and/or appropriate HBV antibody and antigen testing due to the following exposure in the workplace (describe type of exposure):

I understand that the vaccine, if necessary, will be given to me at no charge.

I decline hepatitis B vaccination at this time. However, I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. I am also aware that failure to submit to this test may result in my not receiving workers' compensation. Should I continue to have occupational exposure to blood or other potentially infectious material(s) and want to be vaccinated with hepatitis B vaccine, I can receive the vaccination at no charge to me.

Employee Name (Please Print)

Employee Signature

Date

Witness Name (Please Print)

Witness Signature

Date



**Employee Statement of Declination of Consent to an
HCV Antibody Test After an Exposure**

I understand that, due to my occupational exposure to blood or other potentially infectious material(s), I may be at risk of acquiring hepatitis C virus (HCV) infection. I have been advised that it is recommended that I receive appropriate HCV antibody testing due to the following exposure in the workplace (describe type of exposure):

I decline to have the test done at this time. However, I am aware that failure to submit to this test may result in my not receiving workers' compensation should I develop HCV disease or test positive in the future.

.

Employee Name (Please Print)

Employee Signature

Date

Witness Name (Please Print)

Witness Signature

Date



Employee Statement of Declination of Consent to an HIV Antibody Test After an Exposure

I understand that, due to my occupational exposure to blood or other potentially infectious fluids/material(s), I may be at risk of acquiring HIV infection, a serious disease. I have been advised that it is recommended that I submit to confidential HIV antibody testing due to the following exposure in the workplace (describe type of exposure):

I decline to have the test done at this time. However, I am aware that failure to submit to this test may result in my not receiving workers' compensation should I develop HIV disease.

Employee Name (Please Print)

Employee Signature

Date

Witness Name (Please Print)

Witness Signature

Date



Employee Statement of Consent to, or Declination of, Post-Exposure Prophylaxis (PEP) for HIV

I verify that on _____ (date) I had an occupational exposure to blood or other potentially infectious fluids/material(s). I have had a confidential medical evaluation. My provider discussed with me the potential benefits and risks of a PEP regimen related to my exposure.

PEP Recommendation¹

Recommend 3 (or more) tolerable antiretroviral drugs for all exposures. The medical provider and the exposed worker should consider whether the potential benefits of PEP outweigh potential toxicities. PEP is not justified for exposures that pose a negligible risk for transmission, or if the source patient is determined to be HIV negative.

Preferred PEP regimens: raltegravir plus tenofovir plus emtricitabine OR raltegravir plus Truvada. PEP should be administered for 4 weeks if tolerated. Alternative regimens can be found in Appendix A of the following link: <http://stacks.cdc.gov/view/cdc/20711>

Note: The following drugs are not generally recommended for PEP: didanosine, nelfinavir, tipranavir
 The following drugs should be used only with expert consultation: abacavir, efavirenz, fosamprenavir, maraviroc, saquinavir, stavudine

Nevirapine should not be used and is contraindicated.

The following PEP regimen was recommended and offered to me:

| <u>Drug</u> | <u>Dose</u> | <u>Route</u> | <u>Times/day</u> | <u>Special Instructions</u> |
|-------------|-------------|--------------|------------------|-----------------------------|
| | | | | |
| | | | | |

I, _____, consent to this PEP regimen.
 (Print name)

I, _____, refuse this PEP regimen.
 (Print name)

I, _____, request PEP even though it was not recommended.
 (Print name)

 (Exposed employee’s signature) (Date) (Witness) (Date)

Adapted from:
 1. CDC. Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis. September 25, 2013 <http://stacks.cdc.gov/view/cdc/20711>

Appendix B.

Bloodborne Pathogen Occupational Exposure Report



Bloodborne Pathogen Occupational Exposure Report Form

(Page 1 of 2)

| | |
|--|------------------------------|
| Employee's Name (optional) _____ | Date: _____ |
| District: _____ | County: _____ |
| Site Address (location where exposure occurred): _____ | |
| City: _____ | State: _____ Zip code: _____ |

Instructions: Employees and their supervisors must complete this form within 14 days of occupational exposures to bloodborne pathogens. The form should be maintained as part of the sharps injury log for the county/district.

Date of Injury/Exposure: _____ Time of Injury/Exposure: _____

Person completing report form: _____ Phone: _____

Job Classification:

- Communicable Disease Specialist (CDS)
- Dental Hygienist
- Dentist
- Housekeeper/janitor
- Nurse
- Phlebotomist/lab tech
- Physician/APRN/PA
- Public Health Tech
- Student, type _____
- Other _____

Exposure Source:

- Source person:
 - HBV infected
 - HBV serology negative
 - HBV unknown
 - HCV infected
 - HCV serology negative
 - HCV unknown
 - HIV infected
 - HIV preliminary positive
 - HIV serology negative
 - HIV unknown
- None (Unknown Source)
- Other _____

Location:

- Community setting, type _____
- Exam room
- Home
- Immunization clinic
- Laboratory
- Procedure room
- Service/utility area
- Other _____

Procedure/Purpose:

- Fingertick/heel stick
- Injection, through skin
- Lancing
- Obtaining body fluid or tissue sample
- Start IV
- Suturing
- Venous blood draw
- Unknown/not applicable
- Other _____

Type & Severity of Injury/Exposure:

- Direct contact with concentrated virus
- Human bite resulting in blood exposure
- Mucous membrane exposure
 - Large Volume (major blood splash)
 - Small Volume (i.e. a few drops)
- Nonintact skin
 - Large Volume (major blood splash)
 - Small Volume (i.e. a few drops)
- Percutaneous injury
 - More Severe (large-bore hollow needle, deep puncture, visible blood on device, needle used in patient's artery or vein)
 - Less Severe (solid needle, superficial injury)
- Other _____

Body Part Injured/Exposed:

- (Check all that apply)
- Arm left right
 - Eye left right
 - Face/head
 - Finger left right
 - Hand left right
 - Leg left right
 - Mouth
 - Torso
 - Other _____

Date: _____

Type of Body Substance Involved:

- Blood
 - Fluid containing visible blood
 - Other potentially infectious fluid or tissue
- _____

The Exposure Incident Occurred:

- After use and before disposal of sharp
- As a result of body substance splash
- As a result of specimen leaking/spill
- Between steps of a multistep procedure
- Cleaning a room
- Disassembling
- During trash disposal
- During use of sharp
- While cleaning equipment
- While putting sharp into disposal container
- Other _____

Identify Sharp Involved:

(if known)

Type: _____

Brand: _____

Model: _____

Did the device being used have engineered sharps injury protection?

- yes
- no
- don't know

Was the protective mechanism activated?

- yes-fully
- yes-partially
- no

The exposure incident occurred:

- before activation
- during activation
- after activation

Hepatitis B Vaccination and Vaccine-Response

Status: (Employee)

- Unvaccinated
 - History of HBV infection
- Partially Vaccinated
 - 1 dose
 - 2 doses
- Previously vaccinated:
 - Known responder
 - Known non-responder
 - Anti-HBs response unknown

Personal Protective Equipment (PPE) Used:

(Check all that apply)

- Gloves
- Fluid-resistant gown/apron
- Lab coat
- Face shield or mask
- Eye Protection
- Mouth Piece
- Resuscitation bag
- Other _____

Initial Employee Post-Exposure Management:

(Check all that apply)

- Immediate First Aid
 - Wash exposed area/injury
 - Flush nose, mouth or skin
 - Irrigate eye(s) for 15-30 minutes
- Medical Evaluation
- Counseling/education
- Baseline testing:
 - Anti-HBs
 - Anti-HCV & ALT
 - HIV antibody
- Hepatitis B vaccination
- HBIG
- HIV Post-exposure prophylaxis
 - Medications used _____
 - Baseline drug toxicity testing (CBC, renal and hepatic functions)

Exposed employee: If sharp had no engineered sharps injury protection, do you have an opinion that such a mechanism could have prevented the injury?

- yes
- no

Explain: _____

Exposed employee: Do you have an opinion that any other engineering, administrative or work practice control could have prevented the injury?

- yes
- no

Explain: _____

Employee's Signature (optional) Date

Witness' Signature (optional) Date

Appendix C.

HIV Counseling and Education for Health Care Workers after an Occupational Exposure

HIV COUNSELING AND EDUCATION FOR HEALTH CARE WORKERS AFTER AN OCCUPATIONAL EXPOSURE

Although the risk of HIV transmission from an occupational exposure is low when compared with hepatitis B virus (HBV) and even hepatitis C virus (HCV), the emotional impact of such an exposure on the worker is often profound. For some, it may trigger a serious psychological and/or career crisis; exacerbate existing personal problems, such as marital difficulties; create fear of social repercussions; and disrupt sexual relationships and childbearing plans. Counseling needs to address both psychosocial and disease transmission issues applicable to all bloodborne viruses.

The following guidelines were published in the University of Chicago Press on behalf of the Society for Healthcare Epidemiology of America, Updated US Public Health Service Guidelines for the Management of Occupational Exposures to Human Immunodeficiency Virus and Recommendations for Post-exposure Prophylaxis (September, 2013) and may be located on the following link <http://www.jstor.org/stable/10.1086/672271>. These guidelines address issues that may present during each phase of post-exposure management. While it is intended for situations in which the HIV exposure is known, the principles apply to a number of circumstances (e.g., the healthcare worker [HCW] is waiting for the patient's test results or the patient has refused testing), each of which creates its own anxiety for HCWs.

The term "counselor" will be used to denote any individual who is providing psychological support for an exposed HCW. Regardless of title, counselors should be well versed in issues of HIV infection, available support services, and the general concerns of exposed and infected individuals. Prior to seeing the HCW, the counselor should review the Georgia Department of Public Health policy on post-exposure management and HIV counseling and testing, and the local exposure control plan. Also, the counselor should have on hand a list of resources for linkages to care.

Several subjects should be covered in post-exposure counseling, including assessment of transmission risk from the exposure, information about medical follow-up and laboratory testing, and education to prevent secondary transmission. Based on assessment of the HCW, including the HCW's emotional status, the counselor must determine the ability of the HCW to be actively involved in the decision-making process, as well as the scope and timing of information provided.

Initial Counseling Session

The initial counseling session should occur as soon as possible after the exposure and seek to accomplish the following tasks:

- Establish a trusting environment. Communicate support, concern, confidence, competence and confidentiality. Inform the HCW that the purpose of counseling is not punitive in nature and is a routine part of HIV testing.
- Assess the HCW's emotional status. Acknowledge feelings (e.g., hysteria, anger, fear, disbelief) the HCW may be experiencing and allow for their expression. Acknowledge that

this is an anxiety-provoking situation and assess how the HCW is coping. Support healthy coping mechanisms. Offer linkage for support services, if needed.

- Describe the post-exposure protocol. Indicate what services are provided by the employer and who will be involved in the process, what support services are available (and how they can be accessed), and what is expected from the HCW. If there are needs identified that cannot be met within the organization, linkage to the appropriate resources should be offered.
- Review the relative risk of transmission represented by the specific exposure. Scientifically accurate information about the known risk of seroconversion (i.e. window period) following an occupational exposure to HIV should be accessible to the counselor and employee. Discussion should include the significance of the exposure and whether similar events have led to infection. Counselors should periodically update their knowledge of relevant epidemiological data to ensure that current information is provided.
- Discuss importance of HIV testing and encourage the HCW to test. If the HCW agrees to test, obtain informed consent. If the HCW declines testing, have him/her sign a declination of consent form (See sample in Appendix A.).
- Describe confidential HIV testing. The most important reason for immediate post-exposure testing is to establish a baseline record of the HCW's HIV status at the time of exposure. In the rare event of seroconversion, subsequent claims for Workers' Compensation or avenues of legal recourse will rely on the establishment of this fact. For this reason, anonymous testing programs, which use no personal identifiers, are not recommended for individuals who desire documentation of testing. If there is reluctance to receive confidential testing through the institution's resources, the counselor may suggest that the HCW see his/her personal health care provider or visit an alternative site that offers confidential testing. **Note:** Consider using rapid HIV testing (e.g., OraQuick or Clearview).
- Explain the HIV testing process and possible test results, including the possibility that, depending on previous exposures/risk behaviors, baseline testing will yield a positive/reactive test result. **Note:** HIV antibody testing is performed serially (i.e., baseline, 6 and 12 weeks and 6 months; or testing may conclude at 4 months if fourth-generation combination HIV p24 antigen-HIV antibody testing is used for follow-up)) after an occupational exposure. If rapid HIV testing is performed, explain that reactive results (preliminary positive) will require confirmatory testing (e.g., routine serum testing).
- Educate the HCW on measures to prevent secondary HIV transmission during the follow-up, post-exposure period.
 - Discuss the increased risk of transmission during seroconversion because of high viral load.
 - Advise HIV-exposed HCWs to:
 - Use condoms during all sexual encounters including oral, anal and vaginal sex or sexual abstinence to prevent sexual transmission
 - Avoid pregnancy

- Defer from donating blood, plasma, organs, tissue, or semen
 - Avoid sharing needles
 - If a woman is pregnant, she should consult with her physician about the risk of infecting her infant.
 - If the exposed HCW is breast-feeding, she should be counseled about the risk for HIV transmission through breast milk, and discontinuation of breastfeeding should be considered.
 - Subject to the HCW's desire and/or willingness, discuss his/her personal risk, including identification of personal risks and development of risk reduction plans.
- Explain that post-exposure precautions should be maintained until HIV infection in the source and/or HCW has been ruled out.
 - Explain that there is no need to modify patient-care responsibilities to prevent transmission to patients based solely on an HIV exposure.
 - Assist the HCW in identifying individuals with whom information should be shared about the exposure and possibility of HIV infection, taking into consideration the following:
 - Impact of this information on family, friends and coworkers.
 - The HCW's perception of their ability to keep the information confidential.
 - Possible repercussions for the HCW.
 - Remind the HCW of his/her continued obligation to protect the identity/confidentiality of the source individual.
 - Explain how HIV test results will be provided. **Note:** If rapid HIV testing is used, test results may be provided during this counseling session (see below).
 - Advise the HCW to seek medical evaluation for any acute illness that occurs during the follow-up period, especially if characterized by fever, rash, myalgia, fatigue, malaise or lymphadenopathy.
 - Contact the HCW within 72 hours after the exposure to assess emotional state and provide linkages for additional counseling and/or services (if necessary).
 - Document the following in the HCW's medical record:
 - All counseling and education provided, especially education to prevent secondary transmission, specific issues/problems discussed, and plans
 - Consent or refusal forms
 - Linkages
 - Follow-up

Ongoing Counseling

It may be necessary to establish ongoing counseling for the HCW and possibly his/her spouse or sexual partner. In some cases, co-workers who witnessed the event, or who inadvertently contributed to the exposure, may need counseling support as well. The services the institution is able to offer and the circumstances that necessitate referral to another provider should be clearly defined.

Post-test Counseling Following Occupational HIV Exposure

This section guides counselors in giving HIV test results based on the stage of post-exposure follow-up and HIV antibody test results.

Note: When giving rapid test results, follow most of the concepts listed below, with the exception of the indeterminate and positive test results sections. If the rapid test result is negative, no further testing is required until the next follow-up HIV testing date (see negative results below). If the rapid test result is reactive (preliminary positive), confirmatory testing is required and the HCW should continue to take precautions to avoid possible transmission of HIV to others (see above). Individuals who test positive should discontinue PEP, if started.

• General Concepts

- Give the test results, after briefly assessing the HCW's readiness to receive the result A preliminary greeting, while appropriate, should not prolong the HCW's anxiety. Each HCW comes with his/her own expectation of what he/she will be told, which may not be consistent with the result. This expectation will be influenced by several factors including the stage of follow-up, level of risk represented by the exposure and any personal risk factors.
- Allow time to react to the information provided. Depending on the test result, many emotions may surface. The HCW's expectations, anxiety level, relief, joy, disbelief, sadness, anger or even the absence of emotion may be seen.
- Explain the significance of the result. This will vary depending on what the result is and at what stage in the post-exposure series the test was performed. Counselors should give accurate and factual information without creating false expectations.
- Evaluate the HCW's understanding of the information and offer clarification as indicated; provide literature and/or written instruction as needed.
- Review risk reduction recommendations/plans, and schedule the next appointment, as indicated.
- Remind the HCW to be aware of acute illness. Advise the HCW to seek medical evaluation for acute illness that occurs during the follow-up period, especially if characterized by fever, rash, myalgia, fatigue, malaise or lymphadenopathy.
- With follow-up visits, there should be consistency with the counselor in that, if possible, the same counselor should be seeing the exposed HCW at each visit to minimize anxiety.

- **Interpretation of Test Results**

- **Negative Test Result**

Baseline test: At the time of exposure, the HCW shows no evidence of HIV infection. This, however, does not indicate that infection has not occurred, especially if testing was performed within a few days of an exposure. Antibodies are usually produced within 6 to 12 weeks after infection but may take longer (in rare instances).

Follow-up test: The significance is determined by when it was performed during the follow-up series and the magnitude of the exposure. As the time interval increases from exposure to testing date, a negative test result becomes a better indication that transmission has not occurred. At the 3-month stage, it is reasonable to tell the HCW that a negative result is a good indication that transmission has not occurred. However, a negative test result at 6 months, or 4 months if fourth-generation combination HIV p24 antigen-HIV antibody testing is used for follow-up, will provide greater reliability.

- **Indeterminate Test Result**

Conveying an "indeterminate" result is problematic because of its uncertainty and because such a result is often difficult for HCWs to understand and accept.

General interpretation: An "indeterminate" HIV test result may be reported when the ELISA and Western blot test results do not conform to standards for reactive or non-reactive classification. The employee should be told that the following factors can cause an "indeterminate" test result: an unrelated health condition, infection with HIV-2 or unusual HIV-1 subtypes, or some other unknown cause. the most frequent causes of indeterminate testing: <http://cvi.asm.org/content/14/6/649/T1.expansion.html> .

Less commonly, the HCW is in the window period of HIV seroconversion, especially if this test followed a negative baseline HIV antibody test.

Submission of another blood sample: In general, it is recommended that another test be done in 6 weeks. However, consider an immediate linkage for medical evaluation (to assess possible acute HIV infection) if the exposure was severe, there are acute symptoms present and/or there was a recent negative test result. In rare circumstances, an indeterminate result may be reported in subsequent HIV test(s). If this should occur, the counselor should refer the HCW for clinical evaluation.

- **Positive Test Result**

This test result indicates that the HCW is infected with HIV and able to transmit it to others. It does not mean the HCW has AIDS or will develop AIDS in the near future.

Baseline test: If the specimen was obtained at the time of the exposure or within 2 weeks of the incident (the earliest point when antibodies can be detected), the infection is not a result of that specific event. If the baseline test was obtained after this period, it cannot

be known from this test alone whether infection was present at the time of exposure or whether transmission from the recent occupational exposure occurred.

Follow-up test: A positive HIV antibody test in the post-exposure follow-up period is supportive evidence that occupational transmission has occurred, assuming there has been no interim exposure to infection, occupational or non-occupational.

Note: If the HCW insists, perform a second test to verify the positive/reactive result or if requested link the HCW to an HIV specialist for further testing and counseling.

Counseling the Occupationally HIV-Infected HCW

Occupational HIV seroconversion, although rare, can have a significant impact on all involved: the affected employee; his/her family, friends and significant others; the counselor who has to give the test result; and the institution. There are many issues that will need to be addressed, and counseling the occupationally HIV-infected HCW is the first step in what will become a lengthy process for the HCW and the institution. The following describes in more detail the type of interaction that may take place:

- Communicate the result in a straightforward manner, and allow the employee time to react. Do not anticipate a specific response; be prepared to support whatever reaction occurs.
- Explain the significance of the result. If the HIV antibody test is positive, the HCW is HIV infected. If the baseline HIV test is positive, it is unlikely that the infection is a result of the reported incident. If a follow-up HIV test is positive, it is more likely that the infection is a result of the reported incident.
- Address immediate concerns, including fear and the implications for one's own personal health and mortality; concern about the reaction of family members and sexual partners; anxiety about job implications, especially if the HCW performs invasive procedures; and concerns that confidentiality might be breached.
- Discuss the health implications. HIV infection does not mean the HCW has AIDS. Stress the importance of establishing a relationship as quickly as possible with a health care provider experienced in HIV care who can monitor the HCW's health status and recommend the appropriate medical management.
- Discuss implications for secondary transmission. The HCW needs to understand that he/she is capable of transmitting the virus and will need information to prevent the spread through sexual contact. Recommendations for infection control, appropriate to the HCW's job responsibilities and nature of patient interactions, should be reinforced.
- Develop a plan of action. The next several hours and days are a critical time emotionally for the HCW. In preparing a plan of action, some of the issues that should be explored include:
 - Crisis intervention:
 - What are the HCW's plans for the next 24 hours? How will he/she get home that day?

- Does the HCW clearly understand the meaning of the test result?
- Does the HCW have a support system in place? Is a linkage for psychosocial services or to a community-based support organization appropriate? (The counselor should provide linkages for emergency and ongoing psychological support services to all individuals undergoing HIV testing.)
- Does the HCW need assistance in disclosing results of the test to his/her partner(s)? What reaction is expected? (Remind the HCW to carefully consider decisions to disclose HIV-related information to co-workers or others.)

Note: Emergency mental health contact information per county and/or city/town is available online at the Georgia Department of Behavioral Health and Developmental Disabilities, Georgia Crisis and Access Line at <http://www.mygcal.com/> or by calling 1-800-715-4225.

➤ Linkage to medical care:

- Is the need for early medical evaluation clearly understood?
- Does the HCW understand the importance of continuous adherence to antiretroviral therapy?
 - Is the HCW currently under the care of a health care provider? If so, does he/she anticipate any difficulty in divulging the results of the HIV test to the health care provider? If the HCW does not have a health care provider or if he or she would like a linkage to another provider, is the counselor able to assist? If not, where can linkage information be obtained?
- What medical services are available through the employer?
- Will the HCW have to bear any financial burden?

➤ Plan for linkages and follow-up:

- Write out a summary of the action plan that was developed with the HCW. Include linkages made for medical and psychosocial intervention. In some cases, it may be appropriate to delay discussion of certain issues until the follow-up visit when a more comprehensive dialogue can take place. In such instances, the follow-up should occur within a few days of giving the positive/reactive test result.
- During the initial session, or in subsequent appointments, review the modes of HIV transmission as well as risk-reduction strategies and basic infection control guidelines for the home and workplace with the HCW. The conversation should proceed in an interactive manner, allowing the employee to ask specific questions and allowing the counselor to clarify any misperceptions.
 - Provide written information: Much of the information provided in the post-test counseling session may not be clearly understood by the affected HCW. For this reason, printed material that highlights the recommendations and instructions given should be made available to the HCW for future reference. A list of linkages for medical and psychosocial support services should be included in the information package.

Appendix D.

Additional Resources

OCCUPATIONAL OR NON-OCCUPATIONAL EXPOSURE MANAGEMENT AND TREATMENT GUIDELINES

National Clinicians Post-Exposure Prophylaxis Hotline (PEPLINE)

- 1-888-448-4911 <http://www.nccc.ucsf.edu> (November 24, 2014).

Guidelines

- US Public Health Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis:
<http://www.jstor.org/stable/10.1086/672271> (November 24, 2014).
- American Nurses Association, *Safe Needles Save Lives*
<http://needlestick.org> (November 24, 2014).
- CDC, “Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV in the United States: Recommendations from the U.S. Department of Health and Human Services,” *MMWR*, Vol. 54, No. RR-2, January 21, 2005
<http://www.cdc.gov/mmwr/PDF/rr/rr5402.pdf> (November 24, 2014).
- CDC, “Guidelines for Infection Control in Dental Health-Care Settings,” *MMWR*, Vol. 52, No. RR-17, December 19, 2003, <http://www.cdc.gov/mmwr/PDF/rr/rr5217.pdf> (November 24, 2014).
- CDC, HepB Interpretation table:
<http://www.cdc.gov/hepatitis/HBV/PDFs/SerologicChartv8.pdf>
- CDC, HepC Interpretation table:
http://www.cdc.gov/hepatitis/HCV/PDFs/hcv_graph.pdf
- CDC, “Recommendations for Postexposure Interventions to Prevent Infection with Hepatitis B Virus, Hepatitis C Virus, or Human Immunodeficiency Virus, and Tetanus in Persons Wounded During Bombings and Other Mass-Casualty Events - United States, 2008,”
MMWR, Vol. 57, RR-6, August 1, 2008
<http://www.cdc.gov/mmwr/PDF/rr/rr5706.pdf>
- CDC, “Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis,”
MMWR, Vol. 54, No. RR-9, September 30, 2005
<http://www.cdc.gov/mmwr/PDF/rr/rr5409.pdf>
- CDC, “U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis,” *MMWR*, Vol. 50, No. RR-11, June 29, 2001 available online at <http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf>.

- Mountain Plains AIDS Education and Training Center and the PEpline, *PEP Steps, A Quick Guide to Postexposure Prophylaxis in the Health Care Setting* (April 2006)
<http://mpaetc.org/default.asp>

Safety Device Lists and Other Useful Information

- University of Virginia's International Healthcare Worker Safety Center
<http://healthsystem.virginia.edu/internet/epinet/>
- International Sharps Injury Prevention Society – Safety Product List
http://isips.org/page/safety_product_list
- National Alliance for the Primary Prevention of Sharps Injuries
<http://nappsi.org/safety.shtml>
- Sustainable Hospitals
<http://www.sustainableproduction.org/proj.shos.abou.php>

Continuing Education and Brochures

- ANA Continuing Education Online, *Needlestick Safety and Prevention*,
<https://nursingworld.org/mods/mod600/cendvers.htm> (Expiration Date: December 31, 2011)
- Kathleen McMahon, *Infection Control: HIV/AIDS and Other Bloodborne Pathogens*,
<http://ce.nurse.com/CE163-60/Infection-Control-HIV/AIDS-and-Other-Bloodborne-Pathogens/> (Price, \$10.00)
- CDC, *Cover Your Cough*, <http://www.cdc.gov/flu/protect/covercough.htm>
- CDC, *Exposure to Blood: What Health Care Personnel Need to Know*,
http://www.cdc.gov/ncidod/dhqp/pdf/bbp/Exp_to_Blood.pdf
- CDC, *Hand Hygiene Interactive Training Course*,
<http://www.cdc.gov/handhygiene/training/interactiveEducation/>
- CDC, *Guidelines for Infection Control in Dental Health-Care Settings—2003*,
<http://www.cdc.gov/OralHealth/infectioncontrol/guidelines/ppt.htm>
- CDC, *One and Only Campaign* (safe injection practices),
<http://www.oneandonlycampaign.org>
- CDC, *Guidance for Personal Protective Equipment (PPE) in Healthcare Settings*,
<http://www.cdc.gov/ncidod/dhqp/ppe.html>
- CDC, *Sharps Safety for Healthcare Settings, Teaching Tools*,
<http://www.cdc.gov/sharpssafety/tools.html>

- National Institute for Occupational Safety and Health, *What Every Worker Should Know: How to Protect Yourself From Needlestick Injuries*, NIOSH Publication No. 2000-135, <http://www.cdc.gov/niosh/docs/2000-135/pdfs/2000-135.pdf>

Device Evaluation Forms

- CDC
<http://www.cdc.gov/OralHealth/infectioncontrol/forms.htm>
<http://www.cdc.gov/sharpssafety/pdf/AppendixA-13.pdf>
- Training for the Development of Innovative Control Technologies (TDICT) Project
<http://www.tdict.org/evaluation2.html>

Workbooks and Employer's Brochure

- CDC, *Workbook for Designing, Implementing, and Evaluation a Sharps Injury Prevention Program*, <http://www.cdc.gov/sharpssafety/resources.html>
- National Institute for Occupational Safety and Health (NIOSH), *Information for Employers: Complying with OSHA's Bloodborne Pathogens Standard*, <http://www.cdc.gov/niosh/docs/2009-111/>
- Organization for Safety, Asepsis, and Prevention (OSAP), *CDC Guidelines: From Policy to Practice*, https://osap.site-ym.com/store/view_product.asp?id=396090 (Workbook to help dental settings implement CDC infection control guidelines.)

Other Useful Sites

- American Nurses Association, *Save Needles Save Lives*
<http://needlestick.org>
- Association for Professionals in Infection Control and Epidemiology
<http://www.apic.org>
- CDC, Division of Healthcare Quality Promotion (DHQP), *Bloodborne Pathogens in Healthcare Settings*
<http://www.cdc.gov/hai/>
- Food and Drug Administration
<http://www.fda.gov/>
- CDC, National Institute for Occupational Safety and Health, *NIOSH Safety and Health Topic: Bloodborne Infectious Diseases, HIV/AIDS, Hepatitis B Virus, and Hepatitis C Virus*, <http://www.cdc.gov/niosh/topics/bbp/>
- Organization for Safety, Asepsis and Prevention (OSAP), *Dentistry's Resource for Infection Control and Safety*, <https://osap.site-ym.com/>

- U.S. Occupational Safety and Health Administration (OSHA)
<http://www.osha.gov/SLTC/bloodbornepathogens/>

Appendix E

Summary of Some Georgia Laws Regarding HIV/AIDS

Summary of Selected Georgia Laws Regarding HIV/AIDS Issues

1. Definitions

- **Most definitions related to Georgia’s HIV/AIDS laws are found in a single statute.** Although that statute is entitled “HIV tests -- Who may perform test” and it provides information about HIV testing, it also defines AIDS Confidential Information (ACI), AIDS transmitting crime, Counseling, Health care facility, Health care provider, and many other terms used in Georgia’s HIV/AIDS laws. O.C.G.A. § 31-22-9.1
 - Under this statute, **AIDS confidential information (ACI)** is information which discloses that a person:
 - (A) Has been diagnosed as having AIDS;
 - (B) Has been or is being treated for AIDS;
 - (C) Has been determined to be infected with HIV;
 - (D) Has submitted to an HIV test;
 - (E) Has had a positive or negative result from an HIV test;
 - (F) Has sought and received counseling regarding AIDS; or
 - (G) Has been determined to be a person at risk of being infected with AIDS; *and* which permits the identification of that person.
 - Other statutes provide definitions related to Georgia’s HIV/AIDS laws. For example, **HIV is a “bloodborne pathogen”** under O.C.G.A. § 31-12-13 and **HIV is contagious, infectious, communicable, and extremely dangerous to the public health** under O.C.G.A. § 31-17A-1. It is interesting to note that this definition of HIV is almost identical to the definition of venereal diseases such as syphilis, gonorrhea, and chancroid as found at O.C.G.A. § 31-17-1. This similarity supports the position that minors may consent to HIV testing and treatment, which is explained in greater detail in section number four of this summary.

2. Confidentiality and Disclosure of HIV/AIDS Information

- **AIDS confidential information (ACI) shall not be disclosed except as otherwise provided.** Georgia law makes the confidentiality requirements for the disclosure of ACI more stringent than for those of other medical information.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia’s HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

- ACI as defined in O.C.G.A § 31-22-9.1 and disclosed or discovered within the patient-physician relationship shall be confidential and shall not be disclosed except as otherwise provided in O.C.G.A. § 24-12-21 (see below regarding some of those exceptions).
- A person's written consent is required to disclose ACI unless the disclosure is otherwise authorized or required by law. No person or legal entity which receives ACI pursuant to Georgia law or which is responsible for recording, reporting, or maintaining ACI shall intentionally or knowingly disclose that information to another person or legal entity; or be compelled by subpoena, court order, or other judicial process to disclose that information to another person or legal entity. O.C.G.A. § 24-12-21.
- **Permitted and required disclosures of a person's ACI without that person's consent.** There are many exceptions that permit or require disclosure of ACI without a person's written consent. O.C.G.A. § 24-12-21 lists numerous exceptions to the general confidentiality requirement. For example, under the statute, when the patient of a physician has been determined to be infected with HIV and that patient's physician reasonably believes that the spouse or sexual partner or any child of the patient, spouse, or sexual partner is a person at risk of being infected with HIV by that patient, the physician may disclose to that spouse, sexual partner, or child that the patient has been determined to be infected with HIV, after first attempting to notify the patient that such disclosure is going to be made.

O.C.G.A. § 24-12-21(h) was amended in 2014, effective July 1, 2014, to allow the Department of Public Health to disclose AIDS confidential information regarding a person who has been reported to be infected with HIV to a licensed health care provider whom that person has consulted for medical treatment or advice.

O.C.G.A. § 24-12-21 is approximately 10 pages long so it is not fully summarized in this document and it should be reviewed to determine whether a disclosure is permitted or required.

Some criminal statutes require disclosure to victims of AIDS transmitting crimes, the criminal court, and the penal institution or other facility. O.C.G.A. § 17-10-15; O.C.G.A. § 15-11-66.1.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia's HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

- **HIV+ person's mandatory self-disclosure to partners.** Persons living with HIV/AIDS must disclose their infection status to another person prior to engaging in sexual activity or sharing injection drug needles with that other person. Failure to disclose is a felony. O.C.G.A. § 16-5-60. It is irrelevant whether the other person is already HIV+, whether safe sex practices were used, or whether the risk of transmission is zero.

Confidentiality of Medical Information in General

- **HIPAA** preempts conflicting state law unless that state law gives the patient a greater degree of confidentiality than the protection provided by HIPAA. HIPAA applies only to covered entities. HIPAA is regulated by the HHS Office for Civil Rights. More information may be found in the HIPAA regulations, 45 CFR 164.501, and at <http://www.hhs.gov/ocr/hipaa>.
- **Other Georgia laws** such as O.C.G.A. § 31-33-1 through 31-33-8 regarding Health Records, and O.C.G.A. § 31-17-1 through 31-17-8 regarding venereal diseases, have confidentiality and disclosure provisions.

3. HIV testing

- **Pre-test and post-test counseling.** All individuals must be counseled before and after being tested for HIV, but there are exceptions. O.C.G.A. § 31-22-9.1(a)(6); O.C.G.A. § 31-22-9.2.
- **The Georgia DPH and its agents may administer an HIV test with or without a person's consent.** The authorized agent or agents of the Department of Public Health are directed and empowered, when in their judgment it is necessary to protect the public health, to make examinations of persons infected or suspected of being infected with HIV and to administer an HIV test with the consent of the person being tested. In the event the person infected or suspected of being infected with HIV refuses to consent to the administration of an HIV test, the authorized agent or agents of the Department of Public Health are authorized to petition the court for an order authorizing the administration of an HIV test. O.C.G.A. § 31-17A-2.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia's HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

- **Testing for HIV during pregnancy and at the time of delivery.** Every physician and health care provider who assumes responsibility for the prenatal care of pregnant women during gestation and at delivery shall be required to test pregnant women for HIV except in cases where the woman refuses the testing. If at the time of delivery there is no written evidence that an HIV test has been performed, the physician or other health care provider in attendance at the delivery shall order that a sample of the woman's blood be taken or a rapid oral test administered at the time of the delivery except in cases where the woman refuses the testing. A pregnant woman shall submit to an HIV test unless she specifically declines. O.C.G.A. § 31-17-4.2.
- **Mandatory HIV testing for AIDS transmitting crime by an adult.** Upon a verdict or plea of guilty or a plea of nolo contendere to any AIDS transmitting crime, the court in which that verdict is returned or plea entered shall require the defendant to submit to an HIV test within 45 days following the date of such verdict or plea. O.C.G.A. § 17-10-15.
- **Permissive HIV testing for AIDS transmitting crime by a child.** The court may in its discretion and after conferring with the director of the health district, as such officer is provided for in Code § 31-3-15, order that child to submit to an HIV test within 45 days following an adjudication of delinquency. O.C.G.A. § 15-11-66.1.

4. **Consent by unemancipated minors to HIV testing and treatment**

- **It is unclear under Georgia law whether an unemancipated minor may consent to HIV testing and treatment without the consent of a parent or guardian. However, if presented with the question, the courts would likely find that an unemancipated minor may consent to HIV testing and treatment without the consent of a parent or guardian.**

Georgia statutes define a minor as a person younger than 18 years of age. Unemancipated minors do not have the authority to consent to health care treatment in general, but may consent under specific exceptions such as for the testing and treatment of a venereal disease. Novak v. Cobb County-Kennestone Hospital Authority, 849 F. Supp. 1559 (N.D. Ga. 1994), aff'd 74 F.3d 1173 (11th Cir. 1996).

Georgia statutes permit a minor afflicted with venereal disease to consent to testing and treatment for conditions arising out of that venereal disease. The consent ... by a minor who is or professes to be afflicted with a venereal disease, shall be as valid and binding as if the minor had achieved his majority, provided that any such treatment shall involve procedures and therapy related to conditions arising out of the venereal disease which gave rise to the consent. O.C.G.A. § 31-17-7.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia's HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

HIV is likely a venereal disease under Georgia law. The statutory definitions of HIV and of venereal diseases are virtually identical and found in adjacent chapters of the Georgia Code. The only difference between the two definitions is the addition of the word “extremely” in the definition of HIV: HIV is contagious, infectious, communicable, and extremely dangerous to the public health. Furthermore, a Georgia case expanded Georgia’s definition of venereal disease to include Herpes, and that case indicated that AIDS would also be considered a venereal disease. Long v. Adams, 175 Ga. App. 538; 333 S.E.2d 852 (1985).

Therefore, because (1) a minor may consent to testing and treatment of a venereal disease, (2) the statutory definitions of HIV and venereal disease are virtually identical and found in adjacent chapters of the Georgia Code, and (3) Georgia courts indicate that AIDS is a venereal disease, it is reasonable to conclude that an unemancipated minor in Georgia may consent to HIV testing and treatment for HIV, and conditions arising out of the HIV, without the consent of a parent or guardian.

- **Confidentiality and Disclosure of a Minor’s Health Information.** Under the Georgia statute that allows a minor to consent to testing and treatment for a venereal disease, a member of the medical staff of a hospital or public clinic or a physician licensed to practice medicine and surgery may, but shall not be obligated to, inform the spouse, parent, custodian, or guardian of any such minor as to the treatment given or needed. Such information may be given to or withheld from the spouse, parent, custodian, or guardian without the consent of the minor patient and even over the express refusal of the minor patient to the providing of such information.

Georgia statutes treat privacy and confidentiality of a minor’s HIV medical information differently than they treat venereal disease information and it is unclear which legal standard should apply to that information. As noted above, O.C.G.A. § 24-12-21 addresses mandatory and permissive disclosure of HIV/AIDS information. Under O.C.G.A. § 24-12-21:

(c), AIDS confidential information shall be disclosed to the person identified by that information or, if that person is a minor or incompetent person, to that person's parent or legal guardian.

(d) AIDS confidential information shall be disclosed to any person or legal entity designated to receive that information when that designation is made in writing by the person identified by that information or, if that person is a minor or incompetent person, by that person's parent or legal guardian.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia’s HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

(e) AIDS confidential information shall be disclosed to any agency or department of the federal government, this state, or any political subdivision of this state if that information is authorized or required by law to be reported to that agency or department.

(f) The results of an HIV test shall be disclosed to the person, or that person's designated representative, who ordered such tests of the body fluids or tissue of another person.

(g) When the patient of a physician has been determined to be infected with HIV and that patient's physician reasonably believes that the spouse or sexual partner or any child of the patient, spouse, or sexual partner is a person at risk of being infected with HIV by that patient, the physician may disclose to that spouse, sexual partner, or child that the patient has been determined to be infected with HIV, after first attempting to notify the patient that such disclosure is going to be made.

...

(k) When any person or legal entity is authorized or required by this Code section or any other law to disclose AIDS confidential information to a person at risk of being infected with HIV and that person at risk is a minor or incompetent person, such disclosure may be made to any parent or legal guardian of the minor or incompetent person, to the minor or incompetent person, or to both the minor or incompetent person and any parent or legal guardian thereof.

As noted above, O.C.G.A. § 24-12-21 is approximately 10 pages long so it is not fully summarized in this document and it should be reviewed to determine whether a disclosure is permitted or required.

5. **Infected Healthcare workers**

- **Denial of licenses - discipline of physicians.** O.C.G.A. § 43-34-37 Unprofessional conduct for a physician includes failing to conform to the recommendation of the CDC for preventing transmission of the HIV, Hepatitis B and C Virus and Tuberculosis to patients during exposure-prone invasive procedures. See Recommendations for Preventing Transmission of HIV and HBV to Patients during Exposure Prone Invasive Procedures, 40 MMWR. No. RR-8, 5 (1991). HCWs who are infected with HIV should not perform exposure-prone procedures unless they have sought counsel from an expert review panel [ERP] and been advised under what circumstances, if any, they may continue to perform these procedures.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia's HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

6. **Healthcare workers and Occupational Exposures**

- **Blood borne pathogen standard** governing occupational exposure of public employees. O.C.G.A. § 31-12-13.

Atlanta Legal Aid Society, last updated 07/08/2014. Disclaimer: This information is provided for guidance purposes only. It is not intended to be a comprehensive statement of Georgia's HIV/AIDS laws or to replace the Official Code of Georgia Annotated. It is not intended to be used or relied upon as legal advice, or to substitute for the advice of legal counsel.

References

Abraham Borer, et al. Cell phones and *Acinetobacter* transmission [letter]. *Emerg Infect Dis* [serial on the Internet], July 2005, http://wwwnc.cdc.gov/eid/article/11/7/05-0221_article.htm

Elizabeth A. Boyard, et al., *Guidelines for Infection Control in Health Care Personnel*, 1998, October 28, 2005, http://www.cdc.gov/ncidod/dhqp/gl_hcpersonnel.html (February 2015).

CDC, “Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Nonoccupational Exposure to HIV in the United States: Recommendations from the U.S. Department of Health and Human Services,” *MMWR*, Vol. 54, No. RR-2, January 21, 2005, <http://www.cdc.gov/mmwr/PDF/rr/rr5402.pdf> (February 2015).

CDC, Division of Healthcare Quality Promotion, *Healthcare Worker Occupational Health Guidelines*, <http://www.cdc.gov/hai/> (February 2015)

CDC, Division of Healthcare Quality Promotion, *Diseases and Organisms in Healthcare Settings*, <http://www.cdc.gov/hai/organisms/organisms.html> (February 2015)

CDC, “Guideline for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/API/IDSA Hand Hygiene Task Force,” *MMWR*, Vol. 51, No. RR-16, October 25, 2002, <http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf> (February 2015).

CDC, “Guidelines for Infection Control in Dental Health-Care Settings,” *MMWR*, Vol. 52, No. RR-17, December 19, 2003, <http://www.cdc.gov/mmwr/PDF/rr/rr5217.pdf> (February 2015).

CDC, and the Healthcare Infection Control Practices Advisory Committee (HICPAC), *Guidelines for Environmental Infection Control in Health-Care Facilities*, June 6, 2003, http://www.cdc.gov/hicpac/pdf/guidelines/eic_in_HCF_03.pdf (February 2015).

CDC, “Immunization of Health-Care Workers, Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC),” *MMWR*, Vol. 46, No. RR-18, December 26, 1997, <http://ftp.cdc.gov/pub/Publications/mmwr/rr/rr4618.pdf> (February 2015).

CDC, Oral Health Resources, “Frequently Asked Questions: Personal Protective Equipment (Masks, Protective Eyewear, Protective, Apparel, Gloves),” Updated July 10, 2013. http://www.cdc.gov/OralHealth/infectioncontrol/faq/protective_equipment.htm (February 2015).

CDC, “A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States, Recommendations of the Advisory Committee on Immunization Practices (ACIP) Part II: Immunizations of Adults,” *MMWR*, Vol. 55, No. RR-16, December 8, 2006, <http://www.cdc.gov/mmwr/PDF/rr/rr5516.pdf> (February 2015).

CDC, “Recommendations for Postexposure Interventions to Prevent Infection with Hepatitis B Virus, Hepatitis C Virus, or Human Immunodeficiency Virus, and Tetanus in Persons Wounded During Bombings and Similar Mass-Casualty Events –United States, 2008,” *MMWR*, Vol. 57, No. RR-6, August 1, 2008, <http://www.cdc.gov/mmwr/PDF/rr/rr5706.pdf> (February 2015).

CDC, “Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease,” *MMWR*, Vol. 47, No. RR-19, October 16, 1998, <http://www.cdc.gov/mmwr/PDF/rr/rr4719.pdf> (February 2015).

CDC, “Recommended Adult Immunization Schedule - United States, 2010,” *MMWR*, Vol. 59, No. 1, January 15, 2010, <http://www.cdc.gov/mmwr/PDF/wk/mm5901-Immunization.pdf> (February 2015).

CDC, “Sterilization or Disinfection of Patient-Care Equipment: HIV Related,” November 18, 2000, <http://www.cdc.gov/hai/> (February 2015).

CDC, “Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, HIV and Recommendations for Postexposure Prophylaxis,” *MMWR*, Vol. 50, No. RR-11, June 29, 2001, <http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf> (February 2015)

CDC, *Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program*, February 2008, http://www.cdc.gov/sharpsafety/pdf/sharpsworkbook_2008.pdf (February 2015)

K. E. Corey, et al., “Early Treatment Improves Outcomes in Acute Hepatitis C Virus Infection: A Meta-analysis,” *Journal of Viral Hepatitis*, Vol. 17, No. 3, March 2010, pp. 201-207 (February 2015).

Georgia Department of Natural Resources, Division of Environmental Protection, Environmental Rules, Chapter 391-3-4 Solid Waste Management, 391-3-4-.15 Biomedical Waste. Amended, June 7, 1993, <http://rules.sos.state.ga.us/docs/391/3/4/15.pdf> (February 2015).

Georgia Department of Public Health, “Chapter 14, Standard Operating Guidelines for Conducting Mass Vaccination Clinics,” *Georgia Immunization Program Manual*, October 2012, <http://dph.georgia.gov/sites/dph.georgia.gov/files/Immunizations/Publications-GA-Imm-Manual-Updates.pdf> (February 2015).

Georgia Public Health Rules, *Sharps Injury Prevention, Chapter 290-5-60*, http://rules.sos.state.ga.us/pages/DEPARTMENT_OF_HUMAN_SERVICES/PUBLIC_HEALTH/SHARPS_INJURY_PREVENTION/index.html (February 2015).

(Note: This rule has been repealed as of November 2013. The current rule is O.C.G.A § 31-12-13 and the link may be found in another section of the references titled Sharps Injury Prevention)

Immunization Action Coalition, *Healthcare Personnel Vaccination Recommendations*, October 2009, <http://www.immunize.org/catg.d/p2017.pdf> (February 2015).

D. Kuhar et. Al (September, 2013). Updated US Public Health Service Guidelines for the Management of Occupational Exposures to Human Immunodeficiency Virus and Recommendations for Postexposure Prophylaxis, <http://www.jstor.org/stable/10.1086/672271> (February 2015)

Occupational Safety and Health Administration (OSHA), Occupational Exposure to Bloodborne Pathogens; Needlestick and Other Sharps Injuries: Final Rule. January 18, 2001, http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=16265 (February 2015).

OSHA, “Regulations (Standards-29CFR), Bloodborne pathogens.-1910-1030,” http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051 (February 2015)

OSHA, *Safety and Health Topics: Bloodborne Pathogens and Needlestick Prevention*, <http://www.osha.gov/SLTC/bloodbornepathogens/> (February 2015).

OSHA, Standard Interpretations, Use of Rapid HIV Antibody Testing on a Source Individual After an Exposure Incident, January 8, 2007 http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATION_S&p_id=25619 (February 2015).

William A. Rutala, David J. Weber, and the Healthcare Infection Control Practices Advisory Committee (HICPAC), *Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008*, <http://www.cdc.gov/hicpac/pubs.html> (February 2015).

Jane D. Siegal, et al., and the Healthcare Infection Control Practices Advisory Committee, *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings*, <http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf> (February 2015).

Sharps Injury Prevention, O.C.G.A § 31-12-13, <http://ga.elaws.us/law/section31-12-13> (February 2015)

The Georgia Archives, “Training Records,” *Retention Schedule for State Government Paper and Electronic Records*, approved April 2009, pp. 36, 39,
<http://www.georgiaarchives.org/documents/2011StateGovernmentSchedules.pdf>
(February 2015)

The Georgia Archives, “Training Records,” *Retention Schedule for Local Government Paper and Electronic Records*, approved November 2009, pp. 39, 44,
http://sos.georgia.gov/archives/pdf/state_spec_reports/LGScheduleNov2009.pdf (February 2015).

University of Virginia, International Health Care Worker Safety Center, *List of Safety–Engineered Sharps Devices*, January 22, 2010,
www.healthsystem.virginia.edu/internet/epinet/safetydevice.cfm (February 2015)

U.S. Environmental Protection Agency, *Selected EPA-registered Disinfectants: EPA’s Registered Sterilizers, Tuberculocides, and Antimicrobial Products Against Certain Human Public Health Bacteria and Viruses*, Current as of January 9, 2009,
<http://www.epa.gov/oppad001/chemregindex.htm> (February, 2015)

U.S. Department of Health and Human Services, *Biosafety in Microbiological and Biomedical Laboratories (5th edition)*, December 2009,
<http://www.cdc.gov/biosafety/publications/bmbl5/bmbl.pdf> (February 2015)

**Georgia Department of Public Health
2 Peachtree Street NW
Atlanta, Georgia 30303
<http://dph.georgia.gov/>**