ALABAMA DEPARTMENT OF PUBLIC HEALTH

INFECTION PREVENTION GUIDELINES

INFECTION PREVENTION SECTION
BUREAU OF COMMUNICABLE DISEASE
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Infection Prevention Manual

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INTRODUCTION

The prevention and control of communicable diseases is a cornerstone of the public health system. It is the function and purpose of this manual to provide specific infection control guidelines which will assist in decreasing the opportunity for transmission of communicable diseases in the public healthcare setting. While this manual contains only recommendations, prudence would dictate that all healthcare workers follow these guidelines.

Unapparent infection may be clinically unrecognized yet still be communicable. It is therefore more reliable to provide a high level of infection precautions for all patients, whether or not an infection has been diagnosed. This approach, endorsed by the Centers for Disease Control and Prevention (CDC), the Occupational Safety and Health Administration (OSHA) and the American Public Health Association, is now referred to as Standard Precautions and includes the previously used concept of universal precautions. Standard Precautions apply to blood, all body fluids, secretions, and excretions regardless of whether or not they contain visible blood. They also apply to non-intact skin and mucous membranes.

These guidelines will be revised as the need is recognized.

HAND HYGIENE

Clean hands are the single most important factor in preventing the spread of pathogens in healthcare settings.

Definitions:

Hand hygiene is a general term that applies to handwashing, use of antiseptic hand washes, use of alcohol-based hand rubs, or surgical hand hygiene/antisepsis.

Handwashing refers to washing hands with plain soap and water. Handwashing with soap and water remains a sensible strategy for hand hygiene in non-healthcare settings and is recommended by the CDC and other experts.

Antiseptic handwash refers to water and soap or other detergents containing an antiseptic agent.

Alcohol-based hand rub refers to an alcohol-containing preparation applied to the hands to reduce the number of viable microorganisms.

Surgical hand hygiene/antisepsis refers to an antiseptic handwash or antiseptic hand rub performed preoperatively by surgical personnel to eliminate transient hand flora and reduce resident hand flora. Antiseptic detergent preparations often have persistent antimicrobial activity.

Indications for Hand Hygiene:

- When hands are visibly dirty, contaminated, or soiled. Wash with a non-antimicrobial or an antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands. Such hand rubs reduce bacterial counts on the hands.

Specific Indications for Hand Hygiene:

- Before:
  - Patient contact
  - Inserting urinary catheters, peripheral vascular catheters, or other invasive devices.
- After:
  - Contact with a patient's skin.
  - Contact with body fluids or excretions, non-intact skin, wound dressings.
  - Removing gloves.

Recommended Hand Hygiene Technique:

These recommendations will improve hand hygiene practices and reduce transmission of pathogenic microorganisms to patients and personnel in healthcare settings.

Hand rubs:

- Apply to palm of one hand and rub hands together covering all surfaces of hands and fingers until hands are dry.
- Volume: based on manufacturer
- Following application of alcohol-based hand rubs, hands should be rubbed together until all alcohol has evaporated. It is most important to let the alcohol dry!

Handwashing:

- Wet hands first with water; apply the amount of soap recommended by the manufacturer, and rub hands together for at least 15 seconds, covering all surfaces of the hands and fingers.
- Rinse hands with water and dry thoroughly with disposable towel.
- Use the towel to turn off the faucet.

Flammability of Alcohol Rubs:

Alcohols are flammable. Thus it is important that all storage of replacement alcohol-based hand rub containers, regardless of the quantity they contain, be within an approved cabinet for storing flammable liquids. Dispensers should not be installed over electrical receptacles or near other potential sources of ignition.

Placement of Alcohol Based Hand Gel:

Alcohol based hand gels should be readily available for staff's use, but out of the reach of toddlers.

DISEASE TRANSMISSION

It is important to understand the factors that must be present for disease transmission to occur. Spread of infection in human beings requires the presence of three factors:

1. A disease-causing organism (agent or source) in sufficient quantity

2. A susceptible host (a person who is not immune to that organism)

3. A way for that agent to infect that host (a mode of transmission)

These three factors make up what is commonly referred to as the "chain of infection".

Agent or Source

Infectious agents are biological organisms capable of causing disease. In humans, the source of an infecting agent often is another person. Other potential sources of organisms include animals and environmental objects that have become contaminated.

Host

People's resistance to disease-causing microorganisms varies greatly. When exposed to an infectious agent some may be immune, some may resist infection, and others may begin to carry the organism without becoming ill, while still others may become infected with the organism and develop disease. Some of the factors that determine susceptibility include age, immune status, preexisting chronic disease, and breaks in the skin or mucous membranes.

Mode of Transmission

The infecting agent must enter the susceptible host in order for infection to occur. Different organisms require different conditions for transmission and infection to occur. Some organisms need to enter the bloodstream directly, some need to be inhaled, and others need direct contact with an open area of the skin or a mucous membrane.

In most situations, it is easiest to prevent disease by preventing transmission of the organism. It is not usually possible to eliminate the organism or to eliminate the susceptible host. For some diseases it is possible to immunize susceptible persons in advance of potential exposure. However, for most diseases, we must rely on the use of well established infection control methods to prevent transmission.

STANDARD PRECAUTIONS

Standard Precautions is the terminology for a set of guidelines established by the Centers for Disease Control and Prevention (CDC). These guidelines replace universal precautions - the term that became synonymous with infection control measures to protect healthcare workers from Human Immunodeficiency Virus (HIV) and other bloodborne pathogens in the 1980s and 1990s.

Standard Precautions apply to blood, all body fluids, secretions, and excretions regardless of whether or not they contain visible blood. They also apply to non-intact skin and mucous membranes. The basic tenets of infection control are preserved in Standard Precautions, including handwashing and use of gloves, masks, eye protection, and gowns as appropriate for contact where splashing or soiling is likely to occur. Standard Precautions are designed to protect both workers and patients from all body fluids and substances through barrier precautions, handwashing, and other infection control measures.

See Attachment 6, Standard Precautions, for detailed information.

RESPIRATORY HYGIENE/ COUGH ETIQUETTE IN HEALTHCARE SETTINGS

To contain respiratory secretions, all persons with signs and symptoms of a respiratory infection, regardless of presumed cause, should be instructed to:

- Cover your nose/mouth with a tissue when coughing or sneezing, or cough or sneeze into your sleeve or the fold of your arm. Avoid using your bare hands to cover a cough or sneeze.
- Use tissues to contain respiratory secretions.
- Dispose of tissues in the nearest waste receptacle after use.
- Perform hand hygiene after contact with respiratory secretions and contaminated objects/materials.

Healthcare facilities should ensure the availability of materials for adhering to respiratory hygiene/cough etiquette in patient waiting areas;

- Provide tissues and no-touch receptacles (e.g., waste container with pedal operated lid or uncovered waste container) for used tissue disposal.
- Provide soap and disposable towels for handwashing in areas where sinks are available.
- Provide conveniently located dispensers of alcohol-based hand rubs where sinks are not available.

Masking and separation of persons with symptoms of respiratory infection

- During periods of increased respiratory infection in the community, offer surgical masks to persons who are coughing.

Droplet Precautions

- Healthcare workers should practice Droplet Precautions in addition to Standard Precautions, when examining a patient with symptoms of respiratory infection and where droplets could reach persons six or more feet away (depending on transmissibility of the organism). Examples of appropriate mask usage include:
    - Surgical masks – large droplets such as *N. meningitidis* or B. pertussis
    - N95 masks -- droplets may be suspended in the air for long periods of time such as Mycobacterium tuberculosis and rubeola (measles).

ORIENTATION OF NEW EMPLOYEES

All new county, area, and state level Public Health Department (ADPH) employees who will be providing direct patient care or having patient contact will be orientated to infection control guidelines within the first six weeks of their employment.

Nursing and other supervisory personnel will conduct training sessions to provide orientation to these infection control guidelines with new employees. General principles of disease transmission and appropriate infection control measures should be included in the discussion.

Employees should understand:

1. The importance of hand hygiene in preventing disease transmission.

2. The routes of transmission of various infectious diseases.

3. The basic principles of Standard Precautions.

4. The types of personal protective clothing and equipment necessary for protection and when to use them.

5. How to properly dispose of contaminated medical waste and decontaminates, or dispose of contaminated equipment.

6. The protective action to take in the event of spills or personal exposure to blood and/or body fluids, and the appropriate reporting and follow-up procedures.

7. ADPH's Recommendations for Employee Vaccinations (Section I of this manual).

8. ADPH's Policy on Infected Healthcare Workers (Section I of this manual).

Note:
"Hand Hygiene," "Disease Transmission," and "Orientation Questions & Answers" can be reproduced and used during employee orientation.

EMERGENCY PREPARDNESS

Public Health's Center for Emergency Preparedness (CEP) maintains pertinent bioterrorism preparedness on the department's website, www.adph.org. This site is updated in a timely manner when new information is published and disseminated from the Centers for Disease Control and Prevention (CDC) and other governmental agencies. In addition, an excellent website for information regarding bioterrorism, emerging pathogens, and other infectious disease information is the CDC website: www.cdc.gov.

Bioterrorism Infection Control Practices

Agents of bioterrorism are generally not transmitted from person-to-person. All patients, including symptomatic patients with suspected or confirmed bioterrorism-related illnesses, should be managed utilizing Standard Precautions. Standard Precautions are designed to reduce transmission from both recognized and unrecognized sources of infection and are recommended for all patients receiving care, regardless of their diagnosis or presumed infection status. **For certain diseases or syndromes (e.g., smallpox and pneumonic plague), additional precautions may be needed to reduce the likelihood for transmission**. Standard Precautions prevent direct contact with all body fluids (including blood), secretions, excretions, non-intact skin (including rashes), and mucous membranes.

Detection of Outbreaks

A keen sense of awareness and use of specific epidemiologic strategies will be most important in the detection of outbreaks. All healthcare personnel should report any of the following noted occurrences:

- A rapidly increasing disease incidence.
- An unusual increase in the number of people seeking care, especially with fever, respiratory, or gastrointestinal symptoms.
- An endemic disease rapidly emerging at an uncharacteristic time or in an unusual pattern.
- Clusters of patients arriving from a single locale.
- Large numbers of rapidly fatal cases.
- Any patient presenting with a disease that is relatively uncommon and has bioterrorism potential.

Decontamination Procedures

1. Place all clothing from any suspected victims in airtight impervious (e.g., plastic) bags and save for law enforcement authorities (e.g., FBI, state police).
2. Use soap and water to wash the victim.
3. For environmental disinfection use bleach solution (standard 6.0%-6.15% sodium hypochlorite) in a 0.6% concentration (1 part bleach to 9 parts water). As an alternative, an Environmental Protection Agency (EPA)-approved germicidal detergent can be used for botulism, plague, and smallpox.
4. For suspected smallpox, all bedding and clothing must be autoclaved or laundered in hot water and bleach.
5. Healthcare workers should always wear personal protective equipment (PPE), such as gown, gloves, and mask, during decontamination of anthrax, plague, and smallpox.

SEVERE ACUTE RESPIRATORY SYNDROME (SARS)

As of November, 2002, severe acute respiratory syndrome (SARS) became a newly recognized, severe febrile respiratory illness caused by a previously unknown coronavirus, SARS-associated coronavirus (SARS-CoV).

As of the publication date of this manual, in the absence of a vaccine, effective drugs, or natural immunity to SARS-CoV, the only currently available public health strategies to limit the impact of SARS are rapid identification of infected persons and activation of control measures to prevent transmission. These measures include:

- Global and community surveillance.
- Detection and isolation of cases.
- Identification and monitoring of contacts.
- Adherence to infection control precautions.
- In some instances, measures (e.g., quarantine) to restrict the movement of potentially infected persons.

These are the traditional public health tools used to prevent the spread of any infectious disease, and they constitute the current fundamental strategy for controlling SARS-CoV.

Specific infection control measures to be taken to control disease transmission and minimize the impact of any identified SARS outbreaks should include:

- Respiratory hygiene/cough etiquette.
- Masking and separation of persons with symptoms of respiratory infection.
- Both Standard and Droplet Precautions.
- Hand hygiene.

Each of these infection control measures are discussed in detail in this manual.

For the most current SARS information and recommendations, see the Centers for Disease Control and Prevention's (CDC) website (www.cdc.gov/sars/).

SECTION I

RECOMMENDATIONS FOR VACCINATION AND TUBERCULIN SKIN TESTING OF HEALTH DEPARTMENT EMPLOYEES

Healthcare personnel at the county, area, or state level who **provide direct patient care or have occupational contact with persons who may be ill with certain vaccine preventable diseases** are at increased risk for exposure to and possible transmission of these diseases. Maintenance of immunity is therefore an essential part of a prevention and infection control program for health department employees. The recommendations made in this section are consistent with those made by the United States Public Health Service's (USPHS) Advisory Committee on Immunization Practices (ACIP).

I. GUIDELINES FOR VACCINATION

Recommendations for administration of vaccines and other immunobiologic agents to healthcare workers (HCWs) are organized in three broad disease categories:

- Those for which active immunization is strongly recommended because of special risks for HCWs (e.g., hepatitis B, influenza, measles, mumps, rubella, and varicella);

- Those for which active and/or passive immunization of HCWs may be indicated in certain circumstances (e.g., hepatitis A, meningococcal disease, typhoid fever) or in the future (e.g., pertussis); and

- Those for which immunization of all adults is recommended (e.g., tetanus, diphtheria, and pneumococcal disease). HCWs are not at substantially increased risk than the general public. Therefore, they should receive these from their primary care provider.

A. Hepatitis B

1. Health department employees who have been determined to be at occupational risk for exposure to bloodborne pathogens should be offered the hepatitis B vaccine series. See *Bloodborne Pathogens Exposure Control Plan* (III. Exposure Determination) for a list of these job classifications.

2. Individuals are considered to be immune to hepatitis B if there is:
   a. written documentation of positive serology (anti HBs level ~ 10 mlU/ml or reactive by EIA), or
   b. written documentation of prior receipt of 3 or more doses of hepatitis B vaccine with an appropriate schedule.

B. Influenza

1. Influenza vaccine should be offered annually, in the fall, to the following groups of healthcare providers:
    a. Physicians, nurses, and other personnel in outpatient-care settings, including medical emergency response workers (e.g., paramedics and emergency medical technicians);
    b. Employees of nursing homes and chronic care facilities who have contact with patients or residents;
    c. Employees of assisted living and other residences for persons in groups at high risk; and,
    d. Persons who provide home care to persons in groups at high risk.

C. Measles (Rubella)

1. All HCWs who have contact with patients should have documented immunity to measles.

2. Most persons born before 1956 have probably been infected with measles naturally and need not be considered susceptible.

3. All HCWs born in or since 1956 should have documentation of having received a second dose of measles vaccine.

4. Persons born since 1956 can be considered immune to measles if they have documentation of:
    a. physician-diagnosed measles disease; or,
    b. laboratory evidence of measles immunity (persons who have an "indeterminate" level of immunity should be considered non-immune); or,
    c. 2 doses of live measles vaccine on or after the first birthday, separated by at least one month.

D. Mumps

1. All HCWs who have contact with patients should have documented immunity to mumps.

2. Most persons born before 1957 are likely to have natural immunity and need not be considered susceptible.

3. Persons born in or since 1957 can be considered to be immune if they have documentation of:
    a. physician-diagnosed mumps disease; or,
    b. laboratory evidence of mumps immunity (persons who have an "indeterminate" level of immunity should be considered non-immune); or,
    c. at least two dose of live mumps vaccine on or after the first birthday.

E. Rubella

1. All HCWs, male or female, who might transmit rubella to pregnant patients or

other personnel, should be immune to rubella.

2. Persons can be considered susceptible to rubella unless they have:
   a. laboratory evidence of immunity (persons who have an indeterminate level of immunity should be considered non-immune); or,
   b. documented immunization with live rubella vaccine on or after their first birthday.

F. Varicella (Chickenpox)

Individuals are considered to be immune to varicella if there is:

1. a history of varicella infection; or,
2. written documentation of 2 doses of vaccine, administered at least 1 month apart; or,
3. written documentation of positive serology if history is negative or uncertain.

G. Rabies

Rabies vaccine may be indicated for persons in high-risk groups such as veterinarians and certain laboratory workers.

II. TUBERCULIN (TB) SKIN TESTING

Initial Examination ---- Provide a two-step tuberculin skin test (TST) to all employees at the time of hiring unless a previously significant reaction (induration ≥ 10mm) can be documented. If the first test result is 0-9 mm of induration, give a second test at least one week and, no more than three weeks, after the first test. Use the result of the second test as the baseline test in determining treatment and follow-up of these employees. A history of BCG vaccination does not preclude an initial screening test, and a reaction of 10 mm or more should be managed as a tuberculosis infection. Provide a chest x-ray for employees who have a significant reaction to the skin test or have symptoms compatible with tuberculosis in order to determine the presence of current disease.

A. As part of the employment procedure, each new employee should receive a TST using the two-step (test-retest) method as described in the ADPH Tuberculosis Policy and Procedure Manual. The results should be recorded in his/her employee health record.

B. Any employee found to have a significant tuberculin reaction should be evaluated by chest x-ray and by examination of sputum if clinically indicated.

C. Infected employees (those with 10 mm or greater reactions) with no current disease should be offered therapy for latent TB infection in accordance with guidance found in the ADPH Tuberculosis Policy and Procedure Manual.

D. Significant tuberculin results (10 mm or greater), along with chest film results, should be recorded in the employee's health record.

E. Employees with a significant TST result, and who work in an area where annual TSTs are recommended as a result of the facility risk assessment, should receive an annual symptom screen for TB (i.e., productive prolonged cough, chest pain, hemoptysis, fever, chills, night sweats, loss of appetite, fatigue, and/or weight loss). The employee should be instructed that should he/she develop such symptoms at any time during the year, his/her immediate supervisor is to be notified. This review is to be documented, signed, dated, and placed in the employee's health record.

F. TST negative (i.e., results < 10 mm of induration) employees should undergo repeat testing at regular intervals as determined by their facility risk assessment. The Area TB Managers can assist employees with this assessment.

G. Routine periodic chest x-rays are generally not useful for detecting disease in the absence of symptoms. Chest x-rays should be reserved for persons with symptoms, especially a productive prolonged cough.

H. Any employee exposed to an active case of TB should be referred to the Area TB Manager for appropriate evaluation and follow-up.

I. Tuberculin converters (i.e., those employees with ≥ 10 mm increase in reaction size within a two-year period) should be evaluated for latent TB infection, including a chest x-ray, and be given appropriate therapy. A more extensive assessment should be performed on converters to determine source of exposure.

III. PROTECTION OF IMMUNOCOMPROMISED EMPLOYEES

Immunocompromised individuals may be more susceptible to infections of various types and may have a more severe course when they do contract an infection due to their weakened or depressed immune systems.

Killed or inactivated vaccines do not represent a danger to immunocompromised HCWs and generally should be given as recommended for healthy workers. However, immunization should be administered by the employee's physician.

IV. HIV-INFECTED PERSONS

In general, live virus or live bacterial vaccines should not be administered to HIV-infected persons. However, asymptomatic HCWs need not be tested for HIV infection before administering live virus vaccines.

The following recommendations apply to all HCWs infected with HIV:

- MMR vaccine is recommended for all asymptomatic HIV-infected HCWs who do not have evidence of severe immunosuppression. Administration of MMR to HIV-infected HCWs who are asymptomatic, but who do not have evidence of severe

immunosuppression, should be considered. Measles vaccine is not recommended for HIV-infected persons with evidence of severe immunosuppression.

- Enhanced inactivated poliovirus vaccine (IPV) is the only poliovirus vaccine recommended for HIV-infected persons. Live oral poliovirus vaccine (OPV) should not be administered to immunocompromised persons or their household contacts.

- Influenza and pneumococcal vaccines are indicated for all HIV-infected persons.

V. WORK RESTRICTIONS FOR SUSCEPTIBLE HCWS AFTER EXPOSURE

Post-exposure work restrictions ranging from restriction of contact with high-risk patients to complete exclusion from duty are appropriate for HCWs who are not immune to certain vaccine-preventable diseases.

VI. ALABAMA DEPARTMENT OF PUBLIC HEALTH EMPLOYEE HEPATITIS B VACCINATION POLICY (01-15) See Attachment 2

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ALABAMA DEPARTMENT OF PUBLIC HEALTH
POLICY ON INFECTED HEALTHCARE WORKERS

In order to be in compliance with the Alabama Infected Healthcare Worker Management Act, affected Alabama Department of Public Health employees will be made aware of this law. The Act mandates that any healthcare worker infected with the human immunodeficiency virus (HIV) or hepatitis B virus (HBV) who performs an invasive procedure or any physician providing care to an infected healthcare worker shall notify the State Health Officer, or his designee, of the infection. The purpose of the Act is to prevent transmission of HIV and HBV to patients during invasive procedures. For clarification and continuity purposes, the following words have the following meanings:

(1) **HEALTHCARE WORKER.** Physicians, dentists, nurses, respiratory therapists, phlebotomists, surgical technicians, physician assistants, podiatrists, dialysis technicians, emergency medical technicians, paramedics, ambulance drivers, dental hygienists, dental assistants, students in the healing arts, or any other individual who provides or assists in the provision of medical, dental, or nursing services.

(2) **INFECTED HEALTHCARE WORKER** A healthcare worker infected with HIV or HBV as defined herein.

(3) **HEPATITIS B VIRUS (HBV) INFECTION.** The presence of the HBV as determined by the presence of hepatitis B (e) antigen for six months or longer or by other means as determined by the State Board of Health.

(4) **HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION**. The presence of antibodies to Human Immunodeficiency Virus as determined by enzyme immunoassay and Western Blot or the presence of the HIV infection as determined by viral culture, or by other means as determined by the State Board of Health.

(5) **INVASIVE PROCEDURES.** (a) Those medical or surgical procedures characterized by the digital palpation of a needle tip in a body cavity or by the simultaneous presence of the healthcare worker's fingers and a needle or other sharp instrument or object in a poorly visualized or highly confined anatomic site.
(b) Invasive dental procedures shall include those that provide the opportunity for an intraoral percutaneous injury to the dental healthcare worker and could result in the blood of the healthcare worker coming in contact with the blood or mucous membrane of the patient.

All employees who meet the definition of healthcare worker will be informed of this Act during orientation. It will then be the individual employee's responsibility to report to the State Health Officer as mandated by law.

Further information concerning the Infected Healthcare Worker Management Act can be obtained from the Infection Control Branch at 334-206-5932.

SECTION II

PROTECTION FROM OCCUPATIONAL EXPOSURE TO BLOOD AND BODY FLUIDS

The Centers for Disease Control and Prevention (CDC) recommends that infection control precautions be taken for ALL patients. Under Standard Precautions, blood and certain body fluids of all patients are considered potentially infectious for human immunodeficiency virus (HIV), hepatitis B virus (HBV), and other bloodborne pathogens. Standard Precautions are intended to prevent parenteral, mucous membrane, and non intact-skin exposures of healthcare workers to bloodborne pathogens. The importance of handwashing as the primary prevention of contamination cannot be over emphasized. The use of gloves does not in any way negate the need for handwashing. **Handwashing is the single most important means of preventing the spread of infection.**

I. BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

A Bloodborne Pathogens Exposure Control Plan has been developed by the Alabama Department of Public Health (ADPH) as a means to minimize exposure to human blood and other potentially infectious materials. It is designed to comply with the standards enunciated by the United States Department of Labor, Occupational Safety and Health Administration (OSHA). The *ADPH Bloodborne Pathogens Exposure Control Plan* comprises the second half of this manual. Each employee whose work duties involve reasonably anticipated exposure to blood or other potentially infectious materials should familiarize themselves with this manual and refer to it as needed.

II. MEDICAL WASTE DISPOSAL PLANS

The Alabama Department of Environmental Management (ADEM) adopted rules in 1990 governing the management of medical waste. One of the requirements is that each generator of medical waste prepare, maintain, and update as necessary a written plan to ensure the proper management of medical waste. Alabama Department of Public Health (ADPH) Policy # 92-16 (November 25, 1991) details how each county health department facility (clinic and home health) is to comply with the ADEM rules by completing and submitting a Medical Waste Disposal Plan. Refer to your facility's individual plan for information concerning proper disposal. In addition, the *ADPH Bloodborne Exposure Control Plan* (IX - Regulated Waste Disposal) contains specific information concerning regulated waste, contaminated sharps containment and proper discarding procedures.

III. DISINFECTION AND STERILIZATION - GENERAL PRINCIPLES

A. Definitions

1. Cleaning - the removal of all foreign material (e.g., soil, body fluids, lubricants) from objects by using water and detergents or soaps and washing or scrubbing the object. Cleaning must be done **before** any disinfection or sterilization process.

2. Disinfection - the process of eliminating many or all pathogenic microorganisms on inanimate objects, with the exception of bacterial spores. In healthcare settings, this is generally accomplished by the use of liquid chemicals or wet pasteurization. Objects that come in contact with mucous membranes should receive at least a high level of disinfection. Disinfectants used in the healthcare setting include alcohol (60 - 90% by volume), chlorine (bleach) and chlorine compounds, formaldehyde, 3% hydrogen peroxide, iodophors (povidone - iodine), phenolics, glutaraldehydes (Cidex, Sporiciden), and quaternary ammonium compounds. Gloves should always be worn when using disinfectant products, and object(s) being disinfected should be thoroughly rinsed three times with sterile or chlorinated tap water prior to being used.

   The CDC defines four levels of disinfection. These are:
   a. sterilization - see A.3 below
   b. high-level disinfection - can be expected to destroy all microorganisms, with the exception of high numbers of bacterial spores.
   c. intermediate-level disinfection - inactivates *Mycobacterium tuberculosis,* vegetative bacteria, most viruses, and most fungi but does not necessarily kill bacterial spores.
   d. low-level disinfection - kills most bacteria, some viruses, and some fungi but cannot be relied on to kill resistant microorganisms such as tubercle bacilli or bacterial spores.

3. Sterilization - the complete elimination or destruction of all forms of microbial life. It is accomplished by either physical or chemical processes. Examples of sterilizing procedures include the use of autoclaves, ethylene oxide, and a few liquid disinfecting chemicals, e.g., formaldehyde and glutaraldehyde.

C. Classification Scheme for Disinfection and Sterilization of Patient Care Items or Equipment

The nature of disinfection is understood more readily if instruments and items for patient care are divided into three categories on the basis of the degree of risk of infection involved in the use of the items. The three categories are:

1. Critical items - those which will enter sterile tissue or the vascular system or through which blood will flow. (e.g., surgical instruments, IV catheters)

2. Semi-critical items - those which come in contact with mucous membranes or with skin that is not intact. (e.g., diaphragm-fitting rings, thermometers, whirlpools).

3. Non critical items - those which come in contact with intact skin but not with mucous membranes. (e.g., bedpans, blood pressure cuffs, patient furniture).

C. Disinfection Solutions

1. Any commercial disinfectant approved by the Environmental Protection Agency

(EPA) as a hospital-grade disinfectant-detergent, when diluted according to manufacturer's specifications, may be used for disinfection.

2. Chlorine Bleach
   The active ingredient in chlorine bleach is the hypochlorite ion. This chemical will inactivate many pathogenic agents, including hepatitis B virus (HBV) and the human immunodeficiency virus (HIV). Bleach is never to be used full strength as a cleaner or disinfectant because of its corrosive properties and the strong chlorine fumes which can be a health hazard.

D. Disinfectants that Inactivate (indicated by the X) Hepatitis B (HBV) and HIV

	HBV	HIV
Ethyl alcohol (50%)		X
Ethyl alcohol (80%)	X	X
Glutaraldehyde (2%)	X	X
Hydrogen peroxide (0.3%)		X
Idophor (80 ppm)	X	
Isoprophyl alcohol (70%)	X	X
Phenolics		X
Sodium hypochlorite (50 ppm)		X
Sodium hypochlorite (500 ppm)	X	X

E. Medical Equipment Disinfection
   1. Exam Tables/Infant Scales
      All exam tables and infant scales should be cleaned daily with a 1:10 (1 part bleach to 9 parts water) chlorine bleach solution or other appropriate EPA-registered disinfectant-detergent. Disposable coverings for exam surfaces are to be used and discarded between patients.

   2. Glass Thermometers
      After use, glass thermometers are to be washed with soap and cool water. Rinse well with tap water and dry. Place the dry thermometer(s) in a 70% alcohol solution for at least 20 minutes. Soak oral and rectal thermometers separately. Rinse with tap water, and store in clearly marked dry containers.

   3. Digital Thermometers
      Follow manufacturer’s recommendations for daily cleaning. Cleaning with alcohol can be done between patients.

4. Diaphragm Fitting Rings
    a. After use, wearing gloves, wash the rings with soap and water, then dry.
    b. Immerse rings in a glutaraldehyde solution for 20 - 30 minutes at room temperature or 70% alcohol for 15 minutes.
    c. Remove from solution, rinse well with running water, dry, and store for future use. Do not immerse the rings in boiling water or expose them to excessive heat.

5. Otoscopes/Opthalmoscopes
    a. After the viewing piece is removed from the instrument, clean off visible organic matter with a cotton swab.
    b. Wash the piece with soap and warm water, and dry it.
    c. Place the cleaned piece(s) in 70% alcohol for 10 minutes.
    d. Remove from the alcohol, rinse well with tap water, dry, and store in a dry container.

6. Blood Pressure Equipment
    a. Stethoscope earpieces should be cleaned by using cotton soaked with 70% alcohol or an alcohol swab after each use if more than one person will be using the stethoscope. If organic material is visible, use an applicator to remove it, wash with soap and water then cleanse with alcohol.
    b. Soiled cuffs should be washed in regular laundry detergent after removing the bladders.

7. Pill Counting Trays and Spatulas
    Clean daily with 70% alcohol or other appropriate EPA - registered disinfectant - detergent and allow to completely dry prior to use.

8. Clinic Exam Room Play Tables
    Follow manufacturer's recommendation of cleaning the play tables daily with a soap and water solution. Up to a 10% bleach solution can be used without damage to the finish.

SECTION III

RECOMMENDATIONS FOR THE MANAGEMENT OF PERCUTANEOUS/PERMUCOSAL EXPOSURE TO BLOOD OR OTHER BODY FLUIDS

I. INTRODUCTION

Percutaneous or permucosal exposure to blood or other body fluids may result in exposure to hepatitis B virus (HBV), hepatitis C virus (HCV), and/or Human Immunodeficiency Virus (HIV). Percutaneous exposure is defined as the introduction of blood or body fluids directly through the skin (e.g., punctures or cuts by contaminated sharp instruments or needles and introduction of blood or body fluids onto non-intact skin, lacerations, or via human bites). Permucosal exposure is defined as the introduction of blood or other body fluids onto mucous membranes (e.g., splash into eyes or mouth).

In order to minimize or eliminate employee exposure, self-sheathing needles and safer medical devices, such as sharps with engineered sharps injury protections and needleless systems, should be used whenever possible.

It should be noted that most needlestick injuries are preventable. Injuries often occur at the time of needle disposal. Do not recap used needles by hand; do not remove used needles from disposable syringes by hand; and do not break, bend, or otherwise manipulate used needles by hand. Place used disposable syringes and needles, scalpel blades, and other sharp items in puncture-resistant containers for disposal.

The Alabama Department of Finance, Division of Risk Management, State Employee Injury Compensation Trust Fund (SEICTF) has a statewide program established to manage employee occupational exposure to potentially infectious blood or other body fluids. All services and treatment for an occupational exposure involving an Alabama Department of Public Health (ADPH) employee will be covered by the SEICTF program, and all records will be kept confidential. Consultation is available from the SEICTF Division of Risk Management (334-223-6284) should you have questions regarding appropriate occupational exposure follow-up.

Included in this chapter, for your information, are the current United States Public Health Service Recommendations for Management of exposure to hepatitis B, hepatitis C, and HIV.

II. MANAGEMENT OF OCCUPATIONAL NEEDLESTICKS AND/OR EXPOSURE TO BLOOD/BODY FLUIDS

An exposure that might place healthcare workers at risk for HBV, HCV, or HIV infection is defined as a percutaneous injury (e.g., a needlestick or cut with a sharp object) or contact of mucous membrane or non-intact skin (e.g., exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other body fluids that are potentially infectious.

In addition to blood and body fluids containing visible blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid also are considered potentially infectious.

For human bites, the clinical evaluation must include the possibility that both the person bitten and the person who inflicted the bite were exposed to bloodborne pathogens, although transmission of HBV or HIV infection only rarely has been reported by this route.

Immediate First Aid Treatment of the Exposure Site
Wounds and skin sites that have been in contact with blood or body fluids should be washed with soap and water. Mucous membranes should be flushed with water. No evidence exists that using antiseptics for wound care or expressing fluid by squeezing the wound further reduces the risk of bloodborne pathogen transmission; however, the use of antiseptics is not contraindicated. The application of caustic agents (e.g., bleach) or the injection of antiseptics or disinfectants into the wound is not recommended.

III. RECOMMENDATIONS FOR MANAGEMENT OF EXPOSURE TO HEPATITIS B VIRUS (HBV)

For percutaneous or mucosal exposures to blood, several factors must be considered when making a decision to provide prophylaxis, including the HBsAg status of the source and the hepatitis B vaccination and vaccine-response status of the exposed person. Any unvaccinated employee who incurs a blood or body fluid exposure should be encouraged to begin the hepatitis B vaccine series.

IV. RECOMMENDATIONS FOR THE MANAGEMENT OF EXPOSURES TO HEPATITUS C VIRUS (HCV)

The following are recommendations for follow-up of occupational HCV exposures:

1. For the source, perform testing for anti-HCV.

2. For the person exposed to an HCV-positive source:
   - perform baseline testing for anti-HCV and ALT; and,
   - perform follow-up testing (e.g., at 4-6 months) for anti-HCV and ALT. HCV

RNA may be performed at 4-6 weeks if earlier diagnosis of HCV infection is desired.

3. Confirm all anti-HCV results reported positive by enzyme immunoassay using supplemental anti-HCV testing (e.g., recombinant immunoblot assay, RIBA).

1. Immune Globulin (I.G.) and antiviral agents are not recommended for post-exposure prophylaxis exposure to HCV-positive blood.

V. RECOMMENDATIONS FOR MANAGEMENT OF EXPOSURES TO HIV

Counseling, Baseline Testing, and Medical Evaluation:

Healthcare workers occupationally exposed to HIV should be evaluated within hours (rather than days) after their exposure. They should receive follow-up counseling, post-exposure testing, and medical evaluation, regardless of whether they receive post-exposure prophylaxis (PEP). HIV antibody testing should be performed at baseline (e.g., to establish infection status at the time of exposure), at 6 weeks, 12 weeks, and 6 months. If the source person is seronegative for HIV, baseline testing or further follow-up of the exposed person normally is not necessary. Extended HIV follow-up (e.g., at 12 months) is recommended for healthcare workers who become infected with HCV following exposure to a source co-infected with HIV and HCV.

Post-exposure Prophylaxis (PEP):

Post-exposure prophylaxis will be handled by SEICTF.

SECTION IV

PATIENT CARE PROCEDURES

I. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment (PPE) is a vital barrier between your body and danger. Whenever there is risk of occupational exposure, the appropriate PPE that must be worn is determined by the type of exposure that is expected. Not only is it essential that the proper personal protective equipment be available, but that it be worn, removed, and disposed of in a manner as to not contaminate yourself.

Personal protective equipment may include such things as:

* Gloves
* Gowns
* Goggles
* Face shield
* Apron
* Mouthpiece
* Resuscitation bags

It is important to remember that before putting on any PPE, always begin by washing your hands. This is the single most effective way to prevent the transmission of infection.

Refer to the ADPH Bloodborne Pathogens Exposure Control Plan, second half of this manual, for specific recommendations concerning PPE.

II. INJECTIONS

Vaccine Administration: Infection Control and Sterile Technique

Persons administering vaccines should follow necessary precautions to minimize risk for spreading disease.

1. Hands should be washed with soap and water or cleansed with an alcohol-based hand rub between each patient contact.
2. Gloves are not required when administering vaccinations, unless persons administering vaccinations are likely to come into contact with potentially infectious body fluids or have open lesions on their hands.
3. Syringes and needles used for injections must be sterile and disposable to minimize the risk of contamination.
4. A separate needle and syringe should be used for each injection.
5. Changing needles between drawing vaccine from a vial and injecting it into a recipient is unnecessary.
6. Different vaccines should never be mixed in the same syringe unless specifically licensed for such use.
7. Disposable needles and syringes should be discarded in labeled, puncture-proof containers to prevent inadvertent needle-stick injury or reuse.
8. Safety needles or needle-free injection devices can reduce the risk of injury and should be used whenever available.

III. SPECIMEN COLLECTION

Refer to the Bureau of Clinical Laboratories *Laboratory Reference Manual* for guidelines for proper collection, packaging, and transport of all clinical specimens.

IV. STORAGE OF SUPPLIES

Proper storage of medical supplies is essential to ensuring safe products at time of use.

A. All equipment and supplies, including those in boxes, should be stored in properly designated storage areas.

B. Unpack supplies when received and place them on shelves or in cabinets. As an aid to rotating stock supplies, place the new supplies towards the back of the shelf, and move the older supplies to the front.

C. All expiration dates on sterile supplies/equipment are to be checked routinely and those found to be outdated, removed from the shelf. At any time the integrity of the packaging becomes compromised, the supplies/equipment are to be removed from patient care.

D. All supplies are to be stored on shelves at least 1 1/2 - 2 inches from the floor to avoid contamination from soil, dampness, or bacteria.

SECTION V

RECOMMENDATIONS FOR ISOLATION AREA

A health department clinic site, just as any other medical-care facility, may at any time have either clients or visitors enter the facility with a communicable disease. Particularly for those communicable diseases which are spread by airborne or respiratory droplet routes, the potential for transmission exists within the facility. Significant consequences may occur if, for example, a child with rubella exposes clients visiting a prenatal clinic, a child with measles is waiting to be seen in nutrition or well-child clinics, or an individual with influenza exposes elderly clients in a chronic disease clinic. Obviously, susceptible health department personnel are equally at risk for exposure and transmission of these diseases.

To minimize the risk for transmission of respiratory spread diseases, guidelines for the establishment, use, and cleaning of an isolation area are as follows. These guidelines are based on recommendations made in the *Guidelines for Infection Control in Hospitals* published by the Centers for Disease Control and Prevention, (CDC) and the book *Control of Communicable Disease Manual* published by the American Public Health Association.

I. ESTABLISHMENT

Each health department clinic site, not having a room specifically designed as an isolation room, must maintain an area to be designated as the "isolation room". This should be a room (e.g., unused examination room or dressing room) which preferably is not routinely used for providing client services. The room must have a door which closes, and preferably, a window which can be opened or a ceiling exhaust fan. There should be an operating sink, soap, and paper towels within the room or in close proximity. The room must not be one through which clients or employees routinely go in order to reach an adjacent room. To minimize contamination within the isolation room and to simplify cleaning efforts, the room should be small and sparsely equipped.

II. USE OF THE ISOLATION ROOM

There are some communicable disease conditions which, because of their highly contagious nature and/or the public and personal health significance of transmission, must be isolated in a strictly controlled area. For some other communicable diseases, simply removing the infected individual to an area where they will not be in direct contact with others is sufficient. Always provide these patients with tissues and instruct them to cover their mouths and noses with the tissues when coughing or sneezing. The following are guidelines for which conditions, or under what circumstances, clients or visitors to the health department should be isolated. Whenever possible, the room should be allowed to air between occupancies of the isolation room. The door must be kept closed at all times while the room is occupied.

Persons known or suspected of having the following diseases, or presenting under the following circumstances, must be isolated in the isolation room:

- Diseases: measles, bacterial meningitis, rubella, pertussis, chickenpox, mumps, other rash illnesses accompanied by fever, untreated active tuberculosis, influenza and other upper respiratory tract infections accompanied by fever such as pneumonia or strep throat.

- Circumstances: culturing for pertussis, influenza, or strep throat or obtaining sputum specimens from active tuberculosis (TB) patients or those who are just beginning drug therapy.

Note: Use of a negative pressure room or one with an ultraviolet (UV) light and properly vented exhaust fan is recommended for sputum collection from suspected or diagnosed TB patients. (See Section VIII, Tuberculosis Infection Control Recommendations.)

III. CLEANING THE ISOLATION ROOM

Equipment and furnishings used in the clinic usually are not involved in the transmission of diseases via the respiratory route. However, following occupancy, the isolation room should be routinely cleaned in the following manner:

1. Use an EPA-approved germicide/disinfectant to wipe down all equipment, work surfaces (e.g., counter tops), examination tables, infant scales, and other potentially contaminated objects.

2. Properly dispose of waste.

3. If a window is present in room, open it for 10 minutes. Allow this amount of time before placing another client in the room.

4. If there is an exhaust fan in the ceiling, turn it on for 10 minutes.

SECTION VI

GUIDELINES FOR PREVENTION AND CONTROL OF ANTIBIOTIC-RESISTANT ORGANISMS

I. INTRODUCTION

Some common organisms have become resistant to most antibiotics, and are capable of transmitting that resistance to their own offspring and to other organisms. These are referred to as Multi-Drug Resistant Organisms (MDROs). This does not mean that the organisms are more virulent or able to cause disease, or that they are more transmissible. Resistance poses a therapy dilemma because the antibiotics that would normally be used for treatment become ineffective. Often high doses or combinations of drugs can be used, but sometimes there is no suitable regimen.

These guidelines will address specifically Methicillin-resistant *Staphylococcus aureus* (MRSA) and Vancomycin-resistant enterococci (VRE) in healthcare settings. People in the community, as well as patients being treated in specific healthcare settings, may be colonized or infected with resistant organisms. Public Health consultation/information is often requested regarding appropriate care and follow-up of individuals diagnosed with a resistant organism. Therefore the following guidelines include information for each of these healthcare settings: clinics (including health department clinics, doctors' offices, and ambulatory care centers), home healthcare/hospice, acute care facilities, rehabilitation hospitals, and patients discharged to their homes without home healthcare personnel assistance. **Note: These guidelines are a synopsis of the 2002 Alabama Department of Public Health's Guidelines for Prevention and Control of Antibiotic-Resistant Organisms (available through the Infection Control Branch (334-206-5932) or on the ADPH webpage at www.adph.org under the A-Z listing under Antibotic-Resistant Organisms.**

II. COMMUNITY ASSOCIATED METHICILLIN-RESISTANT STAPHYLOCOCOUS AUREUS (CA-MRSA)

Outbreaks of community associated MRSA (CA-MRSA) frequently occur in various populations, including daycare centers, correctional facilities, college campuses, and among players of competitive sports (e.g. wrestling, football, fencing). Therefore, an MRSA Fact Sheet and a Community-associated MRSA Frequently Asked Questions Fact Sheet are included as Attachment #9 and #10 for staff, patient and community education/information.

III. BACKGROUND

A. **Methicillin-Resistant** *Staphylococcus aureus* **(MRSA)**. In the United States and Alabama, MRSA has become a major source of nosocomial (hospital-acquired) and community-acquired infections and outbreaks.

Staphylococcus aureus is ubiquitous. It grows readily on human skin and mucous membranes. Methicillin-resistant *S. aureus* is a variant of *S. aureus* which is resistant to all beta-lactam antibiotics (including penicillins, cephalosporins and cephamicins). They may also be resistant to aminoglycosides, erythromycin, quinolones and others. By definition, MRSA must be resistant to one of the following semi-synthetic penicillins: methicillin, oxacillin, or nafcillin. MRSA is neither more infectious nor more virulent than susceptible *S. aureus;* it is just more difficult to treat. Non-cutaneous MRSA infections are most effectively treated with intravenous vancomycin.

B. **Vancomycin-Resistant Enterococci (VRE)** There has been a rapid increase in the incidence of infection and colonization with VRE in hospitals in the United States in the past decade. The increase is due mainly to an increase in infections in intensive care (lCU) patients. This increase poses several problems, including the lack of available antimicrobials for therapy, since most VRE are also resistant to multiple other drugs (e.g., aminoglycosides and ampicillin) previously used for the treatment of infections. In addition, there is the possibility that the vancomycin-resistant gene present in VRE may be transmitted to other gram-positive organisms, such as *Staphylococcus aureus.* VRE does not pose an infection risk to healthcare workers. However, healthcare workers can transiently carry the organism and serve as vehicles for transmission to other patients.

IV. COLONIZATION VS. INFECTION

A. **Colonization** is the presence, growth, and multiplication of the organism without observable clinical symptoms or immune reaction. **Colonization and/or infection may be transferred to others if appropriate infection control measures are not taken.**

1. **MRSA** colonization may occur in the nares and on skin, in wounds, decubitus ulcers, respiratory secretions, or urine. One of the most common sites of colonization in both patients and employees is the nose (anterior nares). While personnel may become colonized with MRSA, as they may with susceptible *S. aureus,* they rarely develop infections.

2. **Enterococci** are normally found in the bowel and the female genital tract. When exposed to antibiotics for any reason, the drug-resistant bacteria may survive and multiply, resulting in an overgrowth of drug-resistant enterococci in the bowel.

B. **Infection** refers to invasion of bacteria into tissue with replication of the organism. Infection is characterized by isolation of the organism with accompanying clinical signs of illness. Certain populations such as the elderly or immunocompromised may exhibit minimal symptoms.

V. EPIDEMIOLOGY

A. Methicillin-Resistant *Staphylococcus* aureus (MRSA)

1. Mode of Transmission -MRSA is transmitted primarily by contact with a person who either has a purulent site of infection, a respiratory tract or urinary tract infection or is colonized with the organism. **Hands of personnel are the most common means of transmission of MRSA from patient to patient.** Studies have demonstrated that MRSA can be present on the hands of personnel after performing such activities as wound debridement, dressing changes, tracheal suctioning, and catheter care.

2. Reservoirs - Colonized and infected patients are the major reservoir of MRSA. MRSA has been isolated from environmental surfaces including floors, sinks, and work areas, tourniquets used for blood drawing, and blood pressure cuffs. Although MRSA has been isolated from environmental surfaces (e.g., floors, medical equipment), these are not the most likely source of spread. However, environmental surfaces should be disinfected routinely to reduce the risk of transmission.

3. Risk Factors - The factors that have been identified as increasing the risk that a patient will have a MRSA infection are:
   a. increased length of hospital stay
   b. multiple hospitalizations
   c. greater than 65 years old
   d. multiple invasive procedures
   e. wounds
   f. severe underlying disease
   g. administration of broad-spectrum antibiotics

B. VANCOMYCIN-RESISTANT ENTEROCOCCI (VRE)

1. Mode of Transmission - Enterococci, including VRE, can spread patient to patient by direct contact via transient carriage on the hands of personnel or indirectly on contaminated environmental surfaces and patient care equipment.

2. Reservoirs of VRE - Enterococci are part of the normal flora of the gastrointestinal tract and female genitourinary tracts. Most infections with these microorganisms have been attributed to the patient's endogenous flora. However, VRE is capable of prolonged survival on hands, gloves, and environmental surfaces.

3. Risk Factors - Certain patient populations have been found to be at increased risk for VRE infection or colonization. These include patients who:
   a. are critically ill
   b. have severe underlying disease or immune suppression (such as ICU patients or patients in oncology or transplant wards)
   c. have had an intra-abdominal or cardio-thoracic surgical procedure
   d. have an indwelling urinary or central venous catheter
   e. have had a prolonged hospital stay
   f. have broad spectrum antimicrobial therapy
   g. have received administration of oral and, to a lesser extent, intravenous (IV) vancomycin

VI. CONTROL STRATEGIES

Strategies for controlling antibiotic-resistant organisms are very basic: confine the organism and control the vehicles that can contribute to spread. The three most important elements of a control program are:

- scrupulous hand hygiene,
- appropriate use of barrier precautions, and
- careful attention to environmental sanitation.

GENERAL CONTROL MEASURES

A. **Hand Hygiene.** Waterless alcohol-based hand rubs may be used when access to running water is unavailable, but hands should be washed as soon as possible thereafter. The need for strict compliance with handwashing recommendations should be reinforced. Hands should be washed for at least 15 seconds after any patient contact or contact with articles or equipment used in the care of the patient and after removal of gloves and other barriers to avoid transfer of microorganisms to other patients or environments.

B. **Communication.** Information of patient status or history of colonization or infection should be shared with all caregivers so that the risk of cross transmission can be decreased. Care providers involved in patient transfer from one health facility (or agency) to another should inform the receiving provider of the antibiotic-resistant status of the patient. The admission or transfer of patients should not be denied on the basis of MRSA or VRE infection or colonization.

C. **Gloves.** Clean, non-sterile gloves should be worn for patient care and for contact with contaminated items. Change gloves between tasks and procedures on the same patient. Remove gloves promptly after use, before touching non-contaminated items and environmental surfaces and before contact with another patient.

D. **Gowns.** A clean non-sterile gown should be worn if there is to be substantial contact with a patient who has uncontained drainage or is incontinent and for all

patient-care activities that are likely to generate splashes or sprays of body fluids.

E. **Dedicated Equipment.** Non-critical patient care equipment (e.g., blood pressure cuffs, examination tables, and stethoscopes) used on VRE-positive patients should not be shared with other patients until thoroughly cleaned with an Environmental Protection Agency (EPA)- approved disinfectant.

F. **Education.**

1. Personnel - Continuing education programs for healthcare workers who have direct patient contact or who are responsible for decision making regarding patient care should include a thorough review of basic infection control issues.

2. Patient Education - Patient education is essential to control the transmission of infections. Patients should be instructed to cover their mouths when coughing and practice good handwashing following contact with secretions or excretions and before touching other objects. They should not share drinks or food. Patients placed on isolation (and their families) need additional education, including the reason for isolation, control measures, and expected duration of isolation.
   Note: Patients should be taught to remind their healthcare providers to always follow appropriate handwashing procedures.

G. **Environmental Sanitation.** Each healthcare facility should have procedures that are enforced for the routine care, cleaning, and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces. Dedicated cleaning efforts on the part of housekeeping staff, along with use of EPA- approved hospital grade disinfectant-germicide products, should minimize transmission of antibiotic-resistant pathogens.

H. **Linen.** Contaminated linen should be handled wearing gloves, in a manner that avoids transfer of microorganisms to other people and/or environments. Hot water and detergents will kill the microorganisms.

VII. SETTING SPECIFIC CONTROL MEASURES

Although no guidelines can address all the needs of the many types of facilities serving different patient populations, the following should provide the essential information.

A. **Health Department Clinics.**

Standard Precautions (Attachment 6) should be used for all patients. Waiting areas should be screened for patients with productive coughs, draining wounds or other signs and symptoms of infection. Patients exhibiting such symptoms should be removed from the waiting area to an exam room as soon as possible. Once a patient has been identified with an antibiotic-resistant organism, subsequent visits to the office/clinic should be managed carefully. Any surfaces which may have had contact

with the patient (e.g., blood pressure cuffs, examination table, and stethoscope) should be cleaned with an EPA-registered disinfectant prior to use for another patient.

B. **Home Healthcare**

In addition to Standard Precautions (Attachment 6), home healthcare workers should focus on preventing cross-transmission via the clinical bag, clothing, and equipment which is carried to and from the home by the healthcare professional. Alternatively, the clinical bag may be left in the vehicle and only the disposable items to be used for the patient carried into the home. Reusable equipment must be cleaned either in the patient's home or bagged prior to returning to the healthcare worker's vehicle or facility for disinfection. Hands should be washed before leaving the home.

The family or care provider should be instructed to regularly clean all surfaces contaminated by secretions or touched by patient hands. Any EPA-approved disinfectant, or a 1:10 bleach solution, will be appropriate for household cleaning. Before preparing food and before eating and after direct contact with the patient or any items the patient has touched, family members should perform handwashing with an antibacterial soap for a minimum of 15 seconds. The patient and caregiver should always wash their hands after using the toilet.

SECTION VII

HOME CARE

Infection Control is very important to home care providers. A solid infection control program improves outcomes and quality of patient care. This is achieved through an emphasis on the prevention of nosocomial infection, by minimizing the risks of infection, and through early detection of infection. For specific home care procedures refer to the Home Health Clinical Manual, produced by the Bureau of Home and Community Services and found in the county based offices.

I. Environmental Factors That May Increase Susceptibility To Infection:

In some home settings specific environmental factors may increase a patient's susceptibility to infection. These may include:

- poor sanitation, sewage
- poor hygiene
- contaminated supplies, equipment
- exposure to elements (e.g., heat, cold, air, water, soil)
- rodent, insect infestations
- infectious diseases in other family members
- lack of appropriate infection control and prevention measures by the patient or
- caregiver who is responsible for care between home-care provider visits
- lack of financial resources to purchase supplies and medications
- lack of motivation to participate in the plan of care

It is therefore very important for the home care healthcare providers to educate their patients and the caregivers.

II. Infection Control Principles That Should Be Taught:

- Proper Hand Hygiene
- Asepsis
- Environmental cleanliness
- Home agents suitable for cleaning and disinfection
- Infectious disease transmission and prevention
- Signs and symptoms of infection to report:
    - cloudy, foul urine
    - increased pain
    - dysuria/suprapubic or flank pain
    - purulent drainage/wound drainage
    - erythema
    - fever, chills
    - increased cough or dyspnea

- increased sputum production
- white patchy area in mouth
- diarrhea

III. Infection Reporting/Surveillance

A. Collection of data concerning home-care-associated infections can be helpful in several ways to the agency and the community. The data can be used for:
   1. planning control efforts
   2. detecting outbreaks
   3. directing inservice education
   4. identifying individual patient problems for intervention

B. Communication of Information
   1. It is important that information concerning infections be communicated to the attending physician and to the hospital or extended care facility from which the patient was transferred if the infection is considered to be a nosocomial infection. The infection control practitioner at the facility needs to be aware of this information in order to monitor other patients for disease transmission.
   2. The ADPH Epidemiology Division is to be notified of any diseases which are mandated reportable by law.

IV. Principles of Cleaning, Disinfecting, and Sterilizing

A. The same principles of cleaning, disinfecting, and sterilizing apply, regardless of the healthcare setting. All items must first be cleaned thoroughly to remove organic material before disinfection or sterilization.
B. Since most products used in the home are not hospital-grade disinfectants, modifications must be made in the home setting. (See Section II for information regarding cleaning and disinfection.)
C. Since the home environment should be safer and person-to-person transmission less likely, reusable objects that touch mucous membranes (e.g., tracheostomy tubes) can be cleaned and disinfected by immersion in a 1:50 dilution of 6.0% sodium hypochlorite (household bleach) for three minutes, 70% isopropyl alcohol for five minutes, or 3% hydrogen peroxide for 30 minutes.
D. Noncritical items (e.g., crutches, blood pressure cuffs) in the home setting can be cleaned with a detergent.

V. Products Suitable For Disinfection In The Home

- Bleach (See Section II)
- Hydrogen peroxide
- Boiling water
- Phenolics (e.g. Lysol, Pinesol)
- Isopropyl alcohol (70%)

NOTE: Acetic acid (vinegar) is often used for disinfection, but since vinegar may not

contain a standard concentration of acetic acid it is not recommended. Vinegar is not effective against *Staphylococcus aureus*.

VI. Storage of Medical Supplies

A. Proper storage of items that have been disinfected or sterilized is essential to ensuring a safe product at time of use. It is important to dry, wrap, or place items in airtight containers that are clean or sterile inside.

B. Storage areas must be dry, and items protected from dust, insects, rodents, moisture, dirt or soil, and other contamination.

C. Items must be rotated for use and either expiration dates observed or a first-in, first-out shelf-life system used.

D. Items stored in nursing bags, vehicles, and homes must be stored and handled without compromising the integrity of the product.

VII. Communicable and Infectious Disease Precautions

A. Care providers should be informed and knowledgeable about a patient's diagnosis and the need for specific precautions.

B. It is important that appropriate precautions be taught to caregivers and others in the household to prevent disease transmission.

C. Standard Precautions must be used in handling blood and body fluids of all patients.

D. Appropriate precautions must be used for patients with acute pulmonary TB during the infectious period of their illness. Routinely recommended precautions generally cannot be accomplished in the home due to lack of adequate air exchanges, lack of negative pressure and improper venting of air to the outside. Staff will be designated to care for suspected or confirmed active TB clients and will be fit tested and supplied with appropriate respiratory facial masks according to CDC and OSHA guidelines. Patients should be instructed to cover their mouths and noses with tissue when coughing or sneezing.

E. Respiratory precautions may also be needed for patients with other infectious diseases that are transmitted via the airborne route. Since the patient is in his own home, the healthcare provider, not the patient, should wear a mask during the patient's infectious period.

F. Special precautions may be necessary when caring for patients with antibiotic resistant organisms. (See Section VI). These patients may not require precautions as strict as those recommended for hospitals or long term care facilities, but the healthcare provider should be familiar with these guidelines in order to protect

him/herself and to be able to instruct the household caregiver about appropriate infection control measures.

VIII. Waste Disposal Within The Home

A. The Alabama Department of Environmental Management (ADEM) does not regulate medical waste generated within the home. Therefore this waste can be disposed of along with other home-generated waste in appropriate trash disposal bags.

B. A pamphlet entitled "Handling and Disposal of Home Medical Waste: A Household Guidefor Alabamians," has been printed by ADEM and is available as an instructional handout to ADPH patients.

IX. Soiled Linens

A. Soiled linens and clothing, including those used by HIV, or hepatitis B, or hepatitis C positive individuals, can be safely laundered in the family washer using detergent and the hot-water cycle.

B. Additional antibacterial activity is achieved when bleach (1 cup) is used and/or a dryer is used.

X. Food Preparation

Caregivers should be instructed in the following guidelines for food preparation and serving:

- Good hand hygiene is essential before and after food preparation (especially when handling raw foods such as vegetables, eggs, and when preparing chicken).
- Cooked and uncooked foods should be stored separately in clean containers.
- Do not thaw then refreeze foods.
- Patients with enteric diseases should not assist in food preparation until symptoms resolve and/or they are culture negative for disease.
- Disposable dishes are not indicated for patients with infectious diseases. The patient's dishes and eating utensils can be washed along with family dishes in hot, soapy water or washed in the dishwasher on the hot cycle.

SECTION VIII

TUBERCULOSIS INFECTION CONTROL RECOMMENDATIONS

I. INTRODUCTION

An effective tuberculosis (TB) infection control program requires early identification, isolation, and effective treatment of persons who have active TB. The TB Division of the Bureau of Disease Control has designated TB Managers located in each public health area. They are responsible for ensuring that the policies and procedures defined in the *ADPH Tuberculosis Policy and Procedure Manual* are adhered to, therefore minimizing the risk of transmission of *Mycobacterium tuberculosis.* Please refer to this manual or contact the TB Managers should you need information or assistance.

Within each county health department certain control measures must be used in order to protect both employees and patients from being exposed to tuberculosis. Control measures can be divided into three areas: administrative measures, engineering controls, and personal respiratory protective equipment.

II. ADMINISTRATIVE MEASURES

Administrative measures are used primarily to reduce the risk for exposing uninfected persons to persons who have infectious TB. Within the county health departments administrative measures include:

- screening patients for signs and symptoms of active TB;
- placing these patients in a special equipped TB isolation room (if available) or in a separate room designated for patient isolation. **Note:** Under no circumstances should a person with known or suspected TB be placed in the same area with children, diagnosed HIV-infected persons, or any other severely immunocompromised persons;
- giving these patients a surgical mask, a box of tissues, and instructions regarding the use of these items;
- adhering to all ADPH TB policies and procedures concerning diagnostic evaluation and treatment of persons likely to have TB;
- implementing effective work practices among healthcare workers (HCWs) in the health department (e.g., correctly wearing respiratory protection and keeping doors to isolation rooms closed);
- educating, training, and counseling HCWs about TB; and,

- annually screening TB personnel (and others, as determined by facility risk assessmenet) for TB. (See Section I, Subsection II, Tuberculin Skin Testing).

III. ENGINEERING CONTROLS

Engineering controls are used to prevent the spread and reduce the concentration of infectious droplet nuclei. In the county health departments this is accomplished in designated rooms by:

- controlling the direction of airflow to prevent contamination of air in areas adjacent to the infectious source (use of negative pressure);

- diluting and removing contaminated air via general ventilation (including HEPA filtration); and/or

- using ultraviolet germicidal irradiation (UVGI) to clean air.

IV. PERSONAL RESPIRATORY PROTECTIVE EQUIPMENT

Since HCWs may be exposed to TB when entering rooms in which patients with known or suspected infectious TB may be isolated and/or treatment rooms in which cough inducing or aerosol-generating procedures are performed, appropriate personal respiratory protective equipment will be available for use. In the county health departments, TB personnel, and others as deemed necessary, will be fit tested and appropriate protective respiratory equipment made available to them.

V. ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI)

The purpose of UVGIs is to kill or inactivate airborne tubercle bacilli. It can be used in isolation or treatment rooms as a supplemental method of air cleaning. It is not a substitute for negative pressure.

A. Safety Issues

Short-term overexposure to UV radiation can cause erythema and keratoconjunctivitis. Broad-spectrum UV radiation has been associated with increased risk for squamous and basal cell carcinomas of the skin. It is therefore important to warn employees who are cleaning or replacing tubes never to look directly at the lighted tubes. Certain medical conditions or use of some medications have been associated with photosensitivity. Individuals experiencing photosensitivity should be especially careful to avoid overexposure to UV radiation. Warning signs will be posted at the entrance to and within rooms where UV lights are used.

B. Maintenance

UV light lamps do not need to be dusted prior to each use. Should an accumulation of dust be noted, the tube should be allowed to cool, then cleaned with a damp cloth. Tubes should be replaced if they stop glowing or if they are flickering. Follow manufacturers' recommendations as to replacement.

C. Monitoring

A regularly scheduled evaluation of the UV intensity to which HCWs, patients, and others are exposed should be conducted. UV radiation levels should not exceed those in recommended guidelines *(MMWR December30 2005*, Vol. 54/ No. RR- 17, Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health Care Facilities,2005.)

VI. SPUTUM INDUCTION

Coughing during sputum induction increases the likelihood of droplet nuclei being expelled into the air. Refer to the *ADPH Tuberculosis Policy and Procedure Manual* for correct procedure to be used to reduce airborne transmission.

VII. ADDITIONAL TUBERCULOSIS INFORMATION

Additional tuberculosis information can be referenced in the *ADPH Tuberculosis Policy and Procedure Manual* or by calling the Tuberculosis Control Division at 334-206-5330.

SECTION IX

PREVENTING ALLERGIC REACTIONS TO NATURAL RUBBER LATEX IN THE WORKPLACE

Latex gloves have been proven to be effective in preventing transmission of many infectious diseases to healthcare workers. But for some workers, exposures to latex may result in skin rashes; hives, flushing, itching, nasal, eye, or sinus symptoms, asthma, and rarely, shock. Reports of such allergic reactions to latex have increased in recent years - especially among healthcare workers due to the fact that they use latex gloves frequently. Recent reports in the scientific literature indicate that approximately 1 % to 6% of the general population and 8% to 12% of regularly exposed healthcare workers are sensitized to latex.

The National Institute for Occupational Safety and Health (NIOSH) has issued recommendations for minimizing latex-related health problems in workers while protecting them from infectious materials. These recommendations include reducing exposures, using appropriate work practices, training and educating workers, monitoring symptoms, and substituting non-latex products when appropriate.

Most people who encounter latex products only through their general use in society have no health problems from the use of these products. Workers who repeatedly use latex products are the focus of these recommendations.

I. TYPES OF REACTIONS TO LATEX

Three types of reactions can occur in persons using latex products:
- Irritant contact dermatitis
- Allergic contact dermatitis (delayed hypersensitivity)
- Latex allergy

A. Irritant Contact Dermatitis

The most common reaction to latex products is irritant contact dermatitis - the development of dry, itchy, irritated areas on the skin, usually the hands. This reaction is caused by skin irritation from using gloves and possibly by exposure to other workplace products and chemicals. The reaction can also result from repeated handwashing and drying, incomplete hand drying, use of cleaners and sanitizers, and exposure to powders added to the gloves. Irritant contact dermatitis is not a true allergy.

B. Allergic Contact Dermatitis

Allergic contact dermatitis (delayed hypersensitivity) results from exposure to chemicals added to latex during harvesting, processing, or manufacturing. These chemicals can cause skin reactions similar to those caused by poison ivy. The

rash begins 24 to 48 hours after contact and may progress to oozing skin blisters or spread away from the area of skin touched by the latex.

C. Latex Allergy

Latex allergy (immediate hypersensitivity) can be a more serious reaction to latex than irritant contact dermatitis or allergic contact dermatitis. Reactions usually begin within minutes of exposure to latex, but they can occur hours later and can produce various symptoms. Mild reactions involve skin redness, hives, or itching. More severe reactions may involve respiratory symptoms such as runny nose, sneezing, itchy eyes, scratchy throat, and asthma (difficult breathing, coughing spells, and wheezing). Rarely, shock may occur; but a life-threatening reaction is seldom the first sign of latex allergy. Such reactions are similar to those seen in some allergic persons after a bee sting.

II. OTHER ASSOCIATIONS WITH LATEX ALLERGIES

A topic individuals (persons with a tendency to have multiple allergic conditions) are at increased risk for developing latex allergy. Latex allergy is also associated with allergies to certain foods; especially avocado, potato, banana, tomato, chestnuts, kiwi fruit, and papaya. People with spina bifida are also at increased risk for latex allergy.

Latex allergy should be suspected in anyone who develops certain symptoms after latex exposure, including nasal, eye, or sinus irritation, hives, shortness of breath, coughing, wheezing, or unexplained shock. Any exposed worker who experiences these symptoms should be evaluated by a physician, since further exposure could result in a serious allergic reaction. A diagnosis is made by using the results of a medical history, physical examination, and tests.

Once a worker becomes allergic to latex, special precautions are needed to prevent exposures during work as well as during medical or dental care. Certain medications may reduce the allergy symptoms, but complete latex avoidance, though quite difficult, is the most effective approach.

III. PRODUCTS CONTAINING LATEX

Individuals who already have latex allergy should be aware of latex-containing products that may trigger an allergic reaction. Some commonly used products are available in latex-free forms. The Food & Drug Administration (FDA) mandates that all products containing latex be labeled as such. The following are examples of products that may contain latex:

Emergency Equipment
Blood pressure cuffs
Stethoscopes
Disposable gloves
Oral & nasal airways
Endotracheal tubes
Tourniquets
Intravenous tubing
Syringes

Office Supplies
Rubber Bands
Erasers

Personal Protective Equipment
Gloves
Surgical masks
Goggles
Respirators

Medical Supplies
Catheters
Wound drains
Dental dams
Rubber tops of mulitdose vials

LATEX-CONTAINING PRODUCTS AND ALTERNATIVES

Latex items	Non-latex alternative
Adhesive tape	Plastic or paper tape; 1'' rolled cotton gauze
Adhesives	Non-latex adhesives
Bite blocks	Silastic bite blocks
Blood pressure cuff tubing	Rolled cotton batting on areas of contact w/ patients skin (Latex-free cuffs are available)
Catheter, Foley	Silastic Foley catheter
Catheter leg bag straps	Velcro fastening tape straps
Crutch axillary & hand pads	Cover with cloth
Disposable diapers, rubber pants	Cloth diapers
Drains, Penrose	Silicone tubing
Electrode pads	Non-latex brands
Esmarch bandages	White cotton Ace bandages
Finger cots	Non-latex glove fingers
Gloves, examination	Vinyl or nitrile gloves
Gloves, surgical	Neoprene, triblock copolymer, or nitrile gloves
IV tubing rubber stoppers	3-way stopcocks on IV tubing
Masks, molded w/elastic band	Other types of surgical masks
Medication vials w/rubber stoppers	Use ampules, if possible
Name bands	Non-latex name bands
Pacifiers	Plastic or silicone pacifiers
Rubber bands	String or dental floss
Sheets	Disposable underpads
Solution bag injection port	Tape injection ports (to avoid coring w/needle when withdrawing fluid)
Stethoscope	Place cloth around latex

Syringes	Latex-free or glass syringes
Tourniquets	Wrap w/stockinet or wrap over clothing
Toys	Plastic, cloth, or vinyl toys
Wheelchair cushions	Cover w/cloth
Wheelchair tires	Wear gloves to propel chair

IV. ADPH LATEX USE PROCEDURES

Both latex and vinyl (non-latex) gloves are on contract for use by ADPH employees. Both reduced protein, powder-free and powdered gloves are available. If the powdered gloves are used, good housekeeping practices should be used to remove latex-containing dust from the workplace after use of these gloves. So-called hypoallergeniclatex gloves do not reduce the risk of latex allergy. However, they may reduce reactions to chemical additives in the latex (allergic contact dermatitis).

A. Work Practices

Use appropriate work practices to reduce the chance of reactions to latex:

1. When wearing latex gloves, do not use oil-based hand creams or lotions unless they have been shown to reduce latex-related problems.
2. After removing latex gloves, wash hands with a mild soap and dry thoroughly.
3. Use good housekeeping practices to remove latex-containing dust from the workplace (upholstery, carpets, ventilation ducts).

SECTION X

INFECTION CONTROL RECOMMENDATIONS FOR PREGNANT PERSONNEL

Occupational acquisition of infections is of special concern to female healthcare personnel of childbearing age for several reasons. Immunologic changes occur during pregnancy, primarily depression of certain aspects of cell-mediated immunity such as decreased levels of helper T-cells. These changes permit fetal development without rejection but generally do not increase maternal susceptibility to infectious diseases. Some infections, such as varicella, may be more severe during pregnancy. Transplacental infections with viruses such as parvovirus, varicella, and rubella have been associated with abortion, congenital anomaly, and mental retardation. Other diseases in which the infectious agent may be transmitted to the fetus include cytomegalovirus (CMV), hepatitis B, herpes simplex, influenza, and measles. In addition, certain drugs used to treat or prevent some infections, for example tuberculosis, may be contraindicated during pregnancy.

In general, pregnant healthcare personnel do not have an increased risk for acquiring infections in the workplace. Female personnel of childbearing age should be strongly encouraged to receive immunizations for vaccine-preventable diseases before pregnancy. Such personnel may also decrease their risk of acquiring infection by adhering to appropriate infection control practices, including standard precautions when caring for all patients.

Appendix 1

INFECTION CONTROL ORIENTATION - QUESTIONS & ANSWERS

Q. Why is infection control important to healthcare workers?

A. Regardless of whether working in a clinic or home health, employees having direct patient contact and providing care have a responsibility to know the methods by which disease is spread and the measures that must be taken to prevent the transmission of disease.

Q. How does disease transmission occur?

A. The spread of infection in human beings requires the presence of three factors.
1. A disease-causing **organism** in sufficient quantity. (**source or agent.)**
2. A **susceptible host** (a person who is not immune to that organism).
3. A **mode of transmission** (a way for that agent to infect that host).

Q. Transmission of an organism through the environment occurs how?

A. Transmission occurs through direct or indirect contact with the organism.
1. **Direct contact** - infection occurs by contact from person to person.
   a. contamination through small breaks or cracks in skin
   b. contact with mucous membranes (eyes, nose, mouth)
2. **Indirect contact** - infection occurs by contact with inanimate objects in the environment. There are three types of indirect contact:
   a. **airborne** - transmission through aerosols or droplets (cough, sneeze, nasal discharge) (ex.: influenza, tuberculosis)
   b. **vehicle** - infection through contaminated water or food and from fecal material (ex.: hepatitis A or salmonella)
   c. **vector** - infection via insects (ex.: malaria from mosquitoes or Lyme disease from ticks)

Q. What is meant by the term Standard Precautions?

A. Standard Precautions replace the old "universal precautions" and is an approach to infection control. Standard Precautions apply to blood, all body fluids, secretions, and excretions regardless of whether or not they contain visible blood. They also apply to non-intact skin and mucous membranes. Unapparent infection may be clinically unrecognized, yet still be communicable. It is therefore obviously more reliable to provide a high level of precaution for all patients, whether or not an infection has been diagnosed. In other words, treat **everyone** as if he/she may have a disease which could be transmitted to you.

Q. How important is personal protective equipment to healthcare workers?

A. Personal protective equipment (PPE) is specialized clothing or equipment worn by an employee for protection against an occupational hazard. Gloves, gowns, aprons, or lab coats, masks, and eye protection (goggles or eye shields) would be examples. They are to be worn anytime the employee anticipates he/she may come in contact with blood or other body fluids.

Q. Does hand hygiene still play an important role in infection control?

A. Proper hand hygiene technique is the single most important procedure for helping to prevent the spread of infection.

Q. Are there certain times when hand hygiene is advocated?

A. Hands should **always** be washed:

- before and after any patient contact;
- before and after touching wounds or dressings;
- before applying gloves and after their removal;
- any time hands and skin surfaces are contaminated with blood or body fluids; and,
- after any personal hygiene or using the restroom.

Q. Is the hepatitis B vaccine offered to health department employees?

A. This vaccine is offered at no cost to any employee who is considered to be at high risk for occupational exposure to blood and body fluids. (See *Bloodborne Pathogens Exposure Control Plan* for a list of these designated employees.)

Appendix 2

ALABAMA DEPARTMENT OF PUBLIC HEALTH
EMPLOYEE HEPATITIS B VACCINATION POLICY

Hepatitis B virus (HBV) vaccinations will be offered to all employees at the county, area, or state level who have been determined to be at risk to incur occupational exposure to blood or other potentially infectious materials. (Refer to *ADPH Bloodborne Pathogens Exposure Control Plan.)* A Hepatitis B Vaccine Informed Consent Form is to be completed by each employee offered the vaccine, regardless of whether or not vaccine is administered.

A. New Employees with Documentation of Previous Vaccination or Seroconversion.
Any new employee having documentation of previous HBV vaccination or seroconversion due to previous HBV infection, (e.g., anti-HBs is $\geq$ 10 mlU/ml by RIA or reactive EIA) is considered protected and will be asked to sign the declination section of the informed consent form noting dates of previous vaccination and/or serological seroconversion. This form denotes ADPH's intent to provide vaccine.

B. New Employees with No Documentation of Previous Vaccination or History of Seroconversion.

1. Any new employee who does not have documentation of previous vaccination should be offered the vaccine as outlined below.

2. Any new employee who has previously had the 3-dose vaccine series, but did not seroconvert (e.g., anti-HBs is < 10mlU/ml by RIA or non-reactive by EIA) should be offered a second 3-dose vaccine series as outlined below.

C. **Vaccine Refusal**
Any employee declining HBV vaccination must sign the declination section of the informed consent form. Should he/she decide at a later date to accept the vaccine, arrangements will be made to provide it.

D. **Pre-testing**
Pre-vaccination testing for HBV antibody (anti-HBs) will not routinely be performed. Note: Those employees who have a previous history of receiving the vaccine series, but were never post-vaccine tested for antibody, do not need to be tested. Should they have an exposure in the future, blood would be drawn for testing for antibody at that time.

E. **Vaccination**
The HBV vaccination series consists of three 1-ml doses of vaccine given in a 0, 1, 6-month series. The vaccine is to be administered by the intramuscular route in the deltoid muscle with a needle between one to one and one-half inches long. Each employee will be provided educational literature regarding HBV disease and the vaccine.

F. **Post-vaccination Testing and Follow-Up Following Completion of the Initial 3-dose Vaccine Series.**

One to two months after completion of the initial 3-dose vaccine series, blood will be drawn for anti-HBs testing to provide definitive information regarding response to the vaccine.

1. Employees found to be anti-HBs reactive will be considered to have developed antibodies against hepatitis B and no further follow-up is necessary.
2. Employees found to be anti-HBs non-reactive should be offered a second 3-dose vaccine series.

G. **Re-vaccination, Antibody Testing, & Counseling of Persons Not Responding to Initial 3-dose Series.**

1. Employees who do not develop antibodies (anti-HBs non-reactive) following the initial 3-dose series of vaccine should be offered an additional 3 doses (for a total of 6 doses). These should be administered according to the guidelines of the initial series. (See E above.)

2. One to two months after the second series, blood should be tested for anti-HBs.
   - Those employees found to be anti-HBs reactive will be considered to have developed antibodies against hepatitis B and no further follow-up is necessary.
   - For those employees found to be non-reactive for anti-HBS, the Bureau of Clinical Laboratories will automatically test the specimen for HBsAg.
     Note: In order for the Lab to be aware that the blood sample is that of a health department employee, the hepatitis lab request form must be marked "Employee".

3. Employees found to be non-reactive for both anti-HBs and HBsAg, should be informed:
   a. that they did not develop antibodies and are considered to be susceptible to hepatitis B infection;
   b. of the importance of using Standard Precautions, personal protective equipment, and good handwashing procedures;
   c. of the importance of immediately reporting to their supervisor any exposure

4. Those employees found to be anti-HBs non-reactive but HBsAg reactive should be informed of the test results and referred to their personal physician for evaluation for possible chronic hepatitis B infection. Documentation of test results and referral of employee to his/her personal physician should be placed in his/her employee health record.

H. **Additional Doses of Vaccine for Employees Who Have Previously Received 4 Doses of Vaccine and Did Not Develop Antibodies.**

Employees who have received a total of 4 doses of vaccine (a 3-dose series and a "booster" dose as was previous health department policy) and did not develop antibodies (anti-HBs non-reactive).

1. These individuals should be offered a fifth and sixth dose of vaccine, administered two months apart.

2. One to two months following the sixth dose, they should be tested for anti-HBs and counseled as to the results as indicated in Section G (3 and 4) above.

I. **Additional Booster Doses**

Additional booster doses are not considered necessary since persons who seroconverted following the HBV vaccine series are protected against clinical hepatitis and chronic infection even when antibody levels become low or undetectable.

J. **Post-Exposure Follow-up**

Post-exposure follow-up will be made available to all employees with an occupational exposure incident. (See Section III, "Recommendations for the Management of Percutaneous/Permucosal Exposure to Blood or Other Body Fluids".)

K. **ADPH Employee Hepatitis B Vaccination Database**

A computerized ADPH Employee Hepatitis B Vaccination database is maintained by the Infection Control Branch of the Division of Epidemiology. All employee HBV vaccination data received from the counties and areas is entered into this program.

Appendix 3

Post Hepatitis B Vaccine Employee Screening
Laboratory Screening

Please refer to the laboratory form for hepatitis screening.

Please complete each data element as indicated.

Name - Last, First, Middle Initial
CHR # - If employee assigned one
Date of Birth - Indicate numerically the month, day, year
Medicaid/Medicare - Leave blank
Sex - Indicate M (Male) F (Female)
Race - Indicate W (White), B (Black), A (Asian), or O (Other)
Social Security Number - Fill in the 9 digit number series
Date Collected - Indicate numerically the month, day, year
Patient Is - Mark "Asymptomatic"
Specimen Is - Leave blank
Onset Date - Leave Blank
Test Requested: Mark either:

__ Post Vac (for testing for antibody following 3-dose series) Mark box for B
__ Needlestick - healthcare provider (for baseline testing following an occupational exposure)

SPECIAL INSTRUCTIONS: Use the colored area under Test Results Section on the lab slip and write: **EMPLOYEE**

Appendix 4

MRSA - Methicillin Resistant *Staphylococcus aureus* Fact Sheet

Q. What is *Staphylococcus aureus*?

A. *Staphylococcus aureus,* often referred to simply as "staph", are bacteria commonly carried on the skin or in the nose of healthy people. Occasionally, staph can cause an infection. Staph bacteria are one of the most common causes of skin infections in the United States. Most of these infections are minor (such as pimples and boils) and most can be treated without antibiotics. However, staph bacteria can also cause serious infections (such as surgical wound infections and pneumonia). In the past, most serious staph bacteria infections were treated with a certain type of antibiotic related to penicillin. Over the past 50 years, treatment of these infections has become more difficult because staph bacteria have become resistant to various antibiotics, including the commonly used penicillin-related antibiotics. These resistant bacteria are called methicillin-resistant *Staphylococcus aureus,* or MRSA.

Q. Where are staph and MRSA found?

A. Staph bacteria and MRSA can be found on the skin and in the nose of some people without causing illness. These people are considered to be colonized with the bacteria.

Q. What is the difference between colonization and infection?

A. Colonization occurs when the staph bacteria are present on or in the body without causing illness. Approximately 25 to 30% of the population is colonized in the nose with the staph bacteria at any given time. Infection occurs when the staph bacteria cause disease in the person. People also may be colonized or infected with MRSA, the staph bacteria that are resistant to many antibiotics.

Q. Who gets MRSA?

A. Staph bacteria can cause different kinds of illness, including skin infections, bone infections, pneumonia, severe life-threatening bloodstream infections, and others. Since MRSA is a staph bacterium, it can cause the same kinds of infection as staph in general; however, MRSA occurs more commonly among persons in hospitals and healthcare facilities.

MRSA infections usually develop in hospitalized patients who are elderly or very sick or who have an open wound (such as bedsore) or a tube going into their body (such as a urinary catheter or intravenous (IV) catheter). Certain factors can put some patients at higher risk for MRSA including prolonged hospital stay, receiving broad-spectrum antibiotics, being hospitalized in an intensive care or burn unit, spending time close to other patients with MRSA, having recent surgery, or carrying MRSA in the nose without developing illness.

MRSA causes illness in persons outside of hospitals and healthcare facilities as well. Cases of MRSA diseases in the community have been associated with recent antibiotic use, sharing contaminated items, having active skin diseases, and living in crowded

settings (e.g., daycare centers, among participants of close contact sports, correctional facilities). Community associated MRSA is usually seen as skin infections, but may also cause severe illness.

Q. How common is staph and MRSA**?**
A. Staph and MRSA infections are not routinely reported to public health authorities, so a precise number of cases is not known. Estimates are that as many as 100,000 persons are hospitalized each year with MRSA infections, although only a small proportion of these persons have disease onset occurring in the community.

Q. Are staph and MRSA infections treatable?
A. Yes. Most staph bacteria and MRSA are susceptible to several antibiotics and most staph skin infections can be treated without antibiotics by draining the sore. However, if antibiotics are prescribed, patients should complete the full course and call their doctors if the infection does not get better. Patients who are only colonized with staph bacteria or MRSA usually do not need treatment.

Q. How are staph and MRSA spread?
A. Staph bacteria and MRSA can spread among people having close contact with infected people. MRSA is almost always spread by direct physical contact, and not through the air. Spread may also occur through indirect contact by touching objects (e.g., towels, sheets, wound dressings, clothes, sports equipment) contaminated by the infected skin of a person with MRSA or staph bacteria.

Q. How can I prevent staph or MRSA infections?
A. Practice good hygiene:

- Keep your hands clean by washing thoroughly with soap and water.
- Keep cuts and abrasions clean and covered with a proper dressing (e.g., bandage) until healed.
- Avoid contact with other people's wounds or material contaminated from wounds.

Q. What should I do if I think I have a staph or MRSA infection?
A. See your healthcare provider.

Attachment 5

Community-Associated Methicillin-Resistant *Staphylococcus aureus* (CA-MRSA) Frequently Asked Questions

Q. What is MRSA?

A. MRSA is a type of *Staphylococcus aureus* (S. aureus). *Staphylococcus aureus,* often referred to simply as "staph", are bacteria commonly carried on the skin or in the nose of healthy people. Some *S. aureus* are resistant to the class of antibiotics that are frequently used to treat staph such as methicillin - and thus are called methicillin-resistant *S. aureus* (MRSA).

Q. Who gets MRSA?

A. *S. aureus* (staph), including MRSA can be spread among people having close contact with infected people. MRSA is almost always spread by direct physical contact and not through the air. Spread may occur through indirect contact by touching objects (e.g., towels, sheets, wound dressings, clothes, workout areas, or sports equipment) contaminated by the infected skin of a person with staph bacteria or MRSA.

Just as *S. aureus* can be carried on the skin or in the nose without causing any disease, MRSA can be carried in this way also. This is known as colonization.

MRSA infections are usually mild, superficial infections of the skin that can be treated successfully with proper skin care and antibiotics. MRSA, however, can be difficult to treat and can progress to life-threatening blood or bone infections because there are fewer effective antibiotics available for treatment.

MRSA infections occur commonly among persons in hospitals and healthcare facilities. However, MRSA can cause illness in persons outside of hospitals and healthcare facilities as well. Cases of MRSA infection in the community have been associated with recent antibiotic use, sharing contaminated items, having recurrent skin diseases, and living in crowded settings. Clusters of skin infections caused by MRSA have been described among injecting drug-users, incarcerated persons, players of close-contact sports, men who have sex with men, and other populations. Most of the transmission in these settings appeared to be from people with active MRSA skin infections.

Q. How do I know if I got MRSA from the community or from a healthcare setting?

A. Persons with MRSA infections that meet all of the following criteria likely have community associated MRSA (CA-MRSA) infections:

- Diagnosis of MRSA was made in the outpatient history of MRSA infection or colonization.
- The patient has no medical history in the past year of:
    1. hospitalization
    2. admission to a nursing home, skilled nursing facility, or hospice
    3. dialysis

4. surgery

The patient has no permanent indwelling catheters or medical devices that pass through the skin into the body.

Q. What factors are associated with outbreaks of CA-MRSA?

A. These are the 5 factors which have been identified as common to the outbreaks of CA-MRSA:

1. Compromised skin - skin diseases or problems, abrasions from scrapes, etc.
2. Contact - frequent and very vigorous skin-to-skin contact (e.g., wrestlers and football players)
3. Contaminated surfaces and shared items - such as sports equipment and weight-lifting equipment
4. Crowding - in crowded environments people are very close to one another which increases the likelihood of skin-to-skin contact and contamination of the environment.
5. Cleanliness - the best hygiene may not be ensured in some environments (prisons, gyms, athletic equipment rooms) with a resultant lack of use of soap or of disinfection of equipment.

Q. If my doctor or healthcare provider has told me that I have an MRSA skin infection, what can I do to prevent others from getting infected?

A. You can prevent spreading an MRSA infection to those you live with or others around you by following these steps:

1. Keep infections, particularly those that continue to produce pus or to drain material, covered with clean, dry bandages. Follow your healthcare provider's instructions on proper care of the wound. Pus from infected wounds can contain MRSA and spread the bacteria to others.
2. Advise your family and other close contacts to wash their hands frequently with soap and warm water, especially if they change your bandages or touch the infected wound or potentially infectious materials.
3. Avoid sharing personal items (e.g., towels, washcloths, razor, clothing, or uniforms) that may have contact with the infected wound and potentially infectious material. Wash linens and clothes that become soiled with hot water and laundry detergent Drying clothes in a hot dryer, rather than air-drying, also helps kill bacteria in clothes.
4. Tell all healthcare providers who treat you that you have an antibiotic-resistant staph skin infection.

Q. How is MRSA diagnosed?

A. A sample of the infected wound (either a small biopsy or skin or pus taken with a swab) must be obtained to grow the bacteria in the microbiology laboratory. Once the staph is growing, the organism is tested to determine which antibiotics will be effective for treating the infection. A culture of skin lesions is especially useful in recurrent or persistent cases of skin infection, in cases of antibiotic failure, and in cases that present with advanced or aggressive infections.

Q. What is the mortality rate of CA-MRSA?

A. CA-MRSA infections are typically limited to the skin and do not result in severe disease (such as infection of the bloodstream) or death. However, on rare occasion, CA-MRSA can cause severe illness even when treated quickly.

Appendix 6

STANDARD PRECAUTIONS

Standard precautions replaced the old Universal Precautions in the patient isolation guidelines published by the Centers for Disease Control and Prevention. Key tenets of standard infection control precautions are summarized as follows:

Hand Hygiene: Wash hands after touching blood, body fluids, secretions, excretions, and contaminated items, whether or not gloves are worn. Wash hands immediately after gloves are removed, between patient contacts, and when otherwise indicated to avoid transfer of microorganisms to other patients or environments. It may be necessary to wash hands between tasks and procedures on the same patient to prevent cross-contamination of different body sites. When hands are visibly soiled, wash with a non-antimicrobial or an antimicrobial soap and water. If hands are not visibly soiled, use an alcohol based hand rub for routinely decontaminating hands.

Gloves: Wear clean, non sterile gloves when touching blood, body fluids, secretions, excretions, and contaminated items. Put on clean gloves just before touching mucous membranes and non-intact skin. Change gloves between tasks and procedures on the same patient after contact with material that may contain a high concentration of microorganisms. Remove gloves promptly after use, before touching non-contaminated items and environmental surfaces, and before going to another patient; wash hands immediately to avoid transfer of microorganisms to other patients or environments.

Masks, eye protection, face shields: Wear a mask and eye protection or a face shield to protect mucous membranes of the eyes, nose, and mouth during procedures and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

Gowns: Wear a clean, non-sterile gown to protect skin and to prevent soiling of clothing during procedures and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Select a gown appropriate for the activity and amount of fluid likely to be encountered. Remove a soiled gown as promptly as possible, and wash hands to avoid transfer of microorganisms to other patients or environments.

Patient care equipment: Handle used patient care equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and environments. Ensure that reusable equipment is not used for the care of another patient until it has been cleaned and reprocessed appropriately. Make sure single-use items are discarded properly.

Environmental controls: Ensure the healthcare facility has adequate procedures for the routine care, cleaning, and disinfection of environmental surfaces, beds, bed rails, bedside equipment, and other frequently touched surfaces, and ensure that these

procedures are being followed.

Linen: Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures and contamination of clothing, and that avoids transfer of microorganisms to other patients and environments.

Occupational health and bloodborne pathogens: Take care to prevent injuries when using needles, scalpels, and other sharp instruments or devices; when handling sharp instruments after procedures; when cleaning used instruments; and when disposing of sharps. Whenever possible, use sharps with engineered sharps injury protections (SESIPS). These are non-needle sharps or needle devices containing built in safety features that reduce the risk of sharps injury. When using non-SESIPS, never recap used needles, or otherwise manipulate them using both hands, or use any other technique that involves directing the point of a needle toward any part of the body. Do not remove used needles from disposable syringes and do not bend, break, or otherwise manipulate used needles. Place used SESIPS, disposable syringes and needles, scalpel blades, and other sharp items in appropriate puncture-resistant containers, which are located as close as practical to the area in which the items were used. Use mouthpieces, resuscitation bags, or other ventilation devices as an alternative to mouth-to-mouth resuscitation methods.

Appendix 7

CONTACT PRECAUTIONS

In addition to Standard Precautions, use Contact Precautions, or the equivalent, for specified patients known or suspected to be infected or colonized with epidemiologically important microorganisms that can be transmitted by direct contact with the patient (hand or skin-to-skin contact that occurs when performing patient-care activities that require touching the patient's dry skin) or indirect contact (touching) with environmental surfaces or patient care items in the patient's environment.

I. Gloves and Handwashing

In addition to wearing gloves as outlined under Standard Precautions, wear gloves (clean, non-sterile gloves are adequate) when entering the room. During the course of providing care for a patient, change gloves after having contact with infective material that may contain high concentrations of microorganisms (fecal material and wound drainage). Remove gloves before leaving the patient's environment and wash hands immediately with an antimicrobial agent or an alcohol-based hand rub. After glove removal and handwashing, ensure that hands do not touch potentially contaminated environmental surfaces or items in the patient's room to avoid transfer of microorganisms to other patients or environments.

II. Gown

In addition to wearing a gown as outlined under Standard Precautions, wear a gown (a clean non-sterile gown is adequate) when entering the room if you anticipate that your clothing will have substantial contact with the patient, environmental surfaces, or items in the patient's room, or if the patient is incontinent, or has diarrhea, an ileostomy, a colostomy, or wound drainage not contained by a dressing. Remove the gown before leaving the patient's environment. After gown removal, ensure that clothing does not contact potentially contaminated environmental surfaces to avoid transfer of microorganisms to other patients or environments.

III. Patient Transport

Limit the movement and transport of the patient from the room to essential purposes only. If the patient is transported out of the room, ensure that precautions are maintained to minimize the risk of transmission of microorganisms to other patients and contamination of environmental surfaces or equipment.

IV. Patient-Care Equipment

When possible, dedicate the use of noncritical patient-care equipment to a single patient to avoid sharing between patients. If use of common equipment or items is unavoidable, then adequately clean and disinfect them prior to use with another patient.

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ALABAMA DEPARTMENT OF PUBLIC HEALTH

BLOODBORNE PATHOGENS EXPOSURE PLAN

INFECTION PREVENTION SECTION
BUREAU OF COMMUNICABLE DISEASE
334-206-5932

ADPH-DC-4IREV. 01-2010

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TABLE OF CONTENTS

I. INTRODUCTION

This Bloodborne Pathogens Exposure Control Plan was developed by the ADPH as a means to minimize employee exposure to human blood and other potentially infectious materials. It is designed to comply with the standards enunciated by the United States Department of Labor, Occupational Safety and Health Administration (OSHA) in Part 19101030, Title 29 of the Code of Federal Regulations, "Occupational Exposure to Bloodborne Pathogens".

Each employee, whose work duties involve reasonably anticipated exposure to blood or other potentially infectious materials, must become familiar with, and adhere to, the provisions of the Exposure Control Plan. In order to promote this objective, a copy of the plan shall be readily accessible to all employees. In this facility the plan will be available from:

_____

(name/position)

This plan will be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which would affect occupational exposure. In addition, it will be updated as necessary to reflect new or revised employee positions which have been ascertained to be at potential occupational risk to exposure to bloodborne pathogens.

Within each county health department one or more individuals will have the authority and responsibility for the implementation of this plan.

The person(s) responsible for _____ County is (are):

_____

(name/position)

___/___/___
(Effective date of this Exposure Control Plan)

II. DEFINITIONS

These definitions apply throughout this plan:

"BLOOD" means human blood, human blood components, and products made from human blood.

"BLOODBORNE PATHOGENS" refers to pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

"CLINICAL LABORATORY" means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

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

"CONTAMINATED LAUNDRY" means laundry which has been soiled with blood or other potentially infectious materials or which may contain sharps.

"CONTAMINATED SHARPS" means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

"DECONTAMINATE" means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

"ENGINEERING CONTROLS" are those controls which isolate or remove the blood borne pathogens hazard from the workplace (sharps disposal containers and self-sheathing needles). Safer medical devices such as sharps with engineered sharps injury protections and needleless systems must be used where feasible.

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

"HBV" means Hepatitis B virus.

"HCV" means Hepatitis C virus

"HIV" means Human Immunodeficiency Virus.

"NEEDLELESS SYSTEMS" means devices which provide an alternative to using needles for various procedures in order to reduce the risk of injury involving contaminated sharps. Examples include:

- IV medication systems which administer medication or fluids through a catheter port using non-needle connections; and
- Jet injection systems which deliver liquid medication beneath the skin or through a muscle.

"OCCUPATIONAL EXPOSURE" means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

"OTHER POTENTIALLY INFECTIOUS MATERIAL" (OPIM) means:

- the following human body fluids: semen, vaginal secretions, breast milk, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
- any unfixed tissue or organ (other than intact skin) from a human (living or dead); and
- HIV-containing cell or tissue cultures, organ cultures, and HIV, HCV or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV, HCV or HBV.

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

"PERSONAL PROTECTIVE EQUIPMENT" means specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

"REGULATED WASTE" means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

"SHARPS WITH ENGINEERED SHARPS INJURY PROTECTIONS (SESIPS)" includes non-needle sharps or needle devices containing built-in safety features that are used for collecting fluids or administering medications or other fluids, or other procedures involving the risk of sharps injury. Examples include: needles that retract into a syringe after use, syringes with a sliding sheath that shields the attached needle after use, and IV delivery systems that use a catheter port with a needle housed in a protective covering.

"SOURCE INDIVIDUAL" means any person, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients, clients in institutions for the developmentally disabled, trauma victims, clients of drug and alcohol treatment facilities, residents of hospices and nursing homes, human remains, and individuals who donate or sell blood or blood components.

"STANDARD PRECAUTIONS" formerly referred to as Universal Precautions, is an approach to infection control in which all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

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

"WORK PRACTICE CONTROLS" means controls that reduce the likelihood of employee exposure to blood or other potentially infectious materials by altering the manner in which a task is performed (e.g., use of sharps with engineered sharps injury protection whenever possible).

III. EXPOSURE DETERMINATION

The ADPH has performed an exposure determination concerning which employees may be at risk to incur occupational exposure to blood or other potentially infectious materials. This determination was made without regard to the use of personal protective equipment (e.g. employees are considered to be exposed even if they wear personal protective equipment.) This exposure determination lists all job classifications in which all employees may be expected to incur such occupational exposure, regardless of frequency. Within ADPH the following job classifications are in this category. In addition, OSHA requires a listing of job classifications in which some employees may have occupational exposure. Since not all of the employees in these categories would be expected to incur exposure to blood or other potentially infectious materials, tasks or procedures that would cause these employees to have occupational exposure are listed in order to clearly understand which employees in these categories are considered to have occupational exposure. The job classifications and associated tasks for these categories are as follows:

JOB CLASSIFICATION	**TASKS/PROCEDURES**
1. Laboratory clerical personnel	In a Laboratory environment: 1. Open packages containing specimens 2. Handle report forms when entering data
2. Clinical and Home Health Clerical personnel	1. Handle specimens during labeling and packaging process (in some counties)

3. Janitorial/Housekeeping Laborers (State Lab)	1. Clean up spills 2. Handle identified medical waste/sharps During disposal process

IV. STANDARD PRECAUTIONS

Standard Precautions will be observed by each employee in order to prevent contact with blood or other potentially infectious materials.

V. 2001 NEEDLESTICK SAFETY AND PREVENTION ACT

This Federal law requires employers to identify and make use of effective and safer medical devices that eliminate or reduce employee exposure to bloodborne pathogens. The Act has the following components which will be adhered to in this facility:

Exposure Control Plan:

The Exposure Control Plan will be annually reviewed and updated to reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens. The review and follow-up will include:

- Taking into account innovations in medical procedure and technological developments that reduce the risk of exposure (e.g., devices designed to reduce needlesticks); and,
- Documenting any consideration and use of appropriate commercially-available and effective safer devices (e.g., describe the devices identified as candidates for use, the method(s) used to evaluate those devices, and justification for the eventual selection).

Devices will be selected based on reasonable judgment considering devices which:

- will not jeopardize patient or employee safety or be medically inadvisable; and
- will make an exposure incident involving a contaminated sharp less likely to occur.

Employee Input:

Input from non-managerial employees, responsible for direct patient care, will be solicited regarding the identification, evaluation, and selection of effective engineering controls, including safer medical devices.

Documentation of employee input, in the Exposure Control Plan, can be met by:

- listing the employees involved and describing the process by which input was requested; or
- presenting other documentation such as copies of documents used to request employee participation or records of responses received from employees.

Recordkeeping:

Employees, who are occupationally exposed to blood or other potentially infectious materials, must document on the incident report:

- the type and brand of device involved in the incident;
- location of the incident; and
- a description of the incident.

VI. ENGINEERING AND WORK PRACTICE CONTROLS

Engineering and work practice controls will be utilized to eliminate or minimize exposure to employees at the health department facilities. Where occupational exposure remains after institution of these controls, personal protective equipment will also be utilized. These engineering and work practice controls will be examined for effectiveness on a _____ (time interval) basis and maintained or replaced. In this facility ensuring the effectiveness of these controls will be the responsibility of:

_____

(name/position)

At our facility the following engineering controls will be utilized concerning:

A. Sharps Containers

1. Immediately, or as soon as possible after use, contaminated sharps will be placed in appropriate containers until properly processed. These containers are:

    a. puncture resistant
    b. leak proof on the sides and bottom
    c. appropriately labeled with biohazard label or color-coded red
    d. easily accessible to personnel, but out of reach of clients
    e. located as close as possible to area of use
    f. maintained in an upright position
    g. not allowed to overfill

2. In this facility sharps containers are located at the following sites:

    _____
    _____
    _____
    _____
    _____

3. Contaminated reusable sharps (such as used in dentistry) are not to be stored or processed in a manner that requires employees to reach by hand into the container where the sharps are placed.

4. Contaminated needles and other contaminated sharps are not to be bent, recapped

or removed unless no alternative is feasible or such action is required by a specific medical procedure.

Exceptions at this facility are:

____ None

____ Other _____

5. Such recapping or needle removal will be accomplished through the use of a mechanical device or a one-handed technique. At this facility this is accomplished by:
   ___ None
   ___ Other _____
   _____
   _____

6. Shearing or breaking of contaminated needles is prohibited.

7. In this facility the following person(s) is (are) responsible for the disposal of these containers: _____
   (name/position)

   The containers will be checked on a _____ (time interval) basis.

B. Handwashing Facilities

1. Handwashing facilities are readily accessible to all employees in every health department. In this facility they are located:
   _____
   _____
   _____
   _____
   _____

2. When hands are visibly dirty or contaminated with proteinaceous material or are visibly soiled with blood or body fluids, employees will wash their hands with a non-antimicrobial soap and water or an antimicrobial soap and water.

3. If hands are not visibly soiled, use an alcohol based hand rub for routinely decontaminating hands.
   Note: See Hand Hygiene

C. Work Area Restrictions

1. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is reasonable likelihood of

occupational exposure**.**

2. Food and drink will not be kept in refrigerators, freezers, shelves, cabinets, or on countertops or bench tops where blood or other potentially infectious materials, including any clinical specimens, are present.

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

4. All procedures will be conducted in a manner which will minimize splashing, spraying, splattering, and generation of droplets of blood or other potentially infectious materials. In this facility the following procedures are used to minimize splashing:

   a. use of covers on centrifuges.

   b. _____

   c. _____

   d. _____

D. Specimen Handling

1. Specimens of blood or other potentially infectious materials will only be placed in containers which prevent leakage during collection, handling, processing, storage, transport, and shipping.

2. Containers for storage, transport or shipping of specimens of blood or other potentially infectious materials will be:

   a. appropriately labeled or color-coded and,

   b. closed prior to being stored, transported, or shipped.

3. Refer to the *ADPH Bureau of Clinical Laboratories Laboratory Reference Manual* for specific procedures regarding specimen collection, handling, labeling, and shipping procedures.

E. Equipment Handling

1. Equipment which may become contaminated with blood or other potentially infectious materials will be examined prior to service or shipping and will be decontaminated as necessary, unless decontamination of such equipment or portions of such equipment is not feasible.

2. An appropriate, readily observable label will be attached to the equipment stating which portions remain contaminated until it has been appropriately cleaned.

F. Cleaning and Disinfection

1. All surfaces exposed to blood or other potentially infectious materials are to be wiped clean and appropriately disinfected immediately following completion of each individual patient's care/use or as soon as feasible after any spill of blood or other potentially infectious materials, as well as at the end of the work shift if the surface may have become contaminated since the last cleaning. In this facility the following protective coverings are used to assist in keeping surfaces free of contamination:

   a. disposable exam table paper
   b. _____
   c. _____
   d. _____

2. Instrument cleaning is accomplished in an area separate and apart from treatment areas.

G. Sterilization

1. All items to be sterilized are cleaned prior to being placed in sterilizing solution, autoclave, etc. (See *Infection Control Guidelines Manual* Section II for specifics.)

2. Bioindicators are placed on all items to be sterilized.

3. Sterilizers are monitored on a periodic basis (at least weekly) to insure proper functioning.

4. At this facility

   _____
   (name/position)

   is responsible for any sterilization procedures which may be indicated.

VII. PERSONAL PROTECTIVE EQUIPMENT (PPE)

A. Examples of appropriate personal protective equipment are such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks, eye protection, mouthpieces, resuscitation bags, pocket masks, and other ventilation devices.

B. PPE will be provided without cost to employees.

C. PPE will be chosen based on the anticipated exposure to blood or other potentially infectious materials.

D. PPE will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees'clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

E. PPE will be cleaned, laundered, repaired or replaced, and disposed of (if disposable) at no cost to employees.

F. All garments which are penetrated by blood will be removed immediately or as soon as feasible.

G. In this facility employees will be expected to remove personal protective equipment prior to leaving the work area and place it:

_____
_____
_____

H. Employees will use appropriate personal protective equipment whenever there is a potential for occupational exposure.

1. An employee may temporarily and briefly decline the use of personal protective equipment only under rare and extraordinary circumstances when, in the employee's professional judgment, its use will prevent the delivery of healthcare or public safety services, or will pose an increased hazard to themselves or a co-worker (example: performing emergency CPR).

2. When an employee makes such a judgment, the circumstances will be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future. In this facility

_____
(names/position)

will be responsible for investigation and appropriate follow-up of such occurrences.

I. Gloves

In this facility gloves will be available from (sites of dispersal):

_____
_____

1. Gloves will be worn:

a. Whenever it can be reasonably anticipated that employees will have hand contact with blood or other potentially infectious materials, mucous membranes, and non-intact skin.

b. When handling or touching contaminated items or surfaces.

c. When performing vascular access procedures.

d. During the following procedures being performed in this facility:
_____
_____

2. Gloves will be changed between patients.

3. Disposable (single use) gloves will be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

4. Disposable (single use) gloves will not be washed or decontaminated for re-use.

5. Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised.

6. Utility gloves must be discarded if cracked, peeling, torn, punctured, or otherwise exhibit signs of deterioration, or when their ability to function as a barrier is compromised.

7. Should an employee be allergic to the glove provided, an alternative protective glove will be provided.

J. Masks, Eye Protection, and Face Shields

Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin length face shields, will be worn whenever splashes, spray, splatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can reasonably be anticipated. Situations at this facility which would require such protection are as follows:
_____
_____
_____
_____

K. Emergency ventilation devices will be provided for use in emergency resuscitation.

VIII. HOUSEKEEPING

A. Worksites will be maintained in a clean and sanitary condition according to a written Schedule.

B. All equipment, environmental and working surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious materials.

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

D. Work surfaces in patient care areas need not be cleaned after every patient care procedure unless the procedure results in surface contamination.

E. Reusable sharps (such as used in dentistry) that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into the container where these items have been placed.

F. Broken glassware which may be contaminated will not be picked up directly with the hands. In this facility the following procedures will be used:

_____
_____
_____

G. Trash containers routinely used for contaminated items will be cleaned and decontaminated on a _____ (time interval) basis by _____.
(name/position)

Between cleanings they may be lined with plastic liners. At the time of emptying, these containers will be inspected and decontaminated with soap and water if visibly contaminated.

IX. REGULATED WASTE DISPOSAL

In order to comply with OSHA regulations, which are more inclusive than the Alabama Department of Environmental Management's (ADEM) regulations, the following categories will be considered regulated waste:

- liquid or semi-liquid blood or other potentially infectious materials;

- contaminated items that would release blood or other potentially infectious

materials in a liquid or semi-liquid state if compressed;

- items that are caked with dried blood or other potential infectious materials and are capable of releasing these materials during handling;
- contaminated sharps; and

- pathological and microbiological waste containing blood or other potentially infectious materials.

A. Regulated Waste Containment

1. Regulated waste will be placed in closable, leakproof, and appropriately labeled or color-coded (RED) containers. In this facility such containers are located in:
   _____ (location/site)
   _____ (location/site)
   _____ (location/site)
   _____ (location/site)
   _____ (location/site)

2. If outside contamination of a regulated waste container occurs, it will be placed in a second container which is constructed to prevent leakage, appropriately labeled with biohazard label or color-coded (RED), and closed.

3. Disposal of regulated waste will be in accordance with all Federal, State, and Local regulations.

B. Discarding and Containment of Contaminated Sharps

1. Contaminated sharps will be discarded immediately or as soon as feasible in containers that are:

   a. closable;

   b. puncture resistant;

   c. leakproof on the sides and bottom;

   d. appropriately labeled with biohazard label or color-coded (RED).

2. During use, containers for contaminated sharps will be easily accessible to areas of use, upright, routinely replaced, and not allowed to overfill.

3. When moving containers of contaminated sharps, they will be closed and if leakage is likely, placed in a secondary closable, leakproof, and appropriately labeled container (biohazard label or color-coded (RED)).

4. In this facility sharps containers are located:
   _____ (location/site)
   _____ (location/site)
   _____ (location/site)
   _____ (location/site)
   _____ (location/site)

5. In this facility _____
   (name/position)

   is responsible for removing sharps containers when full and appropriately disposing of them. Containers will be checked on a _____basis (time interval) to ensure timely replacement. (Each facility has an individual Medical Waste Disposal Plan. Refer to this plan for specific information.)

X. CONTAMINATED LAUNDRY

Contaminated laundry will be defined per OSHA as laundry which has been soiled with blood or other potentially infectious materials (semen, vaginal secretions, breast milk, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids) or may contain sharps.

A. Laundry contaminated with blood or other potentially infectious materials:

   1. Will be placed in appropriately marked bags at the location where it was used.
   2. Will not be sorted or rinsed in the area of use.

   3. If wet and presents a reasonable likelihood of soaking through or leaking, will be placed and transported in bags or containers which will prevent soaking through or leaking.

   4. Will be placed and transported in appropriately labeled (biohazard label) or color-coded bags (RED) or containers.

B. All employees who handle contaminated laundry will utilize personal protective equipment to prevent contact with blood or other potentially infectious materials.

C. Laundry at this facility will be cleaned

   ____ Onsite

   ____ Offsite _____(name of services) (If offsite

facility is utilized, laundry containers will be appropriately labeled or color-coded.)

____ Not Applicable - no laundry facilities at this health department.

XI. HAZARD COMMUNICATION

Specific labeling (with the biohazard symbol or the use of red bags or containers) will be used to warn employees of potential hazards.

A. Biohazard labels:

1. Will contain the word "BIOHAZARD" and the following biohazard symbol: 

2. Will have a fluorescent orange or orange-red background with lettering or symbols in a contrasting color.

3. Will either be an integral part of the container or affixed to it in such a fashion as to prevent loss or unintentional removal.

4. Will be affixed to:

   a. containers of regulated waste;

   b. refrigerators and freezers containing blood or other potentially infectious materials;

   c. other containers used to store, transport or ship blood or other potentially infectious materials; and

   d. all contaminated equipment and should state which portions of the equipment remains contaminated. (Example: a centrifuge in which a glass tube was broken and blood has contaminated the inside of the equipment.)

B. Red bags or red containers may be substituted for labels.

C. All Federal, State, and Local regulations will be observed.

D. Labeling is NOT required for:

- Individual containers of blood or other potentially infectious materials that are placed in secondary labeled containers during storage, transport, shipment or disposal;
- Specimen containers if the facility uses Standard Precautions

when handling all specimens; and,
- Laundry bags or containers if the facility uses Standard Precautions for handling all laundry.

E. In this facility biohazard labels are in the following locations:

_____
_____
_____
_____
_____

XII. SPECIAL SITUATIONS

A. Laboratories

1. Standard Precautions will be used with regard to all blood and body fluids.

2. All specimens of blood and body fluids will be placed in a secure, closed, leakproof container. Care will be taken to avoid contamination of the outside of the container or its label.

3. All persons processing specimens of blood or body fluids will wear gloves. Masks or other protective eyewear will be worn if mucous membrane contact may be anticipated. Gloves will be changed and hands washed with soap and water after completion of processing.

4. A biological safety cabinet will be used for procedures (blending, mixing, etc.) which have a potential for generating droplets.

5. Mouth pipetting is forbidden.

6. Needles, syringes and other sharps will be handled as outlined in Section VI (A), Sharps.

7. Working surfaces will be disinfected using appropriate disinfectants following work completion.

8. Contaminated materials and equipment will be appropriately decontaminated or labeled, and appropriately disposed of.

9. Protective equipment will be removed and hands washed upon completion of laboratory duties

B. Home Health (also refer to *Infection Control Guidelines Manual*, Section VII)

1. Standard Precautions will be used with regard to all blood and body fluids.

2. Personal protective attire appropriate to the care to be rendered will be provided for the employee to wear during home visits.

3. An approved alcohol-based hand rub will be provided for use in home health environments lacking running water. The employee will then wash his/her hands as soon as proper facilities are available.

4. All specimens of blood and body fluids will be placed in a secure, closed, leakproof container. This container will then be placed in a secondary cardboard container for use during transport and/or mailing.

5. Gloves will be worn during venipuncture and packaging of specimens. Masks and protective eyewear or a full facial shield will be worn if mucous membrane contact may be anticipated.

6. Medical waste generated in the home can be disposed of along with other home-generated waste in appropriate trash disposal bags.

XIII. HEPATITIS B VACCINATION

A. Hepatitis B vaccine will be made available to all at risk employees identified in the Exposure Determination Section of this manual within 10 days of initial assignment to duties involving occupational exposure unless:

1. The employee previously received the vaccination series;

2. Antibody testing to determine antibody titers (available at the employee's option) reveals immunity or;

3. The vaccination is medically contraindicated.

B. The vaccine will be offered at a reasonable time and place, at no charge to our employees who have the potential for incurring an occupational exposure.

C. The vaccine will be administered under the supervision of a physician or other licensed healthcare professional.

D. The vaccine shall be provided in accordance with current United States Public Health Service (USPHS) recommendations.

E. Employees who decline receipt of the vaccine will be required to sign a release (ADPH-DIC-1/Rev.2-2004(BS).

F. Employees who initially decline the Hepatitis B vaccine may decide at a later date to receive it. Such employees may receive the vaccine at a reasonable time and place at no charge, provided that they are still working at tasks

involving occupational exposure.

G. All necessary hepatitis post-vaccine laboratory tests will be conducted by the ADPH Clinical Laboratory, which is an accredited laboratory, at no cost to employees.

H. Prescreening is not a prerequisite for receipt of the vaccine. (Refer to the *Infection Control Guidelines Manual* for ADPH Employee Hepatitis B Vaccination Protocol.

XIV. EXPOSURE INCIDENT EVALUATION PROCEDURES

A. In the event of direct exposure to, or contact with, blood or other potentially infectious materials:

1. Immediately wash the affected area with soap and water or, in the case of mucous membranes, flush copiously with water or a sterile irrigating solution;

2. Report the incident to your immediate supervisor;

3. Complete appropriate incident forms. This includes the ARIA (Automated Report of Incidents and Accidents), SEICTF form 1 Report of First Incident and Human Resources form 57.

B. Whenever an employee experiences an exposure incident, the circumstances surrounding the exposure incident will be evaluated to assess if:

1. Engineering controls were in place at the time of the incident,

2. Work practice controls were in place at the time of the incident,

3. Personal protective equipment and clothing was being utilized at the time of the incident,

4. Policy compliance failure or policy was inadequate.

C. The goal of the exposure incident evaluation is to identify and correct problems in order to prevent recurrence of similar incidents.

XV. POSTEXPOSURE EVALUATION AND FOLLOW-UP

At this facility, when an employee incurs an exposure, it is to be reported to

_____

(name/position)

A. Refer to the *ADPH Infection Control Guidelines Manual,* Section III, for recommended bloodborne pathogens instructions following blood or body fluid occupational exposures.

B. If employee requires medical attention, the evaluating physician will have access to the following information:

1. A copy of the applicable OSHA regulations;

2. A description of the exposed employee's duties as related to occupational exposure;

3. Route(s) of exposure;

4. If known, the results of the source individual's blood test(s);

5. The employee's treatment record including Hepatitis B vaccination status.

C. The employee will be evaluated and provided medical treatment by one of the State Employees Injury Compensation Trust Fund (SEICTF) assigned physicians. The employee will be informed as to:

1. Recommendations regarding appropriate laboratory baseline testing for HBV, HCV, and HIV and, if indicated, receipt of Hepatitis B vaccine and/or HIV chemoprophylaxis as indicated;

2. Any medical conditions resulting from the incident which may, in the future, require further evaluation and treatment. Any such findings or diagnoses will remain confidential and will not be placed in the employee's medical record.

D. Accurate health department medical records will be established and maintained for each employee incurring a documented occupational exposure.

1. These medical records will contain:

a. Employee's name and social security number;

b. A copy of the employee's Hepatitis B vaccine record;

c. Any other medical information provided by the physician following the occupational exposure medical evaluation and treatment.

2. Employee medical records will be kept confidential. Information contained in employee medical records will not be disclosed to any person without the employee's expressed written consent, except as provided by law.

3. These employee medical records will be maintained for the duration of employment plus thirty (30) years.

4. In this facility medical records will be maintained by

_____

(name/position)

XVI. INFORMATION AND TRAINING

A. All employees with potential for occupational exposure will participate in an infection control training program which will be provided:

1. At no cost;

2. During working hours, and

3. At the time of initial assignment to tasks involving occupational exposure and annually thereafter.

B. When tasks or procedures involving occupational exposure are added or modified, additional appropriate training will be offered.

C. Training will include:

1. Access to a copy of the OSHA standards and an explanation of their contents;

2. A general explanation of the epidemiology and symptoms of bloodborne diseases;

3. An explanation of the modes of transmission of bloodborne pathogens;

4. An explanation of the Exposure Control Plan, and access to it;

5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood or other potentially infectious materials;
6. An explanation of the use and limitations of methods that will prevent or

reduce exposure including appropriate engineering controls, work practices and personal protective equipment;

7. Information on the types, proper use, removal, location, handling, decontamination and disposal of personal protective equipment;

8. An explanation of the basis for selection of personal protective equipment;

9. Information on the Hepatitis B vaccination;

10. Information on appropriate actions to take in the event of an exposure incident, including:

    a. What to do;

    b. Whom to contact;

    c. Method of reporting the incident; and

    d. Post exposure evaluations and follow-up.

11. An explanation of proper signs, labels and color-coding;

12. An opportunity for interactive questions and answers with the person conducting the training. The trainer will be knowledgeable in the subject matter.

13. Records of each training session will be kept, including:

    a. Dates of the training sessions;

    b. The content or a summary of training;

    c. Names and qualifications of person(s) conducting the training; and,

    d. Names and job titles of all persons attending training. (Refer to Appendix G, Employee Training Contract, which is to be used for training documentation.)

14. Training records will be maintained for a period of three (3) years from the date of training.

15. Training at this facility will be conducted by: _____.

XVII. RECORDKEEPING

All records required by the OSHA standard will be maintained by

_____

(name/department)

XVIII. EXPOSURE PLAN REVIEW

This Exposure Control Plan will be reviewed annually and whenever necessary to reflect new or modified tasks and procedures which would affect occupational exposure. In addition, it will be updated as necessary to reflect new or revised employee positions with occupational exposure.

Revision Dates Reason

APPENDIX A
ALABAMA DEPARTMENT OF PUBLIC HEALTH
EMPLOYEE TRAINING CONTRACT
OSHA BLOODBORNE PATHOGEN STANDARD
INFECTION CONTROL PROGRAM

I, _____ verify that I have received training on the OSHA Bloodborne Pathogen Standard. Training Information was provided on the following:

1. Purpose and requirements of the OSHA Bloodborne Pathogens Standard
2. Epidemiology, symptoms and modes of transmission of HBV and HIV
3. Infection Control
4. Standard Precautions (formerly Universal Precautions)
5. Personal protective equipment
6. Engineering and work practice controls
7. Hepatitis B vaccine
8. Explanation of proper signs, labels, and color-coding

I was provided the opportunity to ask questions.

Employee Name: _____
Job Classification: _____

Employee Signature: _____
Date: _____

Trainer Signature: _____
Social Security Number: _____
Trainer's Job Classification: _____
Trainer's Title: _____