

Infection Control Manual for Ambulatory Care Clinics

Third Edition

Texas Department of Health

William R. Archer, III, M.D.
Commissioner of Health

Walter D. Wilkerson, Jr., M.D.
Chairman, Texas Board of Health

While your new Infection Control Manual contains several formatting changes from the previous edition, a few inconsistencies remain in the data and will be corrected in the next revision.

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Visit the TDH Internet web site: <http://www.tdh.state.tx.us>
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3199
(512) 458-7111

Contributors

Texas Department of Health

Bureau of Community Oriented Public Health

Public Health Nursing Section

Public Health Region 6

Nursing Services

Associateship for Disease Control and Prevention

Immunization Division

Bureau of Communicable Disease Control

Infectious Disease Epidemiology and Surveillance Division

Tuberculosis Elimination Division

Bureau of HIV and STD Control

Bureau of Laboratories

Manual Designer

Sharon Hipp

Texas Natural Resource Conservation Commission

Municipal Solid Waste Permits

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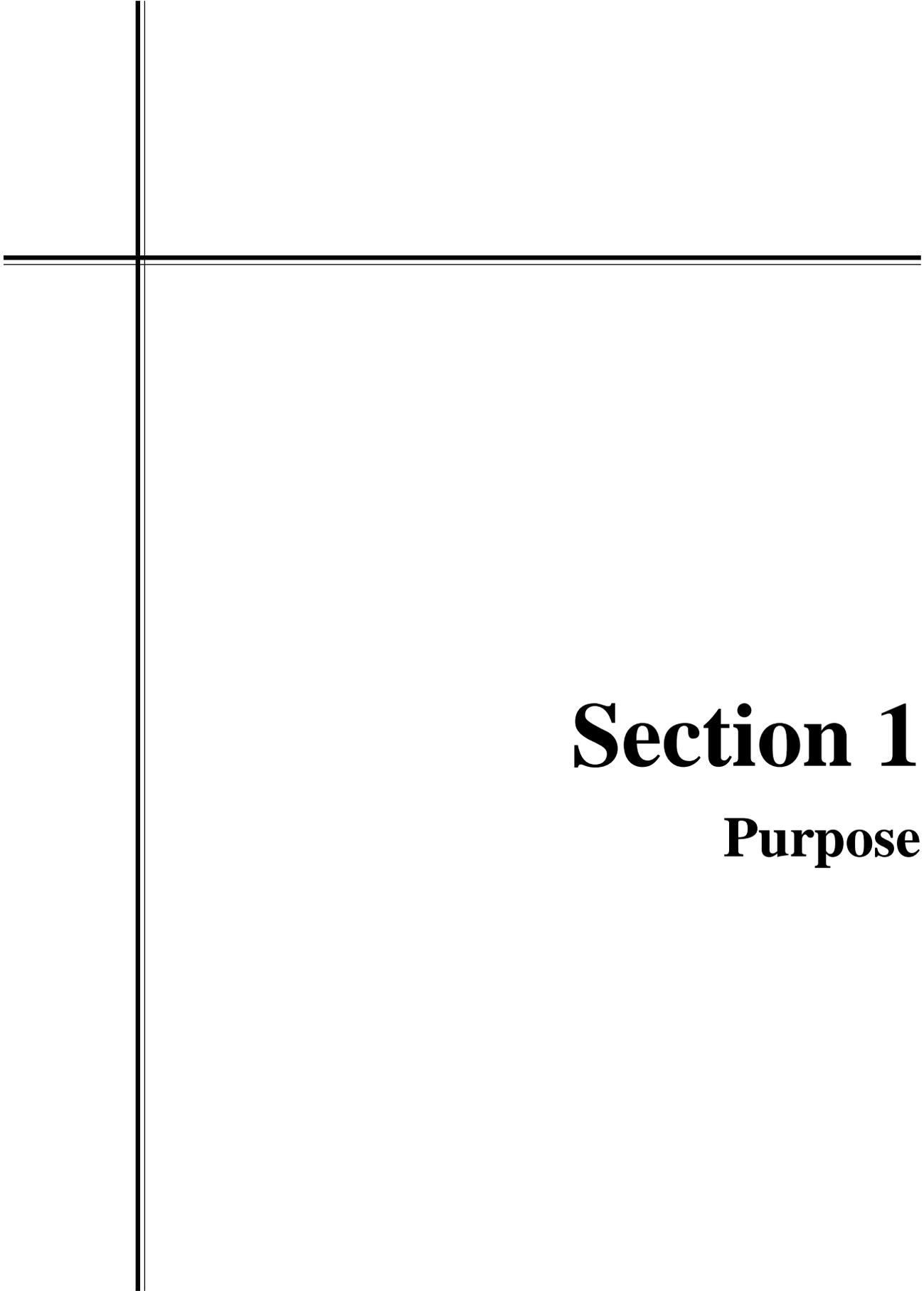
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Section 1

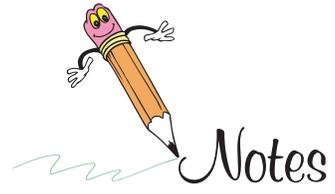
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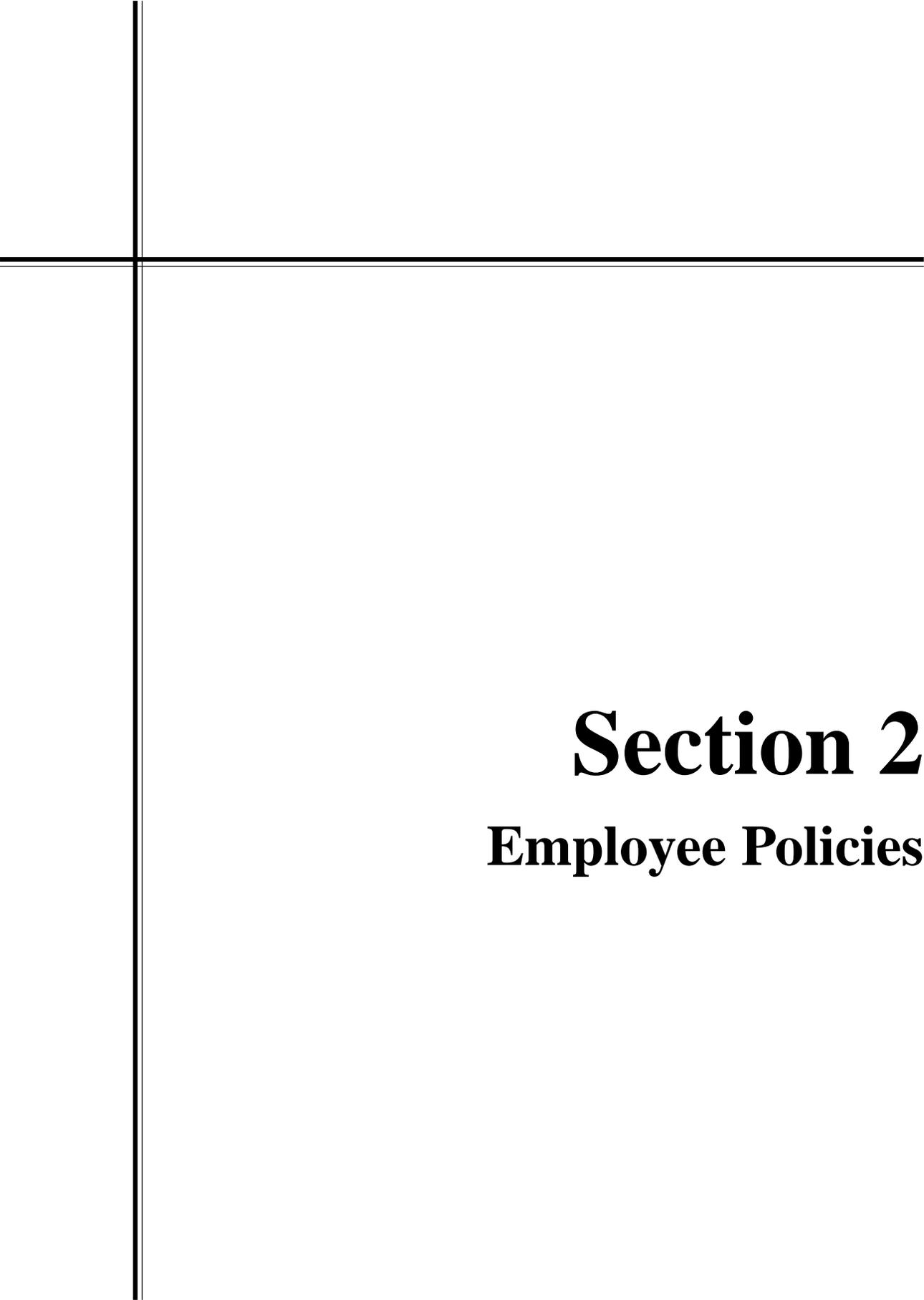
Section 1: Purpose of This Manual

This infection-control manual has been established to:

1. Provide guidelines, procedures, and an exposure control plan to regional and local health department employees for preventing the spread of infectious diseases.
2. Serve as resource document for contractors and health-care providers.
3. Promote safer work practices in caring for patients.
4. Indicate when personal protective equipment is necessary.
5. Serve as written documentation and reference for administrative purposes.
6. Serve as a basis for developing departmental policy statements and in-service education.
7. Assist the Texas Department of Health (TDH) and public-health agencies throughout Texas with the implementation of the Occupational Safety and Health Administration (OSHA) standard, *Occupational Exposure to Bloodborne Pathogens; Final Rule*.

Section 1





Section 2

Employee Policies

Section 2: Employee Policies

Policy 2.1 Handwashing

All staff must observe good personal hygiene, which includes handwashing. Staff in direct contact with patients should wash their hands between each patient contact.

Policy 2.1.1 Handwashing Facilities

All established clinics must be equipped with handwashing facilities which are readily accessible to employees.



Note: Proper handwashing is the single most important means of preventing the spread of infection!

Procedure	Key Points
1. If possible, remove jewelry from hands and wrists.	Only a minimum amount of jewelry should be worn during clinic care.
2. Wet hands under running water. Avoid touching hands to sink surfaces.	
3. Lather hands well with soap, hand antiseptic, or surface antiseptic from a dispenser. Wash fingers, in between the fingers, under the fingernails, palms, backs of hands, and wrists, for 10 seconds.	Bar soap should be used only if soap dispensers are unavailable. It has been proven that bar soap can harbor bacteria if left undrained. If bar soap is to be used, provide a self-draining soap dish. Run water over the soap briefly before replacing it in the soap dish. Remove and clean the inside and outside of the dispensing outlet when it needs to be refilled. Keep it free of soap build-up.
4. Rinse hands thoroughly.	
5. Dry hands with paper towels.	
6. Use paper towel to turn off the faucet.	
7. Cleansing towelettes or an instant hand sanitizer may be used if running water and soap are not available. (This situation often occurs in satellite clinics where sinks and running water are not readily available.)	Because hand sanitizers are not as effective as soap and water, hands should be washed after every 10 uses or as soon as possible.

When to Wash Hands

1. Before and after work.
2. Before and after each significant patient contact.*
3. After removing gloves or other personal protective equipment.
4. After contact with objects contaminated with blood or other body substances.
5. After using the toilet, blowing your nose, or covering a sneeze or cough.
6. Before eating, drinking, or handling food.
7. Before preparing and administering injections.**



Note: Parents should change diapers on their infant(s) as needed during clinic visits, and good handwashing practices should be reinforced at that time. Soiled diapers should be discarded in restroom waste containers.

Remember to wash hands and any other skin surface with soap and water, or flush mucous membranes with water immediately or as soon as feasible following direct contact with blood or other body substances. Report mucous membrane or nonintact skin contact with blood or other body substances to your supervisor immediately! (See Policy 2.5, “Post-Exposure Management for Occupational Exposure to Blood or Other Potentially Infectious Materials [OPIM].”)

Policy 2.2 Use of Gloves/Barrier Precautions

Gloves shall be worn when it can be reasonably anticipated the health-care worker may have hand contact with blood, semen, vaginal secretions, urine, feces, saliva, sputum, vomitus, or any body substance.

Policy 2.2.1 Use of Additional Personal Protective Equipment

Additional forms of barrier protection such as goggles, masks, and gowns are necessary if splattering of blood or other body fluids is anticipated.

Policy 2.2.2 Provision of Personal Protective Equipment

The employer shall provide, at no cost to the employees, necessary personal protective equipment and clean or replace such items as needed.

* Significant patient contact includes, but is not limited to, contact with blood, body substances, mucous membranes, and non-intact skin. Routine contact with a patient's intact skin (e.g., taking blood pressures, taking weights, etc.) does not necessitate handwashing.

** Administering injections is considered a significant patient contact. In field situations, or other clinic situations where it is not practical to wash hands, towelettes or instant hand sanitizers should be used to cleanse the hands between patients.



Note: Throughout the manual, unless otherwise specified, the term “gloves” will refer to disposable latex examination gloves or suitable equivalent such as vinyl gloves or glove liners used underneath the latex gloves, if the employee is allergic to latex. Employees who are allergic to latex should not wear latex gloves or inhale powder from latex gloves worn by other staff.

Procedure	Key Points
1. Gloves shall be used for all procedures where exposure to blood or body substances is expected, including patient care, cleaning equipment and environmental surfaces directly contaminated with such substances, or during any “vascular access procedure.”	Disposable gloves will be made available for all staff to wear when contact with body substances is expected. Vascular access procedures include such things as phlebotomy and finger or heel sticks.
2. It is recommended that gloves be worn on both hands.	When both hands are gloved, be careful not to contaminate equipment and surfaces while performing patient exams.
3. If cross-contamination of surfaces and equipment is anticipated, one hand should remain ungloved and not used to perform the exam.	Employees should evaluate their working situations to determine appropriate glove use.
4. Change gloves between patient contacts. Gloves should not be washed or disinfected for continued use. Gloves should not be reused.	Washing gloves with soap may cause “wicking”(i.e., the enhanced penetration of fluids through undetected holes in the gloves). Disinfecting agents will lead to glove deterioration.
5. If the gloves become torn or punctured, discard them and put on a new pair.	Gloves should be checked for tears and should not replace handwashing.
6. If breaks in the skin are present on the hands, additional coverings may be worn under the gloves.	Glove liners, bandages, gauze, or finger cots can help minimize skin irritations on the hands.
7. For environmental cleaning purposes, heavier reusable household gloves may be used. They can be washed with soap and water after use and hung to dry.	The lightweight examination gloves do not hold up under prolonged exposure to disinfection procedures.
8. Discard the household gloves if they are cracked, peeling, torn, or punctured, or show other signs of deterioration.	

Section 2



Note: The use of gloves is not intended to replace good handwashing practices; rather, it is meant to support and supplement handwashing.

Table of Procedures and Expected Glove Use

Procedure	Glove Use
1. Drawing blood	Y
2. Doing finger or heel sticks	Y
3. Giving immunizations	O
4. Spinning blood in centrifuges	Y
5. Taking oral, ear, or auxiliary temperatures	N
6. Taking rectal temperature	O
7. Testing urine with dipsticks	Y
8. Doing Pap smears and testing for sexually transmitted diseases	Y
9. Pelvic and/or rectal exams	Y
10. Taking blood pressure	N
11. Taking heights, weights	N
12. Doing breast exams	N
13. Changing diapers	Y
14. Doing an oral exam	Y
15. Handling/preparing lab specimens	Y
16. Doing physical exams on children	O

Key to Abbreviations Used

- Y = Yes (glove use is mandatory for the procedure)
- N = No (glove use is not required)
- O = Optional (gloves may be worn but are not required)

**Examples of Personal Protective Equipment for
Protection from Occupational Exposure
to Blood and Body Fluids¹**

Task/Activity	Disposable Gloves	Gown	Mask	Protective Eyewear
Bleeding control for spurting blood	Yes	Yes	Yes	Yes
Bleeding control with minimal bleeding	Yes	No	No	No
Emergency childbirth	Yes	Yes	Yes	Yes
Blood drawing	Yes	No	No	No
Handling and cleaning instruments with microbial contamination	Yes	No ²	No	No
Measuring blood pressure	No	No	No	No
Measuring temperature	No	No	No	No
Giving an injection	No ³	No	No	No

Infection-Control Techniques

1. Thoroughly wash hands with soap and running water for at least 10 seconds after:
 - ◆ significant contact with each patient,
 - ◆ handling a specimen,
 - ◆ contact with a potentially contaminated surface, or
 - ◆ removing personal protective equipment.
2. Wear personal protective equipment appropriate to the task being performed.
3. Health-care workers who have exudative lesions/weeping dermatitis or open sores should refrain from direct patient care until the condition resolves.
4. Change clothing splashed with blood or body fluids as quickly as feasible.
5. Remember that gloves will not provide protection against needle sticks or other percutaneous injuries. Gloves will, however, help to reduce the amount of blood or body substance entering into a wound, when the needle penetrates the glove.

¹ Adapted from Centers for Disease Control *Guidelines* and OSHA standard, *Occupational Exposure to Bloodborne Pathogens: Final Rule*, December 6, 1991.

² Gowns are not needed unless soiling of clothing is likely.

³ Gloves may be used at an employee's discretion.

Section 2

Policy 2.3 Employee Immunizations

All employees will be in compliance with established departmental policies regarding immunizations and TB skin tests.

Policy 2.3.1 Employer Provision of Vaccines

Hepatitis B vaccine, other vaccines, and TB skin tests recommended in departmental policies shall be offered to employees at no cost to the employee.

Procedure	Key Points
1. Employee policies outlined in the following documents are to be followed: Appendix A, "TDH Health Policy Statements," "Employee Immunization" (8/98), and "Tuberculosis Screening Guidelines for Staff and Clients in Various Settings" (8/98)	This document outlines requirements for pre-exposure vaccinations and TB screening.
2. All positions in which the employee's duties include direct contact with patients, the public, or material from patients with infections will be identified. Specific vaccination requirements for these positions will be incorporated into job descriptions in the "Special Instructions" section of the TDH P-71.	Because of their direct contact with patients, the public, and material from patients with infections, health-care workers (physicians, nurses, emergency medical personnel, dental professionals, medical and nursing students, laboratory technicians, hospital volunteers, administrative and clerical staff, hospital and clinic housekeeping staff, and others) are at increased risk for exposure to and possible transmission of TB and vaccine-preventable diseases.
3. Employee vaccination, serology, and/or infection history will be documented and reviewed to identify additional vaccinations or tests which are required.	Vaccination not only protects employees from diseases transmitted by the patients and public they serve but also protects patients and the public from becoming infected through exposure to health-care workers.
4. Newly hired employees will be offered required vaccines, serological tests, or TB screening within 10 days of their initial assignment.	Recommended TB screening intervals vary by risk of exposure. Periodic TB screening identifies recent converters who would benefit from preventive therapy and prevents transmissions to clients and staff.
5. Immunization records will not be inserted in personnel records, but will be maintained in separate files to preserve employee confidentiality.	Separate files for immunization records will permit easy access for evaluation as needed. Employee health files can serve this purpose.

Procedure	Key Points
6. Employee immunizations provided at TDH will also be recorded on a "Personal Immunization Record," Form C-102, and given to the employee.	The completed form is returned to the employee for his/her use.
7. The Deputy Commissioner will review the job duties of non-responders to hepatitis B vaccine and employees with valid medical contraindications to required vaccinations to determine what changes in assignment may be necessary.	The employee, direct supervisor, and bureau chief or regional director will prepare a summary of the immunization problem, job duties, and resulting safety issues for the employee and clients for review by the Deputy Commissioner. Documentation of the review and outcome will be kept on file with the employee's immunization records.

For more information regarding employee immunizations, contact your regional immunization program manager, or the TDH Immunization Division at 1-800-252-9152.

Policy 2.4

Orientation of Employees

All employees with potential for occupational exposure will be oriented to infection control guidelines within 10 days of their employment, as changes occur in policies and practices concerning infection control, and annually thereafter. Documentation of training will be maintained.

Policy 2.4.1

Employer Provision of Employee Training

Training shall be provided during normal working hours, at no cost to the employees.

Procedure	Key Points
1. All employees should be informed about the risks of significant infection to which they are exposed in the occupational setting.	Presentation of the information should be geared to the educational level of the employee.
2. Supervisors will ensure that training sessions are provided to review these infection control guidelines with new employees at their initial assignment and annually thereafter.	General principles of infection control should be included in the discussion.

Section 2

Procedure	Key Points
<p>3. Employees should understand:</p> <ul style="list-style-type: none">a. the routes of transmission of various infectious diseases, especially those for the bloodborne diseases such as hepatitis B and C and HIV/AIDS;b. other relevant epidemiologic aspects of occupationally acquired infectious diseases;c. an explanation of the department's exposure control plan as outlined in this manual;d. a review of the OSHA <i>Bloodborne Pathogens</i> standard;e. the basic principles of universal precautions, and the uses and limitations of personal protective equipment;f. strategies to reduce further occupational exposure, including the use of engineering controls and work practices;g. how to dispose of potentially infectious waste, contaminated clothing, equipment, sharps, and other items such as gloves, etc.;h. the protective action to take in the event of spills or personal exposure to tissue or fluids, and the appropriate reporting measures;i. the department's protocol for reporting and managing needlesticks and other direct exposures to blood;j. an explanation of the signs, labels, or color-coding regarding hazard communication.	<p>Diseases to be discussed include, but are not limited to, those listed in Policy 5.1, "Identification/Isolation of Potentially Infectious Patients." Refer to Appendix E, "Infectious Diseases Information."</p>
<p>4. All employees shall be given information about hepatitis B and C, HIV infection, and AIDS, according to departmental policy.</p>	<p>Refer to Appendix D, "OSHA Standards."</p>
<p>5. Training records shall be kept to document training received.</p>	<p>Topics such as when to use various personal protective equipment and the types of protective items appropriate to the task will be discussed.</p> <p>Refer to Appendix B, "Post-Exposure Management," for a summary of these procedures.</p>
	<p>Training records will be kept for three years from the date of the training session. These records must be made available to the employee when requested by either the employee or the supervisor.</p>

Procedure	Key Points
<p>6. Information to be recorded shall include:</p> <ul style="list-style-type: none"> a. the date(s) of the session and a summary of the course content; b. the name(s) and qualifications of the person conducting the training; c. the names and employee numbers (e.g., Social Security numbers) of all the persons attending the training session. <p>7. Training sessions must include an opportunity for discussion or a question/answer period.</p>	<p>While videotapes and other media may be used to present the basic information, a person qualified to answer questions on the subject matter must be present.</p>

Policy 2.5

Post-Exposure Management for Occupational Exposure to Blood or Other Potentially Infectious Materials (OPIM)

All accidental exposures of employees or patients to blood, blood products, secretions, or other body substances via percutaneous, parenteral, or mucosal routes shall be reported immediately, and appropriate post-exposure evaluation/treatment initiated, as per departmental policy.

Current Estimates - Risk of Becoming Infected After a Single Needle Stick From a Known Positive Source
Hepatitis B: 2% - 40% Hepatitis C: 3% - 10% HIV: 0.2% - 0.5%

Policy 2.5.1

Employer Provision of Post-Exposure Management

The employer shall ensure that all medical evaluations, procedures, prophylaxies, and counseling are made available at no cost to the employee and at a reasonable time/place. A licensed health-care professional will evaluate the exposure and recommend treatment and follow-up as indicated.

Source: Gerberding, Julie, M.D., M.P.H. (Feb. 16, 1995). "Management of Occupational Exposures to Blood-Borne Viruses," *New England Journal of Medicine*.

Section 2

Procedure	Key Points
1. All employees should be aware of the risks of acquiring an infection from occupational exposure in a health-care setting. See Policy 2.4, "Orientation of Employees."	Exposure to bloodborne pathogens is defined as parenteral (needlestick or other punctures of the skin with a used needle or other sharp item), mucous membrane (splatters/aerosols into the eyes, nose, or mouth), or direct contamination of an open wound or non-intact skin with a body substance.
2. All accidental exposures of employee to patient blood or body substances shall be reported to the employee's direct supervisor <i>immediately</i> .	If the direct supervisor is unavailable, the incident shall be reported to the next available supervisor or authorized person (e.g., clinic coordinator, nursing director, regional physician).
3. Regardless of the source of exposure, first aid should be given initially to treat the wound or site of exposure.	
4. For TDH only, the employee must fill out the "Report of Job-Related Injury or Illness" (AP-42) and submit this as required. The supervisor is to fill out the "Investigation of Employee's Accident/Incident" (RM-1).	See Appendix C, "Sample Forms" for examples of current forms as well as forms developed specifically for the purpose of documenting an occupational exposure to blood or OPIM.
5. The employee's supervisor is responsible for coordination of post-exposure management as specified in Appendix B.	The tasks to be coordinated in post-exposure management include risk assessment, completing the documentation, collecting sera on the employee and the source (if available), HIV-related counseling, referral to an evaluating health-care professional as needed, and administering prophylaxis pending the results of serologic follow-up.
6. Document on the appropriate forms the route(s) of exposure and the circumstances under which the exposure incident occurred (TDH forms AP-42, and RM-1).	This information will be important in risk assessment and management of the exposure incident.
7. If post-exposure therapy for HIV is warranted, the first dose should be administered as soon as possible (within one hour of exposure is ideal).	See Appendix B, "Post-Exposure Management."

Procedure	Key Points
8. Post-exposure counseling will be given within 10 calendar days of the exposure.	Check with the HIV program manager for a list of qualified counselors in the area or region.
9. When required for decisions regarding management of hepatitis B prophylaxis, employee hepatitis B surface antibody results should be available within 72 hours.	Postponing testing of the baseline serum will undermine the success of hepatitis B intervention.
10. The employee may refuse all or part of the recommended post-exposure management procedures. Document what step of the process was refused, and have this signed by both employee and supervisor. Attach this documentation to form TDH AP-42 (or on the appropriate post-exposure form specific for blood-borne pathogens (see Appendix C).	Be certain that the employee understands that refusal to submit a baseline serum for HIV antibodies or have it tested within 10 calendar days of the exposure will result in forfeiture of his/her eligibility for HIV-related workers' compensation. Failure to complete the scheduled follow-up serologic evaluation for HIV will also result in forfeiture of eligibility for HIV-related workers' compensation.
11. The supervisor shall make available, or ensure it is made available, to the evaluating health-care professional the following information: <ul style="list-style-type: none"> a. a copy of the OSHA <i>Bloodborne Pathogens</i> standard; b. a description of the employee's duties as they relate to the exposure incident; c. documentation of the route(s) of exposure and the circumstances involved; d. serologic test results of the source, if available; and e. employee health records, such as hepatitis B vaccination and/or serologic status, which may be relevant to the post-exposure treatment. 	The employee has the option to select an evaluating health-care professional outside the department. The evaluating health-care professional will review the information provided and determine what prophylaxis may be needed.
12. Test results should remain strictly confidential and be filed in the employee's health record.	Any test, treatment, or follow-up procedure should be documented, but serologic test results should not be put into the employee's personnel file.

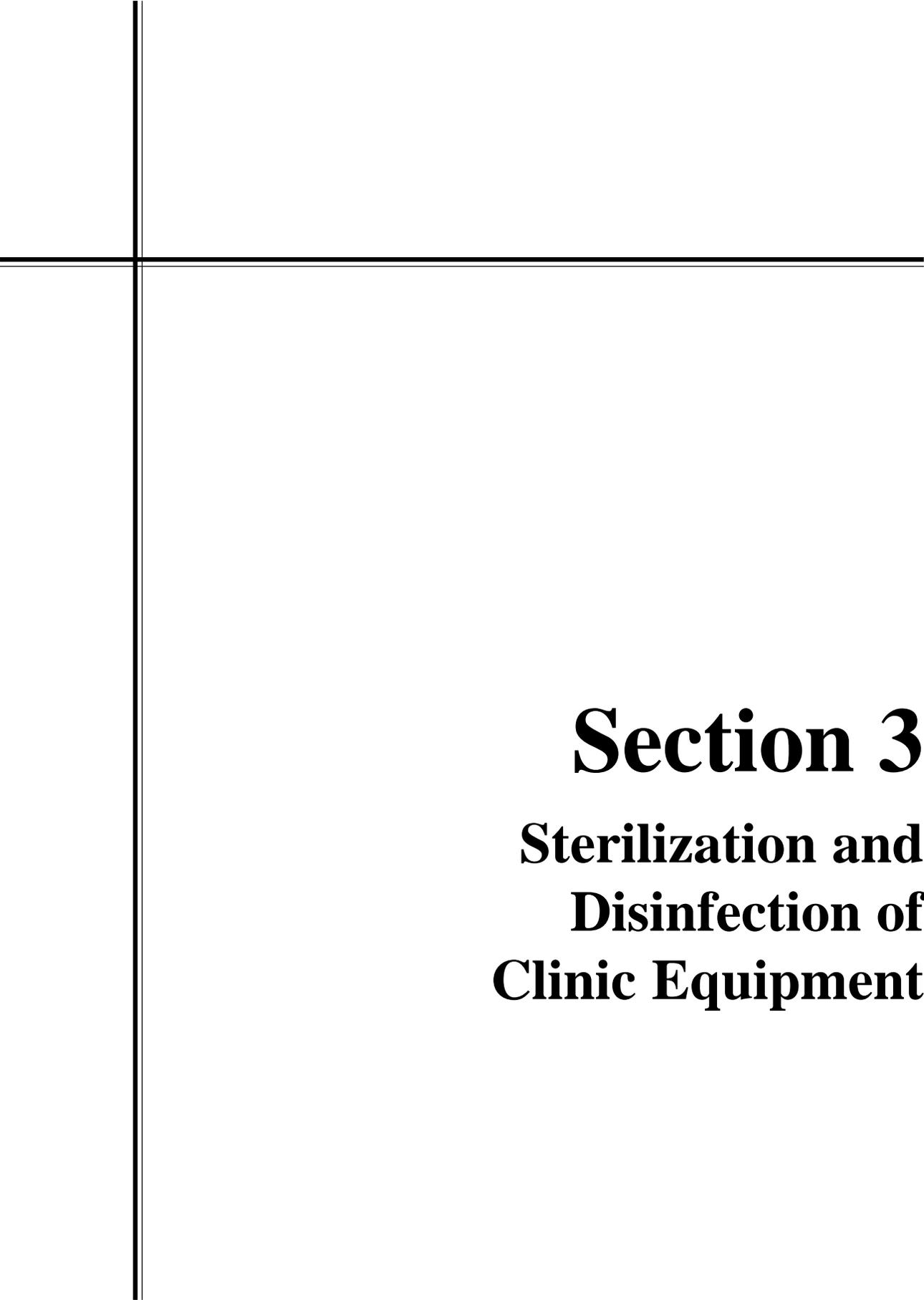
Procedure**Key Points**

13. The employer must obtain and provide the employee with a copy of the evaluating health-care professional's written report within 15 days of its completion in accordance with OSHA standard *Occupational Exposure to Bloodborne Pathogens*, Final Rule (see Appendix D, "OSHA Standards").

This report will document the need, if any, for completion of hepatitis B vaccine series, and that the employee has been advised of the evaluation's results and any medical conditions that may arise as a consequence of exposure.

14. Employee health records will be maintained for the duration of employment plus 30 years thereafter.





Section 3

Sterilization and Disinfection of Clinic Equipment

Section 3: Sterilization and Disinfection of Clinic Equipment

Policy 3.1 Counters/Sinks/Tables/Trays

All counter tops, sinks, trays, and table tops in patient care areas must be made of impervious materials and should be cleaned routinely with a diluted chlorine-bleach solution or with a disinfectant-detergent registered by the U.S. Environmental Protection Agency (EPA). Surfaces which are likely to be contaminated with blood or body fluids will be cleaned daily, and must be cleaned and disinfected after contamination.

Policy 3.1.1 *Routine Schedule for Cleaning and Disinfection*

The facility will maintain a written schedule for cleaning and disinfection, outlining the surfaces and areas to be cleaned, the cleaners or disinfectants used, and the employees involved in the process.

Procedure	Key Points
1. Dilute solutions of chlorine bleach, or any disinfectant-detergent formulations labeled as registered by the EPA, can be used for cleaning environmental surfaces.	If using an EPA-registered disinfectant-detergent, follow the manufacturer's instructions for use (see note at end of Policy 3.1). Remember that the physical removal of microorganisms by scrubbing is just as important as the anti-microbial action of the disinfectant used.
2. If chlorine bleach is to be used for routine cleaning/disinfection, a solution of bleach and water will be mixed and put in a labeled opaque spray bottle. The bleach solution must be mixed at 1:100 concentration or stronger.	A 1:100 solution should be made fresh on the day of use because the active chlorine is lost gradually over the course of a day once bleach has been diluted. See Appendix F, "Principles of Sterilization and Disinfection," for bleach-solution formulas.
3. Spray disinfectant and wipe the surfaces with a clean cloth at the end of each day and whenever contamination occurs. Rinse the surfaces with plain water and dry.	Do not store the cloth in the solution because organic matter from the cloth accelerates the inactivation of the disinfectant solution.

Section 3

Procedure	Key Points
4. Wear gloves while cleaning.	Rinsing is very important in removing soil and chemical residue. It is especially important when using chlorine-bleach solutions, as residual chlorine can be damaging to metal surfaces. Reusable gloves should be inspected for tears or holes before using. They should be washed with soap and water and hung to dry after use. Replace the gloves if they are cracked, peeling, torn, etc.



Note: General information on sterilization and disinfection can be found in Appendix F, “Principles of Sterilization and Disinfection.” For a current listing of chemical disinfectants and sterilants registered by the U.S. Environmental Protection Agency, contact any of the OSHA regional offices in Texas. Check the government section in your local telephone directory for the office nearest you.

Policy 3.2

Cleaning Up Blood and/or Body Secretion Spills

Spills will be cleaned immediately or as soon as feasible, using a 1:10 chlorine-bleach solution or other appropriate EPA-registered disinfectant.

Policy 3.2.1

Use of Chemical Germicides

Chemical germicides that are registered by the EPA as “hospital disinfectants” and are tuberculocidal are to be used to clean up spills of blood or body secretions. Those disinfectant-detergent formulations not designated as “hospital disinfectants” should be reserved for general cleaning of environmental surfaces. Follow the manufacturer’s instructions for using any EPA disinfectants. The procedures below address cleaning spills with a chlorine-bleach solution.

Procedure	Key Points
1. When using chlorine bleach, a 1:10 solution of chlorine bleach should always be available in a labeled, opaque spray bottle.	The 1:10 solution of chlorine bleach can be used for up to <i>one week</i> . Make sure the dispensers are labeled clearly so this 1:10 solution is not confused with the 1:100 dilution. Indicate on the label the date the solution was prepared. See Appendix F, “Principles of Sterilization and Disinfection,” for bleach-solution formulas.

Procedure	Key Points
2. Put on household gloves.	
3. Take care not to splash the blood or body secretions into your mouth or eyes. If the circumstances are such that aerosolization may occur, a mask and goggles must be worn.	
4. Cover the spill with disposable absorbent toweling. Apply the disinfectant solution by spraying it or pouring it directly onto the covered area.	When using any disinfectant in concentrated form or in large amounts (such as with spill cleanup), always make sure the area is well ventilated.
5. Remove the majority of the spill with disposable absorbent toweling. Place towels in heavy-duty garbage bag, and add absorbent material as needed. Dispose of in waste receptacles marked with the BIOHAZARD label.	Heavy-duty garbage bags should be at least 1.2 mil minimum thickness. Examples of absorbent material added to the bags include additional paper towels or kitty litter. See note at the end of Policy 3.2, "Cleaning Up Blood and/or Body-Secretion Spills," and see Policy 4.3, "Waste Treatment and Disposal Methods."
6. When dealing with a large spill, reapply disinfectant directly to the cleaned spill area, then remove with absorbent toweling.	Longer contact times are required when more organic matter is present.
7. Equipment used in spill cleanup (tongs, dust pans, brooms with plastic bristles), should be decontaminated with the chlorine-bleach solution, washed with soap and water, and hung to dry.	The reusable household gloves should be washed with soap and water and hung to dry after all the spill cleanup equipment has been decontaminated and washed.
8. Hands should then be washed with soap and water.	



Note: General information on sterilization and disinfection can be found in Appendix F, "Principles of Sterilization and Disinfection."

Section 3

Policy 3.3

Exam Tables/Infant Scales

All exam tables and infant scales should be cleaned daily with an appropriate disinfectant solution, and disposable coverings for exam surfaces should be used.

Procedure	Key Points
1. Table paper or absorbent pads will be changed on all exam tables and infant scales after use by each patient.	This decreases the possibility of tables becoming contaminated with secretions, excretions, and/or blood. Unless there is oil on the table, surface disinfection between patients is not necessary.
2. Table paper or absorbent pads with no visible soil or body fluids can be discarded with routine solid waste.	If the paper or absorbent pad becomes contaminated, the soiled covering must be discarded in waste containers identified with color coding or the BIOHAZARD symbol. See Policy 4.3, "Other Clinic Waste," for the specifications of these waste containers.
3. If the table or scales become soiled, remove obvious organic soil with disposable towels and follow instructions in Policy 3.2, "Cleaning Up Blood and/or Body-Secretion Spills."	Wear gloves during this cleaning procedure.
4. All exam tables and infant scales should be cleaned at the end of use each day with a chlorine-bleach solution of at least 1:100 concentration, or use an appropriate EPA-registered disinfectant-detergent. See Policy 3.1, "Counters/Sinks/Tables/Trays."	A 2% glutaraldehyde solution or other hospital disinfectant is an acceptable substitute, but it's less economical as a routine cleaner. Follow the manufacturer's instructions for use. Avoid prolonged contact of metal surfaces with chlorine-bleach solution, as bleach is corrosive and may pit the surface. Rinse and dry the treated surface thoroughly.

Policy 3.4

Thermometers

Each thermometer must be designated as being oral, ear, rectal, or axillary. They must not be interchanged. Mercury thermometers must be cleaned and disinfected after each use. Digital and ear thermometers must be cleaned according to manufacturer’s instructions.

Procedure	Key Points
Mercury Thermometers	
<ol style="list-style-type: none"> 1. Thermometers should be placed in containers clearly marked “oral,” “rectal,” or “axillary.” 2. After a mercury thermometer has been used, wash the thermometer with soap and <i>cool</i> water. Rinse well with water and dry. Do <i>not</i> use hot or warm water. <i>Wash oral, axillary, and rectal thermometers separately.</i> 3. Place the dried mercury thermometer(s) in a 70% alcohol solution for at least 10 minutes. <i>Soak oral, rectal, and axillary thermometers separately.</i> 4. Rinse the mercury thermometer(s) with water, dry them again, and store them in a dry container. 	<p>Certain organic substances, such as blood, pus, and feces, neutralize the disinfectant. Soap and water assure emulsification and dispersion of these substances. Drying the thermometer after it has been rinsed assures there is no dilution of the disinfectant from water left on the surface.</p> <p>Either ethanol or isopropyl alcohol may be used. Two percent glutaraldehyde solutions are acceptable for use only if 70% alcohol is not available. Be sure to use fresh disinfectant solutions daily. If glutaraldehyde is used, disinfect the thermometers in a covered container. Follow the manufacturer’s instructions and be sure to rinse the thermometers well after disinfectant treatment. Contamination with gram-negative bacilli is possible if thermometers are stored in disinfectant.</p>
Digital and Other (Such as Ear) Thermometers	
<ol style="list-style-type: none"> 5. When using thermometers with disposable sleeves or sheaths, use a new sleeve or sheath for each patient. 6. Follow manufacturer’s instructions for cleaning. 	

Section 3

Policy 3.5

Devices Used in Procedures Involving Blood

All devices used in procedures involving blood shall be cleaned, disinfected, or discarded after each use, as directed below.

Procedure	Key Points
A. Automatic Lancet Devices	
1. The disposable parts of the device should be thrown away after each use. Sharps should be deposited in appropriate sharps containers.	The disposable parts of an automatic lancet device are the platform and the lancet tip.
2. The device itself should be cleaned and disinfected after every use.	Either ethanol or isopropyl alcohol may be used, providing the material of the device is compatible with the disinfectant.
B. Vacutainer Sleeves	
1. If the sleeve is contaminated with blood, wash it with soap and water, then rinse and dry it. Soak it for 10 minutes in 70% alcohol, remove it from solution and dry.	The alcohol should be changed daily.
2. No special cleaning procedures are necessary if the sleeve is free of blood.	

Policy 3.6

Specula

Reusable specula will be cleaned and autoclaved or receive high-level disinfection as outlined, after each use. Disposable specula will be discarded after use.

Procedure	Key Points
1. Immediately after use, the reusable specula can be either put in a container of soap and water that is covered with a lid, or rinsed with warm water and put aside in the sink. The person doing this should wear gloves.	Covered containers will help keep children's hands out of the container.
2. At the end of the clinic session, disassemble the specula and scrub with soap and water, being careful not to splash. Wear reusable household gloves.	A small brush or toothbrush, to be used only for cleaning equipment, may be helpful in cleaning the specula. Clean the brush thoroughly and allow it to dry after use. Store brushes out of the reach of children.

Sterilization and Disinfection of Clinic Equipment

Procedure	Key Points
3. Rinse the specula with hot water and dry with a paper towel. Reassemble the specula prior to autoclaving or disinfecting.	Air-drying is also acceptable.
4. Use an autoclave to steam-sterilize the specula. Place the specula side by side in the autoclave chamber. Do not stack them on top of one another.	Single-layer stacking allows the steam to reach all surfaces of the specula. Follow the manufacturer's recommendations for proper loading procedures of the autoclave.
5. Place a chemical test strip in between several of the specula. After the cycle, check to see if the strip has changed color. <i>Do not consider as sterile any materials from an autoclave run if the test strips did not change color.</i>	The strip should be placed in the most difficult area for the steam to reach. These special test strips change color when a temperature of 120°C has been maintained for at least 12 minutes. This will provide an immediate indication that high enough temperature was achieved for a minimum period of time, but it does not assure sterility. See Policy 3.11, "Autoclaves," for monitoring the effectiveness of the autoclave and for more information.
6. Assuming the color of the tape has changed, remove the specula and restock them in the rooms and exam tables.	After autoclaving, the specula will be sterile. Once they are removed from the autoclave, they will be clean, but not sterile.
7. High-level disinfection may be used as an alternative if the autoclave is not functioning properly, or if an autoclave is not available. Soak the specula in a 2% glutaraldehyde solution, or appropriate disinfectant in a closed container, according to the manufacturer's instructions, to achieve high-level disinfection. Rinse with water, dry, and restock in exam rooms.	Either autoclaving or high-level disinfection is acceptable. High-level disinfection is an alternative to sterilization when treating surfaces, objects, or instruments that come into contact with mucous membranes. High-level disinfection inactivates viruses, fungi, and actively growing bacteria, including tubercle bacilli, but it will not inactivate bacterial endospores. Refer to Appendix F, "Principles of Sterilization and Disinfection," for more information.
8. Change drawer lining for specula on a weekly basis.	
9. Disposable specula will be discarded into a waste container marked with the BIOHAZARD label.	These are considered as "other regulated medical waste." See Policy 4.3, "Other Clinic Waste," for more information.

Section 3

Policy 3.7

Diaphragm Fitting Rings (DFR)

Diaphragm fitting rings will be disinfected as outlined after each use.

Procedure	Key Points
1. After use, wash the rings with soap and water, then dry. Wear gloves.	The employee will wear gloves to prevent contact with body fluids.
2. Immerse rings in a 2% glutaraldehyde solution, 70% alcohol, or other appropriate disinfectants according to its manufacturer's instructions, to achieve high-level disinfection. Disinfect the rings in a closed container.	Refer to DFR manufacturer's instructions for appropriate high-level disinfection procedure. Follow the manufacturer's instructions for disinfectant use. High-level disinfection inactivates viruses, fungi, and vegetative bacteria including tubercle bacilli, but will not necessarily inactivate bacterial endospores. Refer to Appendix F, "Principles of Sterilization and Disinfection," for more information.
3. Remove from solution, rinse well with running water, dry, and store for future use.	
4. Do not immerse the rings in boiling water or expose them to excessive heat.	

Policy 3.8

TB Sputum-Collection Equipment

All sputum-collection equipment will be disinfected as outlined after use each.

Procedure	Key Points
1. Wearing gloves, dismantle all tubing, mouthpieces, and components.	This ensures that the cleaning process will be thorough.
2. Wash each piece with soap and water to remove obvious secretions. Rinse with running water.	A small brush or toothbrush, to be used only for cleaning equipment, may be helpful for cleaning any grooves or crevices. Thoroughly clean and dry the brush after use. Store it out of the reach of children.
3. Immerse all parts in 2% glutaraldehyde solution or other disinfectant, according to manufacturer's recommendation, to achieve high-level disinfection. Use a closed container.	Contact time for glutaraldehyde-based disinfectants may vary with different products. Follow the manufacturer's recommendations for disinfectant use. High-level disinfection kills tubercle bacilli. Do not use alcohol to disinfect plastic surfaces of pulmonary-function equipment, as alcohol will damage these surfaces.
4. Remove from solution, rinse well with running water, and allow the pieces to air-dry completely.	Wet surfaces serve as breeding grounds for bacteria.
5. Reassemble and store for future use.	

Policy 3.9

Otoscope/Ophthalmoscope:

The plastic attachments are to be cleaned and disinfected as outlined after each use.

Procedure	Key Points
1. After the piece is removed from the instrument, clean off visible organic matter with a cotton swab. Wash the piece with soap and water, and dry it.	Certain substances, such as pus and blood, neutralize the disinfectant. Soap and water assure emulsification and dispersion of these substances. Drying assures there is no dilution of the disinfectant from water left on the pieces.
2. Place the cleaned piece(s) in 70% alcohol for 10 minutes.	Either ethanol or isopropyl alcohol is acceptable for use as a disinfectant, but check to make sure that the plastic materials are compatible with alcohol. A 2% glutaraldehyde solution is acceptable for use if 70% alcohol is not available.
3. Remove the pieces from the alcohol, rinse well with water, dry, and store in a dry container.	
4. If there is no time to soak the piece(s) between patients, the pieces can be cleaned by first washing with soap and water, then taking an alcohol prep or an alcohol-soaked cotton ball and wiping the piece thoroughly, then rinsing with water and drying. Then, at the end of each day, complete steps 1-3.	See Policy 6.3, "Cotton Balls."
5. Disposable specula for ear and nose exams are intended as <i>single-use</i> items and should be discarded after completing <i>each</i> patient's exam.	These may be discarded as routine clinic waste, provided that there is no visible blood present on the specula. If blood is present, these should be discarded into a waste receptacle marked with the BIOHAZARD label.

Policy 3.10

Blood-Pressure Equipment

Stethoscope earpieces should be cleaned after each use unless only one person is using the stethoscope. Blood-pressure cuffs should be kept clean and free from obvious debris.

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Procedure	Key Points
1. Earpieces on stethoscopes should be cleaned by using cotton soaked with 70% alcohol or an alcohol swab each time a different person uses the stethoscope. See Policy 6.3, "Cotton Balls."	Ideally, the earpieces should be washed with soap and water first to remove obvious debris. This may not be practical in most situations. An alternative procedure would be use a cotton swab to remove visible organic material and follow with alcohol.
2. The bell of the stethoscope should be wiped with 70% alcohol or an alcohol swab after use with each patient.	
3. Wash the blood-pressure cuffs when they appear to be dirty or when they become soiled with a body substance.	How often they are washed depends on how much they are used.
4. Blood-pressure cuffs may be washed in regular laundry detergent after first removing the bladder. The cuffs can be soaked in a sink with detergent and washed by hand, or they can be	

Policy 3.11

Autoclave Operation

Clinic autoclaves will be operated and maintained according to manufacturer's instructions to assure proper function.

Policy 3.11.1

Autoclaves

Clinic autoclaves will be monitored periodically to determine that they are functioning properly (i.e., achieving sterile conditions).

Procedure	Key Points
1. Make sure that the autoclave is loaded according to the following guidelines: <ol style="list-style-type: none">Do not overload or crowd items into the chamber.Do not allow material to come into contact with the sides or the door of the chamber.Separate items or arrange them loosely in the chamber.When wrapped and non-wrapped items are loaded together, autoclave them using the run time and temperature guidelines for wrapped items.	This will ensure that steam reaches all materials adequately during the run.

Procedure	Key Points
<p>2. Do not use an autoclave that is not working properly. Make alternate arrangements for sterilizing materials while the equipment is being repaired.</p>	
<p>3. Follow the manufacturer's instructions regarding care and maintenance of the autoclave.</p>	<p>Check to make sure the drain is kept clear.</p>
<p>4. Testing procedures to monitor autoclave performance will utilize both physical and biological parameters.</p> <p>a. Physical Parameters Autoclave performance will be monitored each time the equipment is used by including chemical test strips with the load. In addition, log books will be maintained to record the date, type of load, temperature achieved, and length of time at achieved temperature.</p> <p>b. Biological Parameters Autoclave performance will be monitored using a biological or equivalent indicator system, such as a spore test, on a quarterly basis, or more frequently, as needed. In the autoclave log, note the time and date of the run and the results of the spore test.</p>	<p>These special test strips change color when a temperature of 121°C has been maintained for at least 12 minutes. This will provide an immediate indication that a high enough temperature was achieved for a minimum period of time, but it does not assure sterility. <i>Do not consider any materials sterile if the test strips did not change color.</i></p>

General Guidelines for Run Times and Temperatures

Wrapped Items	Non-Wrapped Items
132°C (270°F): 10 minutes	132°C (270°F): 5 minutes
121°C (250°F): 30 minutes	121°C (250°F): 10 minutes

Section 3

Policy 3.12

Refrigerators and Freezers

Refrigerators and freezers used to store or contain blood or other potentially infectious materials (OPIM) must have a fluorescent orange or orange-red warning label including the BIOHAZARD symbol and word in a contrasting color. These refrigerators and freezers must not be used for food storage.

Procedure	Key Points
Refrigerators should be kept clean at all times. They can be wiped out with liquid dish soap and warm water.	Be sure to include refrigerator cleaning in the written schedule for routine cleaning and disinfection (housekeeping schedule).

Policy 3.13

Centrifuges

Centrifuges will be given a general cleaning once a month. All centrifuges will be cleaned immediately following contamination with blood or other potentially infectious material (OPIM) (see Appendix G).

Policy 3.13.1

Hazard Communication for Contaminated Equipment

BIOHAZARD signs or labels must be posted on contaminated equipment if the equipment cannot be decontaminated immediately.

Procedure	Key Points
1. Centrifuges will be cleaned routinely, once a month, using a chlorine-bleach solution of 1:100 concentration or an EPA-registered disinfectant.	Always unplug the centrifuge prior to cleaning. Do not immerse the unit in water. Always follow the manufacturer's recommendations for cleaning procedures.
2. Wear gloves when cleaning centrifuges.	The gloves will protect the hands from soil and chemical contact.
3. A cloth, small brush, or cotton swab may be needed to get to hard-to-reach areas inside the centrifuge. Rinse with water after using chlorine-bleach solutions.	Remember that if chlorine bleach is used, these solutions can be corrosive to metal surfaces, so rinsing becomes especially important. Cotton swabs should be discarded into clinic trash after use. The cloths and brushes should be cleaned thoroughly and allowed to dry.
4. If the centrifuge (or any piece of equipment) becomes contaminated with blood or other body fluids, clean the spill up right away.	Spills of blood or OPIM should be decontaminated first with a 1:10 solution of chlorine bleach. See Policy 3.2, "Cleaning Up Blood and/or Body-Secretion Spills."
5. If tubes of blood or OPIM leak or break during centrifuge operation, close the centrifuge, leave the room for 30 minutes, and post a warning sign on the door.	A hazardous aerosol will be created if blood or OPIM spills while the centrifuge is spinning. See Appendix G, "Clinic Laboratory Information" for centrifuge precautions.

Procedure	Key Points
6. If contaminated equipment cannot be disinfected and cleaned immediately after a spill, a sign or BIOHAZARD label must be posted on the equipment to alert employees that a spill has occurred.	The sign should be readily visible and should indicate which parts of the equipment are contaminated.
7. If a blood tube or hematocrit (HCT) tube breaks in the centrifuge, use long forceps to remove broken glass. Wear gloves. If a large blood spill results from a tube breaking (where blood has created a pool), soak up the blood using a disposable paper towel, then spray and clean with a 1:10 chlorine bleach solution, let the solution set 10 minutes, then rinse with water.	For disposal of paper towels used to soak up a pool of blood, see Policy 3.2, "Cleaning Up Blood and/or Body-Secretion Spills." Keep contact time to a minimum as chlorine-bleach solution is corrosive to metals. Rinse metal surfaces thoroughly. Never use your hands to manually slow down or stop the centrifuge from spinning.

Policy 3.14

Microscopes and Other Laboratory Equipment in the Clinic

Any equipment that becomes contaminated with blood or OPIM must be decontaminated.

Procedure	Key Points
If the microscope or any piece of clinic equipment becomes contaminated, it should be cleaned/disinfected as soon as it is practical to do so.	Any cleaners or disinfectants used must be compatible with the surface to be cleaned. Follow manufacturer's instructions for cleaning microscopes and other delicate equipment.

Policy 3.14.1

Hazard Communication for Contaminated Equipment

BIOHAZARD signs or labels must be posted on contaminated equipment if the equipment cannot be decontaminated immediately.

Procedure	Key Points
1. If the instrument cannot be readily cleaned after contamination with blood or OPIM, a BIOHAZARD sign and label must be posted on the instrument prior to cleanup.	The sign must be readily visible and must indicate which parts of the instrument are contaminated.
2. The BIOHAZARD sign and label must be attached to contaminated equipment that requires disassembly for the cleaning/disinfecting process or for repairs.	This is important to alert all who handle the equipment, especially off-site repair technicians, as to the nature and extent of the contamination.

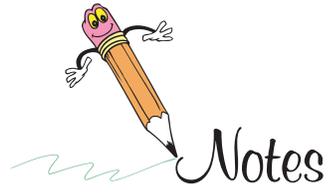
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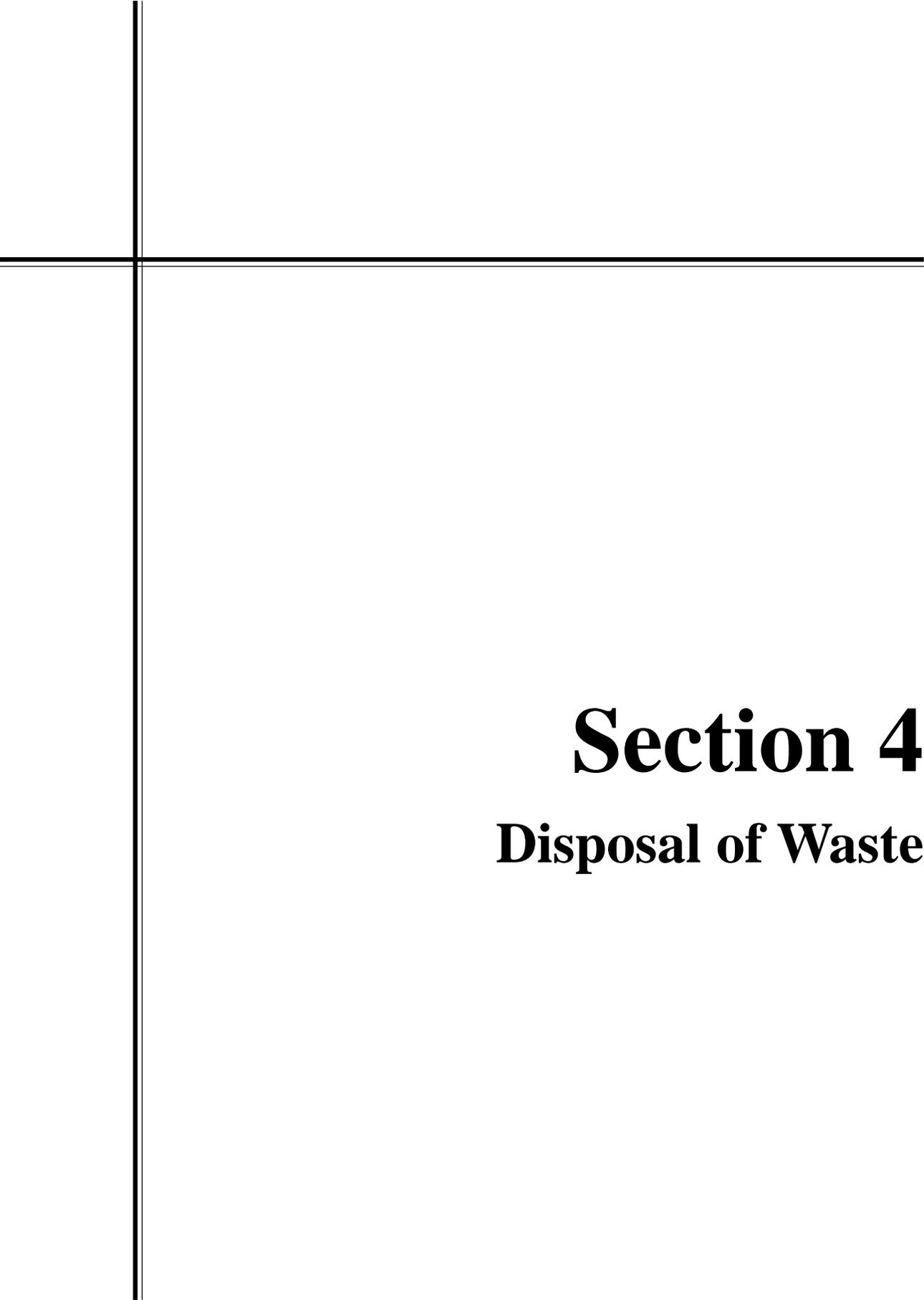
Ultraviolet Lights

Ultraviolet (UV) lights are to be dusted weekly or, if not used often, each time before use. See Policy 5.2, “Collection of Sputum in the Clinic,” and Appendix A, “TDH Health Policy Statements,” for appropriate use of UV lights.

Procedure	Key Points
1. Turn off the UV light before cleaning it.	UV light can cause sunburn and can damage the retina.
2. Lights and UV bulbs should be dusted weekly with a clean dry cloth. If used infrequently, dust before use.	Dust on the bulbs interferes with proper function by reducing the amount of effective UV radiation.
3. UV lights should not be turned on except as used in Policy 5.2, “Collection of Sputum in the Clinic.”	UV lights should be on when the room is occupied. The light can be turned off if the room is unoccupied for extended periods of time.
4. UV lights must be installed according to the manufacturer’s recommendations so the light is directed away from patients. Once installed, the UV tube should not be visible from any normal position in the room.	



**Sterilization and Disinfection of
Clinic Equipment**



Section 4

Disposal of Waste

Section 4: Collection and Disposal of Waste

Policy 4.1 Management of Medical Waste

Waste which is generated within the facility and which has a high potential risk for causing infection if improperly handled or treated will be managed in accordance with:

1. OSHA standard, *Occupational Exposure to Bloodborne Pathogens*; Formal Rule, 29 CFR 1910.1030, (see Appendix D) and
2. *Definition, Treatment, and Deposition of Special Waste from Health-Care Related Facilities*, 25 TAC 1.131–1.137 (see Appendix H).

Policy 4.1.1 Summary of Waste Management Requirements

1. Sharps and other regulated waste shall be collected in approved containers.
2. Waste may be treated on-site or shipped off-site for treatment and disposal. Records must be maintained documenting on-site treatment, and treated waste must be labeled as such.
3. Waste shipped off-site for disposal must be packaged properly and documentation of the shipment, treatment, and disposal must be maintained.

Policy 4.1.2 Definitions

1. Animal Waste — includes carcasses, body parts, whole bulk blood and blood products of animals, and bedding of animals intentionally exposed to pathogens.
2. Bulk Blood and Blood Products — includes all human blood, serum, plasma, and other blood components of 100 ml or more in volume.
3. Microbiological Waste — includes cultures and stocks of infectious agents and associated biologicals; cultures of specimens from laboratories; discarded live and attenuated vaccines; disposable culture dishes; and disposable devices used to transfer, inoculate, and mix cultures.

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4. Pathological Waste — includes, but is not limited to, human materials removed during surgery, labor and delivery, autopsy or biopsy, products of spontaneous or induced human abortions regardless of the period of gestation, laboratory specimens of blood and tissue after completion of laboratory examination, and anatomical remains.
5. Sharps — include, when contaminated, hypodermic needles; hypodermic syringes with needles attached; scalpel blades; razor blades and disposal razors used in surgery, labor, and delivery, or other medical procedures; Pasteur pipettes; and broken glass from laboratories. HCT tubes and microscope slides are also managed as sharps.

Policy 4.2

Collection of Waste

All sharps and other regulated medical wastes shall be properly collected as outlined below. All sharps will be disposed of in specially designated puncture-resistant containers as outlined below (see Appendix D, “OSHA Standards”).



Note: Under no circumstances will hand entry into puncture-resistant containers for sharps be allowed.

Policy 4.2.1

Sharps Collection

All sharps will be disposed of in specially designated puncture-resistant containers as outlined below (see Appendix D, “OSHA Standards”).

Procedure	Key Points
1. Sharps containers shall be puncture-resistant, closable, leak-proof on sides and bottom, color-coded or labeled clearly with the BIOHAZARD symbol.	The BIOHAZARD label must be predominantly fluorescent orange or orange-red with letters or symbols in a contrasting color.
2. Sharps containers will be placed in clinic settings. All sharps will be placed in these containers immediately after use.	Place the containers in the areas where sharps are used. When not in use, these containers must be placed out of the reach of children.
3. Contaminated needles shall not be recapped, bent, sheared, broken, or separated by hand from syringes. Needles and syringes must be discarded into the sharps container as a unit.	Twisting, bending, or separating contaminated needles by hand increases the possibility of injury and occupational exposure. One-hand disposal of sharps is recommended.
4. Broken glassware shall not be picked up directly by hand. Use appropriate mechanical means.	Decontaminate and wash equipment as needed after use in picking up contaminated glass.
5. Sharps containers will be replaced when they are three-fourths full.	Sharps containers must be kept upright, replaced routinely, and not be overfilled.



Notes:

1. **Under no circumstances are children to be left unattended or unsupervised in clinic areas or in any area where sharps are used.**
2. For specific questions regarding special medical waste, contact the Municipal Solid Wastes and Permitting Division, Texas Natural Resources and Conservation Commission.
3. See Appendix H, “Special Waste Treatment and Disposal,” for the EPA brochure, *Disposal Tips for Home Health Care*. This brochure is available from:
 RCRA Docket (5305)
 U.S. Environmental Protection Agency
 401 M Street, S.W.
 Washington, D.C. 20460
 or phone: 1-800-424-9346 or TDD 1-800-553-7672.

Policy 4.2.2

Collection of Other Regulated Medical Waste

All regulated medical waste shall be treated and disposed of as outlined below (see Appendix D, “OSHA Standards”).

Procedure	Key Points
1. All other regulated waste shall be placed in containers which are closable and constructed to contain all contents and prevent leakage of fluids during handling, storage, transport, and shipping.	Receptacles designated for special waste should be set up in the clinics, readily accessible for staff use.
2. Containers must be labeled or color-coded in accordance with paragraph (g)(1)(i) of the Bloodborne Pathogen Standard (see Appendix D, “OSHA Standards”).	The BIOHAZARD label must be predominantly fluorescent orange or orange-red with letters or symbols in a contrasting color. A red bag or container may be substituted for labels.
3. Containers must be closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.	
4. If outside contamination of the regulated waste container occurs, it shall be placed in a second container which meets the same specifications as the first.	Wear gloves and use mechanical devices as necessary to prevent contaminating or injuring the hands.
5. Clinic personnel, not janitorial staff, shall attend to the proper disposal of sharps and other regulated medical waste.	Janitorial staff should be trained to recognize medical waste containers and to leave them alone.

Section 4

Policy 4.3 Waste Treatment and Disposal Methods

All regulated medical waste shall be treated as outlined below and in Appendix H, “Special Waste Treatment and Disposal.”

Treatment Methods for Sharps

Procedure	Key Points
<p>1. Steam Sterilization</p> <ul style="list-style-type: none">a. Autoclave containers for at least 30 minutes at 121°C at 15 psi.b. After autoclaving, label the containers “Treated – Steam Sterilized.”	<p>Autoclave instruments and reagents to be sterilized separately from waste to be decontaminated.</p> <p>Dispose of these containers in the sanitary landfill.*</p>
<p>2. Chemical Disinfection</p> <ul style="list-style-type: none">a. Treat sharps containers with a 1:10 dilution of chlorine bleach for a minimum of three minutes.b. Pour the bleach solution off prior to disposal.c. If using another EPA-registered liquid disinfectant, follow the manufacturer’s instructions.d. Following chemical disinfection, label sharps containers as “Treated – Chemical.”	<p>Use extreme caution when pouring the bleach solution.</p> <p>Note for TDH Clinics Only: Sharps containers treated in this manner will be collected and taken to the Regional Office for pickup as arranged.</p> <p>Dispose of these containers in the sanitary landfill.*</p>
<p>3. Encapsulation</p> <ul style="list-style-type: none">a. Prepare the matrix according to manufacturer’s instructions. Plaster of Paris is an acceptable matrix.b. Be sure that all sharp edges are coated with the material.c. Following encapsulation, label as	<p>When sharps are encapsulated, the containers can be placed in the regular trash. Plaster of Paris is an acceptable matrix.</p> <p>No other form of treatment is necessary prior to encapsulation.</p>

* These containers must be segregated from the regular trash and transported to the sanitary landfill without being compacted.

Treatment Methods for Microbiological Waste

Procedure	Key Points
<ol style="list-style-type: none"> 1. Steam Sterilization <ol style="list-style-type: none"> a. Autoclave containers for at least 30 minutes at 121°C at 15 psi. b. Label the containers "Treated – Steam- Sterilized" 2. Chemical Disinfection <ol style="list-style-type: none"> a. Treat the waste with a 1:10 dilution of chlorine bleach for a minimum of three minutes. b. Pour the bleach solution off prior to disposal. c. Label waste as "Treated — Chemical." d. If using another EPA-registered liquid disinfectant, follow the manufacturer's instructions. 	<p>Biohazard bags may be used for both steam sterilization and chemical disinfection. They should be placed in a regular black trash bag prior to being placed in the trash.</p> <p>The waste, not the exterior of the biohazard bag, must be in contact with the bleach for a minimum of three minutes.</p> <p>Note: Discarded live and attenuated vaccines and other biologicals, if unacceptable for exchange, are considered microbiological waste. Unopened vials of vaccine need to be returned to the TDH Pharmacy Division. Check with the Pharmacy Division on specifics regarding return and exchange of vaccines and biologicals. It can be reached at (512) 458-7500.</p>

Treatment Methods for Pathological Waste

Procedure	Key Points
<ol style="list-style-type: none"> 1. Removing Pathological Waste in Glass Tubes or on Slides <ol style="list-style-type: none"> a. Place in puncture-resistant containers for treatment. b. Treat using steam sterilization, chemical disinfection, or encapsulation. c. Follow disposal procedures for sharps. 2. Disposing of Small Amounts of Tissue, Blood, and Body Fluids Removed During Clinical Procedures <ol style="list-style-type: none"> a. Grind and flush into a sanitary sewer system. b. Treat using steam sterilization or chemical disinfection. Refer to Policy 4.3.1.1 3. Handling Organs or Body Parts <ol style="list-style-type: none"> a. Organs or body parts must be incinerated or interred. 	<p>Follow the procedures for treatment and disposal of sharps.</p> <p>Local sewage-discharge requirements must be met.</p> <p>Incineration and thermal inactivation are also accepted methods of treatment.</p>

Section 4

Treatment Methods for Bulk Blood and Blood Products

Procedure	Key Points
1. Blood or Blood Products	
a. Discharge to sanitary sewer. Blood and blood products can be discharged into a sanitary sewer system without prior treatment.	Local sewage-discharge requirements must be met. Check with your local wastewater officials.
b. Steam sterilization and chemical disinfection: refer to Policy 4.3, "Treatment Methods for Sharps." (1) Label waste as "Treated – Steam-Sterilized" or "Treated – Chemical." (2) This waste can be sent to the sanitary landfill after treatment.	Thermal inactivation and incineration are also accepted methods of treatment.
c. Disposable items that are saturated with blood or body fluids such that liquid flows freely or drips without compression must be treated prior to disposal in a sanitary landfill.	

Policy 4.4

Record-Keeping Requirements

Procedure	Key Points
1. Waste Treated On-Site	
a. Records must be kept to document quantities treated on-site and the process used. (1) Small-quantity generators must record date of treatment, amount of waste treated, method/conditions of treatment, and the printed name and initials of the person performing the treatment. (2) Large-quantity generators must record all items listed for small-quantity generators and have a written procedure for the process used, keep an account of any tests performed to monitor any equipment, as well as a description of chemicals used and their preparation.	A small-quantity generator generates less than or equal to 50 pounds per calendar month. A large-quantity generator generates more than 50 pounds per calendar month.

Procedure	Key Points
<p>2. Waste Treated Off-Site</p> <p>a. Clinics that ship untreated special waste directly from the premises via a registered transporter must obtain a written receipt from the transporter for the shipment. These receipts must be kept on file for at least three years from the date of the shipment.</p>	<p>Check with your waste-management company for specific details. See Appendix H, "Special Waste Treatment and Disposal."</p>

Policy 4.5

Other Clinic Waste

Those wastes identified as other regulated medical wastes shall be managed in the facility according to the provisions of the OSHA standard, *Occupational Exposure to Bloodborne Pathogens; Final Rule* (see Appendix D, "OSHA Standards").

Policy 4.5.1

Non-Infectious Clinic Waste and Office Waste

Waste which is generated within the facility and which does not have a high potential for causing infection does not require special precautions concerning handling and disposal.



Note: Urine dipsticks and empty urine-specimen cups may be placed in the regular trash. These items do not meet the definition of special waste from health-care related facilities or OSHA's definition of a bloodborne pathogen.

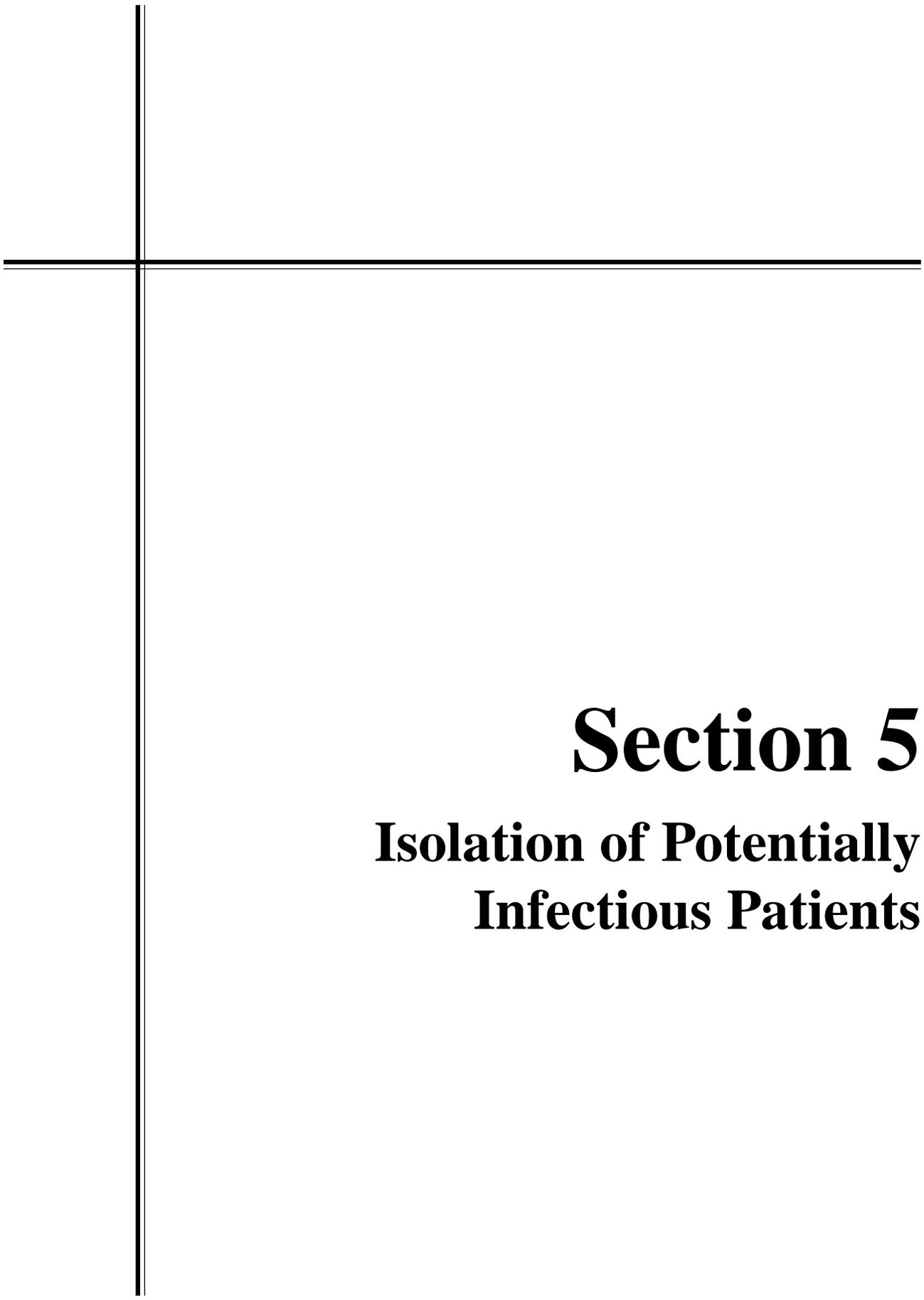
Procedure	Key Points
<p>1. Exam rooms, clinic areas, and laboratories should have trash cans lined with heavy-duty plastic trash bags.</p>	<p>Bags of 1.2 mil thickness are less likely to tear and leak. They are used to contain absorbent towels and other disposable clinic supplies stained with small amounts of blood (less than 100 ml) or other organic debris.</p>
<p>2. These waste receptacles must also be closable, capable of containing all contents, leakproof, and color-coded or labeled as a BIOHAZARD with the word and symbol.</p>	<p>The BIOHAZARD label must be fluorescent orange or orange-red, with the symbol and letters on a contrasting background.</p>

Section 4

Procedure	Key Points
3. All clinic waste that has not been identified as potentially infectious under Policy 4.1.2, "Definitions," should be placed into these lined trash cans.	Disposable items such as paper gowns, drape sheets, exam-table paper, applicators, swabs, tongue blades, used dressings and bandages, urine dipsticks, disposable gloves, cotton balls, hemocult cards, and disposable speculums, if contaminated with <100 ml blood or other potentially infectious materials, fall into this category.
4. Clinic trash cans, when filled, should be emptied by taking the plastic-bag lining and the receptacle out with the trash as a unit. Add a new plastic bag to the trash can.	Removal of non-infectious waste from clinic areas may be assigned to the janitorial staff. Make certain that both the clinic personnel and janitorial staff understand that no one is to reach directly into clinic trash receptacles with their bare hands. This non-infectious waste may be placed with the regular trash.
5. If the waste receptacle becomes contaminated, clean and disinfect it using a 1:10 solution of chlorine bleach.	This should be done as soon as possible.



**Storage and Handling of Equipment,
Supplies, and Biological Specimens**



Section 5
Isolation of Potentially
Infectious Patients

Section 5: Isolation of Potentially Infectious Patients

Policy 5.1 Identification/Isolation of Potentially Infectious Patients

In an effort to prevent the transmission of disease, patients with a suspected or confirmed infectious disease that is transmitted by droplet spread or direct contact will be isolated from the general clinic population.

Procedure	Key Points
<p>1. All staff in the clinic should have a basic knowledge of the common communicable diseases that may be present in the clinic. Examples of the types of illnesses that need to be suspected for patient isolation are:</p> <ul style="list-style-type: none"> ◆ Bacterial meningitis ◆ Chickenpox ◆ Diphtheria ◆ Influenza ◆ Measles ◆ Mumps ◆ Pertussis ◆ Rashes of unknown source ◆ Rubella ◆ Tuberculosis ◆ Upper respiratory infections (especially with fever and productive cough) 	<p>This information should be included as part of the employee's orientation program. See Policy 2.4, "Orientation of Employees."</p>
<p>2. When a patient who is suspected of having one of the above illnesses comes to the clinic, the nurse in charge should be notified, and the patient should be taken out of the waiting room immediately and put in an exam room or office away from other patients.</p>	<p>It is not intended that clinic staff diagnose illness, but rather that they should be aware of indications that the patient may be infectious. It is particularly important to be aware of persons with rash-associated illness in maternity clinics. Clerical and other support staff should tell the nurse in charge if they suspect a patient is infectious.</p>
<p>3. Whenever possible, these patients should be seen immediately.</p>	
<p>4. Whenever possible, schedule clinics for immunosuppressed patients early in the day.</p>	<p>This strategy will help to minimize these patients' risk of exposure to infectious agents.</p>

Policy 5.2

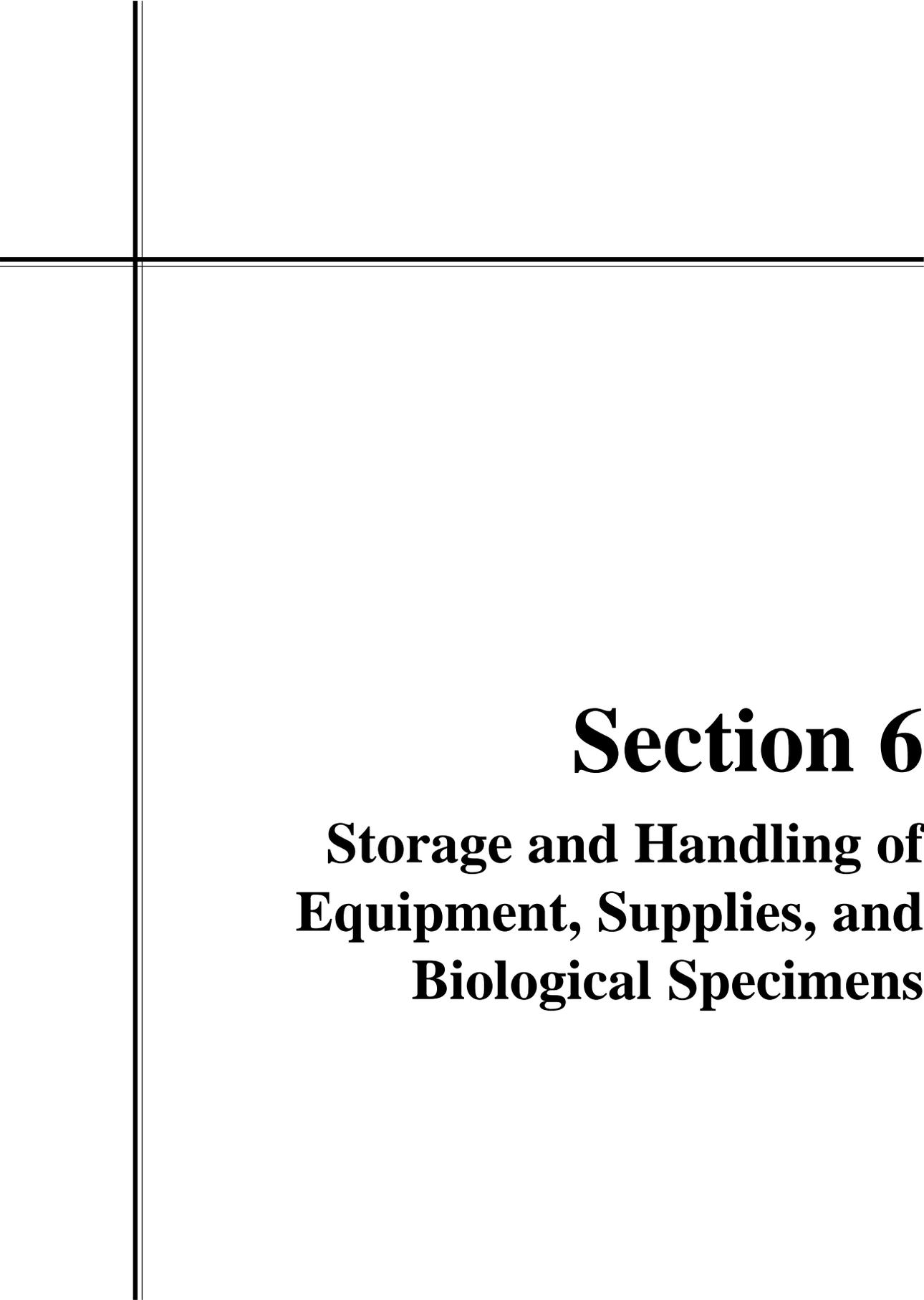
Collection of Sputum in the Clinic

Collection of sputum in clinics will be done in a way to minimize possible exposure of staff and patients.

Procedure	Key Points
1. Sputum collection should always be done in a room that is well ventilated. Ideally, the room should be ventilated to the outside of the building.	
2. Special areas are to be designated for this purpose. Ultraviolet (UV) lights should be placed in the room and used during and after sputum collection. In addition, if the room has a window that can be opened, it should be opened during collection.	If used infrequently, the UV light must be dusted before each collection. See Policy 3.15, "Ultraviolet Lights." Ultraviolet lights are remarkably effective in killing airborne tubercle bacilli and serve as a supplement to ventilation in cleaning the air. Airflow in the room should be gentle enough to not cause dust dispersal. The direction of the airflow should be away from occupied areas and air intakes.
3. If neither UV radiation nor adequate ventilation to the outside is available in the facility or other location, sputum-collection may be done outdoors.	
4. Follow the manufacturer's recommendations for use of the sputum-collection equipment.	
5. Be sure to give the patient full instructions or any necessary information on collecting the specimen before proceeding. The patient should be in the room alone when the sputum is collected. It is important, however, to check on the patient to be sure that the sputum is being collected correctly and to see if the patient has any questions.	Encourage patients to come in for sputum collection in the morning, as this will increase the likelihood of obtaining a good specimen from a more productive cough.
6. TB patients, if not known to be sputum-negative, who are coughing in the clinic should always be given tissues and asked to cover their mouths when coughing. Alternatively, they should be given masks.	Do not schedule a TB clinic prior to or simultaneously with clinics for immunocompromised patients. The TDH Tuberculosis Elimination Division is reviewing information on the efficacy of masks and particulate respirators. Check with the regional TB program manager for current recommendations.



**Isolation of Potentially
Infectious Patients**



Section 6

Storage and Handling of Equipment, Supplies, and Biological Specimens

Section 6: Storage and Handling of Equipment, Supplies, and Biological Specimens

Policy 6.1 Equipment and Supplies

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

Policy 6.2 Sterile Equipment

All expiration dates on sterile equipment will be checked routinely.

For TDH clinics only: Outdated equipment and supplies will be returned to regional headquarters for exchange.

Policy 6.3 Cotton Balls

Cotton balls will not be stored in alcohol unless they are to be used that day.

Procedure	Key Points
1. Unpack supplies when received and place them on shelves or in cabinets immediately.	As an aid to rotating stock supplies, place the new supplies towards the back of the shelf and move the older supplies towards the front.
2. Keep supplies off the floor to avoid contamination from soil and bacteria.	
3. Cotton balls are to be soaked with 70% alcohol at the time they are used. Only a one-day supply should be put into a container and moistened with alcohol. Discard the leftover ones at the end of the day.	Unless the solution is changed daily, the alcohol begins to lose its effectiveness. The moist cotton can then become a breeding ground for certain organisms. Alcohol is the most convenient chemical germicide for use in this situation, but other germicides may be used, provided they are chemically compatible with the surface to be wiped or are not too irritating to the skin.

Policy 6.4 Specimen Storage, Handling, and Transport

Laboratory specimens of blood or other potentially infectious materials (OPIM) shall be handled in accordance with the provisions of the OSHA *Bloodborne Pathogens* standard (see Appendix D, “OSHA Standards”).

Section 6

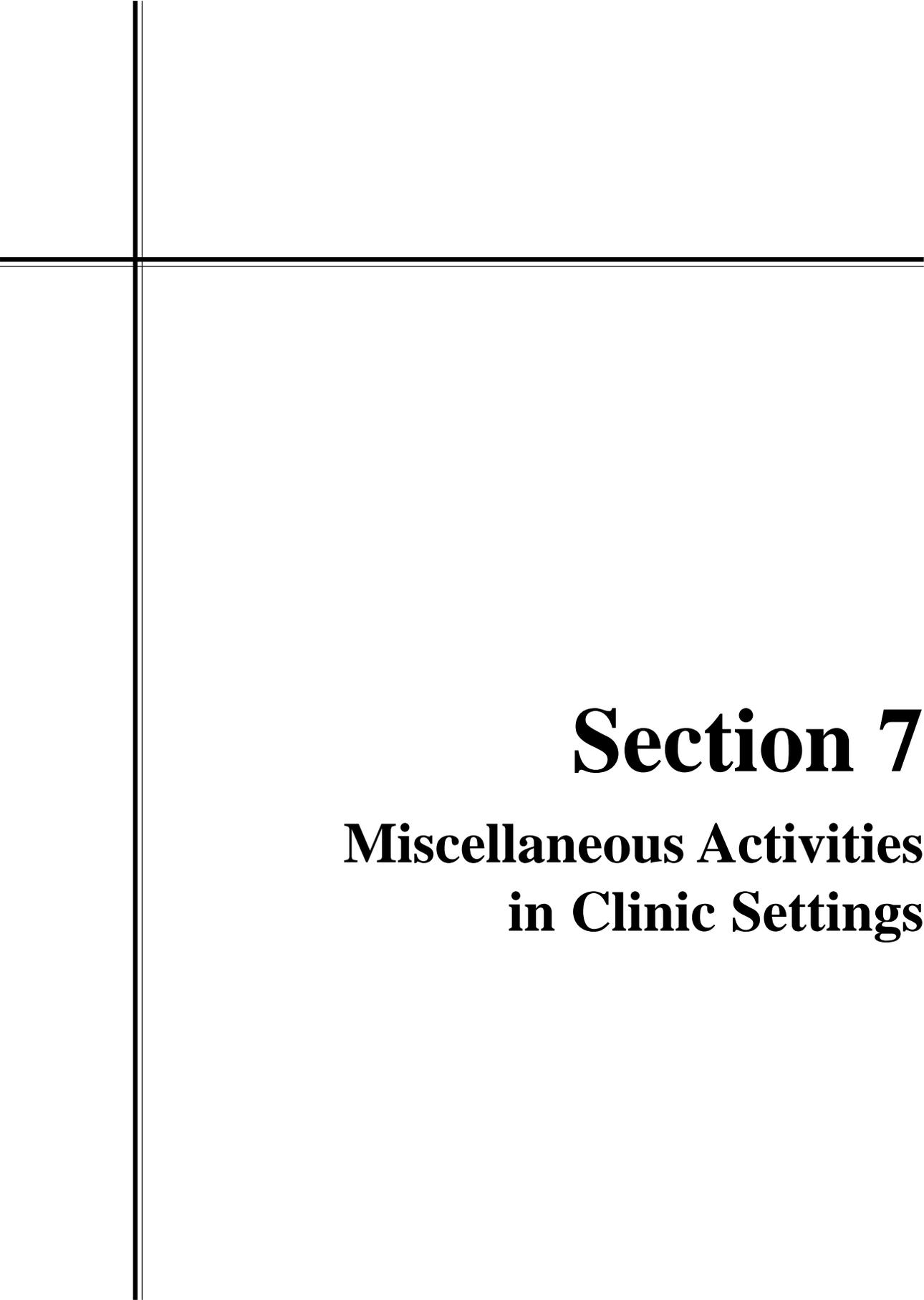
Procedure	Key Points
1. Specimens of blood or OPIM must be placed in containers which prevent leakage during collection, handling, storage, processing, or transport.	Triple containers, required by postal regulations, are supplied by the TDH Bureau of Laboratories. All containers must be closed tightly prior to shipping the specimens.
2. Be sure to add enough absorbent material to absorb the entire contents of the primary container in case of breakage or leakage.	See Appendix G, "Guidelines for Submission of Laboratory Specimens" for packing instructions.
3. The outer container used for storing or shipping specimens must be color-coded or labeled with the BIOHAZARD symbol and word.	The OSHA <i>Bloodborne Pathogens</i> standard states that the BIOHAZARD label is to be affixed to all tertiary containers of specimens leaving the facility for testing. The BIOHAZARD label is not placed on outer containers sent through U.S. mail. Postal regulations have priority over OSHA regulations in this case. Contact other carriers for their specific protocols.
4. All procedures involving blood or OPIM must be performed in such a manner as to minimize splashing, spraying, spattering, and the creation of aerosols of these materials.	
5. Mouth pipetting/suctioning of blood or OPIM is prohibited.	
6. Specimens must also be in leakproof containers separate from vaccines or other biologicals during storage in the refrigerator. The containers should be disinfected at least once a week with a 1:10 solution of chlorine bleach or other EPA-registered hospital disinfectant.	Remember to list this task as part of the written schedule for clinic housekeeping.



Note: General information on sterilization and disinfection can be found in Appendix F, "Principles of Sterilization and Disinfection." For a current listing of chemical disinfectants and sterilants registered by the U.S. Environmental Protection Agency, contact any of the OSHA regional offices in Texas. Check the government section in your telephone directory for the office nearest you.



**Storage and Handling of Equipment,
Supplies, and Biological Specimens**



Section 7
Miscellaneous Activities
in Clinic Settings

Section 7: Miscellaneous Activities in Clinic Settings

Policy 7.1

Laundry

Clinic smocks, laboratory coats, or other reusable personal protective equipment made of cloth will be cleaned and repaired at no cost to the employee.

Procedure	Key Points
1. Reusable personal protective equipment made of cloth will be laundered and repaired, as needed, at no cost to the employee.	
2. Employees must remove their clinic coats or smocks before leaving the clinic or lab area.	Employees cannot take clinic coats or smocks home to be cleaned.
3. A container that is labeled with the BIOHAZARD symbol and word, or color-coded, must be available to collect clothing contaminated with blood or OPIM.	If the contaminated clothing is wet and leakage is possible, the container must be leakproof.
4. Employees will use universal precautions when handling contaminated laundry.	Gloves and other personal protective equipment will be necessary when handling contaminated laundry.
5. If using a contract service for laundry, BIOHAZARD labeling and color-coding provisions will apply, especially if the off-site contract service does not use universal precautions.	See Appendix D, "OSHA Standards," for labeling and color-coding instructions.

Policy 7.2

Toys

All toys provided for patients to play with will be washable and will be kept clean.

Procedure	Key Points
1. Toys should be cleaned with soap and water and dried as needed during the course of the day.	
2. At the end of each day, all toys that have been used will be washed with soap and water, rinsed, and dried.	Do not use toys that can't be washed. Be sure to include this cleaning process in the written schedule for routine cleaning and housekeeping.

Section 7

Procedure	Key Points
3. Toys that are used in the clinics must be safe, easily maintained, and kept clean. They must be made of impervious materials.	Avoid toys with sharp edges, lead-based paints, beads, heavy hard balls that can be thrown, cloth toys, or toys with small removable parts.
4. Throughout the day, make sure that clinic toys do not clutter the entrances, exits, hallways, and walkways.	

Policy 7.3

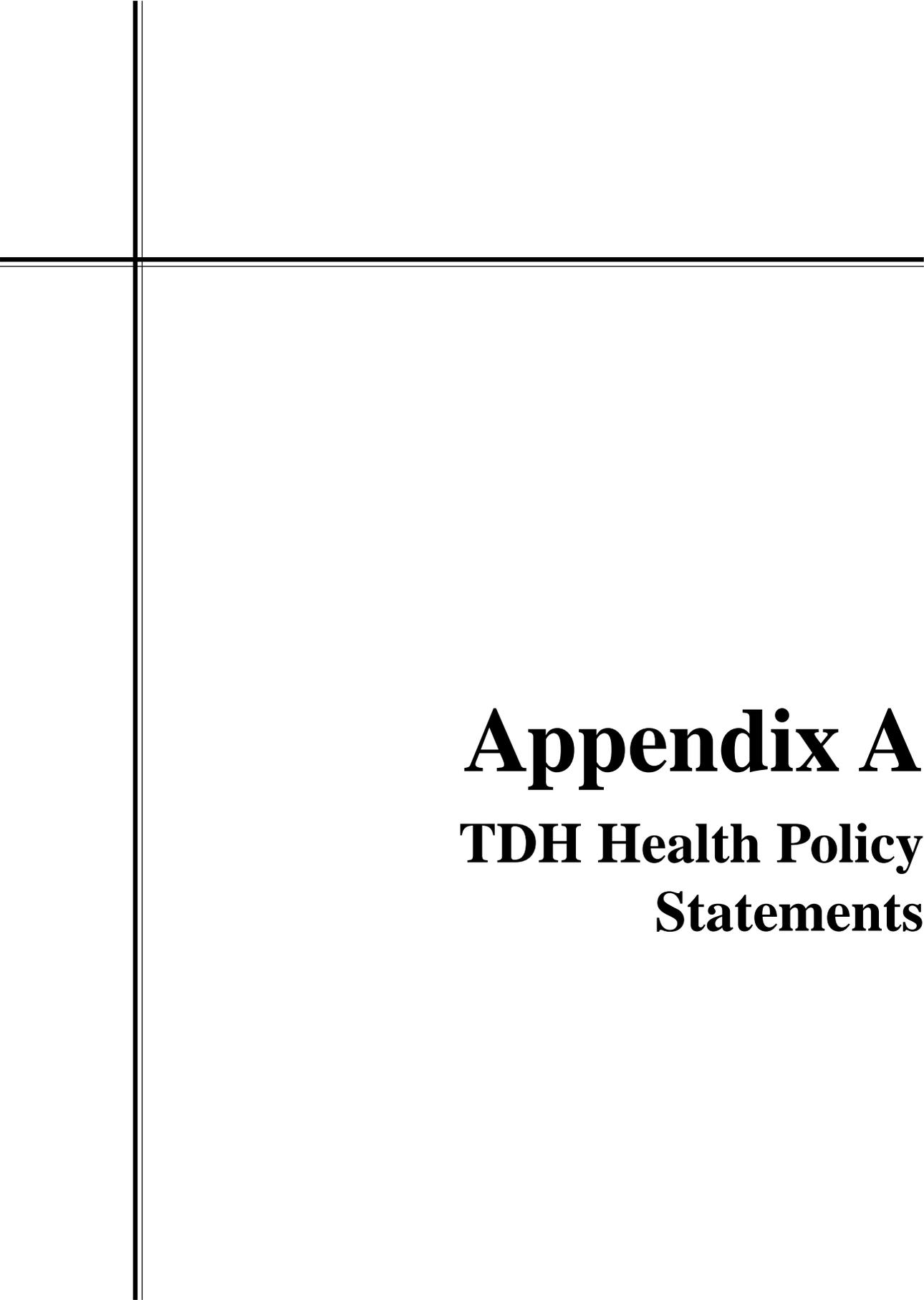
Food

Employee food will be stored separately from vaccines, biologicals, medications, and specimens.

Procedure	Key Points
1. Food and biologicals will not be stored in the same refrigerator. Food cannot be stored in a refrigerator along with specimens.	See Appendix D, "OSHA Standards."
2. Food shall not be eaten in the clinic or laboratory areas.	The following activities are also not permitted in the patient-treatment areas or laboratory areas: <ul style="list-style-type: none">◆ smoking or drinking,◆ applying cosmetics or lip balm, or◆ handling contact lenses without washing hands.



**Miscellaneous Activities
in Clinic Settings**



Appendix A
TDH Health Policy
Statements

TDH Employee Immunization Policy (EIP)

(Revised October 1998)

Background

Because of their direct contact with patients and the public and material from patients with infections, health-care workers are at increased risk for exposure to and possible transmission of vaccine-preventable diseases. Health-care workers include *all* persons — medical or nonmedical, paid or volunteer, full- or part-time, student or nonstudent, with or without patient-care responsibilities — who work in public or private facilities that provide health care to patients. This includes physicians; nurses; emergency medical personnel; dental professionals; medical and nursing students; laboratory technicians; hospital volunteers; administrative and clerical staff; hospital, clinic house-keeping, and maintenance staff; and others.

Maintenance of immunity is an essential part of prevention and infection-control programs for health-care workers. Vaccination not only protects employees from diseases transmitted by the patients and public they serve but also protects patients and the public from becoming infected through exposure to health-care workers. Consistent immunization programs can significantly reduce the number of susceptible employees in health departments and can reduce employee absenteeism during flu season.

Revised Policy Requirements

Applies to	Vaccine
Employees who have direct contact with patients or the public, particularly employees of WIC, STD/HIV, TB, immunization clinics; outreach workers; inspectors; investigators; receptionists and clerical staff; hospital and clinic housekeeping staff; and security personnel who have contact with the public on a regular basis	MMR (2 doses or evidence of immunity to measles, mumps, and rubella) Varicella (2 doses, reliable history of disease, or evidence of immunity to chickenpox) Influenza (1 dose annually)
Employees performing tasks involving exposure to blood or blood-contaminated body fluids (e.g., nurses, physicians, lab and medical technicians, dentists, and dental assistants)	Hepatitis B (documentation of 3 doses; unimmunized new employees must complete a 3-dose series and post-vaccination test showing immunity; if test result is negative, up to 3 additional doses of vaccine may be required)

Appendix A

Applies to	Vaccine
Employees performing tasks involving exposure to soil or animals, or who routinely work outdoors	Tetanus diptheria (complete series with one booster dose every 10 years)
Laboratory employees	Follow lab policy



Note: Required immune-status tests for TDH employees are available through the TDH Laboratory at no charge to the employee but must be coordinated through the Immunization Division. Employees with a previous history of a complete hepatitis B vaccination series do not have to be tested unless an exposure occurs.

Recommendations

Applies to	Vaccine
All employees	MMR (2 doses or evidence of immunity to measles, mumps, and rubella) Varicella (2 doses, reliable history of disease, or evidence of immunity to chickenpox) Tetanus diptheria (complete series with 1 booster dose every 10 years) Influenza (1 dose annually) Pneumococcal (1 dose for persons 65 and older, 1 or more doses for persons at increased risk)

Division directors/bureau chiefs/regional administrators will be responsible for:

- identifying to which specific positions these requirements apply,
- incorporating vaccine requirements into individual job descriptions,
- screening new employees for compliance with vaccine requirements,
- establishing a system for tracking employee-immunization records and assuring ongoing compliance, and
- encouraging participation in annual employee-immunization clinics.

**TEXAS DEPARTMENT OF HEALTH
AUSTIN, TEXAS**

INTER-OFFICE

TO: TB Program Managers, Public Health Regions, Local Health Departments
Directors of Nursing, Public Health Regions, Local Health Departments

THRU: Directors, Public Health Regions
Directors, Local Health Departments
Associate Commissioner for Disease Control and Prevention

FROM: Kate Hendricks, M.D., MPH&TM, Acting Chief
Bureau of Communicable Disease Control
Charles E. Wallace, Director
Tuberculosis Elimination Division

DATE: August 24, 1998

SUBJECT: Tuberculin Skin Testing Guidelines for Staff and Clients in Various Settings

EFFECT OF THIS REVISION: Correction to Screening Table

Screening high-risk groups for TB infection to identify candidates for preventive therapy is an important function of the Tuberculosis Elimination Division. The attached chart has been developed to assist you to guide others in determining who should be routinely screened, when screening should be done, and frequency of screening.

Apply these recommendations after you consider the risk factor for the clients served in your communities. Annual screening may not be appropriate in areas of the state where tuberculosis morbidity is low.

All immigrants, legal or otherwise, except those from Western and Northern Europe, Canada, Japan, Australia, New Zealand, and Israel, should be screened on hiring and/or admission to service.

Tuberculin skin tests should be applied to health-care staff on hiring and to clients on suspicion of tuberculosis when there is no documented evidence of a previously positive tuberculin skin test.

Review signs and symptoms of tuberculosis with clients at the time the tuberculin skin test is applied and again if the skin test is read as positive.

Attachment #1: Table — “Frequency of Screening of Staff and Clients for Tuberculosis in Various Settings” (Revised 08/98)

Contact: TDH Tuberculosis Elimination Division
1100 W. 49th Street
Austin, TX 78756
(512) 458-7447

Frequency of Screening of Staff and Clients for Tuberculosis in Various Settings

Frequency Codes:

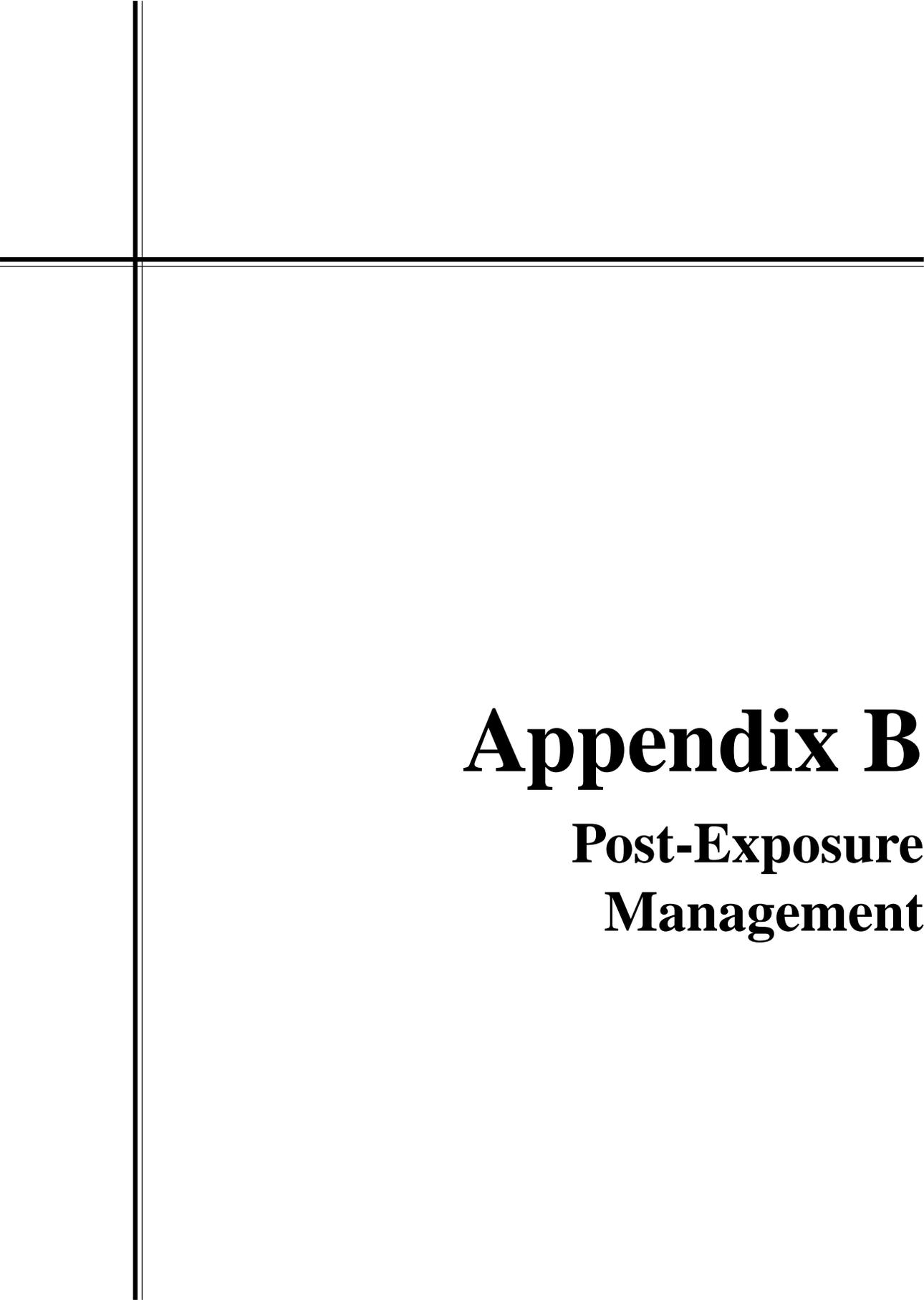
- ¹ On employment
- ² Annually*
- ³ On admission to service or facility
- ⁴ Skin-testing intervals should be based on degree of risk for exposure
- ⁵ Post-exposure
- ⁶ If individual becomes symptomatic
- ⁷ If symptomatic, regardless of skin-test result, refer for chest X-ray

Facility	Who	Frequency	Guidelines
Academic Institutions			
Colleges	Staff	1, 5, 6, 7	* <i>Tuberculosis Screening Guidelines for Children in Various Settings, 04/98 (TDH)</i>
Head Start Programs*			
Public Schools*	Students	4, 5, 6, 7	
Trade Schools			
Universities			
Community Health			
Community Health			
HIV/STD	Staff**	1, 4, 5, 6, 7	* <i>Tuberculosis Screening Guidelines for Children in Various Settings, 04/98 (TDH)</i>
MCH/FP			
WIC*			** <i>Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Facilities, 1994 (CDC)</i>
CIDC*	Clients	4, 5, 6, 7	
Child Health*			
Health Steps*			
Adult Health			
Chronic Disease			
Tuberculosis			

* Booster testing, or two-step testing, is useful when PPD testing of adults is to be repeated periodically (as in health-care worker's skin-testing programs). Two-step testing can be used to reduce the likelihood that a "boosted" reaction is misinterpreted as a new infection. For health-care workers who have not had a documented negative PPD test result during the preceding 12 months, the baseline PPD testing should employ the two-step method. This will detect boosting phenomena that might be misinterpreted as a skin-test conversion. A second test should be performed one to three weeks after the first test. If the second test result is positive, this is most likely a boosted reaction, and the health-care worker should be classified as previously infected. If the second test result remains negative, the health-care worker is classified as uninfected, and a positive reaction to a subsequent test is likely to represent a new infection with *M. tuberculosis*. Should this occur, a chest X-ray to rule out current disease is in order. Revised 8/98

Facility	Who	Frequency	Guidelines
Correctional Facilities			
Bureau of Prisons	Staff ^{H,HH}	1, 2, 5, 6, 7	^H Chapter 89, <i>Texas Health and Safety Code</i> (requires testing of staff and inmates in county jails with 100 or more beds)
Community Corrections County Jails	Inmates ^{H,HH}		
Dept. of Immigration and Naturalization Halfway Houses Pardons and Parole Texas Dept. of Corrections		2, 3, 5, 6, 7 (previously documented negative skin test reactors only). Inmates with documented previously positive skin-test reactions should be screened with a chest X-ray on admission, after potential exposure within the facility, or if they become symptomatic.	^{HH} "Prevention and Control of Tuberculosis in Correctional Facilities: Recommendations of the Advisory Council for the Elimination of Tuberculosis" (<i>MMWR</i> , 6/7/96)
Home Health/Welfare			
Workers (with client contact)	Staff** Clients	1, 2, 5, 6, 7 4, 5, 6, 7	^{**} <i>Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Facilities</i> , 1994 (CDC)
Homeless Shelters			
	Staff Residents	1, 2, 5, 6, 7 3, 5, 6, 7	
Lab Personnel** Medical Examiners**			
	Staff	1, 2, 5, 6, 7 (specifically for those who handle tuberculosis specimens)	
Licensed Care Facilities**			
Day Care for the Aged Dialysis Centers Drug-Treatment Centers FDA vs. Non-FDA Foster Care* Hospitals Nursing Homes Radiation Centers	Staff Clients	1, 2, 4, 5, 6, 7 3, 4, 5, 6, 7	^{**} <i>Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Facilities</i> , 1994 (CDC)
Long-Term Care Facilities**			
MHMR Facilities Hospitals (i.e., VA) State Schools* Group Homes	Staff Clients	1, 2, 4, 5, 6, 7 2, 3, 5, 6, 7	[*] <i>Tuberculosis Screening Guidelines for Children in Various Settings</i> 04/98 (TDH)

Facility	Who	Frequency	Guidelines
Other Populations Food Handlers Beauticians/Barbers Airline Employees General Population		5, 6, 7	No mandate for screening other than post-exposure
Public Services EMS/Fire Fighters/Law- Enforcement Officers	Staff	1, 4, 5, 6, 7	See 1994 CDC guidelines regarding EMS.



Appendix B

Post-Exposure Management

Checklist for Management of Bloodborne Pathogen (BBP) Exposures

Date of incident: _____ Employee name: _____

- 1. Complete "Employee Exposure Assessment Form."
- 2. Determine HBV status.
 Number of doses of vaccine received: 0 1 2 3 4 5 6
 Titer documented on: _____ / _____ / _____
 NO FURTHER ACTION NECESSARY
 Chronic non-responder
 Refer to *MMWR*, Nov. 22, 1991, page 22, for required prophylaxis
- 3. Identify source blood.
 Yes ID No. _____
 Test source blood for HIV. Store remaining blood for 6 months.
 No Comments: _____
- 4. Notify physician.
- 5. Counsel employee.
- 6. Have consent forms signed.
 HIV chemoprophylaxis
 Blood test(s)
- 7. Administer chemoprophylaxis.
 HIV
 HBV

Drug	Quantity Provided	Date	Initials
1.			
2.			
3.			

- 8. Draw employee's blood.
 HIV
 AAT
 HBV

	Manufacturer	Lot	Dose	Initials
Vaccine				
HBIG				

Appendix B

- 9. Submit blood for testing.
 - Employee - HIV, anti-HBs, HBsAg, RPR, HCV, ALT
 - Source - HIV, HBsAg, HCV, RPR

- 10. Schedule employee follow-up blood test(s).
 - HIV 6 weeks _____ 12 weeks _____ 6 months _____
 - HCV 6 months _____
 - ALT 6 months _____

- 11. Provide results to employee.

No further action is necessary if employee has not seroconverted to HIV-positive or HCV-positive six months after exposure.

If employee seroconverts for either HIV or HCV:

- 12. Schedule follow-up medical consultation.
Comments: _____

- 13. Test source blood for HCV and AAT if employee has seroconverted and the source blood was not tested for baseline at the time of exposure.
 - Yes NoComments: _____

Place the completed form in a sealed envelope labeled “CONFIDENTIAL MEDICAL INFORMATION.” File it separately from the employee’s personnel folder. **Do not place lab results or other confidential medical information in the employee’s personnel file.**

Recommendations for Follow-Up of Health-Care Workers After Exposure to Bloodborne Pathogens

I. Occupational Exposure To Hepatitis B

Follow-up for occupational percutaneous or permucosal exposure to blood or body secretions that might contain hepatitis B depends on:

- whether the source of the blood is available;
- the **HBsAg** status of the source; and
- the hepatitis B vaccination and vaccine-response status of the exposed person.

A. Source of Exposure Known and HBsAg-Positive

1. If the exposed person has not been vaccinated or has not completed the vaccination series, the hepatitis B vaccination should be initiated. A single dose of HBIG (0.06 ml/kg) should be administered as soon as possible after exposure and within 24 hours, if possible. The first dose of hepatitis B vaccine should be administered intramuscularly at a separate site (deltoid for adults) and can be administered simultaneously with HBIG or within seven days of exposure; subsequent doses should be administered as recommended for the specific vaccine. If the exposed person has begun but has not completed vaccination, one dose of HBIG should be administered immediately and vaccination should be completed as scheduled.
2. If the exposed person has already been vaccinated against hepatitis B, and the anti-HBs response status is known:
 - a. If the exposed person is known to have had an adequate response in the past, the anti-HBs level should be tested unless an adequate level has been demonstrated within the past 24 months. Although current data show that vaccine-induced protection does not decrease as antibody level wanes, most experts consider the following approach to be prudent:
 - (1) If the anti-HBs level is adequate (antibody level > 10 mIU/ml), no treatment is necessary.
 - (2) If the anti-HBs level is inadequate, a booster dose of hepatitis B vaccine should be administered.
 - b. If the exposed person is known to have not responded to the primary vaccine series, he or she should receive either a single dose of HBIG and a dose of hepatitis B vaccine as soon as possible after exposure, or two doses of HBIG (0.06 ml/kg), one as soon as possible after exposure and the second one month later. The latter treatment is referred for those who have not responded to at least four doses of vaccine.

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3. If the exposed person has already been vaccinated against hepatitis B and anti-HBs response is unknown, the exposed person should be tested for anti-HBs.
 - a. If the exposed person has adequate antibody, no additional treatment is necessary.
 - b. If the exposed person has inadequate antibody, one dose of HBIG (0.06 ml/kg) should be administered immediately, and a standard booster dose of vaccine should be administered at a different site.

B. Source of Exposure Known and HBs Ag-Negative

1. If the exposed person has not been vaccinated or has not completed vaccination:
 - a. If unvaccinated, the exposed person should be administered the first dose of hepatitis B vaccine within seven days of exposure, and vaccination should be completed as recommended. If the exposed person has not completed vaccination, the vaccination series should be completed as scheduled.
2. If the exposed person has already been vaccinated against hepatitis B, no treatment is necessary.

C. Source of Exposure Unknown or Not Available For Testing

1. If the exposed person has not been vaccinated or has not completed vaccination:
 - a. If unvaccinated, the exposed person should be administered the first dose of hepatitis B vaccine with seven days of exposure, and vaccination should be completed as recommended.
 - b. If the exposed person has not completed vaccination, the vaccination series should be completed as scheduled.
2. If the exposed person has already been vaccinated against hepatitis B, and anti-HBs response status is known:
 - a. If the exposed person is known to have had adequate response in the past, no treatment is necessary.
 - b. If the exposed person is known to have not responded to the vaccine, prophylaxis as described earlier in this outline (see page B-5, I.A.) “Source of Exposure Known and HBsAg-Positive”) may be considered if the source of the exposure is known to be at high risk of HBV infection.
3. If the exposed person has already been vaccinated against hepatitis B, and the anti-HBs response is unknown, the exposed person should be tested for anti-HBs.
 - a. If the exposed person has adequate anti-HBs, no treatment is necessary.
 - b. If the exposed person has inadequate anti-HBs, a standard booster dose of vaccine should be administered.

Table 1 summarizes the prophylaxis for percutaneous or permucosal exposure to blood according to the HBsAg status of the source of exposure and the vaccination status and vaccine response of the exposed person.

Records on tested sources and employees should be kept in accordance with established Texas Department of Health policies. Laboratory results from HIV antibody testing, hepatitis B testing, or any other test must remain confidential and never be placed in personnel files.

Table 1
Recommendations for Hepatitis B Prophylaxis
Following Percutaneous Exposure

I. Source HbsAg-positive

Exposed person	Treatment when source is found to be HBsAg-positive
Unvaccinated	Administer HBIG x 1* and initiate hepatitis B vaccine **
Previously vaccinated known responder	Test exposed for anti-HBs <input type="checkbox"/> If adequate, no treatment <input type="checkbox"/> If inadequate, hepatitis B vaccine booster dose
Known non-responder	HBIG x 2 or HBIG x 1, plus 1 dose of hepatitis B vaccine
Response unknown	Test exposed person for anti-HB*** <input type="checkbox"/> If inadequate HBIG x 1, plus hepatitis B vaccine-booster dose <input type="checkbox"/> If adequate, no treatment

II. Source HbsAg-negative

Exposed person	Treatment when source is found to be HbsAg-negative
Unvaccinated	Initiate hepatitis B vaccine
Previously vaccinated known responder	No treatment
Known non-responder	No treatment
Response unknown	No treatment

III. Source unknown or not tested

Exposed person	Treatment when source is found to be unknown or not tested
Unvaccinated	Initiate hepatitis B vaccine
Previously vaccinated known responder	No treatment
Known non-responder	If known high-risk source, may treat as if source were HBsAg-positive
Response unknown	Test exposed person for anti-HBs*** <input type="checkbox"/> If inadequate, hepatitis B vaccine-booster dose <input type="checkbox"/> If adequate, no treatment

* Hepatitis B immune globulin (HBIG) dose 0.06 (ml/kg of body weight) given intramuscularly

** Hepatitis B vaccine dose

*** Adequate anti-HBs is ≥ 10 milli-international units.

This information was adopted from guidelines developed by the national Centers for Disease Control and Prevention in Atlanta, Ga.

II. Occupational Exposure to Hepatitis C

A. Employee with History of Hepatitis C Infection (HCV)

1. If the employee gives a history of infection or has documentation of HCV-positive status, no testing of either the source or the employee is necessary.

B. Source of Exposure Known and Anti-HCV-Antibody-Positive

1. The exposed employee should be tested at the time of initial exposure or as soon as possible after initial exposure for anti-HCV antibody and ALT (alanine aminotransferase) activity.
2. Repeat testing for anti-HCV antibody and ALT activity should be done six months after exposure.
3. All anti-HCV results reported as repeatedly reactive by enzyme immunoassay (EIA) should be confirmed by supplemental anti-HCV testing.
4. No post-exposure prophylaxis is available for hepatitis C; immune globulin is not recommended.

C. Source of Exposure Unknown or Cannot be Tested

1. Follow the guidelines in II. B. above, "Source of Exposure Known and Anti-HCV-Antibody-Positive".

D. Source of Exposure Known and Can be Tested

1. The source should be tested for anti-HCV antibody as soon as possible after initial exposure. If positive, guidelines in II. B. above, "Source of Exposure Known and Anti-HCV-Antibody-Positive," should be followed. If the source tests negative for anti-HCV antibody, no further follow-up for hepatitis C is necessary for the employee.

E. Summary Recommendations

1. No post-exposure prophylaxis is available for hepatitis C; immune globulin is not recommended.
2. Institutions should provide to health-care workers accurate and up-to-date information on the risk and prevention of all bloodborne pathogens, including hepatitis C.
3. Institutions should consider implementing policies and procedures for follow-up of health-care workers after percutaneous or permucosal exposure to anti-HCV-positive blood. Such policies might include baseline testing of the source for anti-HCV and baseline and six-month follow-up testing of the person exposed for anti-HCV and ALT activity. All anti-HCV results reported as repeatedly reactive by EIA should be confirmed by supplemental anti-HCV testing.

4. There are currently no recommendations regarding restriction of health-care workers with hepatitis C. The risk of transmission from an infected worker to a patient appears to be very low. Furthermore, there are no serologic assays that can determine infectivity nor are there data to determine the threshold concentration of virus required for transmission. As recommended for all health-care workers, those who are anti-HCV-positive should follow strict aseptic technique and standard (universal) precautions, including appropriate use of hand washing, protective barriers, and care in the use and disposal of needles and other sharp instruments.

III. Occupational Exposure to HIV

A. Employee with History of HIV Infection

1. If the employee gives a history of HIV infection or has documentation of HIV-positive status, no testing of either the source or the employee is necessary.

B. Source of HIV Exposure Known:

1. If the source of exposure is known, he/she should be assessed clinically and epidemiologically to determine the risk or likelihood of HIV infection. The source should be informed of the exposure and be asked to be tested. It should be stressed to the source that the results will be kept confidential. If the source has no clinical evidence of infection, is HIV-antibody-negative, and has no history of high-risk behavior, no further follow-up of source is indicated.
2. The exposed health-care worker should be counseled that the source could be infected even though results are negative. The health-care worker needs to understand that negative results are not reliable for behaviors that occurred within the past six weeks to three months. The decision to start/continue prophylaxis treatment should not be based on source test results alone.

C. Testing the Exposed Employee

1. The exposed employee should be tested within 10 days of initial exposure.
2. Repeat testing should then be done six weeks, 12 weeks, and six months after exposure.

D. Source of HIV Exposure Unknown and Miscellaneous

1. If the source has evidence of possible HIV infection, a confirmed positive HIV-antibody test, a history of high-risk behavior, cannot be tested, refuses to be tested, or is unknown, then the following steps should be taken:
 - a. The exposed individual should be evaluated clinically for evidence of HIV infection, and HIV antibody testing should be recommended as soon as possible after the exposure. Refusal to submit a specimen must be documented. The

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exposed individual should be advised to report and seek medical evaluation for any acute febrile illness that occurs within 12 weeks after exposure. Such an illness, particularly one characterized by fever, rash, or lymphadenopathy, may be indicative of recent HIV infection.

- b. If the exposed individual's baseline test is negative for HIV antibody, he/she should have repeat testing for HIV antibody in six weeks, 12 weeks, and again in six months. Again, refusal to submit a specimen must be documented. Risk behavior during each testing interim must be assessed and documented.
- c. Both the source, if known, and the exposed individual should be counseled.
- d. If the source is unknown, decisions regarding appropriate follow-up should be individualized. Serologic testing should be made available by the employer to all workers who may be concerned they have been infected with HIV through an occupational exposure.
- e. Post-exposure counseling should be given within two weeks of exposure and should include information on the potential risk of infection and specific measures to prevent transmission.

E. Medical Protocol for the Management of Occupational Exposure to HIV

1. *Post-exposure prophylaxis (PEP) should be initiated within one hour of exposure, if possible.*
2. The attending physician should review available information on occupational-exposure forms submitted by the employee, determine the extent and time of the exposure, and consult a copy of the Exposure Assessment Form (see page C-19). If a fax machine is readily available, this information can be faxed to the attending physician by the supervisor. If not, the supervisor can provide the information on the form over the telephone.
3. If status of the source of exposure is unknown, initiating PEP should be determined on a case-by-case basis. Initiating PEP should be based on the exposure risk and likelihood of HIV infection in the source. Every effort should be made to determine this information; however, the physician's decision to offer or recommend PEP should depend on the type of exposure. PEP should not be delayed while waiting for information regarding the source. Information concerning what testing the involved specimen was submitted for might give some insight regarding the likelihood of HIV being found in that specimen. Blood specimens which are the source of an exposure will be tested for HIV (antibody and antigen) and hepatitis B and C. If there is not enough of the source blood to test, information should be gathered from the submitter and another blood sample obtained, if possible.

4. *The attending physician should initiate prophylaxis promptly (if appropriate and accepted), preferably within 1-2 hours after exposure. Because the interval after which there is no benefit from PEP is not defined, prophylaxis after 24 hours should depend on the type of exposure (e.g., high risk, increased risk, no increased risk). (See Table 2 on following pages for defining criteria.) The recommended length of therapy is four weeks. Medications should not be provided if the exposed employee's HIV status is positive. Each health department should develop a plan to obtain medications within 24 hours, as needed.*

F. Chemoprophylaxis

1. If medications are ordered, blood should be drawn for baseline laboratory tests of exposed individual to monitor drug toxicity, if chemoprophylaxis is chosen as an option.
2. Laboratory testing which should be performed is as follows:
 - a. Complete blood count
 - b. Liver-function tests
 - c. Renal-function tests
 - d. Urinalysis
 - e. Amylase
 - f. Pregnancy test if question of pregnancy
 - g. HIV antibody by ELISA
 - h. Hepatitis B surface antigen and anti-hepatitis B surface antigen
 - i. Hepatitis C antibody (optional; depends on institutional guidelines)
3. Some of the above tests may be performed by the TDH Laboratory, and some will be performed by an outside laboratory. These tests should be repeated by the employee's private physician after two weeks on prophylaxis.

G. Pregnancy

1. If the employee who has been exposed is pregnant or has any reason to believe that she is in the early stages of pregnancy, *do not provide medications*.
2. The employee should immediately contact her private obstetrician, family practitioner, or the individual on call for these physicians and discuss the situation with him/her. The employee's private obstetrician or family practitioner should make the determination as to whether this employee should be provided post-exposure prophylaxis.

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3. The employee's private obstetrician or family practitioner may be referred to the TDH physician handling the exposure and request that the TDH physician dispense one or two days of medication. Any additional medication would be provided via a prescription for the employee by the private practitioner.

**Table 2
Treatment Recommendations for
Occupational Exposure To HIV**

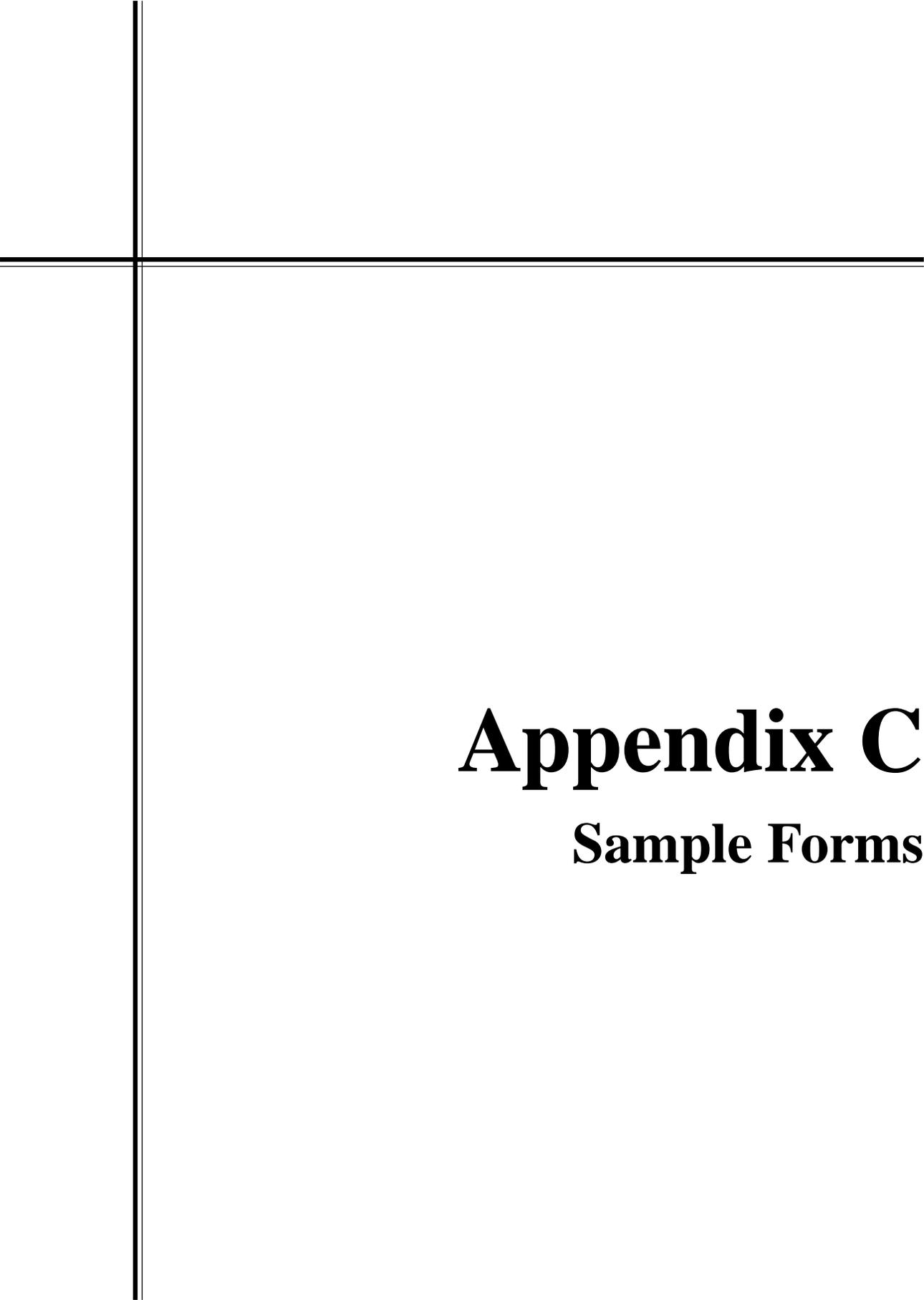
Exposure Type	Source Material	Criteria	Post-Exposure Prophylaxis	Drug Regimen
Percutaneous	Blood — Highest risk	Exposure to a large volume of blood (e.g., deep injury with large-diameter hollow needle previously in source patient's vein or artery, especially involving an injection of source patient's blood)	Recommend	ZDV + 3TC + IDV Zidovudine (ZDU) [AZT] 200 mg t.i.d.
		AND		+
		Exposure to blood containing a high titer of HIV (e.g., source with acute retroviral illness or end-stage AIDS; viral-load measurement may be considered, but its use related to Post-Exposure Prophylaxis (PEP) has not been evaluated)		Lamivudine (3TC) 150 mg b.i.d. +
		OR		Indinavir (IDV) 800 mg t.i.d.
		Exposure to large volume of blood		(if IDV is unavailable, saquinavir may be used at 600 mg t.i.d)
Percutaneous	Blood — Increased Risk	Exposure to large volume of blood (>1 cc)	Recommend	ZDV + 3TC
		OR		+
		Exposure to blood with a high titer of HIV		Zidovudine (ZDU) [AZT] 200 mg t.i.d. +
				Lamivudine (3TC) 150 mg b.i.d.
Percutaneous	Fluid — Visible Blood or other infectious fluid	Exposure to a large volume of blood (>1 cc)		ZDV + 3TC
		OR		+
		Exposure with prolonged contact (>5 min.)		Zidovudine (ZDU) [AZT] 200 mg t.i.d. +
		OR		Lamivudine (3TC) 150 mg b.i.d.
		Exposure to blood with high HIV titer.		

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Exposure Type	Source Material	Criteria	Post-Exposure Prophylaxis	Drug Reaction
Percutaneous	Blood — No increased risk	NEITHER Exposure to large volume of blood (>1 cc)	Offer	ZDV + 3TC Zidovudine (ZDU) [AZT] 200 mg t.i.d.
		NOR Exposure to blood with a high titer of HIV		+ Lamivudine (3TC) 150 mg b.i.d.
Percutaneous	Fluid — Visible blood or other infectious fluid		Offer	ZDV + 3TC Zidovudine (ZDU) [AZT] 200 mg t.i.d. + Lamivudine (3TC) 150 mg b.i.d.
Percutaneous	Noninfectious fluid		None	
Mucous membranes	Blood	Exposure to a large volume of blood (>1 cc)	Offer	ZDV + 3TC
		OR Exposure with prolonged contact (>5 min.)		Zidovudine (ZDU) [AZT] 200 mg t.i.d.
		OR Exposure to blood with high HIV titer		+ Lamivudine (3TC) 150 mg b.i.d.
Mucous membranes	Blood	Exposure to a small volume of blood (<1 cc)	Offer	ZDV + 3TC Zidovudine (ZDU) [AZT] 200 mg t.i.d.
		AND Exposure with brief contact (<5 min.)		+ Lamivudine (3TC) 150 mg b.i.d.
Mucous membranes	Fluid — Visible blood or other infectious fluid			ZDV Zidovudine (ZDU) [AZT] 200 mg t.i.d.

**Post-Exposure
Management**

Exposure Type	Source Material	Criteria	Post-Exposure Prophylaxis	Drug Regimen
Skin	Blood — Fluid with visible blood or other infectious fluid	Exposure where skin integrity is compromised	Offer	ZDV + 3TC
		OR		Zidovudine (ZDU) (AZT) 200 mg. t.i.d.
		Exposure to blood with a high titer of HIV		+
		OR		Lamivudine (3TC) 150 mg b.i.d.
		Exposure with prolonged contact (>5 min.)		
		OR		
		Exposure to extensive area		
Skin	Blood — Fluid with visible blood or other infectious fluid	Exposure where skin is intact	None	
		AND		
		Exposure to a small volume (<1 cc)		
		AND		
		Exposure with brief contact (<5 min.)		
		AND		
		Exposure to a small area		
Mucous membranes	Noninfectious fluid		None	
Skin	Noninfectious fluid		None	



Appendix C

Sample Forms

On-the-Job Injury/Workers' Compensation

All on-the-job injuries are to be reported. Injuries which require medical attention must be reported immediately by phone to the Workers' Compensation Coordinator, TDH Bureau of Human Resources, 458-7302. All forms must be completed and submitted to the Workers' Compensation Coordinator the same day an injury is reported.



Note: When an incident results in exposure to a substance which may cause an occupational disease, an employee must provide, in addition to the attached forms, a written statement as to the date and circumstances of the exposure. Within 10 days after the date of exposure, the employee must be tested for the disease exposed to and submit the test result to the Workers' Compensation Coordinator.

Medical Services

Employees seeking treatment for an on-the-job injury must notify their doctor that the injury occurred on the job and that medical bills are to be submitted to:

The State Office of Risk Management
P.O. Box 13777
Austin, TX 78711

Selection of Doctor - Employees are entitled to an initial choice of doctors. Employees may simply call their doctor of choice and ask to be seen for an on-the-job injury.

The State Office of Risk Management will pay only for those services that are determined to be reasonable, necessary, and related to the injury.

Medication

Often, as a result of an injury, the attending physician will prescribe medication. In those cases, the employee should inform his or her pharmacy that the medication is for an on-the-job injury and that the bill is to be sent to the State Office of Risk Management (SORM) at the address listed above. If the pharmacy refuses to bill the SORM, the employee may pay for the prescription and submit an itemized receipt to the SORM for reimbursement. The receipt must include the date, names of medication, prescription number, quantity, price, and doctor's name.



Note: The injured employee's health insurance must not be used to pay for doctor visits, prescriptions, or other services for an on-the-job injury!

Guidelines for Reporting Employee

Injuries/Illnesses/Incidents in the TDH Laboratory

Employee reports injury/illness/incident to supervisor immediately.

Supervisor (or employee) notifies the Safety Officer (Ext. No. 2423) immediately.

Safety Officer notifies Bureau of Human Resources, Worker's Compensation Coordinator by telephone at Ext. 2326 immediately.

Supervisor completes the Supervisor's Investigation of Employee's Accident/Incident, SORM RM-1 form and submits to the Safety Officer.

Employee completes the Employee's Report of Injury Form SORM-29, and returns it to the Safety Officer. If a blood-borne pathogen exposure is involved, the employee fills out a Written Statement of Exposure form and returns the form to the Safety Officer. Post exposure serological testing of employee is initiated.

Employee completes the Authorization of Release of Information, form SORM-16, and submits to the Safety Officer.

Supervisor provides witnesses to the injury/illness/incident with the Witness Statement, form SORM-74, and returns completed forms to the Safety Officer.

If lost time from work is involved, the employee will fill out an Employee's Election Regarding Utilization of Sick Leave, form SORM-80, and return to the Safety Officer.

The supervisor routes the forms to the Division Director for comments and signature on the Supervisor's Investigation of Employee's Accident/Incident (SORM RM-1) and AP-42 (TDH Report of Job Related Injury or Illness).

The Safety Officer reviews and comments on form RM-1.

The Safety Officer then routes the forms through the Bureau Chief's office for signature.

The Safety Officer keeps copies of all completed paperwork.

The paperwork is submitted to the Associate Commissioner's office and then to the Bureau of Human Resources, Worker's Compensation Coordinator.

Texas Department of Health

Supervisor's Investigation of Employee's Accident/Incident

The Supervisor's Investigation of Employee's Accident/Incident (RM-1) is intended to provide the information necessary to evaluate existing and potential risks to state workers. The Employee's Safety and Health Program of the Office of the Attorney General, in conjunction with the Risk Management Division of the Texas Workers' Compensation Commission (TWCC), will use this information to initiate and evaluate safety programs. The Supervisor's Investigation of Employee's Accident/Incident Report must be completed by State agencies as part of the safety program and risk management reporting requirements.

Instructions for Completing RM-1

The Supervisor's Investigation of Employee's Accident/Incident Report must be completed each time a reportable injury or occupational illness occurs. Reporting on this form fulfills the requirements of Section 7.21 of the Texas Workers' Compensation Act. This means that a report must be prepared and submitted to the Materials Acquisition & Management Division Safety Office (MAMDSO) when an employee loses time from work in the shift following the injury, or when there is medical cost resulting from the job-related injury. All items are to be completed by the injured employee's immediate supervisor and reviewed by the agency's safety officer for accuracy. The investigation should be completed as soon as possible and submitted to MAMDSO within 8 days, with corrective action taken at each supervisory level to prevent recurrence of similar incidents. Reports for accidents/incidents that do not result in medical costs or time lost from the following shift, shall be forward to the MAMDSO within 20 days of the date of the accident/incident.

Heading

In line one of the heading, print the injured employee's last name, first name and middle initial; social security number; and date of birth.

In line two, indicate the injured employee's sex; the date the employee began working in the program; and the program's five digit budget number.

In line three, indicate the employee's four digit job classification code; position status; date of incident; and time of the incident's occurrence. The employee's four digit job classification code can be obtained from the regional personnel assistant, or the operating budget.

Sections

- A. Complete the information concerning the extent of the injury. Item 02, an injury not requiring an SORM-29 (replaces AP-42), is an injury which resulted in no medical cost to TWCC and did not result in the employee losing time from work in the following shift. Medical (item 03) should be checked when there is a medical claim to TWCC but less than one day of lost work. Lost time only (item 04) should be checked when more than one day of work is lost but there is no medical

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claim to TWCC. Medical and lost time (item 05) is appropriate when there is both a medical claim to TWCC and more than one day is lost from work. Check fatality (item 06) when the injury results in the employee's death.

- B. Check the category which best describes the incident responsible for initiating this report.
- C. Indicate the location of the incident's occurrence. If the incident occurred indoors also fill in the building's address. When none of the pre-assigned categories are appropriate, check "other" and fill in the location in the blank provided.
- D. Denote the injured employee's activity at the time of the incident. When none of the listed categories are appropriate, mark "other" and write the activity in the space provided.
- E. Check the body part most affected by the incident. Check "other" category when none of the categories are appropriate.
- F. Denote the primary type of injury brought about by the incident. Use the "other" category when none of the listed categories are appropriate.
- G. Indicate the type of occurrence which resulted in filing this report. Check "other" when none of the pre-assigned categories are appropriate.
- H. Indicate the physical object most directly related to the incident. When none of the listed categories are appropriate, check "other" and specify the type of object.
- I. Denote the act or practice resulting in the incident. Check "other" and specify when none of the pre-assigned categories are appropriate.
- J. Check the most appropriate, or primary, physical hazards associated with the incident. When appropriate check "other" and specify.
- K. Indicate whether the state or the agency had a safety rule which could have prevented this incident.
- L. Indicate whether the rule(s) denoted in item K were violated.
- M. Check all actions already taken or planned to prevent a recurrence of this incident. If item 09 is checked, please list specific action taken to prevent a recurrence. At a minimum, all employees of that program area should be made aware of the accident/incident.
- N. Give a brief narrative description of the incident. Include who was involved, what happened, where the incident occurred, when it happened, why the incident occurred and how it happened.

P.1.

Submit the RM-1 to the Region's/Bureau's/Division's additional duty safety officer for review and comment. A signature is needed whether or not a comment was included.

P.2.

Once this form has been completed by the injured employee's supervisor, and reviewed by the additional duty safety officer, it should be submitted to the Assistant Regional Director for Administration, Bureau Chief, or Division Director for review, comments if appropriate, and signature.

P.3.

Submit completed form to the Materials Acquisition & Management Division Safety Office (MAMDSO), for review of correctness and completeness. When the form is correct and positive action has been initiated to prevent recurrence of similar accidents/incidents, the safety manager should make appropriate comments, sign and date the form. When the report was prepared as a result of medical cost to State workers' compensation or as a result of time lost from work in the following shift (items 03 through 06 in section A.), this form must be submitted to the MAMDSO with (9) days of the accident/incident at the following address:

Safety Office
Human Resources and Support, T 405
100 West 49th Street
Austin, Texas 78756-3199
Phone (512) 458-7744
Texan 824-9744
Fax (512) 458-7244
Texan Fax 824-9244

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SUPERVISOR'S INVESTIGATION OF EMPLOYEE'S ACCIDENT/INCIDENT

1. LAST NAME OF INJURED		2. FIRST NAME		3. M.I.	4. SOCIAL SECURITY NUMBER	5. DATE OF BIRTH
6. SEX M <input type="checkbox"/> F <input type="checkbox"/>		7. DATE OF EMPLOYMENT IN PROGRAM / /		8. AGENCY NUMBER (COMPTROLLER'S CODE) 501		9. BUDGET NUMBER
10. JOB CLASSIFICATION CODE		11. POSITION STATUS <input type="checkbox"/> Full-time <input type="checkbox"/> Part-time <input type="checkbox"/> Hourly		12. DATE OF INCIDENT / /		13. TIME OF INCIDENT a.m. <input type="checkbox"/> p.m. <input type="checkbox"/>

<p>A. EXTENT OF INJURY (Check one only)</p> <p><input type="checkbox"/> 01 No injury (incident only)</p> <p><input type="checkbox"/> 02 Injury not requiring a AP-42</p> <p><input type="checkbox"/> 03 Medical</p> <p><input type="checkbox"/> 04 Lost time only (more than one day)</p> <p><input type="checkbox"/> 05 Medical and lost time</p> <p><input type="checkbox"/> 06 Fatality</p>	<p>D. ACTIVITY ENGAGED IN BY INJURED AT TIME OF INJURY (Check one only)</p> <table border="0"> <tr> <td><input type="checkbox"/> 01 Belling</td> <td><input type="checkbox"/> 21 Moving</td> </tr> <tr> <td><input type="checkbox"/> 02 Buffing</td> <td><input type="checkbox"/> 22 Operating</td> </tr> <tr> <td><input type="checkbox"/> 03 Carrying</td> <td><input type="checkbox"/> 23 Pulling</td> </tr> <tr> <td><input type="checkbox"/> 04 Cleaning</td> <td><input type="checkbox"/> 24 Pushing</td> </tr> <tr> <td><input type="checkbox"/> 05 Chiseling</td> <td><input type="checkbox"/> 25 Reaching</td> </tr> <tr> <td><input type="checkbox"/> 06 Cutting</td> <td><input type="checkbox"/> 26 Redriving</td> </tr> <tr> <td><input type="checkbox"/> 07 Descending</td> <td><input type="checkbox"/> 27 Restriking</td> </tr> <tr> <td><input type="checkbox"/> 08 Digging</td> <td><input type="checkbox"/> 28 Running</td> </tr> <tr> <td><input type="checkbox"/> 09 Drilling</td> <td><input type="checkbox"/> 29 Sanding</td> </tr> <tr> <td><input type="checkbox"/> 10 Driving</td> <td><input type="checkbox"/> 30 Sawing</td> </tr> <tr> <td><input type="checkbox"/> 11 Eating</td> <td><input type="checkbox"/> 31 Searching</td> </tr> <tr> <td><input type="checkbox"/> 12 Erecting</td> <td><input type="checkbox"/> 32 Securing</td> </tr> <tr> <td><input type="checkbox"/> 13 Exercising</td> <td><input type="checkbox"/> 33 Sitting</td> </tr> <tr> <td><input type="checkbox"/> 14 Feeding</td> <td><input type="checkbox"/> 34 Standing</td> </tr> <tr> <td><input type="checkbox"/> 15 Grinding</td> <td><input type="checkbox"/> 35 Stripping</td> </tr> <tr> <td><input type="checkbox"/> 16 Grooming</td> <td><input type="checkbox"/> 36 Turning</td> </tr> <tr> <td><input type="checkbox"/> 17 Jumping</td> <td><input type="checkbox"/> 37 Walking</td> </tr> <tr> <td><input type="checkbox"/> 18 Lifting</td> <td><input type="checkbox"/> 38 Welding</td> </tr> <tr> <td><input type="checkbox"/> 19 Loading</td> <td><input type="checkbox"/> 39 Other (specify)</td> </tr> <tr> <td><input type="checkbox"/> 20 Mopping</td> <td></td> </tr> </table>	<input type="checkbox"/> 01 Belling	<input type="checkbox"/> 21 Moving	<input type="checkbox"/> 02 Buffing	<input type="checkbox"/> 22 Operating	<input type="checkbox"/> 03 Carrying	<input type="checkbox"/> 23 Pulling	<input type="checkbox"/> 04 Cleaning	<input type="checkbox"/> 24 Pushing	<input type="checkbox"/> 05 Chiseling	<input type="checkbox"/> 25 Reaching	<input type="checkbox"/> 06 Cutting	<input type="checkbox"/> 26 Redriving	<input type="checkbox"/> 07 Descending	<input type="checkbox"/> 27 Restriking	<input type="checkbox"/> 08 Digging	<input type="checkbox"/> 28 Running	<input type="checkbox"/> 09 Drilling	<input type="checkbox"/> 29 Sanding	<input type="checkbox"/> 10 Driving	<input type="checkbox"/> 30 Sawing	<input type="checkbox"/> 11 Eating	<input type="checkbox"/> 31 Searching	<input type="checkbox"/> 12 Erecting	<input type="checkbox"/> 32 Securing	<input type="checkbox"/> 13 Exercising	<input type="checkbox"/> 33 Sitting	<input type="checkbox"/> 14 Feeding	<input type="checkbox"/> 34 Standing	<input type="checkbox"/> 15 Grinding	<input type="checkbox"/> 35 Stripping	<input type="checkbox"/> 16 Grooming	<input type="checkbox"/> 36 Turning	<input type="checkbox"/> 17 Jumping	<input type="checkbox"/> 37 Walking	<input type="checkbox"/> 18 Lifting	<input type="checkbox"/> 38 Welding	<input type="checkbox"/> 19 Loading	<input type="checkbox"/> 39 Other (specify)	<input type="checkbox"/> 20 Mopping		<p>G. CONTINUED</p> <p><input type="checkbox"/> 07 Fall on same level</p> <p><input type="checkbox"/> 08 Fall on different level</p> <p><input type="checkbox"/> 09 Over exertion (exceeding physical ability resulting in strain, rupture)</p> <p><input type="checkbox"/> 10 Overexposure to environmental hazards (noise, toxic)</p> <p><input type="checkbox"/> 11 Slip (not a fall)</p> <p><input type="checkbox"/> 12 Struck against (rough, sharp object)</p> <p><input type="checkbox"/> 13 Struck by falling, moving object</p> <p><input type="checkbox"/> 14 Other (specify)</p>
<input type="checkbox"/> 01 Belling	<input type="checkbox"/> 21 Moving																																									
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<input type="checkbox"/> 20 Mopping																																										
<p>B. CATEGORY (Check one only)</p> <p><input type="checkbox"/> 01 Occupational injury (accident)</p> <p><input type="checkbox"/> 02 Occupational injury (aggressive behavior)</p> <p><input type="checkbox"/> 03 Occupational illness/disease</p>	<p>E. BODY PART INJURED (Most serious)</p> <table border="0"> <tr> <td><input type="checkbox"/> 01 Ankle</td> <td><input type="checkbox"/> 16 Internal organ</td> </tr> <tr> <td><input type="checkbox"/> 02 Arm</td> <td><input type="checkbox"/> 17 Jaw</td> </tr> <tr> <td><input type="checkbox"/> 03 Back</td> <td><input type="checkbox"/> 18 Knee(s)</td> </tr> <tr> <td><input type="checkbox"/> 04 Buttocks</td> <td><input type="checkbox"/> 19 Leg(s)</td> </tr> <tr> <td><input type="checkbox"/> 05 Cheek</td> <td><input type="checkbox"/> 20 Mouth</td> </tr> <tr> <td><input type="checkbox"/> 06 Chest</td> <td><input type="checkbox"/> 21 Neck</td> </tr> <tr> <td><input type="checkbox"/> 07 Chin</td> <td><input type="checkbox"/> 22 Nose</td> </tr> <tr> <td><input type="checkbox"/> 08 Ear(s)</td> <td><input type="checkbox"/> 23 Pelvis</td> </tr> <tr> <td><input type="checkbox"/> 09 Eye(s)</td> <td><input type="checkbox"/> 24 Rib(s)</td> </tr> <tr> <td><input type="checkbox"/> 10 Foot-Foot</td> <td><input type="checkbox"/> 25 Scaly</td> </tr> <tr> <td><input type="checkbox"/> 11 Finger/Thumb(s)</td> <td><input type="checkbox"/> 26 Shoulder</td> </tr> <tr> <td><input type="checkbox"/> 12 Forehead</td> <td><input type="checkbox"/> 27 Toe(s)</td> </tr> <tr> <td><input type="checkbox"/> 13 Groin</td> <td><input type="checkbox"/> 28 Wrist(s)</td> </tr> <tr> <td><input type="checkbox"/> 14 Hand</td> <td><input type="checkbox"/> 29 Other (specify)</td> </tr> <tr> <td><input type="checkbox"/> 15 Hip</td> <td></td> </tr> </table>	<input type="checkbox"/> 01 Ankle	<input type="checkbox"/> 16 Internal organ	<input type="checkbox"/> 02 Arm	<input type="checkbox"/> 17 Jaw	<input type="checkbox"/> 03 Back	<input type="checkbox"/> 18 Knee(s)	<input type="checkbox"/> 04 Buttocks	<input type="checkbox"/> 19 Leg(s)	<input type="checkbox"/> 05 Cheek	<input type="checkbox"/> 20 Mouth	<input type="checkbox"/> 06 Chest	<input type="checkbox"/> 21 Neck	<input type="checkbox"/> 07 Chin	<input type="checkbox"/> 22 Nose	<input type="checkbox"/> 08 Ear(s)	<input type="checkbox"/> 23 Pelvis	<input type="checkbox"/> 09 Eye(s)	<input type="checkbox"/> 24 Rib(s)	<input type="checkbox"/> 10 Foot-Foot	<input type="checkbox"/> 25 Scaly	<input type="checkbox"/> 11 Finger/Thumb(s)	<input type="checkbox"/> 26 Shoulder	<input type="checkbox"/> 12 Forehead	<input type="checkbox"/> 27 Toe(s)	<input type="checkbox"/> 13 Groin	<input type="checkbox"/> 28 Wrist(s)	<input type="checkbox"/> 14 Hand	<input type="checkbox"/> 29 Other (specify)	<input type="checkbox"/> 15 Hip		<p>H. PHYSICAL THING MOST CLOSELY ASSOCIATED WITH OCCURRENCE (Check one)</p> <p><input type="checkbox"/> 01 Aircraft</p> <p><input type="checkbox"/> 02 Air pressure</p> <p><input type="checkbox"/> 03 Animal (snake, dog, horse, etc.)</p> <p><input type="checkbox"/> 04 Athletic equipment (baseball, bat, dart, etc.)</p> <p><input type="checkbox"/> 05 Attachments (bit, pulley, gear, shaft)</p> <p><input type="checkbox"/> 06 Building component</p> <p><input type="checkbox"/> 07 Cabinet</p> <p><input type="checkbox"/> 08 Chemical (solid, liquid, or gas)</p> <p><input type="checkbox"/> 09 Clothing</p> <p><input type="checkbox"/> 10 Container (bottle, box, barrel, cylinder, etc.)</p> <p><input type="checkbox"/> 11 Curb</p> <p><input type="checkbox"/> 12 Doors (automatic, manual, revolving)</p> <p><input type="checkbox"/> 13 Drugs or medicine</p> <p><input type="checkbox"/> 14 Dust</p> <p><input type="checkbox"/> 15 Electrical apparatus</p> <p><input type="checkbox"/> 16 Elevator, escalator</p> <p><input type="checkbox"/> 17 Explosives</p> <p><input type="checkbox"/> 18 Eyewear</p> <p><input type="checkbox"/> 19 Fan</p> <p><input type="checkbox"/> 20 Fire, flame, smoke</p> <p><input type="checkbox"/> 21 Floor</p> <p><input type="checkbox"/> 22 Food products</p> <p><input type="checkbox"/> 23 Fumes</p> <p><input type="checkbox"/> 24 Furniture, fixtures</p> <p><input type="checkbox"/> 25 Gas</p> <p><input type="checkbox"/> 26 Glass items</p> <p><input type="checkbox"/> 27 Gun</p> <p><input type="checkbox"/> 28 Ground (earth)</p> <p><input type="checkbox"/> 29 Hand tool</p> <p><input type="checkbox"/> 30 Heating equipment</p> <p><input type="checkbox"/> 31 Hoisting equipment</p> <p><input type="checkbox"/> 32 Ice condition</p> <p><input type="checkbox"/> 33 Infectious or parasitic agent</p> <p><input type="checkbox"/> 34 Inmate, client, employee</p> <p><input type="checkbox"/> 35 Insect</p> <p><input type="checkbox"/> 36 Kitchen equipment</p> <p><input type="checkbox"/> 37 Knife</p> <p><input type="checkbox"/> 38 Lighting fixture and equipment</p> <p><input type="checkbox"/> 39 Ladder, scaffold</p> <p><input type="checkbox"/> 40 Locker</p> <p><input type="checkbox"/> 41 Machine</p> <p><input type="checkbox"/> 42 Material handling equipment</p> <p><input type="checkbox"/> 43 Metal</p> <p><input type="checkbox"/> 44 Mineral (lime, asphalt, clay, gravel, etc.)</p> <p><input type="checkbox"/> 45 Motor vehicle</p> <p><input type="checkbox"/> 46 Needle</p> <p><input type="checkbox"/> 47 Office equipment (chair, desk, cabinet, etc.)</p> <p><input type="checkbox"/> 48 Paint</p> <p><input type="checkbox"/> 49 Particle</p> <p><input type="checkbox"/> 50 Passerby</p> <p><input type="checkbox"/> 51 Person (other than client, inmate, employee)</p> <p><input type="checkbox"/> 52 Pipe</p> <p><input type="checkbox"/> 53 Platform, dock, ramp</p>										
<input type="checkbox"/> 01 Ankle	<input type="checkbox"/> 16 Internal organ																																									
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<input type="checkbox"/> 15 Hip																																										
<p>C. SPECIFIC LOCATION OF OCCURRENCE (Check one only)</p> <p>INDOORS:</p> <p>BUILDING ADDRESS:</p> <p><input type="checkbox"/> 01 Auditorium</p> <p><input type="checkbox"/> 02 Bath/Toilet area</p> <p><input type="checkbox"/> 03 Boiler room</p> <p><input type="checkbox"/> 04 Cafeteria/Snack bar</p> <p><input type="checkbox"/> 05 Cell block</p> <p><input type="checkbox"/> 06 Classroom</p> <p><input type="checkbox"/> 07 Closet</p> <p><input type="checkbox"/> 08 Day room</p> <p><input type="checkbox"/> 09 Dining/Living room</p> <p><input type="checkbox"/> 10 Elevator</p> <p><input type="checkbox"/> 11 Food service area/Dining/Kitchen</p> <p><input type="checkbox"/> 12 Garage</p> <p><input type="checkbox"/> 13 Gymnasium/Recreation</p> <p><input type="checkbox"/> 14 Hallway/Corridor</p> <p><input type="checkbox"/> 15 Hospital/Clinic/Dispensary</p> <p><input type="checkbox"/> 16 Laboratory</p> <p><input type="checkbox"/> 17 Laundry</p> <p><input type="checkbox"/> 18 Library</p> <p><input type="checkbox"/> 19 Loading station</p> <p><input type="checkbox"/> 20 Office areas</p> <p><input type="checkbox"/> 21 Program areas</p> <p><input type="checkbox"/> 22 Ramp</p> <p><input type="checkbox"/> 23 Sales store/Outlet</p> <p><input type="checkbox"/> 24 Seclusion room</p> <p><input type="checkbox"/> 25 Sleeping room</p> <p><input type="checkbox"/> 26 Steps/Stairs/Stairway</p> <p><input type="checkbox"/> 27 Storage area</p> <p><input type="checkbox"/> 28 Waiting room</p> <p><input type="checkbox"/> 29 Workshop/Technical trades</p> <p><input type="checkbox"/> 30 Other (specify)</p> <p>OUTDOORS:</p> <p><input type="checkbox"/> 31 Athletic field</p> <p><input type="checkbox"/> 32 Campus</p> <p><input type="checkbox"/> 33 Grounds</p> <p><input type="checkbox"/> 34 Highway/Road/Street</p> <p><input type="checkbox"/> 35 Loading dock</p> <p><input type="checkbox"/> 36 Park or recreation area</p> <p><input type="checkbox"/> 37 Parking lot</p> <p><input type="checkbox"/> 38 Roof</p> <p><input type="checkbox"/> 39 Sidewalk</p> <p><input type="checkbox"/> 40 Steps/Stairs/Stairway</p> <p><input type="checkbox"/> 41 Storage area</p> <p><input type="checkbox"/> 42 Swimming pool area</p> <p><input type="checkbox"/> 43 Tower</p> <p><input type="checkbox"/> 44 Other (specify)</p>	<p>F. TYPE OF INJURY (Check primary one)</p> <table border="0"> <tr> <td><input type="checkbox"/> 01 Abrasion</td> <td><input type="checkbox"/> 15 Heat exhaustion</td> </tr> <tr> <td><input type="checkbox"/> 02 Amputation</td> <td><input type="checkbox"/> 16 Hernia</td> </tr> <tr> <td><input type="checkbox"/> 03 Bite</td> <td><input type="checkbox"/> 17 Infection</td> </tr> <tr> <td><input type="checkbox"/> 04 Bruise</td> <td><input type="checkbox"/> 18 Inflammation</td> </tr> <tr> <td><input type="checkbox"/> 05 Burn</td> <td><input type="checkbox"/> 19 Internal injuries</td> </tr> <tr> <td><input type="checkbox"/> 06 Concussion</td> <td><input type="checkbox"/> 20 Puncture</td> </tr> <tr> <td><input type="checkbox"/> 07 Cut</td> <td><input type="checkbox"/> 21 Rupture</td> </tr> <tr> <td><input type="checkbox"/> 08 Dermatitis</td> <td><input type="checkbox"/> 22 Scratch</td> </tr> <tr> <td><input type="checkbox"/> 09 Dislocation</td> <td><input type="checkbox"/> 23 Shock</td> </tr> <tr> <td><input type="checkbox"/> 10 Foreign object</td> <td><input type="checkbox"/> 24 Sprain</td> </tr> <tr> <td><input type="checkbox"/> 11 Fracture</td> <td><input type="checkbox"/> 25 Sting</td> </tr> <tr> <td><input type="checkbox"/> 12 Frostbite</td> <td><input type="checkbox"/> 26 Strain</td> </tr> <tr> <td><input type="checkbox"/> 13 Hearing loss</td> <td><input type="checkbox"/> 27 Other (specify)</td> </tr> <tr> <td><input type="checkbox"/> 14 Heart attack</td> <td></td> </tr> </table>	<input type="checkbox"/> 01 Abrasion	<input type="checkbox"/> 15 Heat exhaustion	<input type="checkbox"/> 02 Amputation	<input type="checkbox"/> 16 Hernia	<input type="checkbox"/> 03 Bite	<input type="checkbox"/> 17 Infection	<input type="checkbox"/> 04 Bruise	<input type="checkbox"/> 18 Inflammation	<input type="checkbox"/> 05 Burn	<input type="checkbox"/> 19 Internal injuries	<input type="checkbox"/> 06 Concussion	<input type="checkbox"/> 20 Puncture	<input type="checkbox"/> 07 Cut	<input type="checkbox"/> 21 Rupture	<input type="checkbox"/> 08 Dermatitis	<input type="checkbox"/> 22 Scratch	<input type="checkbox"/> 09 Dislocation	<input type="checkbox"/> 23 Shock	<input type="checkbox"/> 10 Foreign object	<input type="checkbox"/> 24 Sprain	<input type="checkbox"/> 11 Fracture	<input type="checkbox"/> 25 Sting	<input type="checkbox"/> 12 Frostbite	<input type="checkbox"/> 26 Strain	<input type="checkbox"/> 13 Hearing loss	<input type="checkbox"/> 27 Other (specify)	<input type="checkbox"/> 14 Heart attack		<p>I. TYPE OF OCCURRENCE (Check one only)</p> <p><input type="checkbox"/> 01 Aggression (client, student, inmate, patient)</p> <p><input type="checkbox"/> 02 Bodily reaction (drug, medication)</p> <p><input type="checkbox"/> 03 Caught in, on, under, or between</p> <p><input type="checkbox"/> 04 Contact with chemicals</p> <p><input type="checkbox"/> 05 Contact with electric current</p> <p><input type="checkbox"/> 06 Contact with temperature extremes</p>												
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RM-1

Continued On Other Side

EMPLOYEE'S REPORT OF INJURY

Dear Claimant:

We have received a report that you were injured in the course of your employment. In order for us to process your claim efficiently, please fill in all lines completely and print legibly. **Attach additional sheets if necessary.**

1. Name: _____ Social Security: _____
2. Give your current home address: _____
3. By whom are you employed? Texas Department of Health
4. What is your job title/description? _____
5. What are your monthly wages? _____ 6. How many days per week do you work? _____
7. On what date were you injured? _____
8. What was the exact location of the accident (street address if possible)? _____
9. How did the accident happen? _____
10. What part of your body was injured? _____
11. When did you report this accident? _____
12. To whom did you make your accident report? _____
13. List name(s), address(es), and telephone number(s) of witness or witnesses: _____
14. Name, address, and telephone number of physician who provided treatment: _____
15. When did you first receive treatment? _____
16. When did you stop working as a result of your accident? _____
17. Name, address, and telephone number of doctor presently treating you: _____
18. When were you last treated? _____
19. Have you returned to work? _____ If so, when? _____
20. Have you lost any wages on account of your accident? _____
21. Have you ever had a previous injury claim? _____ If so, describe: _____

(dated) _____ (signed) _____

Form No. SORM-29 Rev. 9-98

PLEASE COMPLETE BACK SIDE OF THIS FORM

More  **...**

EMPLOYEE INFORMATION

Please Provide the Following Information:

Date of Birth: _____

Budget Number: _____

Home Phone Number: _____

County you live in: _____

Marital Status: Married Widowed Separated Single Divorced

Number of Dependent Children: _____

Spouse's Name: _____

Supervisor's name and phone number: _____

Were you doing your regular job when you were injured? _____

Date and time of day you were injured: _____

**Authorization for Release of Information
(SORM-16)**

Patient: To Whom It May Concern:

You are hereby expressly authorized to release and furnish to the State Office of Risk Management, and/or any associate, assistant, representative, agent, or employee thereof, any and all desired information, (including, but not limited to, office records, medical reports, memos, hospital records, laboratory reports, including results of any and all tests including alcohol and/or drug tests, X-rays, X-ray reports, including copies thereof) pertaining to the physical and/or mental condition which is the basis of my workers' compensation claim. This includes not only all current and/or future information, but also all past medical information which is related to the injury or injuries which from the basis of my claim.

Print name _____

Photostatic copies of this signed authorization will be considered as valid as the original.

This is *not* a release of claims for damages.

Signature: _____ Date: _____

Please sign the above medical authorization and return it, so that we may secure release of your medical records.

Thank you.

A. Employee Information

Name: _____

Date (form filled out): _____

Division/Program: _____ Supervisor: _____

Personal Physician: _____ Physician: _____

Phone: _____

Appendix C

CLAIM NUMBER _____

**WITNESS STATEMENT
(SORM-74)**

**MUST BE TYPED
OR PRINTED**

Claimant _____
Employer _____
Date of Injury _____
Statement Taken by _____

Name: _____ Age: _____

Residence Address: _____

Home Telephone: _____ Work Telephone: _____

Employer: _____

On _____, 19____, at about _____ p.m./a.m., I was
in or at (clearly state your own location) _____

_____ when an accident involving the above employee is alleged to have occurred.

(Check only one box)

I saw the accident.

The accident occurred in the following manner: _____

Other pertinent information and source: _____

I did not see the accident.

Information given me by (name of person) _____
indicates it occurred as follows: _____

Other pertinent information and source: _____

I know nothing whatsoever about the occurrence.

Signature

Date
Form No. SORM-74 Rev. 9/98

Appendix C

**EMPLOYEE'S ELECTION REGARDING
UTILIZATION OF SICK LEAVE
(SORM-80)
(Texas Labor Code, Sec. 501.044)**

Place a check by each applicable item.

Claim Number _____

ELECTION 1

_____ I hereby elect to see sick leave until it is exhausted before receiving weekly payments of workers' compensation. By making this election, I understand that I am not entitled to weekly payments of compensation until my sick leave is exhausted.

(Type Employee's Name as Shown on Payroll)	(Hours of Sick Leave Available as of Date of Injury)
(Employee's Social Security Number)	(Name of Agency)
Employee's Signature/Date	(Claims Coordinator's Signature/Date)

ELECTION 2

_____ I hereby elect to receive weekly payments of worker's compensation after seven (7) day waiting period. I understand that I may use sick leave for the seven (7) day waiting period, but that I may not use sick leave after that time. I understand that I may not receive weekly payments of compensation and sick leave at the same time.

(Type Employee's Name as Shown on Payroll)	(Name of Agency)
(Employee's Social Security Number)	
Employee's Signature/Date	(Claims Coordinator's Signature/Date)

ELECTION 3

_____ I do not desire to use sick leave for this injury.

(Type Employee's Name as Shown on Payroll)	(Name of Agency)
(Employee's Social Security Number)	
Employee's Signature/Date	(Claims Coordinator's Signature/Date)

Appendix C

Employee Exposure Assessment Form

A. Employee Information

Name: _____

Date (form filled out): _____

Division/Program: _____ Supervisor _____

Personal Physician: _____ Physician: _____

Phone: _____

B. Exposure Information

Date of Exposure (mm/dd/yy): _____

Time of Exposure (a.m./p.m.): _____

C. Characteristics of Source Material [check appropriate box(s)]

Infectious

- Blood or serum
- Fluid or tissue with visible blood
- Amniotic fluid
- Cerebrospinal fluid
- Pericardial fluid
- Peritoneal fluid
- Pleural fluid
- Semen

Non-Infectious (without visible blood)

- Synovial fluid
- Vaginal secretions
- Saliva
- Sputum
- Stool
- Sweat
- Urine
- Vomitus

D. Characteristics of Exposure (Check as many as apply):

- Percutaneous injuries: Exposed with visibly bloody device or device used in source patient's artery or vein.
- Deep intramuscular injury
- Superficial injury

Appendix C

- Other: (give brief description on back of this form)
- Muscosal contacts: Large volume (> cc)
- Prolonged contact (> 5 min)
- Small Volume (< cc)
- Brief contact (< 5 min)
- Skin contacts: Skin integrity obviously compromised
- Large volume (> 1cc)
- Prolonged contact (> 5 minutes)
- Extensive area of contact
- Skin intact
- Small volume (< 1cc)
- Small area of contact

E. Characteristics of Source (Check one):

- Specimen is from an HIV positive individual who is asymptomatic or known low viral titer.
- Specimen is from an HIV positive individual who is symptomatic patient with acute retroviral syndrome (infected within past few weeks and has a mononucleosis-like illness).
- Specimen is from an HIV positive individual who is preterminal, CD4 < 100 or viral titer > 50,000.
- Specimen has tested HIV negative by ELISA, Western Blot testing.
- HIV Serostatus of the specimen is unknown.

Specimen sent to the lab to be tested for:

F. Employee Clinical History:

1. Have you ever been diagnosed with HIV infection in the past (i.e. tested HIV positive)?

Yes No

2. Have you received a hepatitis B immunization/vaccine?

Yes No

3. Are you currently pregnant or have you been trying to conceive a child?

Yes No

4. Have you ever been treated for kidney disease or liver disease or other immune system disorders?

Yes No

5. Are you presently taking any medications regularly?

Yes No

If yes, please list:

6. Do you routinely use illegal drugs such as heroin, cocaine, etc.?

Yes No

7. Have you ever been in a treatment program to stop the use of illegal drugs?

Yes No

Appendix C

Checklist for Management of Bloodborne Pathogen (BBP) Exposures

Date of incident: _____ Employee name: _____

- 1. Complete "Employee Exposure Assessment Form."
- 2. Determine HBV status
 - Number of doses of vaccine received: 0 1 2 3 4 5 6
 - Titer documented on: _____ / _____ / _____
 - NO FURTHER ACTION NECESSARY
 - Chronic non-responder
 - Refer to MMWR, Nov. 22, 1991 - Page 22 for required prophylaxis
- 3. Identify source blood
 - Yes ID# _____
 - Have source blood tested for HIV. Store remaining blood for 6 months.
 - No Comments: _____
- 4. Notify physician
- 5. Counsel employee
- 6. Have consent forms signed
 - HIV chemoprophylaxis
 - Blood test(s)
- 7. Administer chemoprophylaxis
 - HIV
 - HBV
- 8. Draw employee's blood
 - HIV
 - AAT
 - HBV
- 9. Submit blood for testing
 - Employee - HIV, anti HBs, HBsAg, RPR, HCV, ALT
 - Source - HIV, HBsAg, HCV, RPR

Appendix C

- 10. Schedule employee follow-up blood test(s)
 - HIV 6 weeks _____ 12 weeks _____ 6 months _____
 - HCV 6 months _____
 - ALT 6 months _____

- 11. Provide results to employee

No further action is necessary if employee has not seroconverted to HIV or HCV positive 6 months after exposure.

If employee seroconverts for either HIV or HCV:

- 12. Schedule follow-up medical consultation

- 13. Test source blood for HCV and AAT if employee has seroconverted and the source blood was not tested for baseline at the time of exposure
 - Yes
 - No

Comments: _____

Place the completed form in a sealed envelope labeled: CONFIDENTIAL MEDICAL INFORMATION and file it separately from the employee's personnel folder. **Do not place lab results or other confidential medical information in the employee's personnel file.**

Appendix C

Texas Department of Health Bloodborne Pathogen Testing Consent/Declination Form

TO THE EMPLOYEE: Texas law requires that counseling be provided to anyone potentially exposed to human immunodeficiency virus (HIV) and other blood-borne pathogens such as hepatitis B (HBV), or hepatitis C (HCV) during the course of job duties. After being counseled and having all of your questions answered, sign the reverse side of this form to indicate that you understand and consent to testing for HIV and other blood-borne pathogens or that you understand and decline such testing. All tests used a sample of blood taken from your arm.

HIV tests

The tests currently used by the Texas Department of Health are antibody tests, that is, tests which detect the presence of antibodies to HIV but not the virus itself. If you have been recently exposed to HIV, your body has not yet made the antibodies which can be detected by the tests. You will need an initial test within 10 calendar days after exposure and additional tests at six weeks, twelve (12) weeks and six months.

In addition to the knowledge gained from having the HIV tests performed, a small percentage of tests may give a “false-positive” or a “false-negative” result. A “false positive” result means a test has incorrectly indicated that you are infected with HIV, when in fact, you are not. A “false-negative” result means a test has incorrectly indicated that you are not infected with HIV, when in fact, you are. A small percentage of results can be inconclusive, necessitating retesting.

If the first test is positive, further confirmatory tests shall be performed on that blood sample. You will be considered as infected with HIV, but it does not indicate that you have HIV illness or AIDS now or that you will develop these conditions in the future.

If all your tests results are positive, you are presumed to be infected with HIV, and you will be referred for more extensive counseling and medical evaluation. The test results can also help you make important decisions involving your personal life, professional duties and obligations.

HIV testing is confidential, as provided by Texas law, and disclosure can be made only to the health-care professional designated to evaluate claims of occupational exposure to blood-borne pathogens, persons responsible for workers compensation claims and individuals who are specifically authorized by the individual tested or Texas law. Records shall be handled in a confidential manner, and personnel handling records have been advised of the confidentiality of HIV-related information.

Appendix C

HCV Tests

There is no pre-exposure or post-exposure prophylaxis for hepatitis C. If your exposure to blood was percutaneous or permucosal, you will also be tested for antibody to HCV and for alanine aminotransferase. Negative tests will be repeated six months after the exposure. If you seroconvert, you will have the opportunity to seek medical evaluation and treatment for chronic liver disease.

HBV

Hepatitis B is a treatment - preventable blood-borne pathogen and, therefore, more information about it will be provided during the process of evaluating the need for prophylaxis.

Bloodborne Pathogens Testing Consent/Declination

I have had an opportunity to ask questions, including the risks and benefits of taking these tests. Any questions I had about the tests were answered to my satisfaction. I understand that neither the Texas Department of Health, its employees, nor the State of Texas has warranted the accuracy of the test results.

Information about the tests has been given to me in the following manner:

(Check one) orally
 written

(Check one) I have read the form and I understand its meaning
 The form has been read to me and I understand its meaning.
 All the blanks were filled in before I signed this form.

I have been advised of the need to collect my blood due to an occupational exposure incident in which I have been potentially exposed to blood-borne pathogens. Permission to have my blood drawn and tested for the human immunodeficiency virus (HIV), hepatitis B (HBV), hepatitis C (HCV), and alanine aminotransferase activity (AAT) at the expense of my employer is hereby given.

I consent to be tested.

Signature: _____ Date: _____

Print Name: _____

Witness Signature: _____ Date: _____

Print Name: _____

I decline counseling/testing. I understand:

- a. and accept responsibility for declining counseling/testing procedures;
- b. that if I refuse to be tested within 10 calendar days of the exposure I shall be disqualified for worker's compensation or other similar claims, as specified by Texas law;
- c. that I may agree to have my blood drawn but not tested. I understand that federal standards require that such blood specimen be retained under proper storage conditions for ninety (90) calendar days, during which time I may decide to have testing completed. Unless testing is performed within 10 calendar days after exposure, I shall not qualify for workers' compensation or other similar benefits;
- d. that my failure to sign the consent or declination is in fact a declination and my legal rights will be affected accordingly.

Appendix C

Employee must initial **each** blood-borne pathogen test being declined.

HIV _____ HBV _____ HCV _____ AAT _____

Employee Signature: _____ Date: _____

Print Name: _____

Witness Signature: _____ Date: _____

Print Name: _____

**Texas Department Of Health
Employee Consent/Declination
For Post-Exposure Chemoprophylaxis
for Occupational Exposure
To HIV Recitals**

I understand and agree as follows:

1. I may have been exposed to human immunodeficiency virus (HIV), the virus which causes AIDS, in my workplace. The risk of infection from my exposure is not know, however, should HIV infection occur the ultimate outcome is likely to be fatal. I have been offered treatment with one or more of the following medications, (Zidovudine, Lamivudine and Indinavir) which might reduce my risk of infection. I have been advised that there is no guarantee that such drug treatment after HIV exposure will prevent infection. I have also been advised that because strains of HIV are now resistant to Zidovudine, combination treatment with multiple medications may be offered as post-exposure prophylaxis
2. I have been advised that the treatment by my personal physician should consist of the following:
 - a. My blood will be tested for complete blood count platelet, liver function test, kidney function tests and other tests as determined by my personal physician, including but not limited to a test for antibodies to HIV.
 - b. I have been advised to use contraception during the four weeks of treatment and the four weeks following treatment. If I am currently pregnant or feel that I could be in the early stages of pregnancy, I have consulted with my personal obstetrician or family practitioner to determine if I should be given post-exposure prophylaxis.
 - c. I will be given a one or two day supply of one or more of the following medications: Zidovudine, Lamivudine, or Indinavir with instructions on how to take this medication.
 - d. I will contact my personal physician immediately to set up an appointment to obtain a prescription for additional medication as needed.
 - e. My personal physician will be responsible for the continuation of therapy, if needed.
 - f. I will consult my personal physician if I develop side effects while taking any of the medication.

Appendix C

3. I understand and hereby acknowledge that there is a risk of serious side effects associated with the drugs prescribed with post-exposure prophylaxis including but not limited to the following:
 - a. Known side effects of Zidovudine include:
Common: headache, muscle pain, tiredness, loss of appetite, trouble sleeping, nausea.
Uncommon: fever, vomiting, dizziness, diarrhea, anemia, low white blood count, low platelet count, hepatitis (liver inflammation), pancreatitis (pancreas inflammation).
 - b. Known side effects of Lamivudine include:
Common: headache, muscle pain, tiredness, loss of appetite, trouble sleeping, nausea.
Uncommon: fever, vomiting, dizziness, diarrhea, anemia, low white blood count, hepatitis liver inflammation), pancreatitis (pancreas inflammation).
 - c. Known side effect of Indinavir include:
Common: abdominal pain, fatigue, nausea, vomiting, diarrhea, headache, insomnia, changes in taste, abnormal liver tests.
Uncommon: anemia, low white blood count, hepatitis (liver inflammation), kidney stones (nephrolithiasis), pancreatitis (pancreas inflammation).
 - d. Indinavir cannot be taken concurrently with any of the following drugs: Seldane, Hismanal, Halcion, Versed, and Propulsid. Serious and/or life-threatening events could occur if the above medications are taken with Indinavir.
 - e. Treatment side effects are expected to disappear after treatment is stopped, but could be life-threatening or irreversible. I specifically acknowledge, however, that these drugs are new and there is little known about their short-term and long-term side effects when used in combination. New or rare side effects, including cancer, birth defects, or other life-threatening diseases, might develop now or in the future.
4. The risks of drawing blood included temporary discomfort from the needle stick, bruising and rarely, infection.
5. Knowledge that I could be HIV infected may cause personal psychosocial risks. Being tested for HIV may cause personal anxiety regardless of the test results. Receiving positive test results may cause severe personal anxiety.
6. Post-exposure prophylaxis treatment will involve knowledge of this incident only to those who need to know. Records recording this incident and the outcome will be kept confidential. I will be the only individual that can give written permission to have these records released. I may be asked for permission to enroll me in the Center for

Disease Control's anonymous registry of health-care workers who receive post-exposure prophylaxis. Enrollment in this registry will not affect my treatment, but may benefit health-care workers in the future.

7. I understand that treatment hereunder does not obligate the Texas Department of Health (TDH) to treat any other conditions affecting me or to treat conditions that might arise after this treatment is completed.
8. I understand that this treatment is optional and voluntary on my part, I have the right to decline this treatment at any time. If I decide to discontinue treatment, I will notify my personal physician.
9. Before the medication can be provided, I must consent to the treatment and must release TDH, their medical staff, and employees, from any and all liability that may result from the treatment.

Release of All Claims

10. Fully realizing that post-exposure prophylactic treatment may be unsuccessful and that it may have certain side effects including but not limited to those listed above, I request that such treatment be performed, and expressly consent to it.
11. I hereby release and forever discharge the TDH, their medical staff, and any other persons connected with the such treatment, from all claims, damages, and causes of action that may arise from the performance of the treatment described in this Release, and from other medical care arising from the performance of such treatment, while I am being treated.
12. I agree that no representations have been made to me regarding the success of this treatment, except as may be set forth in this instrument.
13. This Release will be binding on the heirs, legal representatives, and assigns of me.
14. I have read all the terms of this instrument and fully understand that I am signing a complete release to any claim resulting from the performance of the treatment by the TDH.

TDH Physician Administering This Treatment:

I understand that I will receive subsequent treatment from:

Personal Physician Name: _____

Personal Physician Address (if available) _____

Personal Physician Phone: _____

I will report to my personal physician's office: (mm/dd/yy) _____

I Accept Treatment

By signing here, I am consenting to this treatment.

Signature _____

Printed Name _____

Witness _____

Signature _____

Printed Name _____

Person Obtaining Consent _____

Name of Interpreter (if used) _____

I Decline Treatment

By signing here, I am declining this treatment

Signature _____

Printed Name _____

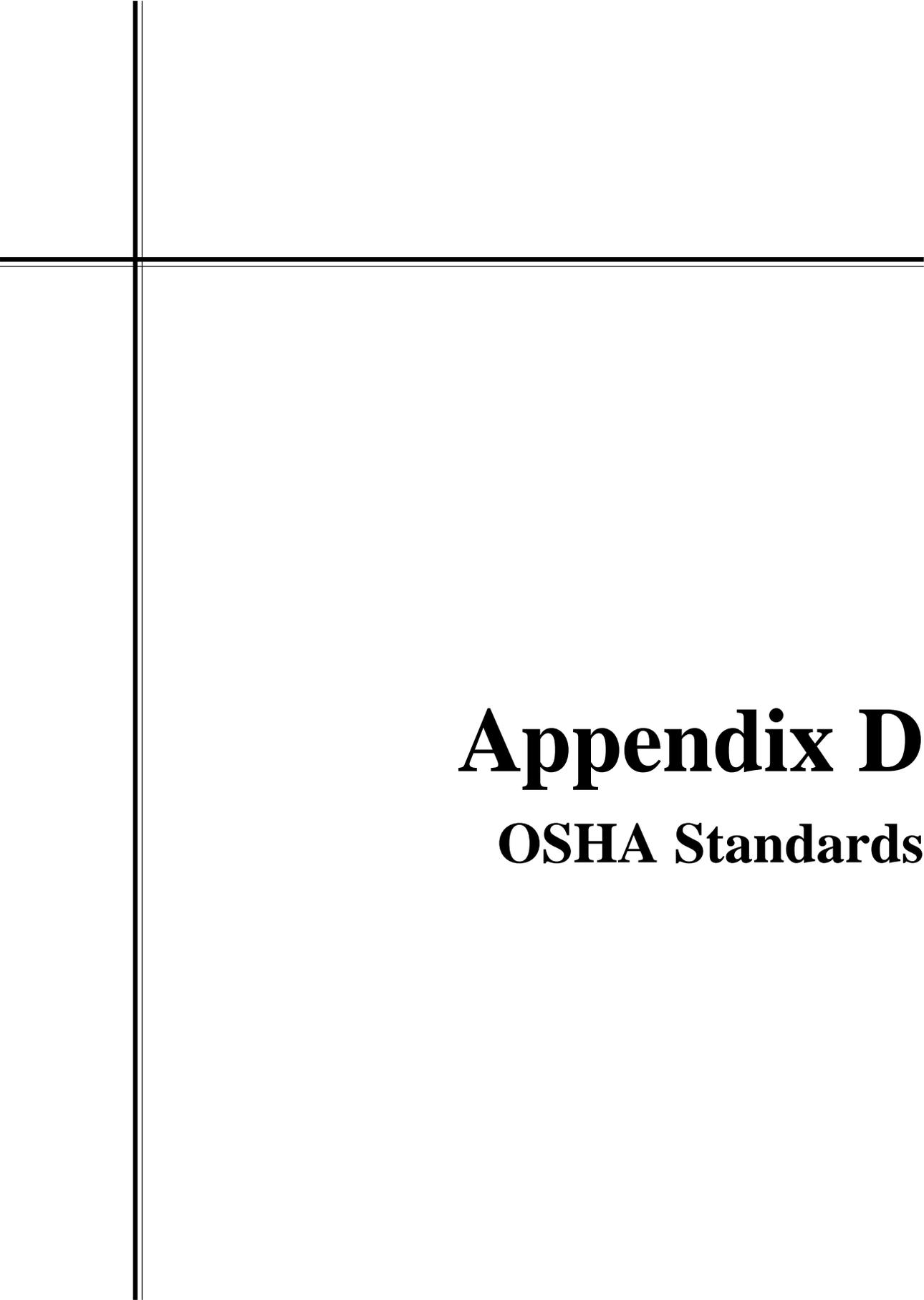
Witness _____

Signature _____

Printed Name _____

Person Obtaining Consent _____

Name of Interpreter (if used) _____



Appendix D

OSHA Standards

federal register

**Friday
December 6, 1991**

Part II (Excerpts)

Pages 64175 thru 64182

Department of Labor

**Occupational Safety and Health
Administration**

29 CFR Part 1910.1030

**Occupational Exposure to Bloodborne
Pathogens; Final Rule**

Appendix D

XI. The Standard*General Industry*

Part 1910 of title 29 of the Code of Federal Regulations is amended as follows:

PART 1910—[AMENDED]**Subpart Z—[Amended]**

1. The general authority citation for subpart Z of 29 CFR part 1910 continues to read as follows and a new citation for § 1910.1030 is added:

Authority: Secs. 6 and 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657, Secretary of Labor's Orders Nos. 12-71 (36 FR 8754), 8-76 (41 FR 25059), or 9-83 (48 FR 35736), as applicable; and 29 CFR part 1911.

* * * * *
Section 1910.1030 also issued under 29 U.S.C. 653.
* * * * *

2. Section 1910.1030 is added to read as follows:

§ 1910.1030 Bloodborne Pathogens.

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

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

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

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

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

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

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

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

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

Decontamination means the use of physical or chemical means to remove,

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

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

Engineering Controls means controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

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

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

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

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

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

Other Potentially Infectious Materials means

(1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

(3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

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

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

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

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

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

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

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

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

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

eliminate or minimize employee exposure.

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

(A) The exposure determination required by paragraph(c)(2).

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

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

(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.20(e).

(iv) The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

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

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

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

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

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

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

(d) *Methods of compliance*—(1)

General—Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

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

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

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

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

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

(vi) Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

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

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

(B) Such recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

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

(A) Puncture resistant;

(B) Labeled or color-coded in accordance with this standard;

(C) Leakproof on the sides and bottom; and

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

(ix) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

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

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

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

(xiii) Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

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

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

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

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

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

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

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

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

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

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

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

(vi) If a garment(s) is penetrated by blood or other potentially infectious

materials, the garment(s) shall be removed immediately or as soon as feasible.

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

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

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

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

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

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

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

(1) Periodically reevaluate this policy;

(2) Make gloves available to all employees who wish to use them for phlebotomy;

(3) Not discourage the use of gloves for phlebotomy; and

(4) Require that gloves be used for phlebotomy in the following circumstances:

(i) When the employee has cuts, scratches, or other breaks in his or her skin;

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

(iii) When the employee is receiving training in phlebotomy.

(x) Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or

droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

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

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

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

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

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

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

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

(D) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means.

such as a brush and dust pan, tongs, or forceps.

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

(iii) Regulated Waste.

(A) Contaminated Sharps Discarding and Containment. (1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

(i) Closable;

(ii) Puncture resistant;

(iii) Leakproof on sides and bottom; and

(iv) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

(2) During use, containers for contaminated sharps shall be:

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

(ii) Maintained upright throughout use; and

(iii) Replaced routinely and not be allowed to overfill.

(3) When moving containers of contaminated sharps from the area of use, the containers shall be:

(i) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

(ii) Placed in a secondary container if leakage is possible. The second container shall be:

(A) Closable;

(B) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

(C) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

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

(B) Other Regulated Waste

Containment. (1) Regulated waste shall be placed in containers which are:

(i) Closable;

(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

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

(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(2) If outside contamination of the regulated waste container occurs, it

shall be placed in a second container. The second container shall be:

(i) Closable;

(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

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

(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

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

(iv) Laundry.

(A) Contaminated laundry shall be handled as little as possible with a minimum of agitation. (1) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

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

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

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

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

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

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

These requirements apply in addition to the other requirements of the standard.

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

(i) Standard microbiological practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(ii) Special practices.

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

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

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

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

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

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

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

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

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

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

(K) All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(f) *Hepatitis B vaccination and post-exposure evaluation and follow-up—(1)*

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

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

(A) Made available at no cost to the employee;

(B) Made available to the employee at a reasonable time and place;

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

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

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

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

(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

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

(iv) The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in appendix A.

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

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

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

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

(A) The source individual's blood shall be tested as soon as feasible and

after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

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

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

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

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

(B) If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

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

(v) Counseling; and

(vi) Evaluation of reported illnesses.

(4) *Information Provided to the*

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

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

(A) A copy of this regulation;

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

(C) Documentation of the route(s) of exposure and circumstances under which exposure occurred;

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

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

(5) *Healthcare Professional's Written Opinion.* The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's

written opinion within 15 days of the completion of the evaluation.

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

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

(A) That the employee has been informed of the results of the evaluation; and

(B) That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

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

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

(g) *Communication of hazards to employees—* (1) *Labels and signs.* (i) Labels. (A) Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(B) Labels required by this section shall include the following legend:



BIOHAZARD

BIOHAZARD

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

(D) Labels required by affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(E) Red bags or red containers may be substituted for labels.

(F) Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other

clinical use are exempted from the labeling requirements of paragraph (g).

(G) Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

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

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

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



BIOHAZARD

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

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

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

(ii) Training shall be provided as follows:

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

(B) Within 90 days after the effective date of the standard; and

(C) At least annually thereafter.

(iii) For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.

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

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

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

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

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

(B) A general explanation of the epidemiology and symptoms of bloodborne diseases;

(C) An explanation of the modes of transmission of bloodborne pathogens;

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

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

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

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

(H) An explanation of the basis for selection of personal protective equipment;

(I) Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

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

(K) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

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

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

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

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

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

(A) The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

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

(C) The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

(h) *Recordkeeping—(1) Medical Records.* (i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.20.

(ii) This record shall include:

(A) The name and social security number of the employee;

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

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

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

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

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

(A) Kept confidential; and

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

(iv) The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

(2) *Training Records.* (i) *Training records shall include the following information:*

(A) The dates of the training sessions;

(B) The contents or a summary of the training sessions;

(C) The names and qualifications of persons conducting the training; and

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

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

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

(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

(4) *Transfer of Records.* (i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.20(h).

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

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

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

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

(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and

Follow-up, and (g) (1) Labels and Signs, shall take effect July 6, 1992.

Appendix A to Section 1910.1030—Hepatitis B Vaccine Declination (Mandatory)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis

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

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§ 1910.1020 Access to employee exposure and medical records.

(a) *Purpose.* The purpose of this section is to provide employees and their designated representatives a right of access to relevant exposure and medical records; and to provide representatives of the Assistant Secretary a right of access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act. Access by employees, their representatives, and the Assistant Secretary is necessary to yield both direct and indirect improvements in the detection, treatment, and prevention of occupational disease. Each employer is responsible for assuring compliance with this section, but the activities involved in complying with the access to medical records provisions can be carried out, on behalf of the employer, by the physician or other health care personnel in charge of employee medical records. Except as expressly provided, nothing in this section is intended to affect existing legal and ethical obligations concerning the maintenance and confidentiality of employee medical information, the duty to disclose information to a patient/employee or any other aspect of the medical-care relationship, or affect existing legal obligations concerning the protection of trade secret information.

(b) *Scope and application.* (1) This section applies to each general industry, maritime, and construction employer who makes, maintains, contracts for, or has access to employee exposure or medical records, or analyses thereof, pertaining to employees exposed to toxic substances or harmful physical agents.

(2) This section applies to all employee exposure and medical records, and analyses thereof, of such employees, whether or not the records are mandated by specific occupational safety and health standards.

(3) This section applies to all employee exposure and medical records,

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and analyses thereof, made or maintained in any manner, including on an in-house of contractual (e.g., fee-for-service) basis. Each employer shall assure that the preservation and access requirements of this section are complied with regardless of the manner in which the records are made or maintained.

(c) *Definitions.* (1) *Access* means the right and opportunity to examine and copy.

(2) *Analysis using exposure or medical records* means any compilation of data or any statistical study based at least in part on information collected from individual employee exposure or medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the employer or no further work is currently being done by the person responsible for preparing the analysis.

(3) *Designated representative* means any individual or organization to whom an employee gives written authorization to exercise a right of access. For the purposes of access to employee exposure records and analyses using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

(4) *Employee* means a current employee, a former employee, or an employee being assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. In the case of a deceased or legally incapacitated employee, the employee's legal representative may directly exercise all the employee's rights under this section.

(5) *Employee exposure record* means a record containing any of the following kinds of information:

(1) Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained;

(ii) Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of a chemical in the blood, urine, breath, hair, fingernails, etc) but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;

(iii) Material safety data sheets indicating that the material may pose a hazard to human health; or

(iv) In the absence of the above, a chemical inventory or any other record which reveals where and when used and the identity (e.g., chemical, common, or trade name) of a toxic substance or harmful physical agent.

(6)(i) *Employee medical record* means a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel or technician, including:

(A) Medical and employment questionnaires or histories (including job description and occupational exposures),

(B) The results of medical examinations (pre-employment, pre-assignment, periodic, or episodic) and laboratory tests (including chest and other X-ray examinations taken for the purposes of establishing a base-line or detecting occupational illness, and all biological monitoring not defined as an "employee exposure record"),

(C) Medical opinions, diagnoses, progress notes, and recommendations,

(D) First aid records,

(E) Descriptions of treatments and prescriptions, and

(F) Employee medical complaints.

(ii) "Employee medical record" does not include medical information in the form of:

(A) Physical specimens (e.g., blood or urine samples) which are routinely discarded as a part of normal medical practice; or

(B) Records concerning health insurance claims if maintained separately from the employer's medical program and its records, and not accessible to the employer by employee name or other direct personal identifier (e.g., social security number, payroll number, etc.); or

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(C) Records created solely in preparation for litigation which are privileged from discovery under the applicable rules of procedure or evidence; or

(D) Records concerning voluntary employee assistance programs (alcohol, drug abuse, or personal counseling programs) if maintained separately from the employer's medical program and its records.

(7) *Employer* means a current employer, a former employer, or a successor employer.

(8) *Exposure or exposed* means that an employee is subjected to a toxic substance or harmful physical agent in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes past exposure and potential (e.g., accidental or possible) exposure, but does not include situations where the employer can demonstrate that the toxic substance or harmful physical agent is not used, handled, stored, generated, or present in the workplace in any manner different from typical non-occupational situations.

(9) *Health Professional* means a physician, occupational health nurse, industrial hygienist, toxicologist, or epidemiologist, providing medical or other occupational health services to exposed employees.

(10) *Record* means any item, collection, or grouping of information regardless of the form or process by which it is maintained (e.g., paper document, microfiche, microfilm, X-ray film, or automated data processing).

(11) *Specific chemical identity* means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

(12)(i) *Specific written consent* means a written authorization containing the following:

(A) The name and signature of the employee authorizing the release of medical information,

(B) The date of the written authorization,

(C) The name of the individual or organization that is authorized to release the medical information,

(D) The name of the designated representative (individual or organization)

that is authorized to receive the released information,

(E) A general description of the medical information that is authorized to be released,

(F) A general description of the purpose for the release of the medical information, and

(G) A date or condition upon which the written authorization will expire (if less than one year).

(ii) A written authorization does not operate to authorize the release of medical information not in existence on the date of written authorization, unless the release of future information is expressly authorized, and does not operate for more than one year from the date of written authorization.

(iii) A written authorization may be revoked in writing prospectively at any time.

(13) *Toxic substance or harmful physical agent* means any chemical substance, biological agent (bacteria, virus, fungus, etc.), or physical stress (noise, heat, cold, vibration, repetitive motion, ionizing and non-ionizing radiation, hypo—or hyperbaric pressure, etc.) which:

(i) Is listed in the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS), which is incorporated by reference as specified in § 1910.6; or

(ii) Has yielded positive evidence of an acute or chronic health hazard in testing conducted by, or known to, the employer; or

(iii) Is the subject of a material safety data sheet kept by or known to the employer indicating that the material may pose a hazard to human health.

(14) *Trade secret* means any confidential formula, pattern, process, device, or information or compilation of information that is used in an employer's business and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

(d) *Preservation of records.* (1) Unless a specific occupational safety and health standard provides a different period of time, each employer shall assure the preservation and retention of records as follows:

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(i) *Employee medical records.* The medical record for each employee shall be preserved and maintained for at least the duration of employment plus thirty (30) years, except that the following types of records need not be retained for any specified period:

(A) Health insurance claims records maintained separately from the employer's medical program and its records,

(B) First aid records (not including medical histories) of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a non-physician and if maintained separately from the employer's medical program and its records, and

(C) The medical records of employees who have worked for less than (1) year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment.

(i) *Employee exposure records.* Each employee exposure record shall be preserved and maintained for at least thirty (30) years, except that:

(A) Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one (1) year as long as the sampling results, the collection methodology (sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained, are retained for at least thirty (30) years; and

(B) Material safety data sheets and paragraph (c)(5)(iv) records concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name if known) of the substance or agent, where it was used, and when it was used is retained for at least thirty (30) years;¹ and

¹Material safety data sheets must be kept for those chemicals currently in use that are effected by the Hazard Communication Standard in accordance with 29 CFR 1910.1200(g).

(C) Biological monitoring results designated as exposure records by specific occupational safety and health standards shall be preserved and maintained as required by the specific standard.

(iii) *Analyses using exposure or medical records.* Each analysis using exposure or medical records shall be preserved and maintained for at least thirty (30) years.

(2) Nothing in this section is intended to mandate the form, manner, or process by which an employer preserves a record as long as the information contained in the record is preserved and retrievable, except that chest X-ray films shall be preserved in their original state.

(e) *Access to records—(1) General.* (i) Whenever an employee or designated representative requests access to a record, the employer shall assure that access is provided in a reasonable time, place, and manner. If the employer cannot reasonably provide access to the record within fifteen (15) working days, the employer shall within the fifteen (15) working days apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available.

(ii) The employer may require of the requester only such information as should be readily known to the requester and which may be necessary to locate or identify the records being requested (e.g. dates and locations where the employee worked during the time period in question).

(iii) Whenever an employee or designated representative requests a copy of a record, the employer shall assure that either:

(A) A copy of the record is provided without cost to the employee or representative,

(B) The necessary mechanical copying facilities (e.g., photocopying) are made available without cost to the employee or representative for copying the record, or

(C) The record is loaned to the employee or representative for a reasonable time to enable a copy to be made.

(iv) In the case of an original X-ray, the employer may restrict access to on-site examination or make other

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suitable arrangements for the temporary loan of the X-ray.

(v) Whenever a record has been previously provided without cost to an employee or designated representative, the employer may charge reasonable, non-discriminatory administrative costs (i.e., search and copying expenses but not including overhead expenses) for a request by the employee or designated representative for additional copies of the record, except that

(A) An employer shall not charge for an initial request for a copy of new information that has been added to a record which was previously provided; and

(B) An employer shall not charge for an initial request by a recognized or certified collective bargaining agent for a copy of an employee exposure record or an analysis using exposure or medical records.

(vi) Nothing in this section is intended to preclude employees and collective bargaining agents from collectively bargaining to obtain access to information in addition to that available under this section.

(2) *Employee and designated representative access*—(i) *Employee exposure records.* (A) Except as limited by paragraph (f) of this section, each employer shall, upon request, assure the access to each employee and designated representative to employee exposure records relevant to the employee. For the purpose of this section, an exposure record relevant to the employee consists of:

(1) A record which measures or monitors the amount of a toxic substance or harmful physical agent to which the employee is or has been exposed;

(2) In the absence of such directly relevant records, such records of other employees with past or present job duties or working conditions related to or similar to those of the employee to the extent necessary to reasonably indicate the amount and nature of the toxic substances or harmful physical agents to which the employee is or has been subjected, and

(3) Exposure records to the extent necessary to reasonably indicate the amount and nature of the toxic substances or harmful physical agents at workplaces or under working condi-

tions to which the employee is being assigned or transferred.

(B) Requests by designated representatives for unconsented access to employee exposure records shall be in writing and shall specify with reasonable particularity:

(1) The records requested to be disclosed; and

(2) The occupational health need for gaining access to these records.

(ii) *Employee medical records.* (A) Each employer shall, upon request, assure the access of each employee to employee medical records of which the employee is the subject, except as provided in paragraph (e)(2)(ii)(D) of this section.

(B) Each employer shall, upon request, assure the access of each designated representative to the employee medical records of any employee who has given the designated representative specific written consent. Appendix A to this section contains a sample form which may be used to establish specific written consent for access to employee medical records.

(C) Whenever access to employee medical records is requested, a physician representing the employer may recommend that the employee or designated representative:

(1) Consult with the physician for the purposes of reviewing and discussing the records requested,

(2) Accept a summary of material facts and opinions in lieu of the records requested, or

(3) Accept release of the requested records only to a physician or other designated representative.

(D) Whenever an employee requests access to his or her employee medical records, and a physician representing the employer believes that direct employee access to information contained in the records regarding a specific diagnosis of a terminal illness or a psychiatric condition could be detrimental to the employee's health, the employer may inform the employee that access will only be provided to a designated representative of the employee having specific written consent, and deny the employee's request for direct access to this information only. Where a designated representative with specific

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written consent requests access to information so withheld, the employer shall assure the access of the designated representative to this information, even when it is known that the designated representative will give the information to the employee.

(E) A physician, nurse, or other responsible health care personnel maintaining medical records may delete from requested medical records the identity of a family member, personal friend, or fellow employee who has provided confidential information concerning an employee's health status.

(iii) *Analyses using exposure or medical records.* (A) Each employee shall, upon request, assure the access of each employee and designated representative to each analysis using exposure or medical records concerning the employee's working conditions or workplace.

(B) Whenever access is requested to an analysis which reports the contents of employee medical records by either direct identifier (name, address, social security number, payroll number, etc.) or by information which could reasonably be used under the circumstances indirectly to identify specific employees (exact age, height, weight, race, sex, date of initial employment, job title, etc.), the employer shall assure that personal identifiers are removed before access is provided. If the employer can demonstrate that removal of personal identifiers from an analysis is not feasible, access to the personally identifiable portions of the analysis need not be provided.

(3) *OSHA access.* (i) Each employer shall, upon request, and without derogation of any rights under the Constitution or the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, that the employer chooses to exercise, assure the prompt access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analyses using exposure or medical records. Rules of agency practice and procedure governing OSHA access to employee medical records are contained in 29 CFR 1913.10.

(ii) Whenever OSHA seeks access to personally identifiable employee medical information by presenting to the

employer a written access order pursuant to 29 CFR 1913.10(d), the employer shall prominently post a copy of the written access order and its accompanying cover letter for at least fifteen (15) working days.

(f) *Trade secrets.* (1) Except as provided in paragraph (f)(2) of this section, nothing in this section precludes an employer from deleting from records requested by a health professional, employee, or designated representative any trade secret data which discloses manufacturing processes, or discloses the percentage of a chemical substance in mixture, as long as the health professional, employee, or designated representative is notified that information has been deleted. Whenever deletion of trade secret information substantially impairs evaluation of the place where or the time when exposure to a toxic substance or harmful physical agent occurred, the employer shall provide alternative information which is sufficient to permit the requesting party to identify where and when exposure occurred.

(2) The employer may withhold the specific chemical identity, including the chemical name and other specific identification of a toxic substance from a disclosable record provided that:

(i) The claim that the information withheld is a trade secret can be supported;

(ii) All other available information on the properties and effects of the toxic substance is disclosed;

(iii) The employer informs the requesting party that the specific chemical identity is being withheld as a trade secret; and

(iv) The specific chemical identity is made available to health professionals, employees and designated representatives in accordance with the specific applicable provisions of this paragraph.

(3) Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity of a toxic substance is necessary for emergency or first-aid treatment, the employer shall immediately disclose the specific chemical identity of a trade secret chemical to the treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement.

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The employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraphs (f)(4) and (f)(5), as soon as circumstances permit.

(4) In non-emergency situations, an employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under paragraph (f)(2) of this section, to a health professional, employee, or designated representative if:

(i) The request is in writing;

(ii) The request describes with reasonable detail one or more of the following occupational health needs for the information:

(A) To assess the hazards of the chemicals to which employees will be exposed;

(B) To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

(C) To conduct pre-assignment or periodic medical surveillance of exposed employees;

(D) To provide medical treatment to exposed employees;

(E) To select or assess appropriate personal protective equipment for exposed employees;

(F) To design or assess engineering controls or other protective measures for exposed employees; and

(G) To conduct studies to determine the health effects of exposure.

(iii) The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information would not enable the health professional, employee or designated representative to provide the occupational health services described in paragraph (f)(4)(ii) of this section:

(A) The properties and effects of the chemical;

(B) Measures for controlling workers' exposure to the chemical;

(C) Methods of monitoring and analyzing worker exposure to the chemical; and,

(D) Methods of diagnosing and treating harmful exposures to the chemical;

(iv) The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

(v) The health professional, employee, or designated representative and the employer or contractor of the services of the health professional or designated representative agree in a written confidentiality agreement that the health professional, employee or designated representative will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in paragraph (f)(9) of this section, except as authorized by the terms of the agreement or by the employer.

(5) The confidentiality agreement authorized by paragraph (f)(4)(iv) of this section:

(i) May restrict the use of the information to the health purposes indicated in the written statement of need;

(ii) May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and,

(iii) May not include requirements for the posting of a penalty bond.

(6) Nothing in this section is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(7) If the health professional, employee or designated representative receiving the trade secret information decides that there is a need to disclose it to OSHA, the employer who provided the information shall be informed by the health professional prior to, or at the same time as, such disclosure.

(8) If the employer denies a written request for disclosure of a specific chemical identity, the denial must:

(i) Be provided to the health professional, employee or designated representative within thirty days of the request;

(ii) Be in writing;

(iii) Include evidence to support the claim that the specific chemical identity is a trade secret;

(iv) State the specific reasons why the request is being denied; and,

(v) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

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(9) The health professional, employee, or designated representative whose request for information is denied under paragraph (f)(4) of this section may refer the request and the written denial of the request to OSHA for consideration.

(10) When a health professional employee, or designated representative refers a denial to OSHA under paragraph (f)(9) of this section, OSHA shall consider the evidence to determine if:

(i) The employer has supported the claim that the specific chemical identity is a trade secret;

(ii) The health professional employee, or designated representative has supported the claim that there is a medical or occupational health need for the information; and

(iii) The health professional employee or designated representative has demonstrated adequate means to protect the confidentiality.

(11)(i) If OSHA determines that the specific chemical identity requested under paragraph (f)(4) of this section is not a *bona fide* trade secret, or that it is a trade secret but the requesting health professional, employee or designated representatives has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means for complying with the terms of such agreement, the employer will be subject to citation by OSHA.

(ii) If an employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health needs are met without an undue risk of harm to the employer.

(12) Notwithstanding the existence of a trade secret claim, an employer shall, upon request, disclose to the Assistant Secretary any information which this section requires the employer to make available. Where there is a trade secret claim, such claim shall be made no

later than at the time the information is provided to the Assistant Secretary so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(13) Nothing in this paragraph shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is trade secret.

(g) *Employee information.* (1) Upon an employee's first entering into employment, and at least annually thereafter, each employer shall inform current employees covered by this section of the following:

(i) The existence, location, and availability of any records covered by this section;

(ii) The person responsible for maintaining and providing access to records; and

(iii) Each employee's rights of access to these records.

(2) Each employer shall keep a copy of this section and its appendices, and make copies readily available, upon request, to employees. The employer shall also distribute to current employees any informational materials concerning this section which are made available to the employer by the Assistant Secretary of Labor for Occupational Safety and Health.

(h) *Transfer of records.* (1) Whenever an employer is ceasing to do business, the employer shall transfer all records subject to this section to the successor employer. The successor employer shall receive and maintain these records.

(2) Whenever an employer is ceasing to do business and there is no successor employer to receive and maintain the records subject to this standard, the employer shall notify affected current employees of their rights of access to records at least three (3) months prior to the cessation of the employer's business.

(3) Whenever an employer either is ceasing to do business and there is no successor employer to receive and maintain the records, or intends to dispose of any records required to be preserved for at least thirty (30) years, the employer shall:

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(i) Transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard; or

(ii) Notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

(4) Where an employer regularly disposes of records required to be preserved for at least thirty (30) years, the employer may, with at least (3) months notice, notify the Director of NIOSH on an annual basis of the records intended to be disposed of in the coming year.

(i) *Appendices.* The information contained in appendices A and B to this section is not intended, by itself, to create any additional obligations not otherwise imposed by this section nor detract from any existing obligation.

APPENDIX A TO § 1910.20—SAMPLE AUTHORIZATION LETTER FOR THE RELEASE OF EMPLOYEE MEDICAL RECORD INFORMATION TO A DESIGNATED REPRESENTATIVE (NON-MANDATORY)

I, _____ (full name of worker/patient), hereby authorize _____ (individual or organization holding the medical records) to release to _____ (individual or organization authorized to receive the medical information), the following medical information from my personal medical records:

 (Describe generally the information desired to be released)

I give my permission for this medical information to be used for the following purpose:

 but I do not give permission for any other use or re-disclosure of this information.

(NOTE: Several extra lines are provided below so that you can place additional restrictions on this authorization letter if you want to. You may, however, leave these lines blank. On the other hand, you may want to (1) specify a particular expiration date for this letter (if less than one year); (2) describe medical information to be created in the future that you intend to be covered by this authorization letter; or (3) describe portions of the medical information in your records which you do not intend to be released as a result of this letter.)

 Full name of Employee or Legal Representative

 Signature of Employee or Legal Representative

 Date of Signature

APPENDIX B TO § 1910.20—AVAILABILITY OF NIOSH REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) (NON-MANDATORY)

The final regulation, 29 CFR 1910.20, applies to all employee exposure and medical records, and analyses thereof, of employees exposed to toxic substances or harmful physical agents (paragraph (b)(2)). The term *toxic substance or harmful physical agent* is defined by paragraph (c)(13) to encompass chemical substances, biological agents, and physical stresses for which there is evidence of harmful health effects. The regulation uses the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS) as one of the chief sources of information as to whether evidence of harmful health effects exists. If a substance is listed in the latest printed RTECS, the regulation applies to exposure and medical records (and analyses of these records) relevant to employees exposed to the substance.

It is appropriate to note that the final regulation does not require that employers purchase a copy of RTECS, and many employers need not consult RTECS to ascertain whether their employee exposure or medical records are subject to the rule. Employers who do not currently have the latest printed edition of the NIOSH RTECS, however, may desire to obtain a copy. The RTECS is issued in an annual printed edition as mandated by section 20(a)(6) of the Occupational Safety and Health Act (29 U.S.C. 669(a)(6)).

The Introduction to the 1980 printed edition describes the RTECS as follows:

"The 1980 edition of the Registry of Toxic Effects of Chemical Substances, formerly known as the Toxic Substances list, is the ninth revision prepared in compliance with the requirements of Section 20(a)(6) of the Occupational Safety and Health Act of 1970 (Public Law 91-596). The original list was completed on June 28, 1971, and has been updated annually in book format. Beginning in October 1977, quarterly revisions have been provided in microfiche. This edition of the Registry contains 168,096 listings of chemical substances: 45,156 are names of different chemicals with their associated toxicity data and 122,940 are synonyms. This edition includes approximately 5,900 new chemical

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compounds that did not appear in the 1979 Registry. (p. xi)

"The Registry's purposes are many, and it serves a variety of users. It is a single source document for basic toxicity information and for other data, such as chemical identifiers and information necessary for the preparation of safety directives and hazard evaluations for chemical substances. The various types of toxic effects linked to literature citations provide researchers and occupational health scientists with an introduction to the toxicological literature, making their own review of the toxic hazards of a given substance easier. By presenting data on the lowest reported doses that produce effects by several routes of entry in various species, the Registry furnishes valuable information to those responsible for preparing safety data sheets for chemical substances in the workplace. Chemical and production engineers can use the Registry to identify the hazards which may be associated with chemical intermediates in the development of final products, and thus can more readily select substitutes or alternative processes which may be less hazardous. Some organizations, including health agencies and chemical companies, have included the NIOSH Registry accession numbers with the listing of chemicals in their files to reference toxicity information associated with those chemicals. By including foreign language chemical names, a start has been made toward providing rapid identification of substances produced in other countries. (p. xi)

"In this edition of the Registry, the editors intend to identify "all known toxic substances" which may exist in the environment and to provide pertinent data on the toxic effects from known doses entering an organism by any route described. (p. xi)

"It must be reemphasized that the entry of a substance in the Registry does not automatically mean that it must be avoided. A listing does mean, however, that the substance has the documented potential of being harmful if misused, and care must be exercised to prevent tragic consequences. Thus, the Registry lists many substances that are common in everyday life and are in nearly every household in the United States. One can name a variety of such dangerous substances: prescription and non-prescription drugs; food additives; pesticide concentrates, sprays, and dusts; fungicides; herbicides; paints; glazes, dyes; bleaches and other household cleaning agents; alkalies; and various solvents and diluents. The list is extensive because chemicals have become an integral part of our existence."

The RTECS printed edition may be purchased from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, DC 20402 (202-783-3238).

Some employers may desire to subscribe to the quarterly update to the RTECS which is

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published in a microfiche edition. An annual subscription to the quarterly microfiche may be purchased from the GPO (Order the "Microfiche Edition, Registry of Toxic Effects of Chemical Substances"). Both the printed edition and the microfiche edition of RTECS are available for review at many university and public libraries throughout the country. The latest RTECS editions may also be examined at the OSHA Technical Data Center, Room N2439—Rear, United States Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210 (202-523-9700), or at any OSHA Regional or Area Office (*See*, major city telephone directories under United States Government-Labor Department).

[53 FR 38163, Sept. 29, 1988; 53 FR 49981, Dec. 13, 1988, as amended at 54 FR 24333, June 7, 1989; 55 FR 26431, June 28, 1990; 61 FR 9235, Mar. 7, 1996. Redesignated at 61 FR 31430, June 20, 1996]

§ 1910.1025 Lead.

(a) *Scope and application.* (1) This section applies to all occupational exposure to lead, except as provided in paragraph (a)(2).

(2) This section does not apply to the construction industry or to agricultural operations covered by 29 CFR Part 1928.

(b) *Definitions.* *Action level* means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 $\mu\text{g}/\text{m}^3$) averaged over an 8-hour period.

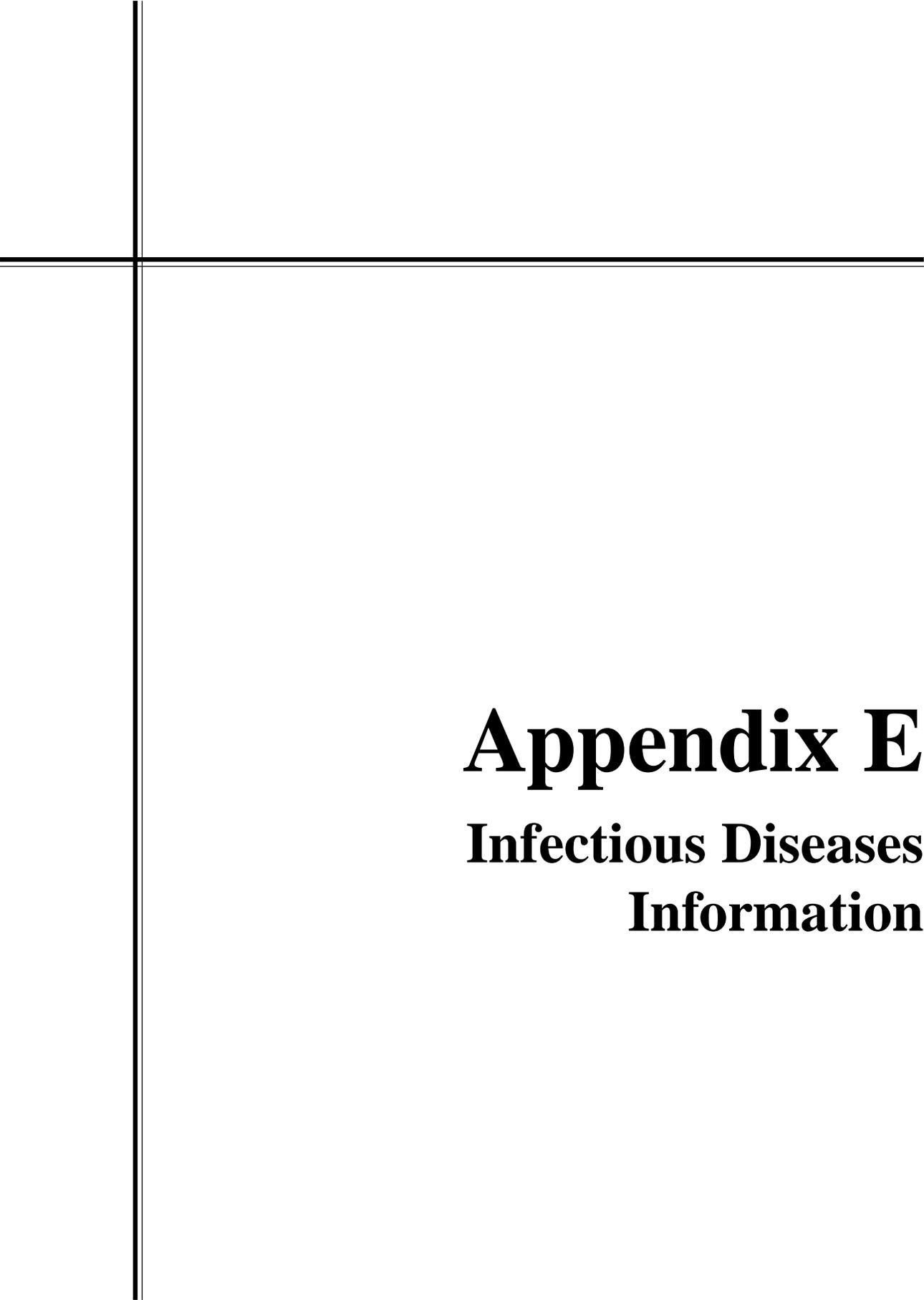
Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Director means the Director, National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health, Education, and Welfare, or designee.

Lead means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.

(c) *Permissible exposure limit (PEL).* (1) The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 $\mu\text{g}/\text{m}^3$) averaged over an 8-hour period.

(2) If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit, as a time weighted average (TWA) for that



Appendix E

Infectious Diseases Information

Note

The following brochures should be placed in Appendix E. If you *do not* have the latest versions on hand, please order them in writing from the TDH warehouse. A copy of the order form and instructions are provided in Appendix E.

Table for Ordering Brochures

Title	Stock #	Rev. Date
TDH Weekly Notifiable Conditions Report	Epi-1	10/98
Reportable Conditions in Texas	6-101a	10/98
Recommendations for the Prevention and Control of Communicable Diseases in a Group-Care Setting	6-30	4/97
Identification, Confirmation, & Reporting of Notifiable Conditions	6-142	9/96

Instructions for Completing Form AG-30

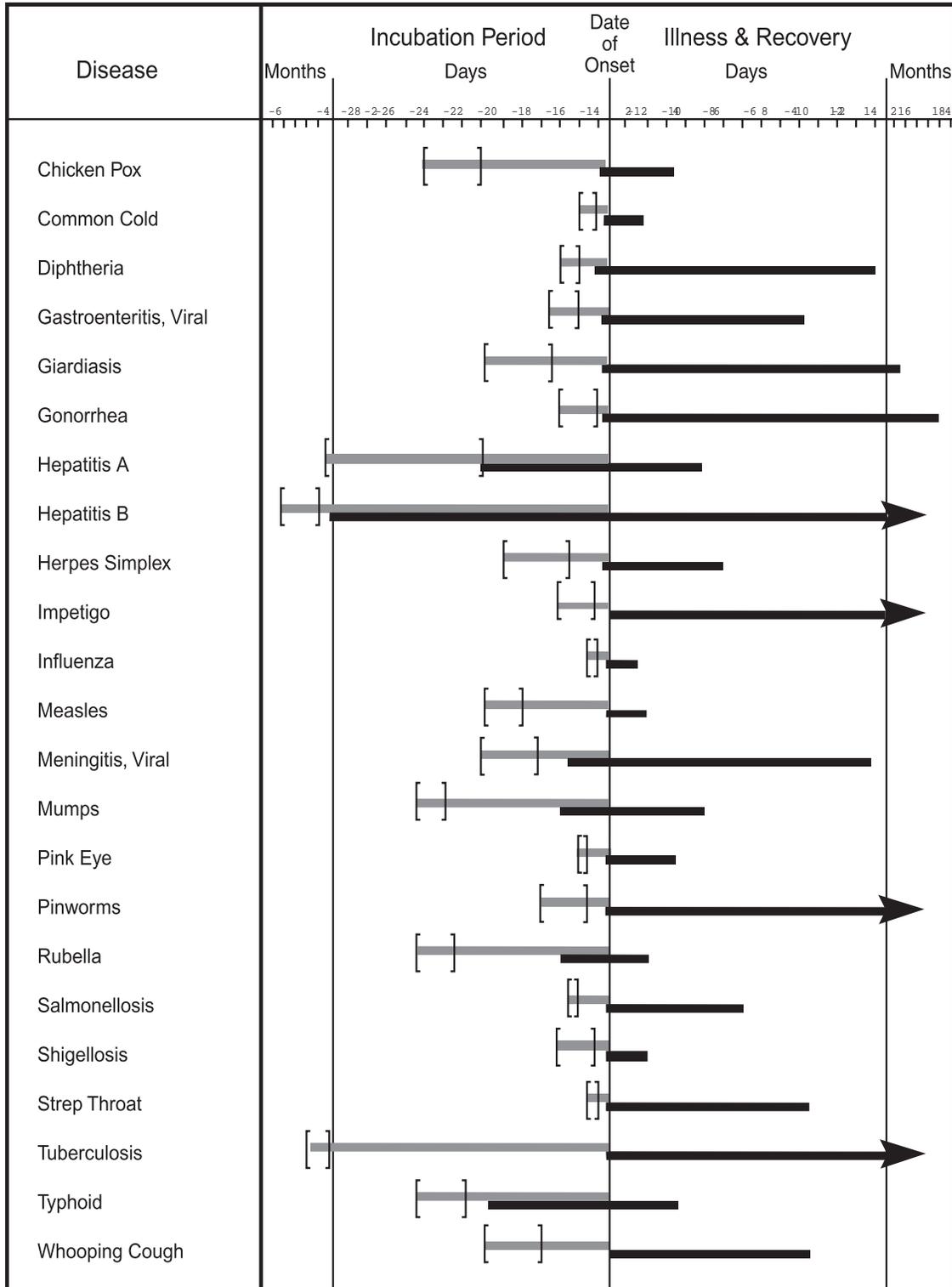
1. Do *not* fill in any information in the "Request Date" box.
2. Enter your name and address.
3. Enter the stock number of the item you wish to order. (Stock numbers are included in the catalog.)
4. Enter the quantity of materials you would like to receive.
5. Enter the title of the material.
6. Have the appropriate person sign and date the form.
7. Make a copy of the signed form for your records.
8. Mail the form to:

Texas Department of Health
 Attn: TDH Warehouse Manager
 1100 West 49th Street
 Austin, TX 78756-3101

Materials will be billed to the Texas Health Steps program. If you need additional assistance ordering materials, you may call (512) 458-7751 for help.

FORM NO. AG-30		TEXAS DEPARTMENT OF HEALTH REQUISITION FOR OFFICE SUPPLIES/FORMS/LITERATURE			Page ____ of ____ pages														
Mail to: TX Dept. of Health, ATTN: TDH Warehouse Manager 1100 West 49th Street Austin, TX 78756 READ THE TX DEPT. OF HEALTH FORMS AND LITERATURE CATALOG 15-1 INSTRUCTIONS PRIOR TO SUBMITTING REQUISITION <div style="border: 1px solid black; width: 100%; height: 40px; display: flex; align-items: center; justify-content: center; font-size: 2em;">2</div>				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">REQUEST DATE _____</td> </tr> <tr> <td>Budget No. _____</td> <td rowspan="5" style="font-size: 3em; text-align: center;">1</td> </tr> <tr> <td>Telephone: _____</td> </tr> <tr> <td>Ordered By: _____</td> </tr> <tr> <td>Division: _____</td> </tr> <tr> <td>Requestor Code: _____</td> </tr> <tr> <td>Date Rec'd: _____</td> <td></td> </tr> <tr> <td>Date Input: _____</td> <td></td> </tr> </table>				REQUEST DATE _____		Budget No. _____	1	Telephone: _____	Ordered By: _____	Division: _____	Requestor Code: _____	Date Rec'd: _____		Date Input: _____	
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ENTER "SHIP TO" ADDRESS ABOVE					Warehouse Use Only														
Catalog number	Quantity	Unit of Issue	Description	ISSUE	B/O	CANX													
3																			
	4																		
			5																
AUTHORIZED SIGNATURE <div style="font-size: 3em;">6</div>			DATE 	Make copies of this form to order materials from the TDH Warehouse. KEEP A COPY OF THIS COMPLETED FORM FOR YOUR RECORDS. You can order the two-part AG-30 forms from the TDH Warehouse.															
If you are not with a TDH program, but reside in the State of Texas, and wish to order materials from this Catalog, you will need to refer to page 27 of the Texas Department of Health Forms and Literature Catalog 15-1 for special ordering instructions. You may also (512) 458-7751 for assistance in ordering.																			

Incubation Periods and Duration of Communicability of Common Infectious Diseases



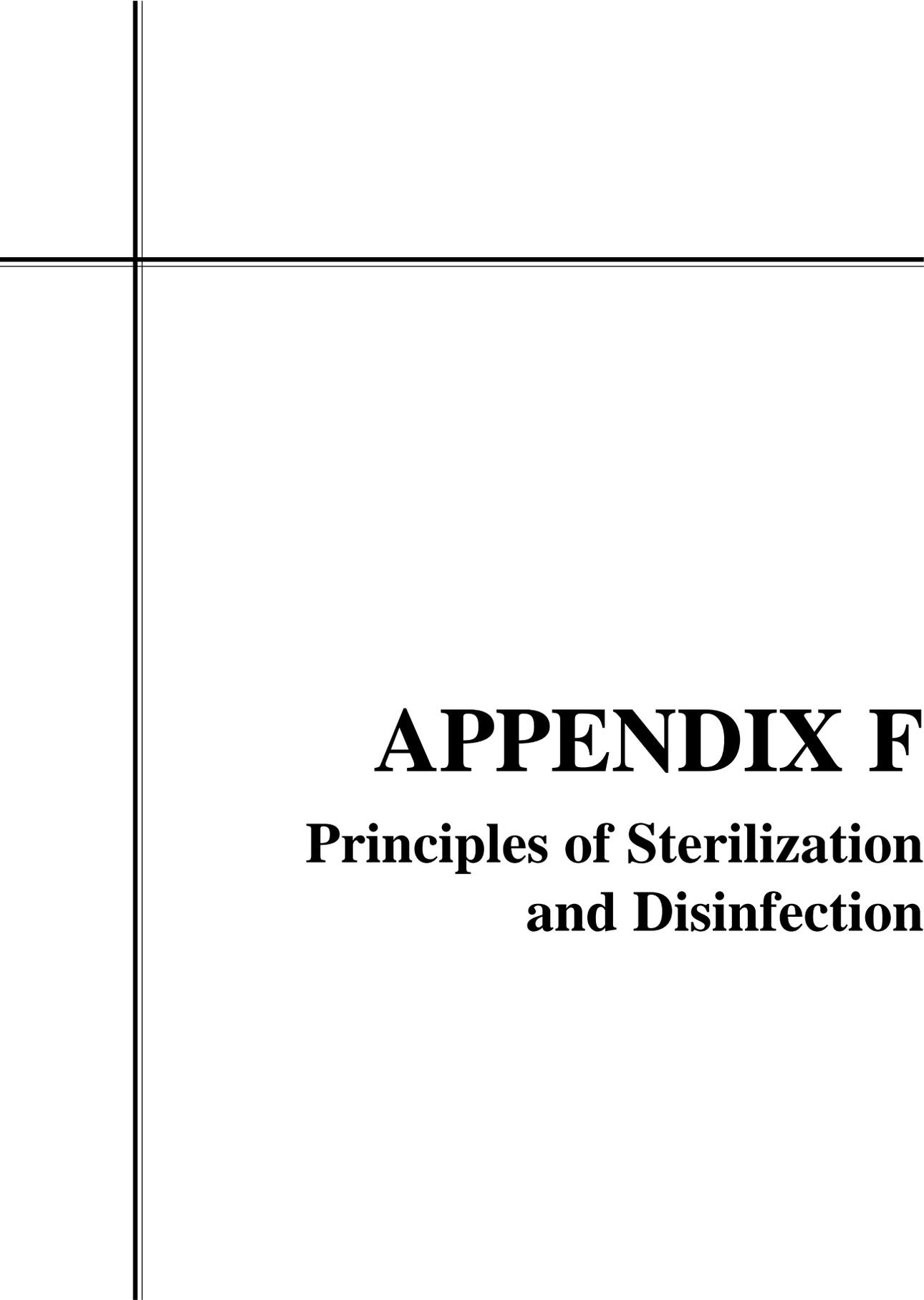
[] indicate probable period of exposure
 █ incubation period
 █ communicable period

(Note that communicable period can be shortened for many diseases by appropriate antibiotic treatment. Arrows indicate the possibility of a prolonged carrier state.)

The ABC's of Hepatitis

What is it?	Hepatitis A (HAV)	Hepatitis B (HBV)	Hepatitis C (HCV)	Hepatitis D (HDV)	Hepatitis E (HEV)
	HAV is a virus that causes inflammation of the liver. It does not lead to chronic disease.	HBV is a virus that causes inflammation of the liver. The virus can cause liver cell damage, leading to cirrhosis and cancer.	HCV is a virus that causes inflammation of the liver. This infection can lead to cirrhosis and cancer.	HDV is a virus that causes inflammation of the liver. It only infects those persons with HBV.	HEV is a virus that causes inflammation of the liver. It is rare in the U.S. There is no chronic state.
Incubation Period	15 to 50 days. Average 30 days.	4 to 25 weeks. Average 8 to 12 weeks.	2 to 25 weeks. Average 7 to 9 weeks.	4 to 26 weeks.	2 to 9 weeks. Average 40 days.
How is it spread?	Transmitted by fecal/oral route, through close person to person contact or ingestion of contaminated food and water.	Contact with infected blood, seminal fluid, and vaginal secretions. Sex contact, contaminated needles, tattoo/body piercing and other sharp instruments. Infected mother to newborn. Human bite.	Contact with infected blood, contaminated IV needles, razors, tattoo/body piercing and other sharp instruments. Infected mother to newborn. It is not easily transmitted through sex.	Contact with infected blood, contaminated needles. Sexual contact with HDV infected person.	Transmitted through fecal/oral route. Outbreaks associated with contaminated water supply in other countries.
Symptoms	May have no symptoms. Adults may have light stools, dark urine, fatigue, fever, and jaundice.	May have no symptoms. Some persons have mild flu-like symptoms, dark urine, light stools, jaundice, fatigue and fever.	Same as HBV.	Same as HBV.	Same as HBV.
Treatment of Chronic Disease	Not applicable.	Interferon is effective in up to 35-45% of those treated.	Interferon is effective in 10-20% of those treated.	Interferon with varying success.	Not Applicable.
Vaccine	Two doses of vaccine to anyone over the age of two.	Three doses may be given to persons of any age.	None	None	None
Who is at risk?	Household or sex contact with an infected person or living in an area with HAV outbreak. Travelers to developing countries, homosexual men, and IV drug users.	Infant born to infected mother, having sex with infected person or multiple partners, IV drug users, emergency responders and health-care workers, homosexual men, and hemodialysis patients.	Anyone who had a blood transfusion before 1990; health-care workers, IV drug users, hemodialysis patients, infants born to infected mother, and multiple sex partners.	IV drug users, homosexual men, and those having sex with a HDV-infected person.	Travelers to developing countries.
Prevention	Immune Globulin or vaccination. Wash hands after going to the toilet. Clean surfaces contaminated with feces, such as changing tables.	Vaccination and safe sex. Clean up any infected blood with bleach and wear protected gloves. Do not share razors or toothbrushes.	Safe sex. Clean up spilled blood with bleach. Wear gloves when touching blood. Do not share razors or tooth-brushes.	Hepatitis B vaccine to prevent HBV infection. Safe sex.	Avoid drinking or using potentially contaminated water.





APPENDIX F

Principles of Sterilization and Disinfection

Inactivation of Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV) by Disinfectants

ND no data

Disinfectant	Concentration Inactivating 10 ⁶ HBV, 10 min., 20° C*	Concentration Inactivating 10 ⁶ HIV, ≤10 min., 25° C**
Chlorine dioxide	ND	ND ⁺
Ethyl alcohol	ND	50%
Formalin	ND	ND ⁺
Glutaraldehyde	2%	ND ⁺
Glutaraldehyde-phenate	0.13% glutaraldehyde-0.44% phenol	ND
Hydrogen peroxide	ND	0.3%
Iodophor	80 ppm	ND ⁺
Isopropyl alcohol	70%	35%
Paraformaldehyde	ND	0.5%
Phenolic	ND	0.5%
Quarternary ammonium	ND	ND ⁺
Sodium hypochlorite	500 ppm	50 ppm

* Data from Bond et al.

** Data from Martin et al.

+ Other investigators have used reverse transcriptase activity and/or virus infectivity assays to determine the activity of other disinfectants against HIV. Other disinfectants that inactivate HIV include 1:200 dilution of chlorine dioxide, 1% formalin, 0.25% iodophor, 0.08% quarternary ammonium compound, and glutaraldehyde.

Classification of Devices, Processes, and Germicidal Products

Device Classification	Spaulding Process Classification	EPA Product Classification
Critical (Enters sterile tissue or vascular system): Implants, scalpels, needles, other surgical instruments, etc.	Sterilization Sporicidal chemical; prolonged contact	Sterilant/disinfectant
Semicritical (Touches mucous membranes): Flexible endoscopes, laryngoscopes, endotracheal tubes, and other similar instruments	High-Level Disinfection Sporocidal chemical; short contact	Sterilant/disinfectant
Noncritical (Touches intact skin): Stethoscopes, tabletops, floors, etc.	Intermediate-Level Disinfection	Hospital disinfectant with label claim for tuberculocidal activity.
	Low-Level Disinfection	Hospital disinfectant without label claim for tuberculocidal activity.

Modified from Favero MS, Bond WW: Chemical disinfection of medical and surgical materials. In: Block SS, ed: *Disinfection, sterilization and preservation*, ed 4, Philadelphia, 1991 Lea & Febiger.

Methods Of Sterilization and Disinfection

Object	Sterilization		Disinfection		
	Critical Items*		High Level*	Intermediate Level*	Low Level*
	Procedure	Exposure Time (hr)	Procedure (exposure time \geq 20 min.) ^{b,c}	Procedure (exposure time \geq 10 min.)	Procedure (exposure time \geq 10 min.)
Smooth, hard surface ^a	A B C D E	MR MR MR 6 6	C D E F ^d G	H J K	H I J K L
Rubber tubing and catheters ^c	A B C D E	MR MR MR 6 6	C D E F ^d		
Polyethylene tubing and catheters ^{c,e}	A B C D E	MR MR MR 6 6	C D E F ^d		
Lensed instruments	A B C D E	MR MR MR 6 6	C D E		
Hinged instruments	A B C D E	MR MR MR 6 6	C D E		
Thermometers (Oral and rectal) ^f				H ^f	

Modified from Rutala WA: In Wenzel RP, ed. *Prevention and control of nosocomial infections*, Baltimore, 1987, Williams & Wilkins, pp 257-282, and from Simmons BP: *Am J Infect Control* 11:96-115, 1983.

* Critical Items: Will enter tissue or vascular system or blood will flow through them.

Semicritical Items: Will come in contact with mucous membrane or nonintact skin.

Noncritical Items: Will come in contact with intact skin.

High Level: Semicritical items

Intermediate Level: Some semicritical and noncritical items

Low Level: Noncritical items

A – Heat sterilization, including steam or hot air (see manufacturer's recommendations).

Appendix F

- B – Ethylene oxide gas (see manufacturer’s recommendations).
- C – Glutaraldehyde-based formulations (2%). (A glutaraldehyde-phenate formulation at full strength also has been shown to sterilize items that are soaked for 6¾ hours. Caution should be exercised with all glutaraldehyde formulations when further use is anticipated.)
- D – Demand-release chlorine dioxide (will corrode aluminum, copper, brass, series 400 stainless steel, and chrome with prolonged exposure).
- E – Stabilized hydrogen peroxide (6%) will corrode copper, zinc, and brass.
- F – Wet pasteurization at 75°C for 30 minutes after detergent cleaning.
- G – Sodium hypochlorite (1000 ppm available chlorine; will corrode metal instruments).
- H – Ethyl or isopropyl alcohol (70% to 90%).
- I – Sodium hypochlorite (100 ppm available chlorine).
- J – Phenolic germicidal detergent solution (follow product label for use-dilution).
- K – Iodophor germicidal detergent solution (follow product label for use-dilution).
- L – Quaternary ammonium germicidal detergent solution (follow product label for use-dilution).
- MR – Manufacturer’s recommendations.

^a See text for discussion of hydrotherapy

^b The longer the exposure to a disinfectant, the more likely it is that all microorganisms will be eliminated. Ten-minute exposure is not adequate to disinfect many objects, especially those which are difficult to clean, because they have narrow channels or other areas that can harbor organic material and bacteria. Twenty-minute exposure may be the minimum time needed to reliably kill *M. tuberculosis* with glutaraldehyde.

^c Tubing must be completely filled for disinfection. Care must be taken to avoid entrapment of air bubbles during immersion.

^d Pasteurization (washer disinfectant) of respiratory therapy¹⁶⁰ and anesthesia equipment¹⁶¹ is a recognized alternative to high-level disinfection. Some data¹⁶² challenge the efficacy of some pasteurization units.

^e Thermostability should be investigated when indicated.

^f Limited data suggest that at least a 20-minute exposure time is necessary. Do not mix rectal and oral thermometers at any stage of handling or processing.

Formulas for Mixing Chlorine Bleach Solution

1:100 Concentration¹

Metric Measurement Volumes			Approximate Household Measurement Volumes		
Bleach	Water	Total	Bleach	Water	Total
2.5 mL	247.5 mL	250 mL	$\frac{2}{3}$ tsp	1 $\frac{1}{4}$ cup	10 oz
5 mL	495 mL	500 mL	1 $\frac{1}{4}$ tsp	2 $\frac{1}{2}$ cups	20 oz
10 mL	990 mL	1 L	2 tsp	1 qt	1 qt
20 mL	1980 mL	2 L	4 tsp	2 qts	2 qts

1:10 Concentration²

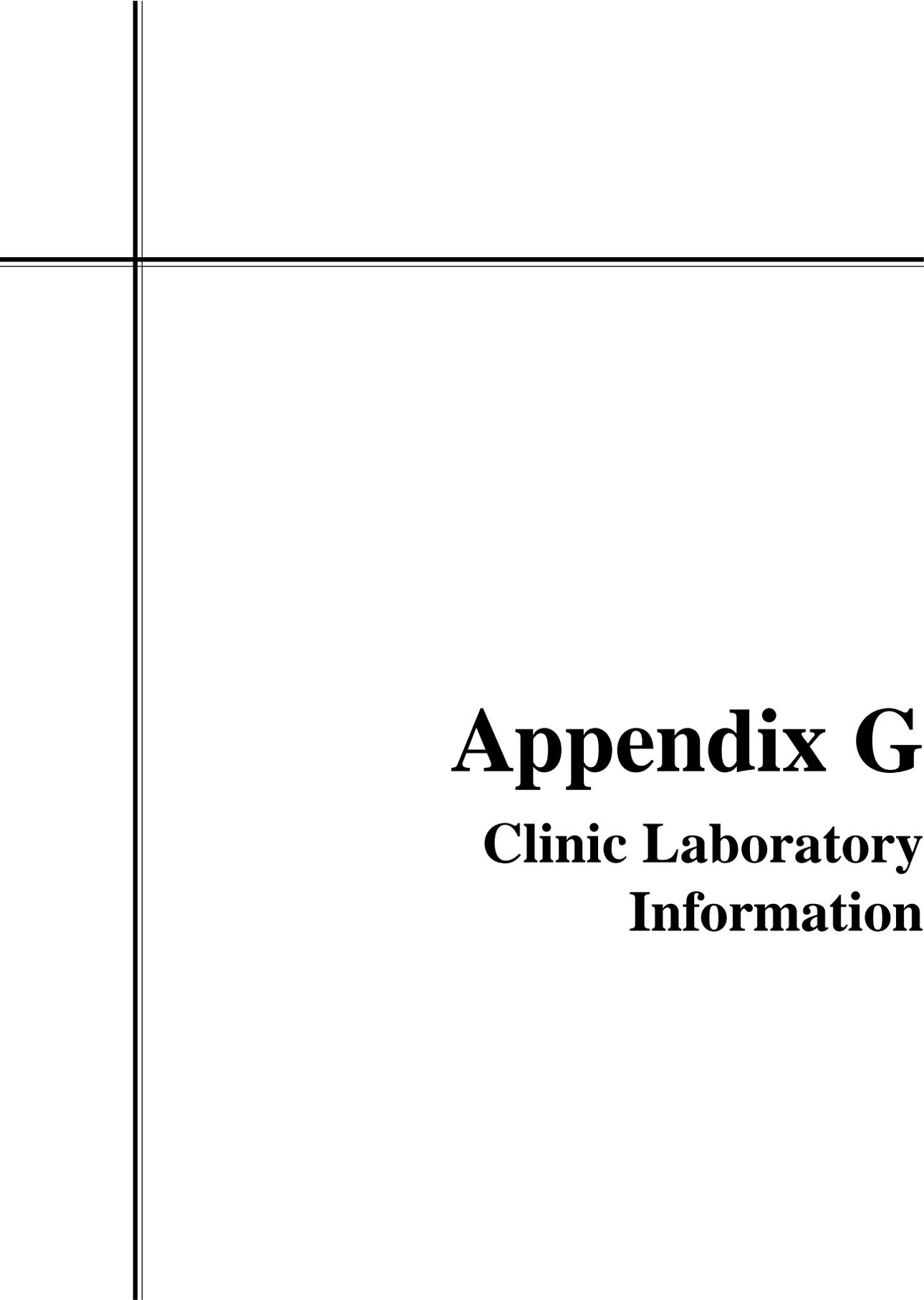
Metric Measurement Volumes			Approximate Household Measurements Volumes		
Bleach	Water	Total	Bleach	Water	Total
25 mL	225 mL	250 mL	2 Tbsp	1 cup + 2 Tbsp	10 oz
50 mL	450 mL	500 mL	$\frac{1}{4}$ cup	2 $\frac{1}{4}$ cups	20 oz
100 mL	900 mL	1 L	6 Tbsp	3 $\frac{1}{2}$ cups	1 qt
200 mL	1800 mL	2 L	$\frac{3}{4}$ cup	7 cups	2 qts

Desired Chlorine Concentration³

	5000 ppm	1000 ppm	500 ppm	100 ppm
Dilution of bleach (5.25% NaCl) prepared fresh for use within 24 hours	1:10	1:50	1:100	1:500
Dilution of bleach (5.25% NaCl) prepared fresh and used for 1-30 days	1:5	1:25	1:50	1:250

¹ This solution is used for general cleaning of non-porous environmental surfaces on a routine basis. The solution must be made fresh **daily** because the active ingredient is lost more rapidly in very dilute solutions than in the more concentrated solution.

² This solution is used to decontaminate and disinfect non-porous environmental surfaces when a spill of blood, body fluids or feces has occurred. The solution can be made up **once a week** and dispensed from an opaque spray bottle which has been clearly labeled.



Appendix G

Clinic Laboratory Information

Guidelines for the Submission, Collection, and Handling of Specimens

The following information is provided so that you will be aware of the Bureau of Laboratories' guidelines for the submission, collection, and handling of specimens.

Telephone Inquiries

Telephone inquiries should be directed to:

(512) 458-7578 for lab results

(512) 458-7598 for inquiries about guidelines for the submission, collection, and handling of specimens

We examine specimens as carefully and rapidly as possible; however, we do not sacrifice accuracy for speed. Please consider the following information before making a telephone inquiry.

- ◆ Lab-reporting results are given only to the original submitter.
- ◆ Upon receipt of the specimen at the Bureau of Laboratories, most testing will be completed in one to three days; however, newborn screening tests take three to six days.
- ◆ Confirmation of findings in certain bacteriological examinations may necessitate a short delay in reporting results.
- ◆ If specimens must go to another reference center, the report will be delayed for at least two weeks.
- ◆ Newborn screening results can be obtained through the Voice Response System (512) 458-7300 (24-hour access). This automated inquiry system requires the mother's social security number or the specimen serial number for result look-up.

Of course, emergency matters may be pursued any time.

Mailing Containers/Completion of Forms

The laboratory provides specimen mailing containers to physicians and public health laboratories and water sample containers to any citizen upon request. The containers are the property of the state of Texas and must not be used for any purpose other than the shipment of specimens to a state health laboratory.

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Each container may contain specimen identification forms and special instructions, if applicable, or a “master copy” form should be used. The completed forms must accompany the specimen to avoid delays. Forms should be completed as follows:

- ❖ Use **BOLD CAPITAL BLOCK LETTERS** to complete all information that is requested on the form.
- ❖ If the patient is Medicaid eligible, you *must* provide the Medicaid number.
- ❖ For Texas Health Steps (EPSDT) specimens, you *must* provide the Medicaid number or indicate the Title V number.
- ❖ **Unidentified or improperly identified specimens are unsatisfactory and they will not be tested.**
- ❖ Specimens identified by number only will be tested; however, results will not be reported until a patient’s name is provided. Standard laboratory practice recommends, and our federal license requires, the patient’s name on the specimen vial.

The patient’s name on the specimen identification form and the specimen must be the same. If they are not the same, the specimen will not be tested.

Submission of Specimens

Please exercise care when submitting specimens and requesting tests. Services are offered only in keeping with departmental policies, licensure, and mission; therefore, services may be withdrawn in case of misuse or improper specimen submission. Submission of proper specimens under optimum conditions is very important. Improperly collected and submitted specimens can compromise testing as well as results. Valid tests seldom can be performed on inadequate specimens.

The Bureau of Laboratories enforces the principles of Good Laboratory Practices. The submitter is responsible for adhering to expiration dates on collection media. We will monitor the interval between the collection and the receipt of time-sensitive specimens (newborn screening, bacteriological water, gonorrhea).

Serological Testing

The TDH laboratory does not provide blood-collection tubes; therefore, physicians and clinics should have a supply of vacuum tubes for the collection of blood specimens for serological testing. The following simple precautions must receive full consideration in collecting and handling blood specimens to prevent hemolyzed specimens:

- ◆ Avoid bacterial contamination of the presence of water or chemicals in syringes or tubes, freezing, and rough treatment
- ◆ Avoid extremely high temperatures, such as may occur in mail vans in the summer
- ◆ Avoid excessive handling

A single result is significant in a few serological tests. In most cases, single results will be more misleading than helpful. Therefore, the bureau's policy requires paired specimens, that is, two blood specimens collected two to three weeks apart for most diseases. Collecting the first specimen as soon as possible after the onset of the disease is essential. Single specimens will be accepted for syphilis serology requests and for the systemic mycoses when a chronic infection is under way.

Sputum

When submitting sputum, be certain that it is from the deeper portion of the lungs. Often saliva only is submitted, and this is usually unsatisfactory. The Bureau of Laboratories in Austin provides reference and primary culturing work in mycobacteriology and mycology.

Fecal Specimens for Bacteriological Culturing

Fecal specimens for bacteriological culturing will be accepted only under special circumstances and with prior approval (512-458-7318). When approved, these specimens must be submitted in glycerine and saline, and the top of the bottle must be securely fastened to prevent leaking.

Fecal Specimens for Intestinal Parasites

The examination of fecal specimens for intestinal parasites is still viewed as a reference service and will be provided for any public health clinic, but prior arrangement is required for all other specimens (512) 458-7318). The specimens must not be sent in the bacteriological preservative. The specimen should

be divided into two portions, one being placed into a vial of formaldehyde, the second being placed into a vial of polyvinyl alcohol. The Bureau of Laboratories provides kits.

Fecal Specimens for Viral Isolation

Fecal specimens for viral isolation must not be chemically preserved at all. Instead, fresh, unpreserved stools must be submitted. If there will be a delay of a few hours in getting any viral isolation specimen to the laboratory, then it must be held in the refrigerator and carried on wet ice. Longer delays will necessitate freezing and shipment of the specimen on dry ice.

Shipping

Submitters are responsible for shipping specimens in conformity with all safety and labeling regulations. Be aware that many commercial carriers no longer accept specimens. When using any carrier, including the bus service or the U.S. Postal Service, package specimens to avoid leakage or breakage. All specimen mailing containers supplied by the bureau meet U.S. Postal Service requirements. Specimens must be packed in triple containment with sufficient absorbent material enclosed to absorb the entire volume of liquids. Pure isolates of microorganisms require:

- ◆ triple containment, and
- ◆ a BIOHAZARD label.



Note: Always exert the maximum precaution for the safety of those who handle the parcels, for the protection of the specimens, and to avoid jeopardizing the system for shipping specimens.

The policy of the Bureau of Laboratories is — *all* blood specimens in a container will be considered broken if one tube in that container is broken during shipment.

Rabies Specimens

The TDH laboratory recommends shipping rabies specimens by bus. Guidelines for shipping rabies specimens are as follows:

- ◆ Specimens must be shipped in a sealed, sturdy container.
- ◆ Animal heads and wet ice must be placed in separate plastic bags that will not leak.

- ◆ Enclose sufficient absorbent material to keep all moisture within the container.
- ◆ Specimens should not be frozen because freezing delays and frequently compromises the examination.
- ◆ Use sufficient wet ice, or preferably cold packs, to maintain a cool environment, even with a delay of one full day.



Note: State law requires telephone notification to this Laboratory before shipment of rabies specimens (1-800-252-8163).

Reference Services

If reference services are needed but are not provided in this laboratory system, the Bureau of Laboratories uses the services of the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. When a particular test is available only from CDC, submitters should send the specimen to the Texas Department of Health for forwarding to the CDC.

Submitting Laboratory Specimens

(Rev. 10/01/96)

Texas Department of Health, Bureau of Laboratories

Regulations, effective December 17, 1989, altered the requirements for the submission of diagnostic specimens through the U.S. Postal Services system. The primary changes are:

1. clinical specimens, including blood specimens, that “contain or can reasonably be expected to contain an etiological agent” must be transported in a triple container;
2. a limit of 50 ml total volume per outside shipping unit or container has been established;
3. container must contain sufficient absorbent materials to absorb the entire content of primary container in case of breakage or leakage; and
4. outside shipping container must be properly labeled.

The Texas Department of Health, Bureau of Laboratories, will supply only triple containers only for all types of clinical specimens. Use of TDH containers will insure full compliance with all U.S. Postal Services requirements.

The definition of an acceptable triple container is:

1. Primary container — a bottle or tube in which the specimen is collected or held, such as a feces bottle, test tube, or tube (vacutainer) of blood or serum within;
2. Secondary container — a durable, screw-capped, leak-proof container (Zip-lock bags are not acceptable) within;
3. Tertiary or third container — a fiberboard cylinder with a screw-capped lid or similar material.

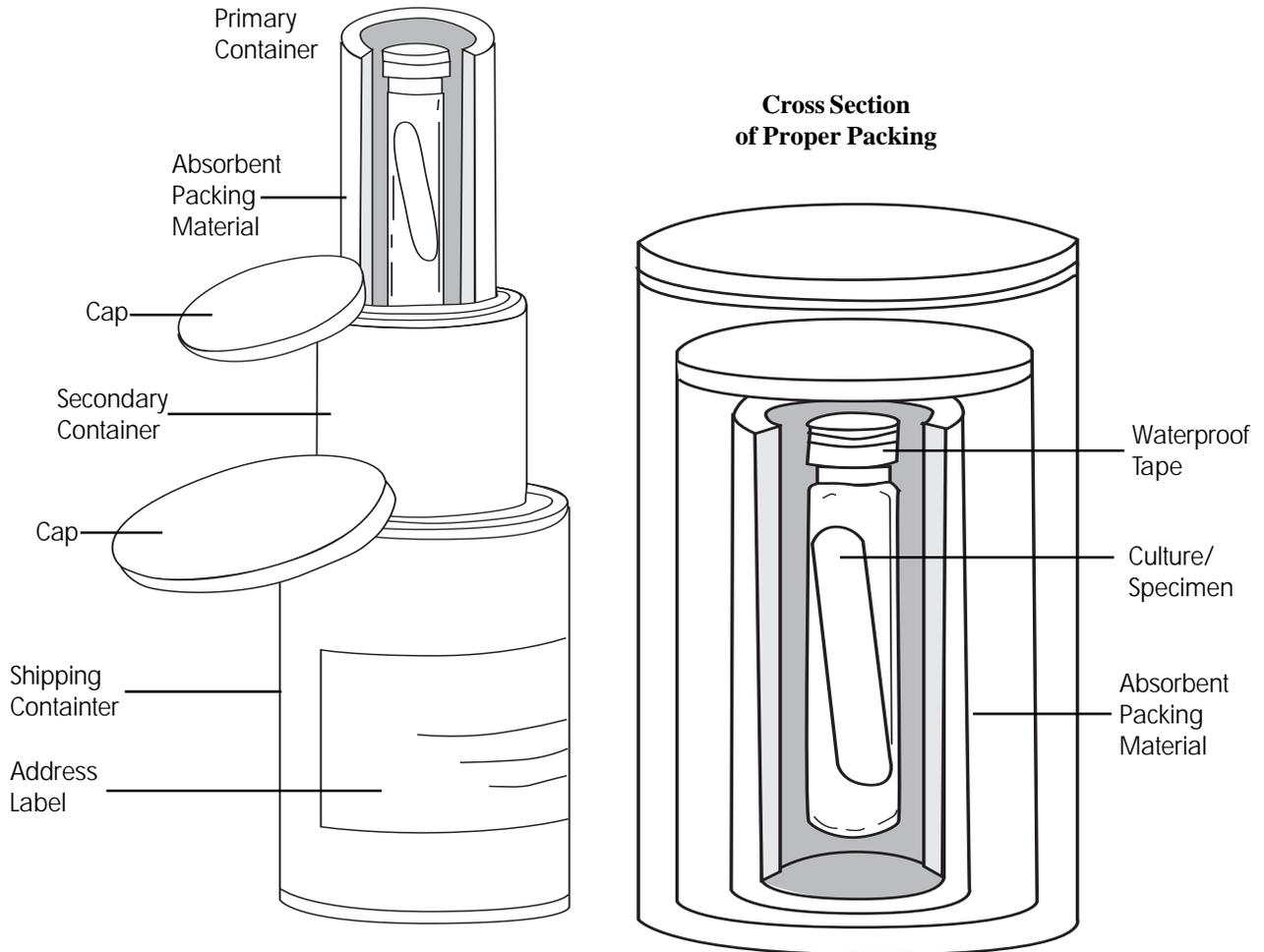
<u>Triple Container plus BIOHAZARD Label</u>	<u>Triple Container Only</u>
Pure Cultures of Bacteria, Fungi, or Viruses	All clinical specimens for isolation studies
	All blood or serum specimens
	Specimens for:
	Gonorrhea-Chlamydia (Gen-Probe) Program

Containers are available in three sizes for blood specimens. You may order containers for one specimen, four specimens, and seven specimens. All kits for Texas Health Steps (EPSDT), Title V, RhoGam, diabetes, PKU, and thyroid specimens will include triple containers.

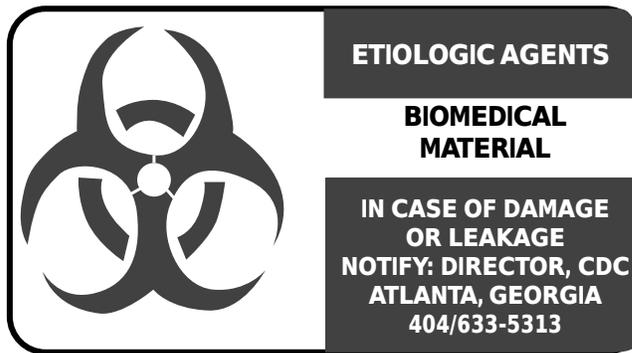
In order to ensure the satisfactory receipt and proper testing of your specimens in our laboratory:

1. Label each tube of blood or serum is with the name of the patient exactly the way it is written on the laboratory request form;
2. Place some absorbent material, such as paper towels, in the bottom of the secondary plastic liner, then put the labeled tubes of blood or serum in the plastic liner on the absorbent material (no padding between tubes is required) and then add sufficient absorbent material on top of the blood tubes so that when the cap is tightened and the container is shaken, the tubes do not rattle;
3. Wrap the properly completed laboratory request form(s) (must have the name of patient(s) and a correct return address) around the secondary plastic liner and place the secondary container in the fiberboard cylinder; and
4. Make sure that the proper label is attached to the outside container before the specimens are mailed.

Packaging And Labeling of Etiologic Agents



(Red on White)



Precautions for Using Laboratory Equipment and Devices*

Centrifuges

Centrifugation presents serious hazards from mechanical failure and from the generation of aerosols of biohazardous materials or toxic chemicals if improperly used or in the absence of good laboratory practices. A mechanical failure, such as a broken drive shaft, a faulty bearing, or a disintegrated rotor, can produce high-velocity hazardous fragments. If these fragments escape the protective housing of the centrifuge, they can produce traumatic injury to personnel.

- Mechanical failure can be minimized by meticulous observance of the manufacturer's instructions and utilization of periodic rotor inspection service.
- Aerosols can be avoided by observing sound laboratory practices and using appropriate centrifuge safety equipment and containment hoods or cabinets.
- Shields, trunnion cups, and centrifuge tubes should be properly balanced. Ensure that matched sets of trunnion cups, shields, and adapters do not become mixed. If the components are not inscribed with their weights by the manufacturer, colored stains can be applied for identification to avoid confusion. When the tubes are balanced, the shields, trunnion cups, and adapters, including any disinfectant solution or water added for balancing, should be included in the procedure. The basic concern is that the centers of gravity of the tubes are equidistant from the axis of rotation. To illustrate the importance of this, two identical tubes containing 20 g of mercury and 20 g of water, respectively, will balance perfectly on the scales; however, their performance in motion is totally different, leading to violent vibration with all its attendant hazards. This is especially important to consider when centrifuging gradients containing cesium salts.

* Excerpt from the Texas Department of Health Bureau of Laboratories Safety Manual, August 1996 ed.

- Screw caps, or other tight-fitting skirted caps that fit outside the rim of the centrifuge tube are safer to use than plug-in closures. Even screw-capped bottles are not without risk; if the rim is soiled and seals imperfectly, fluid will escape down the outside of the tubes.
- Aluminum foil should not be used to cap centrifuge tubes because it detaches or ruptures and does not prevent aerosols.
- Do not use cotton plugs when centrifuging biohazardous materials. Instead, use rubber stoppers or other tight-fitting plastic, rubber, or metal caps or closures.
- Heat-sealed tubes should be used when centrifuging highly toxic or pathogenic materials or concentrating infectious agents, (e.g., viruses).
- Continuous-flow rotors, particularly the steam driven Sharples™ designed for cream separation, are notorious generators of aerosols and must be enclosed in well ventilated hoods, if used with infectious agents.

The frequency of use, maximum g-force exposure, washing, etching, abrasion, and method of storage affect the life expectancy of glass centrifuge tubes and bottles.

- The stresses developed during these processes are cumulative in Pyrex™ glass despite its excellent chemical resistance. When used with proper adapters and cushions, it can withstand moderate speeds.
- Corex™ glass has four to six times the strength of conventional glass, greater resistance to alkalis and acids, scratching, and etching, and is unaffected by temperatures up to 300°C. In proper adapters, Corex™ tubes may be used at relatively high speeds.
- Before using glass centrifuge tubes, eliminate those with cracks, severe etching, scratches, and chipped rims.
- While plastic tubes and bottles resist breakage, they may begin to show signs of deterioration (crazing, cracking, or spotting) after several runs as a result of the interaction of centrifugal forces, chemical effects from samples and cleaning solutions, and autoclaving cycles of heat and pressure. Tubes showing these signs should be discarded. Note that celluloid (cellulose nitrate) centrifuge tubes are highly flammable, prone to shrinkage with age, can distort on boiling, and can be highly explosive in an autoclave.

Rotor Use and Maintenance

It is generally recommended that medium- and high-speed rotors be accelerated to a low speed before allowing them to reach higher programmed speeds. The detection of imbalances, (e.g., missing or mis-hung swinging buckets, unfastened rotor covers, and unaligned drive shafts) at low speed can prevent serious accidents at higher speeds.

High-speed rotor heads are prone to metal fatigue and, where there is a chance that they may be used on more than one machine, each rotor should be accompanied by its own logbook indicating the number of hours run at top speeds. Failure to observe this precaution and to institute replacement after recommended periods of use can result in dangerous and expensive disintegration. Frequent inspection, cleaning and drying are important to ensure absence of corrosion or other damage that may lead to the development of cracks. Many high-speed rotors, including the zonal rotors for preparative ultracentrifuges, are made of aluminum. Precautions must be exercised to avoid their deterioration and corrosion. For example, alkalis (e.g., Radiacwash™ and Count-Off™), halide salt solutions, and many acids should not come in contact with these rotors as they may remove the anodizing that protects the rotor from pitting. For gradient separations in aluminum rotors, sucrose solutions are recommended. Some rotors also contain cores of Noryl™ which deteriorate in the presence of certain solvents, including benzene, chloroform, petroleum ether, and propylene glycol. In general, titanium rotors are preferred.

Caution should be exercised as to what chemicals, including disinfectants, are permitted to contact component materials that are subject to deterioration.

If the rotor is treated with a disinfectant, it should be rinsed with clean water and dried as soon as the disinfectant has adequately decontaminated the rotor.

Before using a rotor, inspect it carefully for the presence of contaminants, salt deposits, or cracks.

Rinse out buckets/rotor cavity after each run; use special brushes and detergent; dry thoroughly; and grease gaskets and threads according to manufacturer's recommendations.

Always run all swing-out buckets. Open and inspect all buckets before and after use.

Remove condensation ice from rotor chamber at frequent intervals.

Rubber “O” rings and tube closures must be examined for deterioration and must be kept lubricated with material recommended by the makers. This provision is especially important for the use of zonal rotors.

Where tubes of different materials are provided (e.g., celluloid, polypropylene, stainless steel), care must be taken to employ tube closures designed specifically for the type of tube in use. These caps are often similar in appearance, but are prone to leakage if applied to tubes of the wrong material. When properly designed tubes and rotors are well maintained and handled, leakage should never occur.

When service is required, the centrifuge must be decontaminated before allowing service personnel to repair it. In the event of a centrifuge malfunction and/or spill which may create hazardous aerosols, air-circulating equipment should be shut down, (e.g., air conditioners, fans, fume hoods, biological safety cabinets) and the room should be vacated by all personnel for a suitable period (at least 30 minutes) to allow the aerosol to dissipate. Broken glass should then be cleaned up promptly and contaminated areas properly decontaminated. Remember that if contaminated materials have reached the chamber, the pump oil will be contaminated as well. The person using the centrifuge, along with the principal investigator in charge of the lab, is responsible for ensuring that clean-up and decontamination is achieved. Maintenance service may be refused on centrifuges which appear to be improperly used and/or contaminated.

OSHA Instruction CPL 2-2.44C

Office of Health Compliance Assistance*

Labeling Requirements

Item	No Label Required		Biohazard Label	or	Red Color- Coded Container
Reusable contaminated sharps			X	or	X
Regulated waste container			X	or	X
Refrigerator/freezer holding blood or other potentially infectious material (OPIM)			X		
Containers used for storage, transport, or shipping of blood or OPIM			X	or	X
Blood/blood products released for clinical use	X				
Individual specimen containers of blood or OPIM remaining in facility	X ¹	or	X	or	X
Specimens shipped from the primary facility to another facility			X	or	X
Individual containers of blood or OPIM placed in labeled container during storage, transport, shipment, or disposal	X				
Contaminated equipment needing servicing or shipping					
Contaminated laundry	X ³	or	X	or	X
Contaminated laundry sent to another facility that does not use universal precautions			X	or	X

* Document reformatted from original OSHA document, "Appendix E."

¹ Labels are not required if universal precautions (UP) are used in handling all specimens and containers are recognizable as containing specimens.

² Specifying, in addition, the location of the contamination.

³ Alternative label or color code must be used when facility uses UP in handling all soiled laundry and employees can recognize containers as requiring compliance with UP.



**U.S. Postal Service Regulations
Concerning the Mailability of Used Sharps
and Other Medical Devices (C023.80-8.10)
and Information Required
for Infectious Substance Manifest
(DMM, Issue 48, 01/01/95)**

8.0 ETIOLOGIC AGENT PREPARATIONS, CLINICAL SPECIMENS, AND BIOLOGICAL PRODUCTS

General Etiologic agent preparations, clinical specimens, and biological products are
8.1 nonmailable, except when they are intended for medical or veterinary use, research, or laboratory certification, related to public health; and when it is determined that such items are properly prepared for mailing to withstand shocks, pressure changes, and other conditions incident to ordinary handling in transit.

Definitions The terms used in these standards are defined as follows:

8.2 a. An "etiologic agent" is a microbiological agent or its toxin that causes, or may cause, human or animal disease.



- b. An "etiologic agent preparation" is a culture or suspension of an etiologic agent and includes purified or partially purified spores or toxins that are themselves etiologic agents.
- c. A "clinical specimen" is any human or animal material including, but not limited to, excreta, secreta, blood and its components, tissue, and tissue fluids, but excluding animal materials, such as leather goods and poultry eggs, that are produced commercially.
- d. A "biological product" is a biological product known or presumed to contain an etiologic agent that is subject to preparation and manufacture under 9 CFR 102 (Licensed Veterinary Biological Products), 9 CFR 103 (Biological Products for Experimental Treatment of Animals), 9 CFR 104 (Imported Biological Products), 21 CFR 312 (Investigational New Drug Application), or 21 CFR 600-680 (Biologics) and that, under such provisions, may be shipped in interstate commerce.
- e. "Sharps" means any item with a projecting cutting edge or fine point that was used in animal or human patient care or treatment or in medical research, or industrial laboratories, including but not limited to hypodermic needles, syringes (with or without the attached needles), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of the presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides or cover slips. The term sharps does not include new unused medical devices such as hypodermic needles, syringes, and scalpel blades.
- f. "Other medical devices" means any devices used in animal or human patient care or treatment or in medical research that are not, or do not contain, a projecting sharp.

**Packaging
Etiologic Agent
Preparations**
8.3

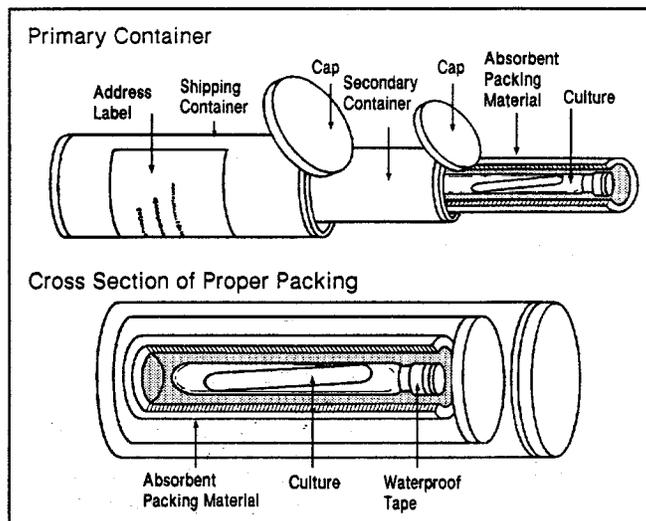
Packaging for etiologic agent preparations (see Exhibit 8.3) is subject to these standards:

- a. Despite the exemptions in 49 CFR 173.387(b) for packages of 50 milliliters (ml) (1.666 fluid ounce) or less, all etiologic agent preparations and clinical specimens known or reasonably believed to contain an etiologic agent must conform to 42 CFR 72.3(a), meet the packaging requirements of 49 CFR 173.387(b), and must not exceed 50 ml per outside package. Sufficient outage (space for liquid expansion) must be provided so that the primary container is not liquid full at 130 F (55 C).
- b. The material must be packaged in a securely sealed and watertight primary container (test tube, vial, etc.) enclosed in a second sealed and watertight, durable container (secondary container). Several primary containers may be enclosed in a single secondary container if there is adequate shock-absorbent material between them to prevent breakage during ordinary handling while in transit and if the total liquid volume of all the enclosed primary containers does not exceed 50 ml.
- c. The space at the top, bottom, and sides between the primary and secondary containers must contain enough materials to absorb the entire contents of the primary containers in case of breakage or leakage.
- d. Each set of the primary and secondary containers must be enclosed in an outer shipping container constructed of fiberboard or other material.
- e. Each package containing an etiologic agent preparation must be designed and constructed so that, if it were subject to the environmental and test conditions in 49 CFR 173.387(b), there would be no release of the contents to the environment, and no significant reduction in the effectiveness of the packaging.



Biological
Materials
Packaging
Exhibit 8.3

How to Seal Etiologic Agents



- f. To expedite delivery and reduce handling, a mail parcel containing material required by 42 CFR 72.3(d) to bear an "Etiologic Agents/Biohazard Material" label must be sent by First-Class Mail, Priority Mail, or Express Mail.

**Packaging of
Clinical
Specimens and
Biological
Products**
8.4

Packaging for clinical specimens and biological products is subject to these standards (see Exhibit 8.3):

- a. A biological product such as polio vaccine, or a clinical specimen not reasonably believed to contain an etiologic agent, such as a urine or blood specimen used in drug-testing programs or for insurance, must be packaged in a securely sealed primary container with sufficient shock-resistant material to withstand shock and pressure changes and absorbent material surrounding the primary container, or otherwise configured to take up the contents in case of leakage, and in an outer shipping container with secondary leakproof materials so that, if there should be leakage of the primary container during shipment, the contents must not escape from the outer shipping container. Clinical specimens and biological products exceeding 50 ml per parcel must be packaged in a fiberboard box or shipping container of equivalent strength.
- b. Single primary containers must not contain more than 1,000 ml (1 quart) of material. Two or more primary containers whose combined volume do not exceed 1,000 ml may be placed in a single secondary container.
- c. The maximum amount of clinical specimens that may be enclosed in a single outer shipping container is 4,000 ml (4 quarts).

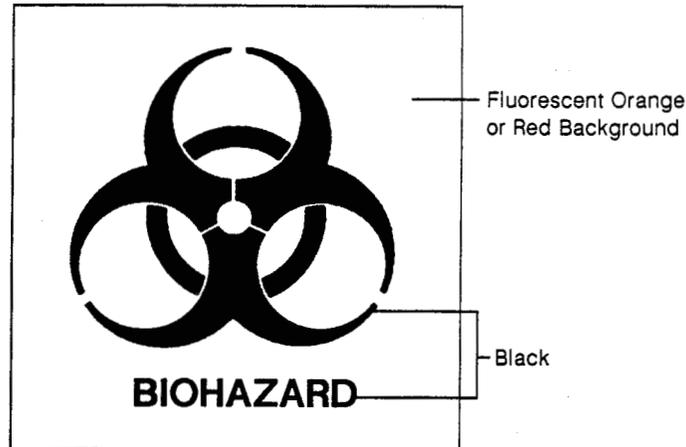
Sharps
8.5

Packaging for sharps and unsterilized containers is subject to the following standards:

- a. A parcel containing the types of used materials defined in 8.2e is nonmailable unless it bears the International Biohazard Symbol on a label with either a fluorescent orange or fluorescent red background (see Exhibit 8.5a). Such parcels are mailable only as First-Class or Priority Mail.



International
Biohazard
Symbol
Exhibit 8.5a



- b. Used sharps must be packaged in a securely sealed, leak-resistant, and puncture-resistant primary container, the total volume of liquid contents of which may not exceed 50 ml. The primary container must maintain its integrity when exposed to temperatures between 0 and 120 degrees Fahrenheit.
- c. The primary container must be packaged within a water-tight secondary containment system. The secondary containment system may consist of more than one component. If one of the components is a plastic bag, it must be at a minimum 3.0 mils thick and reinforced with a fiberboard sleeve. A plastic bag by itself does not satisfy the requirement for a secondary containment system. Several primary containers may be enclosed within a secondary containment system to prevent breakage during ordinary processing.
- d. The secondary containment system must be enclosed within an outer shipping container constructed of 200-pound grade corrugated fiberboard or similar material of equivalent strength. The secondary containment system must fit securely within the shipping container to prevent breakage during ordinary processing.
- e. There must be enough material within a watertight barrier to absorb and retain three times the total liquid allowed within the primary container (150 ml per primary container) in case of leakage.
- f. Each parcel must not weigh more than 35 pounds.
- g. Each package prepared for mailing must be designed and constructed so that, if subjected to the environmental and test conditions in 49 CFR 178.604 (leakproof test), 178.606 (stacking test), 178.608 (vibration standard), 178.609 (test requirements for packaging for infectious substances (etiologic agents)), in addition to a bursting test for the shipping container and an absorbency test for the absorbent material commensurate with the requirements in 8.5e, there is no release of the contents to the environment and no significant reduction in the effectiveness of the packaging.
- h. All mailed packages containing used sharps must be accompanied by a four-part manifest or mail disposal service shipping record. The manifest must be placed in an envelope affixed to the outside of the shipping container. The manifest must comply with any applicable requirements imposed by the laws of the State from which the package is mailed. At a minimum, the information shown in Exhibit 8.5h must be on the manifest.



Each distributor or manufacturer of mailing kits or packaging assemblies, including containers, cartons, and any other related material to be used to mail sharps to a storage or disposal facility, must obtain an authorization from the USPS. Before applying for this authorization, each such type of the mailing kit must be tested and certified against the standards in 8.5g by an independent company or organization. This authorization may be obtained by applying in writing to the Business Mail Acceptance manager, USPS Headquarters. The letter of application must contain the following:

- (1) Address of the headquarters or general business office of the distributor or manufacturer.
 - (2) Addresses of all disposal and storage sites.
 - (3) List of all types of mailing kits to be covered with proof of package testing certifications by the independent testing facility that subjected the materials to the testing requirements in all 8.5.
 - (4) Copy of the proposed manifest to be used with all mailings.
 - (5) 24-hour telephone numbers for emergencies.
 - (6) List of the types of sharps to be mailed for disposal.
- j. Each package must be mailed using merchandise return service, and each authorized manufacturer (or distributor) must provide to the Business Mail Acceptance manager a surety bond of \$50,000 or a letter of credit as proof of sufficient financial responsibility to cover disposal costs if the manufacturer (or distributor) ceases doing business before all its shipping containers are disposed of, or to cover clean-up costs if spills occur while the containers are in USPS possession. Each primary and shipping container must bear a label, which cannot be detached intact, showing:
- (1) Company name of the manufacturer or the distributor.
 - (2) U.S. Postal Service Auth. No.
 - (3) Container ID number (or unique model number) signifying that the packaging material is certified and the manufacturer or distributor obtained an authorization required by 8.5i.

Other Used Medical Devices 8.6 Packaging for other used medical devices is subject to these standards:

- a. Other used medical devices, as defined in 8.2f, must be mailed as First-Class or Priority Mail.
- b. Other used medical devices must be packaged in a securely sealed, leak-resistant primary container, the total liquid volume of which must not exceed 50 ml, unless the devices are shipped in formalin or its equivalent. The primary container must maintain its integrity when exposed to temperatures between 0 and 120 degrees Fahrenheit.
- c. The primary container must be enclosed in an outer shipping container constructed of 200-pound grade corrugated fiberboard or similar material of equivalent strength. The primary container must fit securely within the shipping container to prevent breakage during ordinary processing.
- d. There must be enough material between the shipping container and the primary container to absorb three times the total liquid allowed within the package unless the device is mailed in a formalin solution or its equivalent.
- e. Each parcel containing other used medical devices must bear a complete return address (not a post office box).

Marking and Labeling—General 8.7 When applicable, the outer containers must have required labels affixed; e.g., the "Etiologic Agents/Biohazard Material" label and "Clinical Specimen/Biological Products-Biohazard" label, required by 42 CFR 72.3(d); or, if the material is to be transported by air, the infectious substances label specified in *International Mail Manual*



135.4, the proper shipping name and UN number as well as a shipper's declaration for dangerous goods. The UN number for etiologic agents affecting humans is 2814. The UN number for etiologic agents affecting animals only is 2900. See 40 CFR 172, *Identification Number Cross Reference Index to Proper Shipping Names*, for a description of UN numbers.

- Clinical Specimens, etc.**
8.8 The outside container of clinical specimens, biological products, and unsterilized containers or devices must be marked to identify the contents with the proper shipping name; e.g., "Clinical Specimens," "Unsterilized Medical Devices," etc.
- Sharps**
8.9 Each exterior package containing sharps must be marked with the words "Infectious Waste," "Medical Waste," or a label displaying the universal biohazard symbol.
- Dry Ice**
8.10 Generally, all outside containers containing more than 5 pounds of dry ice (carbon dioxide solid) that are eligible for air transportation must have a shipper's declaration for dangerous goods attached in triplicate. Packages containing dry ice must be designed and constructed to permit the release of carbon dioxide gas to prevent a buildup of pressure that could rupture the packaging. After fulfilling the conditions in 8.10a through 8.10c, below, the marking "ORM-A UN 1845 Carbon Dioxide Solid" or "Dry Ice" is not required (see 49 CFR 173.615 and 175.10(a)(13)). A shipper's declaration for dry ice is also not required if:
- The weight of the dry ice in the package does not exceed 5 pounds and the net weight of the dry ice is marked on the package.
 - The dry ice is a refrigerant for a material being used for diagnostic or treatment purposes (e.g., frozen medical specimens) and the material is so marked on the package.
 - The package is marked "Carbon Dioxide Solid" or "Dry Ice."



1. Generator (Mailer)

- a. Name.
- b. Complete address (not a post office box).
- c. Telephone number.
- d. Description of contents of shipping container. Describe contents as "Used Medical Sharps." Do not use any other description.
- e. Date the shipping container was mailed.
- f. State permit number of the approved facility in which the contents are to be disposed.

2. Destination Facility (Disposal Site)

Complete address (not a post office box).

3. Generator's (Mailer's) Certification

"I certify that this carton has been approved for the mailing of used medical sharps, has been prepared for mailing in accordance with the directions for that purpose, and does not contain excess liquid or nonmailable material in violation of the applicable postal regulations. I AM AWARE THAT FULL RESPONSIBILITY RESTS WITH THE GENERATOR (MAILER) FOR ANY VIOLATION OF 18 USC 1716 WHICH MAY RESULT FROM PLACING IMPROPERLY PACKAGED ITEMS IN THE MAIL. I also certify that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and in proper condition for carriage by air according to the applicable national governmental regulations."

This printed statement is to be followed by the printed name of the generator (mailer), the signature of the generator, and the date the manifest was signed.

4. Destination Facility (Storage or Disposal Site)

- a. Printed certification or receipt, treatment, and disposal stating: "I certify that the contents of this package have been received, treated, and disposed of in accordance with all local, state, and federal regulations."
- b. Printed or typewritten name of an authorized recipient at the destination facility.
- c. Signature of the authorized recipient at the destination facility.
- d. Date representative of destination facility signed manifest.

5. Transporter or Intermediate Handler Other Than U.S. Postal Service (If Different From Destination Facility)

- a. Name.
- b. Complete address (not a post office box).
- c. Printed name of transporter or intermediate handler.
- d. Signature of transporter or intermediate handler.

6. Serialized Manifests

The manifest or mail disposal service shipping forms must be serialized.

7. Area Reserved for Comments

The manifest must contain an area reserved for discrepancies and comments, especially if an alternative destination facility is used.

8. Completion and Distribution of Manifest

The manifest must contain instructions for completing the manifest and distributing copies.

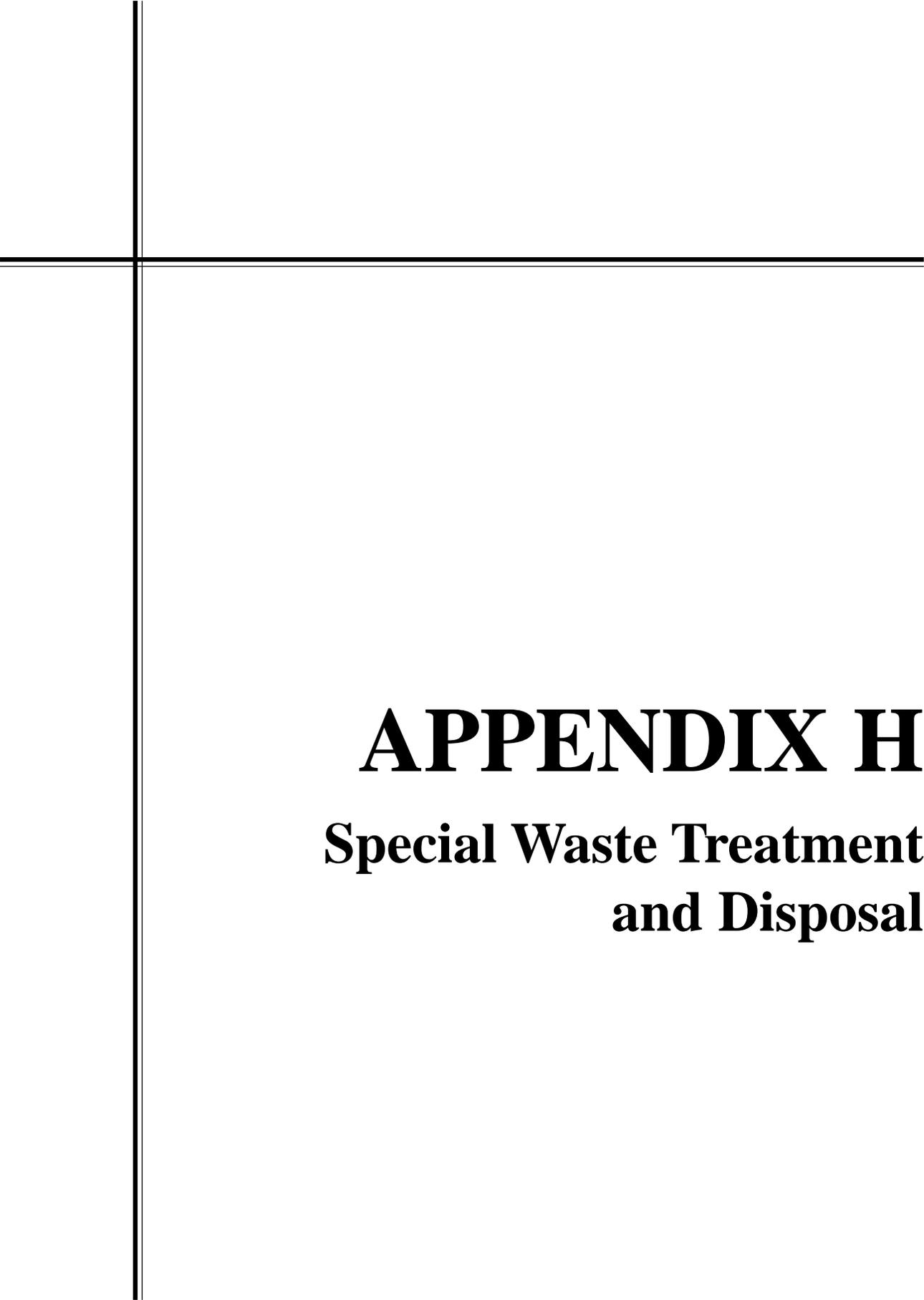
- a. One copy must be kept by the generator (mailer).
- b. One copy must be kept by the transporter or intermediate handler for 90 days.
- c. One copy must be kept by the destination facility for 90 days.
- d. One copy must be mailed to the generator by the destination facility.

9. Emergency Telephone Number

The manifest must bear the following statement with appropriate information:

"IN CASE OF EMERGENCY, OR THE DISCOVERY OF DAMAGE OR LEAKAGE, CALL 1-800-XXX-XXXX."

Information Required for Infectious Substance Manifest
Exhibit 8.5h



APPENDIX H

Special Waste Treatment and Disposal

DETACH HERE

Order Form

Please send me _____ copies of the health-care professional brochure
Disposal Tips for Home Health Care: Educating Your Patients
(EPA/530-SW-90-014A)

Please send me _____ copies of the patient flyer *Disposal Tips for
Home Health Care* (EPA/530-SW-90-014B)

Name _____

Address _____

City _____ State _____ Zip _____

Place Stamp Here

Return Address

RCRA Docket (OS-305)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

Appendix H

TREATMENT, DECONTAMINATION, AND DISPOSAL OF SPECIAL WASTE FROM HEALTH-CARE RELATED FACILITIES

After treatment all medical waste shall be disposed of in a sanitary landfill unless incinerated or discharged to the sanitary sewer.

Type of Special Waste	Grinding and/or Flushing into a Sanitary Sewer	Steam Sterilization	Steam Sterilization/Grinding & Discharge to Sanitary Sewer	Incineration	Thermal Inactivation	Thermal Inactivation/Grinding & Discharge to a Sanitary Sewer	Chemical Disinfection	Chemical Disinfection/Grinding & Discharge to a Sanitary Sewer	Moist Heat Disinfection/Microwaving & Radio Waves	Chlorine Disinfection/Maceration	Approved Alternate Treatment Process
1. Animal waste			X								
a. Carcasses		X ³	X	X ³					X ³	X ³	X ³
b. Body Parts		X ³		X ³					X ³	X ³	X ³
c. Bulk whole blood, serum, plasma, or other blood components		X ³	X	X ³	X ³	X	X ³	X	X ³	X ³	X ³
d. Animal bedding		X ³		X ³					X ³	X ³	X ³
2. Bulk human bloods & body fluids	X	X ³		X ³	X ³	X	X ³	X	X ³	X ³	X ³
3. Microbiological waste		X ³		X ³	X ³		X ³		X ³	X ³	X ³
4. Pathological waste										X ^{3,6}	X ^{3,6}
a. Human											
i. Body Parts ¹		X ²		X ³					X ^{3,6}	X ^{3,6}	X ^{3,6}
ii. Tissues, fetuses, organs ¹	X	X ²		X ³					X ³	X ³	X ^{3,6}
iii. Bulk blood and body fluids	X	X ³		X ³	X ³	X	X ³	X	X ³	X ³	X ^{3,6}
b. Products of human abortion ¹											
i. Body parts, tissues, or organs	X	X ²		X ³					X ³	X ³	X ^{3,6}
ii. Bulk blood and body fluids	X	X ³		X ³	X ³	X	X ³	X	X ³	X ³	X ^{3,6}
c. Lab specimens of blood or tissue	X	X ³	X	X ³					X ³	X ³	X ^{3,6}
d. Anatomical remains ¹		X ²		X ²			X	X	X	X	X ^{3,6}
5. Sharps											
a. Needles, blades, and razors ⁵		X ⁴		X ⁴			X ⁴		X ⁴	X ⁴	X ^{3,6}
b. Pipettes and broken glass ⁵		X ⁴		X ⁴			X ⁴		X ³	X ³	

25 TEXAS ADMINISTRATIVE CODE (TAC) §1.136. APPROVED METHODS OF TREATMENT AND DISPOSITION

¹Interment

³Followed by deposition in a sanitary landfill

⁵Encapsulation in a matrix is an acceptable means of treatment

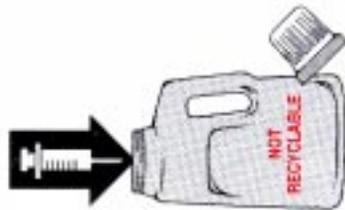


Disposal Tips for Home Health Care

You can help prevent injury, illness, and pollution by following some simple steps when you dispose of the sharp objects and contaminated materials you use in administering health care in your home. You should place:

- Needles,
- Syringes,
- Lancets, and
- Other sharp objects

in a hard-plastic or metal container with a screw-on or tightly secured lid.

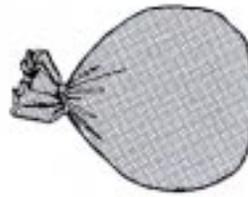


Many containers found in the household will do, or you may purchase containers specifically designed for the disposal of medical waste sharps. Before discarding a container, be sure to reinforce the lid with heavy-duty tape. **Do not put sharp objects in any container you plan to recycle or return to a store, and do not use glass or clear plastic containers** (see additional information below). Finally, make sure that you keep all containers with sharp objects out of the reach of children and pets.

We also recommend that:

- Soiled bandages,
- Disposable sheets, and
- Medical gloves

be placed in securely fastened plastic bags before you put them in the garbage can with your other trash.



Preventing Injury and Pollution

Containers with sharps are not recyclable

EPA promotes all recycling activities, and therefore encourages you to discard medical waste sharps in sturdy, nonrecyclable containers, when possible. If a recyclable container is used to dispose of medical waste sharps, make sure that you don't mix the container with other materials to be recycled. Since the sharps impair a container's recyclability, a container holding your medical waste sharps properly belongs with the regular household trash. You may even want to label the container, **"NOT FOR RECYCLING."** These steps go a long way toward protecting workers and others from possible injury. (Although disposing of recyclable containers removes them from the recycling stream, the expected impact is minimal.)

Local Programs

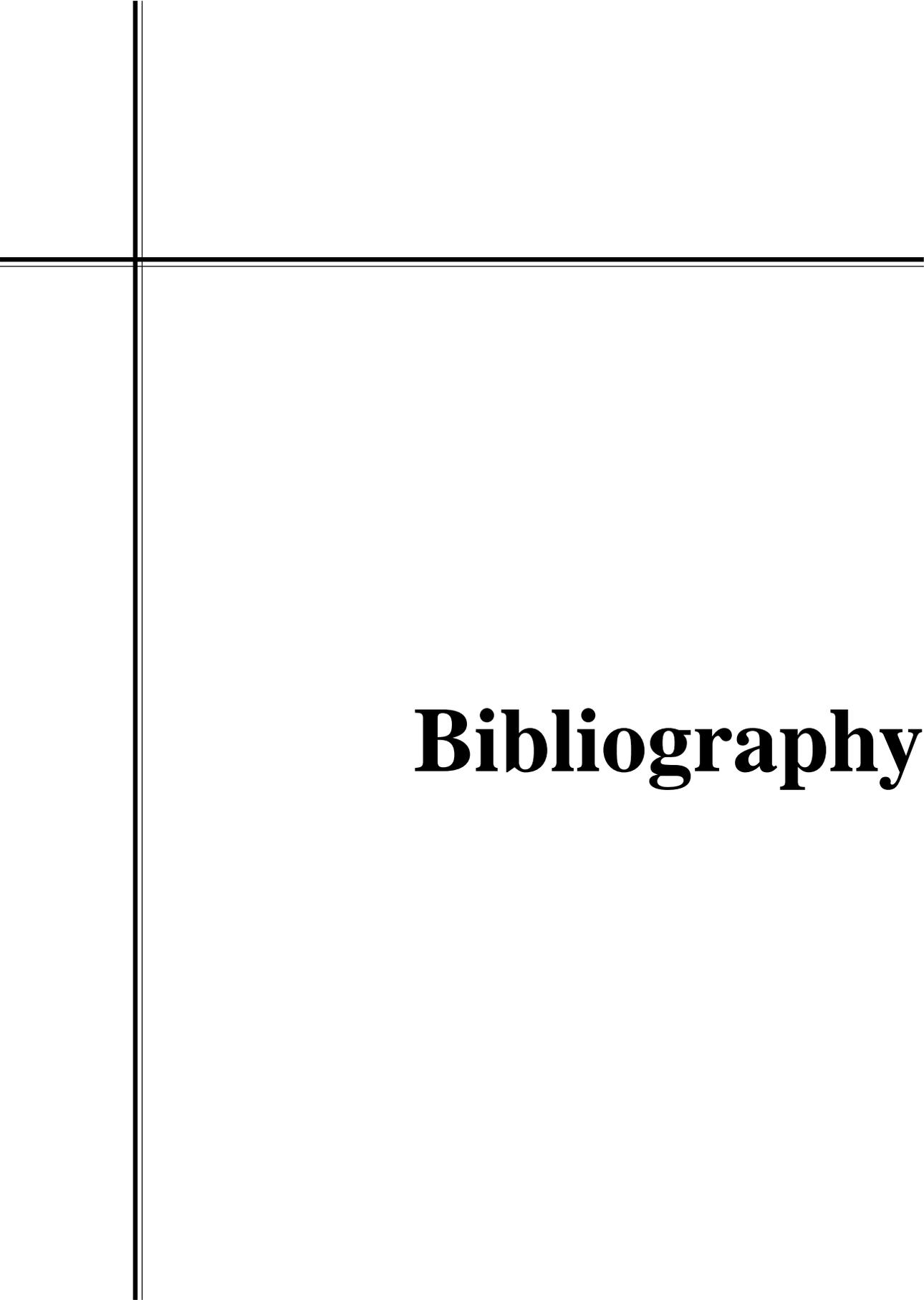


Your state or community environmental programs may have other requirements or suggestions for disposing of your medical waste. You should contact them for any information you may need.

For additional copies of these disposal tips, please call the RCRA Hotline Monday through Friday, 8:30 a.m. to 7:30 p.m. EST. The national toll-free number is (800) 424-9346; for the hearing impaired, it is TDD (800) 553-7672.



Recycled Recyclable
Printed with Soy/Canada Ink on paper that
contains at least 50% recycled fiber



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