
**INFECTIOUS DISEASES POLICY
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OUHSC/OU-TULSA INFECTIOUS DISEASES POLICY

I. INTRODUCTION

- A. This document outlines the University of Oklahoma (OU) policy and procedures for all OU campuses and clinical related facilities except the OU Norman campus (hereinafter referred to as OUHSC/OU-Tulsa) for infectious diseases including human immunodeficiency virus (HIV), other bloodborne pathogens such as the hepatitis B virus (HBV) and the hepatitis C virus (HCV), tuberculosis, and other infectious diseases.
- B. These programs and policies shall be guided by the recommendations and regulations of the Occupational Safety and Health Administration (OSHA), U.S. Public Health Service, and the Centers for Disease Control and Prevention (CDC), and shall be updated as these guidelines and recommendations change.
- C. While this constitutes the OUHSC/OU-Tulsa policy, colleges and associated clinical entities may adopt more detailed procedures so long as they do not conflict with or attempt to override the OUHSC/OU-Tulsa policy, and which are at least as stringent as the OUHSC/OU-Tulsa policy.

II. SCOPE

- A. This policy applies to faculty, students, staff and administrators of all OUHSC/OU-Tulsa facilities and programs. All references within this document to “employees” means faculty, staff, administrators, residents, fellows, and/or students on the University payroll.
- B. Each college or department, investigator, and clinician is expected to follow and enforce the procedures outlined in this document. Disciplinary procedures should be followed for employees or students who refuse or fail to use appropriate safety equipment or employ appropriate safe procedures.
- C. Each college or department shall provide required employee vaccinations, skin tests, chest x-rays, and other preventive medical procedures or evaluations, and appropriate protective clothing and safety devices for a given task or procedure including but not limited to laboratory coats, uniforms, aprons or other protective clothing; safety glasses or goggles; gloves; respirators; and mechanical pipetting devices as required by this policy at no cost to the employee.

III. PATIENTS WITH INFECTIOUS DISEASES

- A. OUHSC/OU-Tulsa faculty, students and staff with patient care responsibilities may not refuse to treat a patient whose condition is within their realm of competence solely because the patient has an infectious disease. However, departments/clinics may choose to defer non-emergency procedures on patients with airborne infectious diseases until such time as the patient is non-infectious.
- B. All patient medical records must be kept confidential and must not be disclosed to others

except as required or permitted by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Regulations and other applicable laws or as authorized in writing by the patient. Oklahoma law specifically requires the good faith disclosure of infectious disease test results to the Oklahoma State Department of Health and to healthcare personnel having a reasonable need to know about the infection for purposes of providing patient care.

IV. VACCINATION/IMMUNIZATION REQUIREMENTS

- A. All application, immunization schedules, vaccine doses, etc., should follow the Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report (MMWR), December 26, 1997, Vol. 46, No. RR-18, "Immunization of Health-Care Workers", or any update published in the MMWR.
- B. Vaccination/immunization requirements for employees should be as indicated in Appendix A. The cost of such vaccinations/blood tests/skin tests to meet these requirements shall be paid for by the employee's department. Additional vaccination scenarios are addressed as follows:
 - 1. Additional vaccination/immunization requirements for required rotations for employees shall be paid for by the employee's college or department. Additional vaccination/immunization requirements for elective rotations for employees should be paid for by the individual. Additional vaccination/immunization requirements for elective rotations for students shall be paid for by the student.
 - 2. Any additional vaccinations requested by an employee or student that are not considered "required" or "suggested" in the table in Appendix A will be provided at the employee/student's expense, if available.
- C. Vaccination/immunization requirements for OUHSC students and OU-Tulsa health sciences students shall be as indicated on the vaccine history form found in Appendix A. Colleges/departments may modify the forms for their particular student needs but must include at least the requirements indicated on these forms in this Appendix. Costs for student vaccination/immunizations/blood tests/skin tests shall be borne by the student and/or the student's health insurance. In addition, all first-time student enrollees who will reside in on-campus student housing shall be vaccinated against meningococcal disease or be provided by Student Health with detailed information on the risks associated with meningococcal disease and the availability of vaccine and sign a written waiver in a form approved by the State Department of Health stating that the individual has received and reviewed the information provided and has chosen not to be vaccinated against meningococcal disease. The cost of the meningococcal vaccine shall be borne by the student.
- D. Vaccination/immunization requirements for OU Norman-based students on the OU-Tulsa or OUHSC campus should be in accordance with the current OU-Norman student vaccination requirements (see http://goddard.ou.edu/healthservices/immunizations_main.html).
- E. For new employees, all vaccination/immunization/blood test/skin testing records required

by this policy must be completed by and on file with the appropriate Employee Health office within ten (10) days of employment. Within 30 days from the date of hire, required vaccination/immunization/titering requirements identified as deficient by the appropriate Employee Health office must be initiated. The vaccination/immunization/titer/skin test requirements must be completed prior to the end of the specified University employment orientation period, or within six (6) months, whichever is sooner, unless the employing department requires a shorter time period for compliance.

- F. Proof of immunity to measles, mumps, rubella, and varicella must be documented for all healthcare workers and other workers who perform duties in patient care settings. Employees who lack documented immunity and who are subsequently exposed or who exhibit signs or symptoms of these communicable diseases will be restricted from duty for the incubation period of the exposure or disease on leave with pay if available, or, if not available, on leave without pay.
- G. Each Employee Health office shall maintain all employee vaccination/immunization records for at least the duration of employment plus thirty (30) years.

V. HEALTH AND SAFETY PRECAUTIONS

- A. OUHSC/OU-Tulsa faculty, students and staff with any reasonably anticipated exposure to human blood, body fluids or other potentially infectious materials should comply with the guidelines and regulations established by the CDC, OSHA, and the OUHSC/OU-Tulsa *Bloodborne Pathogen Exposure Control Plan* (see Appendix C).
- B. OUHSC/OU-Tulsa faculty and staff who may, during the course of their employment, have the potential for exposure to TB, should comply with the OUHSC/OU-Tulsa *Tuberculosis Infection Control Policy and Program* (see Appendix D). Student policies and procedures are also found in this document.
- C. Laboratory protocols for research using infectious disease agents are included in the OUHSC/OU-Tulsa *Laboratory Safety Manual*, the CDC/NIH document *Biosafety in Microbiological and Biomedical Laboratories* and the NIH *Guidelines for Research Involving Recombinant DNA Molecules*, which may be obtained upon request from the OUHSC Environmental Health and Safety Office (EHSO). All such protocols must be reviewed and approved by the OUHSC Institutional Biosafety Committee (IBC) prior to initiation.

VI. HAND HYGIENE PROCEDURES

Students and employees with patient care responsibilities should follow the hand hygiene procedures found in Appendix D.

VII. WORK RESTRICTIONS

- A. Work restrictions for employees with patient contact should follow the protocol established by the CDC and the Hospital Infection Control Practices Advisory Committee entitled, "Guideline for Infection Control in Healthcare Personnel, 1998", summarized in Appendix

E, *Guidelines for Work Restrictions for Healthcare Personnel with Patient Contact.*

- B. Work restrictions for employees with no patient contact and classroom restrictions for students are identified in Appendix F, *Guidelines for Work/Classroom Restrictions for Employees/Students without Patient Contact.*
- C. Employees with infectious diseases that require work restrictions according to these tables should notify their immediate supervisor as soon as possible.
- D. In the event a review of work restrictions by an expert review panel is indicated, the supervisor should contact the appropriate campus' Legal Counsel Office for advice.

VIII. PROCEDURES FOR EXPOSURES

- A. Exposures to infectious or potentially infectious agents/materials shall be documented as follows:
 - 1. For employee exposures, the employee must complete an *Employee's Report of Injury* form. The employee's supervisor must complete and sign a *Supervisor's Report of an Employee's Injury* form. Links to forms and submittal procedures are found at <http://hr.ou.edu/benefits/Workerscompensation.asp>.
 - 2. All student exposures should be reported to Student Health Services.
- B. Exposures to blood or other potentially infectious material should follow the procedures identified in the OUHSC/OU-Tulsa *Bloodborne Pathogen Exposure Control Plan* found in Appendix B.
 - 1. The responding health care professional should manage the exposure or possible exposure according to the current CDC guidelines or protocol. Copies of the most current protocol may be obtained from the EHSO or the CDC.
 - 2. OUHSC/OU-Tulsa departments/clinics where employees have the potential for exposure to human blood or other potentially infectious materials from patients and who do not have access to hospital source blood patient testing procedures should have a plan for drawing source blood in the event of an exposure incident. See Appendix B, OUHSC/OU-Tulsa *Bloodborne Pathogen Exposure Control Plan* for additional detail.
 - 3. All post-exposure initial and follow-up testing, counseling, and participation in medication protocols will be without cost to all OUHSC/OU-Tulsa employees under the workers' compensation program. Costs for initial and follow-up visits to the student health nurse by students are covered by Student Health Service fees; however, the costs for any testing or participation in medication protocols are the responsibility of the student and/or their health insurance provider.
- C. Exposures to *M. tuberculosis* will follow the procedures identified in the OUHSC/OU-Tulsa *Tuberculosis Infection Control Program* found in Appendix D.

- D. Exposures to other infectious diseases shall be addressed on a case-by-case basis. Employees should proceed for medical evaluation to the facilities identified in Appendix I, *Referral Facilities for Exposures to Infectious Diseases other than Bloodborne Pathogens or Tuberculosis*.

Effective Date: November 10, 1999

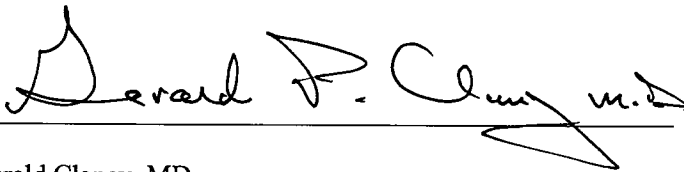
Revised: April, 2000

Revised: March, 2004

Revised: September, 2010



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President, OU-Tulsa

APPENDIX A
VACCINATION/IMMUNIZATION REQUIREMENTS

Vaccination/Immunization Requirements

All existing and new employees are required to complete the appropriate campus *Vaccine History Form* beginning on page A-3 and present it to the appropriate Student/Employee Health facility. Proof of immunity to measles, mumps, rubella, and varicella should be documented for all healthcare workers and other workers who perform duties in patient-care settings. Employees who do not show proof of previous vaccination/immunity (or for varicella, show a documented history of chicken pox) of the diseases indicated on the table below should be titered for immunity and/or be offered the vaccination at no cost to the employee (cost to be borne by the employee's department). Employees may choose to decline titering, vaccination, or skin tests/blood tests but must sign documentation that the titer/vaccination(s)/skin tests/blood tests was/were offered and the risk of not participating is understood. Employees who lack documented immunity or history and who are subsequently exposed or who exhibit signs or symptoms of these communicable diseases will be restricted from duty for the incubation period of the exposure or disease (see Appendix E).

All application, immunization schedules, vaccine doses, etc., should follow the Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report (MMWR), December 26, 1997, Vol. 46, No. RR-18, "Immunization of Health-Care Workers," or any update published in the MMWR.

Participation in the annual tuberculosis (TB) skin testing program will conform to the procedures outlined in the OUHSC/OU-Tulsa *Tuberculosis Infection Control Policy and Program*.

- A. Employees with reasonable anticipation of occupational exposure to blood or other potentially infectious materials shall be offered, at no cost to the employee, the opportunity to receive the hepatitis B vaccination series from the appropriate Employee Health office. Employees may decline the vaccination series and must indicate so on the appropriate Vaccine History Form. Employees may request the vaccination series at a later date if they so desire. Students with the potential for exposure to blood or other potentially infectious materials are encouraged to receive the hepatitis B vaccination series, which may be obtained from the appropriate campus student health service.
 1. For hepatitis B vaccinations given after the effective date of this policy, students and employees should have their antibody level measured approximately 4-8 weeks after administration of the third vaccination to assess adequacy of response.
 2. Such vaccination and serology testing shall be at no cost to the employee and shall be paid for by the employee's college or department. Students are responsible for their own costs.
 3. If, as a result of the titer information, the vaccination series and serology testing should be repeated, this should also be performed at no cost to the employee and shall be paid for by the employee's college or department.
 - a. If the results of the second serology tests are negative, no further primary vaccinations will be provided. In accordance with CDC guidelines, the employee or student should be evaluated to determine whether they are hepatitis B surface antigen positive (chronically infected).
 - b. Vaccine non-responders with negative hepatitis B antibodies who are also hepatitis B surface antigen negative should be considered susceptible to

HBV infection and should be counseled accordingly.

4. Employees or students desiring hepatitis A vaccination may inquire as to the availability and cost of such vaccination through the appropriate campus Employee Health or Student Health office, but such vaccination will be provided at the expense of the employee or student unless, for employees, it can be shown that the employee has an increased risk of exposure as a result of on-the-job activities at OU.
- B. Vaccinations required or recommended for laboratory work with infectious agents should be offered to all employees who work with such agents at no cost to the employee. If the employee chooses to decline the vaccination, this decision must be documented using the *Vaccine/TB Skin Test Declination Form for OUHSC Employees*. The employee should be allowed to receive the vaccination at a later date if desired and if exposure is still present.
- C. Vaccinations/immunizations/TB skin testing requirements for employees are summarized in the following table:

HR Category	Personnel Category	Required	Suggested
A.1	Healthcare workers with reasonable anticipation of exposure to bloodborne pathogens (e.g., nurses, physicians, technicians, clinical lab personnel, housekeeping staff in clinical facilities, and dental clinical personnel hired after January 1, 2010)	Hepatitis B Measles/Mumps/Rubella Varicella TB Skin Testing Program	Influenza Tetanus/ Diphtheria Pertussis
A.2	Healthcare workers without reasonable anticipation of exposure to bloodborne pathogens (e.g., front-line reception, occupational therapy, psychiatry employees, translators, social workers, counselors, and dental reception/office personnel hired after January 1, 2010)	Measles/Mumps/Rubella Varicella TB Skin Testing Program	Influenza Tetanus/Diphtheria Pertussis
B.	Other employees who work in patient contact areas	TB Skin Testing Program Measles/Mumps/Rubella Varicella	Influenza
C.1	OUHSC Police	Hepatitis B Measles/Mumps/Rubella Varicella TB Skin Testing Program	Influenza Tetanus/Diphtheria
C.2	OU-Tulsa Campus Security	Hepatitis B Measles/Mumps/Rubella Varicella TB Skin Testing Program	Influenza Tetanus/Diphtheria
D.	Child Study Center	Measles/Mumps/Rubella Varicella TB Skin Testing Program	Influenza Tetanus/Diphtheria Hepatitis A

HR Category	Personnel Category	Required	Suggested
E.	Personnel whose job duties require handling food	N/A	Influenza Tetanus/Diphtheria Hepatitis A
F.	Research	Based on specific research	Influenza Tetanus/Diphtheria
G.1	Site Support/Operations personnel with reasonable anticipation of exposure to bloodborne pathogens and who provide services in patient care areas	Hepatitis B Measles/Mumps/Rubella Varicella TB Skin Testing Program Tetanus/Diphtheria	Influenza Hepatitis A (plumbers only)
G.2	Site Support/Operations personnel without reasonable anticipation of exposure to bloodborne pathogens, but who provide service in patient care areas	Measles/Mumps/Rubella Varicella TB Skin Testing Program Tetanus/Diphtheria	Influenza
H.	Other Site Support, Operations, and Landscape Personnel	Tetanus/Diphtheria	Influenza
I.	Housekeeping staff in non-clinical facilities	Hepatitis B	Hepatitis A Tetanus/Diphtheria Influenza
J.	Animal Handlers and personnel who enter animal care areas	In accordance with the OUHSC Division of Animal Resources <i>Occupational Health and Safety Program</i>	
K.	All other employees for which none of the above category descriptions apply	None	Influenza

Vaccine History Form for OUHSC Employees and Students

Name (print) _____ Dept. _____ EmplID _____ Date _____
 Date of Birth _____ Job Title _____
 Building in which work is performed _____ Supervisor Name _____

Department Address _____ Dept. Phone _____ Date Hired _____

Do your job duties ever require work in patient contact areas? Yes No Initial

If you answered Yes, please provide the records requested in 1, 2, 3, 4, 5, 7 and 8 below.

Do your duties have the potential for exposure to human blood, blood products, or other body fluids? Yes No Initial

If you answered Yes, please provide the records requested in 6 below.

Do your job duties ever require work in clinical areas, or are you a student? Yes No Initial

If you answered 'No' to all three of the above questions, complete all information requested above and send the form to Employee Health at OUPB 2350. If you answered 'Yes' to any of the above questions, complete the rest of this form and attach proof of vaccinations or blood tests.

1. Tuberculin PPD Mantoux Skin or Interferon Gamma Release Assay (IGRA) Test (Tine or Monovac test not acceptable) complete item a. or b.
 a. Attach evidence of a negative tuberculin PPD (Mantoux) test received in the last 12 months. Test Date _____
 or
 b. Date of first positive tuberculin PPD or IGRA test Test Date _____
 i. Attach evidence of a follow-up negative chest x-ray X-Ray Date _____
 ii. Did you receive isoniazid-based therapy? Yes No

2. Varicella (Chicken Pox) complete a., b., or c.
 a. Have you had chickenpox? Yes No Uncertain
 If 'Yes', attach documentation from a healthcare provider of either a diagnosis or history of chickenpox or herpes zoster (shingles)
 If 'No' or 'Uncertain', or you do not have documentation of history, a blood test to check for immunity is required. If you are not immune, item 2.c. is required.
 or
 b. Attach evidence of varicella blood test. Test Date _____
 or
 c. Attach evidence of two varicella immunizations 1) _____ 2) _____

3. Rubeola (Measles) complete a. or b.
 a. Attach evidence of 2 rubeola immunizations 28 days apart after the age of 12 months 1) _____ 2) _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____

4. Rubella (German Measles) complete a. or b.
 a. Attach evidence of 1 rubella immunization received after the age of 12 months Vaccine Date _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____

5. Mumps complete a. or b.
 a. Attach evidence of 1 mumps immunization received after the age of 12 months Vaccine Date _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____

6. Hepatitis B immunizations complete a. b. or c.
 a. Attach evidence of 1, 2, and 3 hepatitis B immunizations and dates 1) _____ 2) _____ 3) _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____
 or
 c. **Vaccine Refusal** - I understand that due to my occupational or student 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 me if I am an OUHSC/OU-Tulsa employee). However, I decline the hepatitis B vaccine at this time. I understand 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 and other potentially infectious materials and want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series (at no charge to me if I am an OUHSC/OU-Tulsa employee).
 Printed Name _____ Signature _____ Date _____

7. Tetanus and Diphtheria
 a. Did you receive childhood Diphtheria-Pertussis-Tetanus (DPT) immunization? Yes No Uncertain
 b. Have you received adult Tetanus-diphtheria (Td) immunizations Yes No Uncertain
 c. Approximate date of last tetanus booster Test Date _____

8. Pertussis
 a. Have you received adult Tdap immunizations? Yes No Uncertain
 c. Approximate date Test Date _____

I understand I will be deemed by the University to have declined to be vaccinated if I have not completed the vaccination/immunization requirement by 180 days of my employment or my initial notification of these requirements. I have therefore assumed the risk of contracting these diseases should I elect to decline to be immunized. I know that I may re-visit this decision with Employee Health at any time, and I may change my mind any time in the future.

I have declined/deferred one of the above (declination form attached).
 Employee Signature _____ Date _____

Vaccine History Form for OU-Tulsa Employees

Name (print) _____ Date _____
 Date of Birth _____ Date of Hire _____
 Department _____ Dept. Phone _____
 HR Coordinator Name (Printed) _____ (Signature) _____

This employee is assigned HR Category _____.

Employee is to provide the following (please bring evidence of the following with you to your Employee Health/SEHC appointment):

- 1. Tuberculin PPD Mantoux Skin or Interferon Gamma Release Assay (IGRA) Test (Tine or Monovac test not acceptable) complete item a. or b.
 a. Attach evidence of a negative tuberculin PPD (Mantoux) test received in the last 12 months. Test Date _____
 or
 b. Date of first positive tuberculin PPD or IGRA test Test Date _____
 i. Attach evidence of a follow-up negative chest x-ray X-Ray Date _____
 ii. Did you receive isoniazid-based therapy? Yes No

- 2. Varicella (Chicken Pox) complete a., b., or c.
 a. Have you had chickenpox? Yes No Uncertain
 If 'Yes', attach documentation from a healthcare provider of either a diagnosis or history of chickenpox or herpes zoster (shingles)
 If 'No' or 'Uncertain', or you do not have documentation of history, a blood test to check for immunity is required. If you are not immune, item 2.c. is required.
 or
 b. Attach evidence of varicella blood test. Test Date _____
 or
 c. Attach evidence of two varicella immunizations 1) _____ 2) _____

- 3. Rubeola (Measles) complete a. or b.
 a. Attach evidence of 2 rubeola immunizations 28 days apart after the age of 12 months 1) _____ 2) _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____

- 4. Rubella (German Measles) complete a. or b.
 a. Attach evidence of 1 rubella immunization received after the age of 12 months Vaccine Date _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____

- 5. Mumps complete a. or b.
 a. Attach evidence of 1 mumps immunization received after the age of 12 months Vaccine Date _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____

- 6. Hepatitis B immunizations complete a. b. or c.
 a. Attach evidence of 1, 2, and 3 hepatitis B immunizations and dates 1) _____ 2) _____ 3) _____
 or
 b. Attach evidence of a positive blood test for IGG antibodies Test Date _____
 or
 c. **Vaccine Refusal** - I understand that due to my occupational or student 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 me if I am an OUHSC/OU-Tulsa employee). However, I decline the hepatitis B vaccine at this time. I understand 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 and other potentially infectious materials and want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series (at no charge to me if I am an OUHSC/OU-Tulsa employee).
 Printed Name _____ Signature _____ Date _____

- 7. Tetanus and Diphtheria
 a. Did you receive childhood Diphtheria-Pertussis-Tetanus (DPT) immunization? Yes No Uncertain
 b. Have you received adult Tetanus-diphtheria (Td) immunizations Yes No Uncertain
 c. Approximate date of last tetanus booster Test Date _____

- 8. Pertussis
 a. Have you received adult Tdap immunizations? Yes No Uncertain
 c. Approximate date Test Date _____

I understand I will be deemed by the University to have declined to be vaccinated if I have not completed the vaccination/immunization requirement by 180 days of my employment or my initial notification of these requirements. I have therefore assumed the risk of contracting these diseases should I elect to decline to be immunized. I know that I may re-visit this decision with Employee Health/SEHC at any time, and I may change my mind any time in the future.

I have declined/deferred one of the above (declination form attached).

Employee Signature _____ Date _____

Prospective employees: Attach appropriate documentation as requested and submit the completed, signed form to OU-Tulsa Student/Employee Health 4444 S. Yale Avenue, Tulsa, OK 74135-2512.

Vaccine Refusal Form for OUHSC/OU-Tulsa Employees

Name _____

Dept _____

SSN _____ / _____ / _____ or Employee ID Number _____

- Varicella
- Rubeola
- Rubella
- Mumps
- Pertusis
- Tuberculosis (TB) Skin Test/Interferon Gamma Release Assay (IGRA) Test
- Other: _____

I acknowledge that I am aware of the following facts:

Measles, mumps, and rubella are highly communicable viruses. Rubella may be associated with significant morbidity in adults and is associated with a high rate of fetal anomalies in the early months of pregnancy. Healthcare personnel are among a group at high-risk for transmission. The risk for measles infection in medical personnel is estimated to be thirteenfold that for the general population. A substantial proportion of reported mumps has occurred among unvaccinated adolescents and young adults on college campuses and in the workplace, and mumps transmission in medical settings has been reported nationwide.

Varicella is a highly communicable disease caused by the varicella-zoster virus. Although it is generally a benign, self-limiting disease, varicella may be associated with serious complications (e.g. bacterial superinfection, pneumonia, encephalitis, Reye's Syndrome) and/or death. Clinical trials have shown that Varivax produces immune responses in a high proportion of individuals and is generally well tolerated in healthy persons ranging from 12 months to 55 years of age.

Pertussis is highly contagious. The Tetanus/Diphtheria/Acellular Pertussis (Tdap) vaccine is a sterile solution administered intramuscularly for active immunization against the three toxins. Goals of the Tdap immunization program include protecting the vaccinated adult against pertussis, reducing the reservoir of pertussis in the population at large, decreasing exposure of persons at risk for complicated infection and decreasing the cost and disruption of pertussis in healthcare facilities and other institutional settings. Pertussis can be a serious, sometimes fatal disease, especially for infants. Although adults are less likely than infants to become seriously ill with pertussis, adults have been shown to be an important source of infection to infants with whom they have close contact.

Tuberculosis (TB) is a disease caused by germs that are spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine. A person with TB can die if he/she does not get treatment. The Mantoux Purified Protein Derivative (PPD) skin test is the standard method of determining whether a person is infected with *Mycobacterium tuberculosis*. The test is generally well tolerated by most patients and is contraindicated only for persons who have had a severe reaction (e.g., necrosis, blistering, anaphylactic shock, or ulcerations) to a previous PPD or who have been vaccinated with Bacillus Calmette-Guérin (BCG). It is not contraindicated for any other persons, including infants, children, pregnant women, and persons who are HIV-infected. Persons who have been vaccinated with BCG should have their blood drawn for an Interferon Gamma Release Assay (IGRA)

tuberculin test instead of a skin test.

I understand that the consequences of my declining to be vaccinated, titered, or skin tested could endanger my health and the health of those with whom I have contact, including my family, my coworkers, my community, and patients. I understand that by declining these vaccines, titers, or skin tests, I may continue to be at risk of acquiring and transmitting these diseases and may be excluded from working if there is an outbreak of this disease in the University, the OU Medical Center, or the community.

I understand the importance of not conveying infectious diseases to patients, employees, and students; however, I decline participation in the (check one or both):

- vaccination program by providing evidence of documented immunity to the above indicated infectious diseases.
- PPD skin testing program

With this declination, I understand that the consequences under the OUHSC/OU-Tulsa *Infectious Diseases Policy* are that, should I be potentially exposed to any of these agents or contract these diseases, I will be restricted from duty for the appropriate incubation period of the exposure or disease on leave with pay if available, or, if not available, on leave without pay.

I know that I may re-visit this decision with Employee Health at any time, and I may change my mind anytime in the future.

Signature _____ Date _____

APPENDIX B

OUHSC/OU-TULSA *BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN*

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MANAGER ANNUAL RESPONSE AND RESULTING DEPARTMENTAL
STANDARD OPERATING PROCEDURES FORMS**

Bloodborne Pathogen Exposure Control Plan

I. INTRODUCTION

- A. This document describes the *Bloodborne Pathogen Exposure Control Plan* for employees of all University of Oklahoma campuses and clinical related facilities except the OU Norman campus (hereinafter referred to as OUHSC/OU-Tulsa), developed to protect employees from health hazards associated with bloodborne pathogens in the workplace as required by the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standard (29 CFR 1910.1030) adopted by the Oklahoma Department of Labor.
- B. This Plan is made readily available to OUHSC/OU-Tulsa employees and, upon request, to the Oklahoma Department of Labor.
- C. This Plan will be reviewed and evaluated by the OUHSC/OU-Tulsa Environmental Health and Safety Office (EHSO) at least annually.

II. SCOPE AND APPLICATION

- A. This Plan applies to all OUHSC/OU-Tulsa employees with occupational exposure to human blood or other potentially infectious materials.
- B. Occupational exposure means reasonably anticipated eye, skin, mucous membrane or parenteral contact with human blood or other potentially infectious materials that may result from the performance of an employee's duties at OU.
- C. Other potentially infectious material means the following:

- 1. **Human Body Fluids**

- a. semen,
- b. vaginal secretions,
- c. pericardial fluid,
- d. cerebrospinal fluid,
- e. synovial fluid,
- f. pleural fluid,
- g. peritoneal fluid,
- h. amniotic fluid,
- i. saliva in dental procedures,
- j. any body fluid that is visibly contaminated with blood, and
- k. all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

- 2. **Other**

- a. any unfixated tissue or organ (other than intact skin) from a human, living or dead;
- b. human immunodeficiency virus (HIV)-containing cell or tissue cultures,

- c. human organ cultures;
- d. HIV- or hepatitis B virus (HBV)-containing culture medium or other solutions; and
- e. blood, organs, or other tissues from experimental animals infected with HIV, HBV or other bloodborne pathogens infectious to man.

3. **Human Cell Lines and Human Cell Strains**

- a. Only established human cell lines and human cell strains which are characterized (tested by antigenic screening for viral or agent markers, co-cultivation with indicator cells allowing contaminants to grow, or molecular technology such as polymerase chain reaction or nucleic acid hybridization) to be free of bloodborne pathogens (including HIV, HBV, Epstein-Barr virus, Herpes virus and papilloma members of the Papovavirus group, etc.) and documented as such may be excluded from the requirements of the OSHA Bloodborne Pathogen Standard.
 - b. Cell lines/strains that are procured from commercial vendors or other sources with documented testing to be free of human bloodborne pathogens and which have been protected from contamination may be excluded from the requirements of the OSHA Bloodborne Pathogen Standard.
- D. Hazard communication designated coordinators or payroll coordinators are responsible for determining which employees have reasonable anticipation of exposure to blood or other potentially infectious materials [without regard to the use of personal protective equipment (PPE)], and, for new employees, should ensure that the electronic *Personnel Action Form (ePAF)* reflects that the position has occupational exposure to blood or other potentially infectious material.

III. **STANDARD/UNIVERSAL PRECAUTIONS**

- A. OSHA requires the use of "Universal Precautions" to prevent contact with human blood or other potentially infectious material. According to the concept of universal precautions, as developed by the United States Centers for Disease Control and Prevention (CDC), all human blood and certain body fluids are treated as infectious for HBV, HIV, and other bloodborne pathogens. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids should be considered potentially infectious materials.
- B. Hospital procedures require the use of "Standard Precautions." Standard Precautions add body substance isolation principles to the requirements of Universal Precautions and applies them to all patients receiving care in hospitals, regardless of their diagnosis or presumed infection status. Standard Precautions apply to 1) blood; 2) all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood; 3) nonintact skin; and 4) mucous membranes.

IV. **ENGINEERING AND WORK PRACTICE CONTROLS**

- A. Engineering and work practice controls should be utilized first to minimize employee exposure.

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- B. Handwashing facilities should be readily accessible to employees. Personnel in work areas that do not have handwashing facilities readily accessible should be provided with an appropriate hand cleanser in conjunction with clean cloth or paper towels or antiseptic towelettes. Employees should wash their hands with soap and running water as soon as feasible after using antiseptic hand cleansers or towelettes.
 - C. Employees should wash their hands immediately or as soon as feasible after removal of gloves or other PPE.
 - D. Employees should wash their hands or 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.
 - E. Appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure should be used whenever feasible.
 1. Clinic managers should solicit input at least annually from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls; document the solicitation; and provide a copy of the documentation to the EHSO for inclusion in the Exposure Control Plan. Example forms that may be used for such solicitation and documentation is located in Appendix C-A.
 2. Where such safer medical devices are identified and to be used, departmental standard operating procedures (SOPs) for such use should be developed and provided to all applicable employees and to the EHSO for incorporation into this Exposure Control Plan. An example form that may be used to document the SOPs is located in Appendix C-A.
 - F. Contaminated needles or other contaminated sharps shall not be bent, recapped, or removed. If needles must be recapped, a mechanical means or a one-handed technique shall be used. Needles should not be removed from a blood tube holder in order to re-use the tube holder.
 - G. Immediately or as soon as possible after use, contaminated sharps should be placed in appropriate containers, even if the sharps are reusable and will be reprocessed. Blood tube holders, with needles attached, shall be immediately discarded into an accessible sharps container after the safety feature has been activated.
 1. These sharps containers should be:
 - a. puncture resistant,
 - b. labeled with the biohazard symbol or color-coded,
 - c. leak-proof on the sides and bottom,
 - d. placed near the point of use, and
 - e. not be allowed to overfill (a good guideline is to dispose when approximately two-thirds full).
 2. Other considerations for selection of sharps containers include lids that lock tight for

safe disposal, a container that is specifically constructed for the method of sterilization that will be used (if sharps containers are not specifically constructed to be autoclaved, the resulting mass of melted plastic is extremely hazardous due to the needles that often protrude), and a clear top that allows inspection.

- H. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses is prohibited in areas where there is a reasonable likelihood of occupational exposure.
- I. Food or drink shall not be kept in areas where blood or other potentially infectious materials are present or stored.
- J. Procedures that minimize spraying, splashing, spattering, and generation of droplets of infectious material shall be used whenever possible.
- K. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.
- L. Specimens of blood or other potentially infectious materials shall be placed in a container that prevents leakage during collection, storage, transport, or shipping. This container shall be red or labeled with the biohazard symbol and closed prior to being stored, transported, or shipped. If contamination outside this primary container occurs or is likely to occur, it shall be placed in a second red or similarly labeled container that prevents leakage during handling processing, storage, transport, or shipping.
- M. Equipment that has been in contact with blood or other potentially infected material shall be examined prior to servicing or shipping and shall be decontaminated as necessary.
 - 1. Where complete decontamination cannot occur prior to servicing, a readily observable biohazard label shall be attached to the equipment stating which portions of the equipment remain contaminated, and
 - 2. the employee requesting the service or repair is responsible for ensuring that information is conveyed to all affected employees, service representatives such as the OUHSC Biomed Shop and/or the manufacturer prior to handling, servicing, or shipping so that appropriate precautions can be taken.

V. **PERSONAL PROTECTIVE EQUIPMENT**

- A. Where occupational exposure remains after the institution of engineering controls, PPE should also be used by the employees. The appropriate PPE shall be provided by the department/laboratory/clinic at no cost to the employee in the appropriate sizes, appropriate and be readily accessible for the job at hand.
- B. Departments are responsible for developing laboratory/clinic/departmental standard operating procedures (SOPs) that specify the type of PPE to be worn and other safety equipment to be used, specific to the work being performed and for making them available to departmental employees and the EHSO. These SOPs should be developed incorporating the following guidelines.
 - 1. Gloves shall be worn when it can be reasonably anticipated that the employee may

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- have hand contact with blood or other potentially infectious materials, mucous membranes, and non-intact skin such as during phlebotomies and when handling or touching contaminated items.
2. Masks in combination with eye protection devices such as goggles or face shields shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious material may be generated and eye, nose, or mouth contamination can be reasonably anticipated.
 3. Gowns, aprons, lab coats, surgical caps or hoods, and/or shoe covers shall be worn when gross contamination can be reasonably anticipated. The type and characteristics of this protective clothing will depend upon the task and degree of exposure anticipated.
- C. Supervisors are responsible for:
1. ensuring that appropriate sizes of PPE are readily available to employees,
 2. ensuring that employees use the PPE properly,
 3. ensuring that employees are trained in the use of PPE and demonstrate an ability to use PPE properly before allowing them to perform work requiring the use of PPE, and
 4. identifying and retraining employees who the supervisor believes do not have the understanding and skill required to properly use the required PPE. Examples of when retraining is required include, but are not limited to:
 - a. changes in workplace operations,
 - b. changes in types of PPE, or
 - c. inadequacies in an employee's knowledge or use of required PPE.
- D. All garments shall be removed as soon as feasible if contaminated by blood or other potentially infectious material.
- E. Disposable gloves shall be removed and replaced when contaminated or torn and should not be reused. Utility gloves (for non-patient contact) may be decontaminated for re-use if the integrity of the glove is not compromised.
- F. To prevent widespread contamination, employees must remove gloves before touching objects such as door knobs, light switches, telephones, etc., and before leaving the work site.
- G. Removed PPE should be placed in a designated area or container for storage, washing, decontamination, or disposal. PPE contaminated with blood or body fluids should be placed in a designated container that is either red or labeled with the biohazard symbol.
- H. PPE should be cleaned, laundered and/or disposed in a proper manner.
1. Contaminated disposable PPE should be placed in a biohazard bag until it can be

sterilized/autoclaved. After complete sterilization is assured, the bag should be placed in an opaque (brown or gray) bag or other container that is not labeled with the biohazard symbol, and placed in the trash for disposal.

2. Contaminated launderable PPE shall be handled in the following manner.
 - a. Departments must segregate its laundry into two categories - contaminated (laundry that has been soiled with blood or other potentially infectious materials) and uncontaminated.
 - b. Contaminated laundry shall be handled as little as possible with a minimum of agitation.
 - c. All employees who have contact with contaminated laundry should wear protective gloves and other appropriate PPE.
 - d. 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.
 - e. Contaminated laundry should be transported by the department to the designated pick up and delivery locations in red bags or containers labeled with the biohazard symbol. These must be purchased by each department.
 - f. 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 to the designated pick-up locations by the department in bags or containers that prevent soak through and/or leakage of fluids to the exterior.
 - g. The department is responsible for informing the vendor that the laundry in red bags or bags labeled with the biohazard symbol is contaminated and that the vendor should handle contaminated laundry in accordance with the requirements of 29 CFR 1910.1030.

VI. LABELS AND SIGNS

- A. All biohazard labels and signs shall bear the biohazard legend and international sign and shall be fluorescent orange or orange-red with the lettering and symbols in a contrasting color.
- B. Biohazard labels shall be affixed to all containers of biomedical waste, refrigerators, freezers and other containers that hold or are contaminated with blood or other potentially infectious material. Red bags or containers may be substituted for labels.
- C. Labels should be affixed in a manner that prevents loss or unintentional removal.
- D. 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.
- E. 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.
- F. Biomedical waste that has been decontaminated need not be labeled or color-coded.

VII. HOUSEKEEPING AND SPILL CLEANUP**A. GENERAL INFORMATION**

1. Supervisors should ensure that the worksite is maintained in a clean and sanitary manner.
2. All equipment and working surfaces shall be decontaminated as soon as possible after contact with blood or potentially infectious material.
3. Contaminated work surfaces shall be decontaminated after completion of procedures, immediately or as soon as feasible after any spill of blood or other potentially infectious material, and at the end of the work shift if the surface has become contaminated since the last cleaning.
 - a. All bins, pails, cans, and similar receptacles intended for reuse that have a reasonable likelihood of becoming contaminated with blood or other potentially infectious material shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
 - b. Broken glassware that may be contaminated should never be picked up directly with the hands but by mechanical means such as a brush and dustpan, tongs, or forceps.

B. DISINFECTANTS

Spills of blood and blood-contaminated fluids and potentially contaminated surfaces shall be properly cleaned following the manufacturer's handling instructions using the following disinfectants:

1. products registered by the United States Environmental Protection Agency (USEPA) as a "hospital disinfectant" (chemical germicides that have a label claim for tuberculocidal activity),
2. products registered by the USEPA as being effective against human immunodeficiency virus (HIV), or
3. a solution of 5.25 percent sodium hypochlorite (household bleach) diluted between 1:10 and 1:100 with water (a 1:100 dilution of common household bleach yields 500 parts per million free available chlorine - approximately 1/4 cup of bleach per gallon of tap water).

C. SPILL PROCEDURES

1. Universal precautions must be observed. Cleaning of spills must be limited to those persons who are trained for the task.
2. If an untrained person encounters a spill, he/she should limit access to the area and immediately call the person(s) assigned to this duty.

3. Only disposable towels should be used to avoid the difficulties involved in laundering.
4. If a spill involves broken glassware, the glass should **never** be picked up directly with the hands. It must be cleaned up using mechanical means such as a brush and dustpan, tongs, or forceps.
5. For blood spills on hard surfaces:
 - a. Alert people in immediate area of spill.
 - b. Put on protective equipment. This may include a laboratory coat with long sleeves, back-fastening gown or jumpsuit, disposable gloves, disposable shoe covers, safety goggles, mask or full-face shield.
 - c. Cover spill with paper towels or other absorbent materials.
 - d. Carefully pour a freshly prepared 1 to 10 dilution of household bleach or other approved disinfectant (see VII.B. above) around the edges of the spill and then into the spill. Avoid splashing.
 - e. Disinfectants require at least a 20-minute contact period to work (or the contact time indicated on the label.)
 - f. After the spill has been absorbed, collect paper towels into a biohazard bag. Clean-up the spill area with fresh towels soaked in disinfectant. Leave a residue of disinfectant. Allow a 20-minute contact period (or the manufacturer's recommended contact time) before considering the area clean and disinfected.
6. For blood spills on carpeting:
 - a. Do not use chlorine bleach solution on carpet.
 - b. Use only a registered disinfectant as described in VII.B. above. Read and follow manufacturer's instructions.
 - c. Isolate the area, if possible.
 - d. Wear gloves and other appropriate PPE.
 - e. For small spills on carpets (smaller than a quarter):
 - (1) Soak the spill with enough disinfectant to cover the spot.
 - (2) Let dry at least overnight to ensure that the spot is disinfected.
 - (3) Shampoo carpet, if needed, or use 3% hydrogen peroxide to remove discoloration.
 - f. For larger spills on carpet:
 - (1) Pour disinfectant on the spot and let stand at least 30 minutes to allow some disinfection to take place. Blot up excess liquid with disposable towels.
 - (2) Soak the area with additional disinfectant. Allow to dry overnight. Shampoo carpet, if needed, or use 3% hydrogen peroxide to remove discoloration.
7. All contaminated items should be double-bagged and labeled with the biohazard

symbol.

- a. Procedures for launderable items must follow those outlined in Section V.H.2, *Personal Protective Equipment*.
- b. Disposal of contaminated material must follow procedures outlined below in Section VIII., *Biomedical Waste Disposal*.

VIII. BIOMEDICAL WASTE DISPOSAL

- A. Biomedical waste includes materials that are capable of producing an infectious disease, or materials that are not otherwise regulated as hazardous waste, but should be autoclaved or incinerated through a biomedical waste incinerator. Examples of biomedical waste include:
1. cultures and stocks of infectious agents, live vaccines and culture dishes, devices, paper, and cloth that has come into contact with such cultures, stocks, and live vaccines;
 2. items contaminated with blood or other human body fluids that drip freely or would release such materials in a liquid or semi-liquid state if compressed or are caked with dried blood or body fluids and are capable of releasing these materials;
 3. human blood, blood products, and human body fluids except urine or feces, unless they can be discharged into the collection system of a publicly owned treatment works within the generating facility;
 4. pathological wastes consisting of human tissues, organs, and body parts removed during surgery, autopsy, biopsy and other medical procedures;
 5. used or contaminated sharps including hypodermic needles, syringes, (with or without the attached needle), Pasteur pipettes, scalpel blades, suture needles, and needles with attached tubing and other types of broken or unbroken glassware that has come in contact with infectious agents (such as used slides and cover slips);
 6. animal carcasses and body parts, and contaminated bedding;
 7. wastes from surgery, autopsy and other medical procedures;
 8. significantly soiled dressings and other patient-care materials;
 9. dialysis unit wastes;
 10. isolation wastes, unless determined to be non-infectious by the infection control committee at the health care facility;
 11. pharmaceutical wastes;
 12. laboratory reagents contaminated with infectious body fluids;
 13. all materials that have come in contact with or are contaminated with

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- cytotoxic/antineoplastic agents;
14. used blood collection bags, tubes, and vials; and
 15. any other material and contaminated equipment that, in the determination of the facility infection control staff or EHSO, presents a significant danger of infection because it is contaminated with, or may reasonably be expected to be contaminated with, infectious agents.
- B. Antineoplastic/cytotoxic agents and other chemical hazards require special disposal arranged through the EHSO.
- C. If any infectious waste is also a chemical waste, call the EHSO for assistance with disposal after disinfection.
- D. Biomedical wastes that are also radioactive must be treated according to requirements for both biomedical and radioactive waste.
- E. Prior to any treatment, all biomedical wastes, including those to be incinerated, must be enclosed in a puncture resistant bag or other puncture-resistant container that is color coded or labeled with the biological hazard symbol.
- F. Untreated biomedical waste is not to be disposed of in the municipal waste stream. All biomedical wastes must be treated and rendered harmless and biologically inert by one of the following methods:
1. incineration in an approved incinerator,
 2. steam sterilization at sufficient time and temperature to destroy infectious agents in waste,
 3. chemical disinfection where contact time, concentration, and quantity of the chemical disinfectant are sufficient to destroy infectious agents in the waste, or
 4. any other method approved by the Oklahoma Department of Environmental Quality and is generally recognized as effective.
- G. A biological indicator should be routinely utilized to ensure that complete sterilization of biomedical waste has occurred prior to disposal. Recommended procedures are as follows:
1. Spore strips inoculated with *Bacillus stearothermophilus* and *Bacillus subtilis* or other suitable and reliable biological indicator should be used at least once per week to monitor the adequacy of sterilizer performance.
 2. Care must be taken to place the spore strips in the middle or most inaccessible portion of the autoclave load, preferably inside a filled, biohazardous waste bag.
 3. Once placed in the autoclave load, perform the sterilization process in the normal manner.
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4. Some commercial spore strips have a color change indicator. This color change does not indicate that sterility was achieved, only that minimal process parameters were attained. Do not rely on this color change to ensure sterilization.
 5. Process and incubate the spore strips according to manufacturer or vendor procedures.
 6. If the processed spore strips indicate microbiological growth, the appropriate support service, such as Site Support on the Oklahoma City campus at 405/271-2121, should be notified as soon as possible and the autoclave should not be used until it has been repaired. Others who may use the equipment should be notified as well.
 7. Record the results in a permanent location.
- H. After disinfection but before disposal in the municipal waste stream, all treated biomedical wastes should be enclosed in an unmarked outer container that is **not** red or labeled with the biohazard symbol. Any biomedical waste that has been treated as described above and packaged such that it is clearly evident that the waste had been effectively treated is not subject to regulation as biomedical waste and may be collected, transported, and disposed of as municipal waste.

IX. HEPATITIS B VACCINATION

Employees and students will be offered the hepatitis B vaccination series in accordance with Appendix A of the OUHSC/OU-Tulsa *Infectious Diseases Policy*.

X. FIRST AID PROCEDURES

- A. If any employee responds to an emergency that provides potential for exposure to blood or other potentially infectious materials, standard precautions should be used.
- B. First aid kits should include protective equipment including gloves, masks, and face shields for response to emergencies in which blood is present. Pocket masks for CPR procedures are also recommended.
- C. For most situations in which first aid is given, the following guidelines for protective clothing are offered.
 1. For bleeding control with minimal bleeding, disposable gloves should be worn.
 2. For bleeding control with spurting blood, disposable gloves, a gown, a mask, and protective eye wear are recommended.
 3. For measuring temperature or measuring blood pressure, no protection is required.
- D. After emergency care has been administered, hands and other skin surfaces should be washed immediately and thoroughly with warm water and soap. Hands should always be washed after gloves are removed, even if the gloves appear to be intact.

- E. If blood is splashed onto the unprotected skin or mucous membranes of persons other than the victim, the skin should be washed with soap and water or the mucous membranes should be flushed with water thoroughly. Immediately after washing or flushing, follow the procedures in Section XI., *Exposure Incident Procedures*.
- F. After an emergency that involves blood is over, clean-up of blood may be required. Housekeeping services will not automatically clean the spill. Departments with personnel trained under the Bloodborne Pathogen Standard are responsible for cleaning such spills occurring within their department. If no one in the department is trained, or if a spill is observed that cannot be attributed to any department, access to the spill area should be limited and General Services (405/271-2311) in Oklahoma City or the EHSO in Tulsa (918/660-3878) should be contacted for the needed response.
- G. Waste materials heavily contaminated with blood must not be disposed in the regular trash. These items must be disposed of as biomedical waste. See Section VIII., *Biomedical Waste Disposal*.

XI. EXPOSURE INCIDENT PROCEDURES

- A. If an employee or student sustains an exposure incident (such as a stick with a contaminated needle/scalpel/dental wire or a splash of potentially infectious material in the eye, mouth, mucous membrane, or non-intact skin), the exposed person should immediately:
 - 1. clean the wound with soap and water; flush mucous membranes with water or normal saline solution;
 - 2. notify his/her supervisor, designated coordinator, or other designated individual; and
 - 3. proceed for treatment as soon as possible, preferably within 1-2 hours of the exposure.
- B. Recommended locations for treatment are as follows:
 - 1. Oklahoma City Employees

If injured at the VA, during business hours (8:00 a.m. - 5:00 p.m) the employee should proceed to Occupational Health Service on the first floor.

If injured at the VA after hours, the employee should proceed to the VA Life Support Unit (emergency room).

All Others During Business Hours:

Employee Health
900 NE 10th
Family Medicine Center, Suite 1600 (Green Clinic)
Oklahoma City, Oklahoma 73104
405/271-3100

Hours: 7:30 a.m. - 4:30 p.m. Monday through Friday (Closed 11:30 - 12:30 p.m.)

All Others After Hours:

Presbyterian Tower Emergency Department
700 N. E. 13th
Oklahoma City, Oklahoma 73104
405/271-4064

(A follow-up appointment should be made the next working day at Employee Health)

2. Oklahoma City Students

During Business Hours:

Student Health
Family Medicine Center
900 Northeast 10th Street
Oklahoma City, Oklahoma 73104
405/271-2577

After Hours:

Presbyterian Tower Emergency Department
700 N. E. 13th
Oklahoma City, Oklahoma 73104
405/271-4064

(A follow-up appointment should be made the next working day at Student Health)

3. Tulsa Employees

During Business Hours:

Student/Employee Health Clinic (SEHC)
4444 S. Yale Avenue
Tulsa, OK 74135
918/619-4565
918/646-0146 (pager)

After Hours:

The employee should notify the House Supervisor of the facility where the injury occurred and follow instructions given; report to SEHC the next business day.

4. Tulsa Students

During Business Hours:

Student/Employee Health Clinic (SEHC)

4444 S. Yale Avenue
Tulsa, OK 74135
918/619-4565
918/646-0146 (Pager)

After Hours:

The employee should proceed to the emergency department of the facility where the injury occurred and report to SEHC the next business day.

5. Enid Employees

Urgent Care Plus
1805 W. Owen K. Garriott Rd.
Enid, OK 73703-0552
580/233-9012

6. Lawton Employees

AM-PM Clinic
4411 West Gore Blvd
Lawton, OK
580/355-0575

Prompt Care Center
412 SW Summit
Lawton, OK
580/357-9685

7. George Nigh Rehabilitation Center

The employee should notify his/her supervisor and the facility risk manager who will refer the employee to the nearest emergency room.

8. All Other Locations

After notifying his/her supervisor, the employee should report to the nearest emergency department and follow-up by telephone with Human Resources at 405/271-2191 for Oklahoma City area employees or 918/619-4565 for Tulsa area employees to receive the appropriate treatment protocol(s).

C. The responding health care professional should manage the exposure or possible exposure according to the current CDC guidelines or protocol (as described in the *OUHSC/OU-Tulsa Infectious Diseases Policy*).

D. Source Blood Procedures

Source blood testing should be initiated immediately to determine the need for post-exposure prophylaxis for the exposed employee. Post-exposure prophylaxis should be initiated as soon as

possible (preferably within 1-2 hours).

1. Oklahoma City

a. For employees in hospital-based clinics:

- (1) During regular business hours, OUHSC Employee Health should be notified immediately. OUHSC Employee Health will then contact the facility's infection control office to coordinate patient source blood drawn for testing. Results should be called to OUHSC Employee Health.
- (2) After hours, the employee should proceed to the emergency department. Lab work results should be identified as OUHSC employee related and requested to be forwarded to OUHSC Employee Health via OUMC Employee Health Department or may be retrieved from the Meditech system..

b. For employees in clinics that have the capabilities of drawing patient blood:

- (1) Someone with documented competency in phlebotomy who has received bloodborne pathogen training and been offered the hepatitis B vaccination series should draw two serum separator tubes of the source patient's blood (contact Employee Health for proper tube color).
- (2) The vials should be labeled with "source, doe", where 'doe' is the last name of the exposed employee.
- (3) The vials should be packaged in a biohazard labeled container that will prevent leakage or breakage during transport.
- (4) The samples and confidential document should be sent with the employee to OUHSC Employee Health during business hours or to the nearest emergency department after hours.

c. Employees receiving exposures not falling into the above two categories should request that the source accompany a departmental representative to OUHSC Employee Health for lab collection. Documentation should be completed and submitted with the patient's blood identifying the sample as OUHSC employee related and requesting results be forwarded to OUHSC Employee Health.

2. Tulsa

- a. Employees should contact their supervisor and proceed to SEHC. The supervisor shall escort the source patient to SEHC.
- b. Tulsa residents should contact the SEHC or house supervisor of the facility in which they are working.

3. Other Locations

OUHSC/OU-Tulsa departments/clinics where employees have the potential for

exposure to human blood or other potentially infectious materials from patients and who do not have access to hospital source blood patient testing procedures should have a plan for drawing source blood in the event of an incident. Such a plan could include sending the patient to the same facility where the employee is receiving treatment or drawing blood in accordance with the procedures found in the OUHSC/OU-Tulsa *Infectious Disease Policy* and this Appendix.

- E. Information that must be provided to the responding healthcare professional includes:
1. a description of the exposed employee's duties as they relate to the exposure incident,
 2. documentation of the route(s) of exposure and circumstances under which exposure occurred,
 3. results of the source individual's blood testing, if available, and
 4. all medical records relevant to the appropriate treatment including vaccination status.

XII. POST-EXPOSURE EVALUATION AND FOLLOW-UP

- A. Following an exposure incident, a confidential examination and follow-up shall be made available to the employee to address such infectious diseases as HBV, HCV, and HIV. This shall include confidential post-exposure prophylaxis and counseling in accordance with current CDC protocol.
- B. The healthcare professional providing treatment must forward a written opinion (as outlined in the OSHA regulation) to the employee and the appropriate Employee Health office (or for satellite locations, the appropriate infection control nurse), and maintain a copy on file.
- C. Additional information regarding the OUHSC/OU-Tulsa policies and procedures for hepatitis B vaccination and post exposure follow-up may be found in the OUHSC/OU-Tulsa *Infectious Diseases Policy*.

XIII. TRAINING

- A. OUHSC/OU-Tulsa employees who do not have reasonable anticipation of exposure shall be provided with information and training regarding first aid procedures in Section X. and what to do in the event of an emergency.
- B. All employees with occupational exposure to blood or other potentially infectious materials shall be provided with bloodborne pathogen training in the subject matter identified below at the time of assignment to tasks where occupational exposure may take place, when changes affect employees' occupational exposure and at least annually thereafter. Training must be documented by means of a written quiz, a copy of which must be forwarded to the EHSO.
- C. The training program shall contain at least the following elements:

1. an accessible copy of the regulatory text of the OSHA standard and an explanation of its contents;
 2. a general explanation of the epidemiology of and symptoms of bloodborne diseases;
 3. modes of transmission of bloodborne pathogens;
 4. an explanation of the department/laboratory/clinic's *Bloodborne Pathogen Exposure Control Plan* and how to get a copy of plan;
 5. appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;
 6. use and limitations of engineering controls, work practices, and PPE;
 7. an explanation of the basis for selection of PPE;
 8. information regarding the hepatitis B vaccine, including efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;
 9. appropriate actions to take and persons to contact in emergencies involving blood or other potentially infectious materials;
 10. procedure to follow if an exposure incident occurs including the methods of reporting the incident and the medical follow-up that will be made available;
 11. information on the post-exposure evaluation and follow-up that will be provided following an exposure incident;
 12. signs and labels that are required; and
 13. an opportunity for interactive questions and answers with the instructor.
- D. Employees who are required to use PPE shall also be trained to know at least the following:
1. when PPE is necessary,
 2. what PPE is necessary,
 3. how to properly don, doff, adjust and wear PPE,
 4. the limitations of the PPE, and
 5. the proper care, maintenance, useful life and disposal of PPE.

XIV. RECORDKEEPING REQUIREMENTS

- A. The EHSO will maintain records of training for at least three (3) years. Documentation of training performed by the department or by personnel other than EHSO personnel should be forwarded to the EHSO for inclusion in the training record.
- B. Copies of any injury/exposure report forms filed with Human Resources (HR) will be forwarded to the EHSO by HR where it will be filed in accordance with OSHA recordkeeping requirements.
- C. The employee's vaccination status shall be maintained by Employee Health for Oklahoma City employees and by the SEHC for Tulsa Employees.
- D. Information provided to the healthcare professional outlined in Section XI.E. and the healthcare professional's written opinion generated as a result of an exposure incident, shall be maintained by that healthcare professional and made available to OUHSC/OU-Tulsa at any time.

APPENDIX B-A

**SAMPLE SAFER NEEDLE DEVICES QUESTIONNAIRE AND
CLINIC MANAGER ANNUAL RESPONSE AND RESULTING DEPARTMENTAL STANDARD
OPERATING PROCEDURES FORMS**

SAFER NEEDLE DEVICE QUESTIONNAIRE

In an effort to ensure that your concerns regarding needlesticks and other sharps injuries are addressed, we ask that you complete this questionnaire and return it to your clinic manager by _____ (date).

Clinic Manager: _____

Address: _____

1. Are there any tasks you perform using a needle or other sharp for which you feel there is an elevated risk of injury?

- Yes
- No

2. If you answered yes to question 1., please describe the task(s): _____

3. If you answered yes to question 1., do you believe a safer needle device or other device would reduce the risk of injury?

Yes, I would like to try (indicate as much information as you know about the make, model, manufacturer, vendor, catalog number, etc.):

Yes, I would like someone to suggest a device.

No, I don't think a device will help, but I do think a change in workpractices could help as follows: _____

You may submit this form anonymously, but if you do we will not be able to contact you for input. If you would like us to contact you to help select a safer needle device or implement your ideas about how to reduce the risk of injury, please complete the following information:

Name: _____

Clinic: _____

Phone Number: _____

CLINIC MANAGER ANNUAL RESPONSE AND RESULTING DEPARTMENTAL STANDARD OPERATING PROCEDURES FORMS

A survey of the _____ clinic was performed on _____. Copies of the questionnaire responses are attached.

As a result, the following tasks have been identified as requiring the use of a safer device, and such use is now departmental standard operating procedure:

<u>TASK</u>	<u>DEVICE TO BE USED</u>

Clinic Manager Name

Clinic Manager Signature

Date

Send this form and copies of questionnaire responses to the appropriate EHSO as follows:

Oklahoma City Campus - ROB-301
Tulsa Campus - Bldg 12-12207

APPENDIX C

OUHSC/OU-TULSA TUBERCULOSIS INFECTION CONTROL PROGRAM

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TUBERCULOSIS INFECTION CONTROL PROGRAM

I. INTRODUCTION

The University of Oklahoma Health Sciences Center and the University of Oklahoma - Tulsa (OUHSC/OU-Tulsa) recognize that transmission of *M. tuberculosis* (TB) is a risk in health-care facilities. Prevention of disease and reduction of this risk may be effectuated through an effective facility-wide TB infection control program identifying procedures for early detection, isolation, and treatment of persons with active infectious disease. These goals may be accomplished through a hierarchy of control measures including (1) the use of administrative measures to reduce the risk of exposure to persons with infectious TB, (2) the use of engineering controls to prevent the spread and reduce the concentration of infectious droplet nuclei in the air, and (3) the use of personal respiratory protective equipment in areas where there is still a risk of exposure.

It is the intention of the OUHSC/OU-Tulsa to adhere to current guidelines established by the Centers for Disease Control and Prevention (CDC) for preventing the transmission of TB in health-care facilities. This will be accomplished through the OUHSC/OU-Tulsa *Tuberculosis Infection Control Program*, which shall incorporate the fundamental elements identified in the CDC guidelines, and which shall be in compliance with local, state, and federal law. Adherence to the procedures outlined in this infection control program should greatly reduce the risk to persons in these settings.

II. SCOPE

This program affects all persons who are employed by OUHSC/OU-Tulsa and who may, during the course of their employment, have the potential for exposure to TB. Sections VIII.E., VIII.F., and VIII.G. of this program also apply to all OUHSC/OU-Tulsa employees who do not have reasonable anticipation of exposure to TB, but who, during the course of their employment, experience a TB incident or are exhibiting signs or symptoms of TB. Student policies and procedures are found in Appendix C-A, *Student Procedures*.

III. RESPONSIBILITIES

- A. The Senior Vice President and Provost for OUHSC and the President of OU-Tulsa are responsible for assuring compliance on their respective campuses and affiliated satellite locations with the Center for Disease Control and Prevention (CDC) Guidelines adopted by the State of Oklahoma and for enforcing this *Tuberculosis Infection Control Program*.
- B. The Environmental Health and Safety Office (EHSO) is responsible for:
 - 1. auditing campus compliance and reporting compliance status to the appropriate administrative head;
 - 2. communicating with faculty, staff, students, contractors, vendors, and regulatory agencies on institutional compliance matters;
 - 3. assisting departments as requested concerning training resources and procedures;
 - 4. maintaining a master campus training and fit test record file; and

5. providing technical assistance to personnel and departments.
- C. Deans and Administrative Heads are responsible for:
1. complying with and enforcing the *Tuberculosis Infection Control Program* for their respective areas;
 2. ensuring funding is available for appropriate personal protective equipment, employee skin testing, and medical evaluations as necessary for compliance;
- D. Clinic Managers are responsible for:
1. identifying employees within the clinical area who will wear respirators and assuring that these employees receive annual training and fit testing as required by Section VII.;
 2. assuring that front-line reception employees are properly instructed to screen all incoming patients to identify those with possible TB signs and symptoms, and that the proper procedures are followed once potential TB patients are identified;
 3. ensuring that employees are provided with and properly wear appropriate protective equipment;
 4. ensuring that all employees who have the potential for exposure to TB participate in the TB skin testing program outlined in this Program;
 5. ensuring that offers to potential new employees are made contingent upon the appropriate Employee Health office obtaining, within ten (10) days of hire, documentation of a negative TB skin test, or, if skin testing is contraindicated, a negative Interferon Gamma Release Assay (IGRA) or negative chest x-ray indicating no evidence of infectious TB;
 6. ensuring that any airborne precaution room in his/her area of responsibility is inspected as required by Appendix C-B, and maintaining documentation as appropriate to verify that the inspection has occurred and that the room has passed the inspection requirements;
 7. identifying employees under their area of responsibility who may be exhibiting signs or symptoms of TB and ensuring evaluation by the appropriate Employee Health office or the employee's personal physician; and
 8. if an employee under their responsibility develops TB, coordinating with the EHSO, the appropriate Employee Health office, and the local City/County Health Department to ensure that contact investigation is performed.
- E. Employee Health is responsible for:
1. performing PPD skin testing, IGRA testing, chest x-rays, and other medical evaluations required by this program, and maintaining documentation of same in

- confidential employee health records to verify compliance with this Program; and
2. where applicable, coordinating employee health functions at satellite locations to ensure healthcare services and documentation are performed and maintained in accordance with the requirements of this Program.
- F. Each employee who has the potential for exposure to TB is responsible for:
1. complying with the *OUHSC/OU-Tulsa Tuberculosis Infection Control Program*,
 2. attending TB and respiratory training sessions annually and other training as required,
 3. participating in the PPD skin testing program,
 4. performing his/her job in accordance with safety precautions communicated to him/her during training sessions and other educational programs, and
 5. notifying his/her supervisor immediately in the event of exposure to any known or suspected active TB.

IV. IDENTIFICATION OF PATIENTS WHO MAY HAVE ACTIVE TB

- A. Triage of patients should include vigorous efforts to detect patients with active TB promptly. Healthcare workers (HCWs) who are the first points of contact in facilities serving patients at risk for TB should be trained to ask appropriate questions that will help detect patients with signs and symptoms suggestive of TB.
- B. In general, persons suspected or confirmed to have active TB should be considered infective if:
1. cough is present, they are undergoing cough inducing procedures, or sputum acid-fast bacilli (AFB) smears are positive; and
 2. they are not on chemotherapy, or have just started chemotherapy, or have a poor clinical or bacteriologic response to chemotherapy.
- C. Patients entering walk-in clinic areas with a persistent cough should be asked these questions upon arrival in the waiting area:
1. Have you had a cough for more than three weeks?
 2. Do you currently have a cough of any duration, plus one of these symptoms: coughing up blood, weight loss, night sweats or fever?
- D. Patients responding "yes" to either of these questions should be:
1. seen as soon as possible;
 2. given a surgical mask and instructed to keep it on;

3. given tissues and instructed to cover their mouth and nose when coughing or sneezing; and
 4. placed in an airborne precaution room, separate waiting area, private exam room, or outside until they are seen.
- E. The reception clerk is responsible for maintaining an adequate supply of surgical masks and tissues at the check-in area and ensuring that the patient with TB symptoms follows the instructions regarding use while in the waiting room or isolation room. If the patient does not follow these instructions, the reception clerk should alert the Clinic Manager or other administrative personnel to ensure patient compliance.
- F. Patients with active TB should not have appointments scheduled in areas where immunocompromised persons are treated.

V. VENTILATION

- A. Patient care settings in which patients with TB are frequently seen should have airborne precaution room(s) available. Clinic Managers are responsible for determining such need by monitoring changes in numbers of known or suspected TB patients seen. If the number of cases appears to be increasing at a facility, the Clinic Manager should notify the clinic director of the situation and the potential need for modification of facility arrangements or patient policies.
- B. All cough-inducing procedures performed on patients who may have infectious TB should be performed using local exhaust ventilation devices such as booths or special enclosures, or in a room that meets the ventilation requirements for airborne precautions.
- C. Patient care areas without access to an airborne precaution room should have a contingency plan in the event a patient suspected to have infectious TB enters the patient care setting. This contingency plan should include early detection, patient use of masks and tissues, placing the patient in a separate waiting area, and seeing the patient as quickly as possible or rescheduling the patient for a time when they are not infectious.
- D. Airborne precaution rooms, where present, should meet the requirements outlined in Appendix C-B, *Airborne Precaution Room Requirements*. The Clinic Manager is responsible for ensuring that these requirements are met and maintaining appropriate documentation that verifies compliance.

VI. TB ISOLATION PRACTICE

- A. Known or suspected infectious TB patients should be placed in an airborne precaution room whenever possible.
- B. Patients who are placed in an airborne precaution room should be educated about the mechanisms of *M. tuberculosis* transmission and the reasons for their being placed in isolation. They should be taught to cover their mouths and noses with a tissue when coughing or sneezing, even while in the airborne precaution room, to contain liquid drops and droplets before they are expelled into the air.

- C. Patients in an airborne precaution room should remain in the airborne precaution room with the door closed.
- D. If possible, diagnostic and treatment procedures should be performed in the airborne precaution room to avoid transporting these patients through other areas of the facility. If patients who may have infectious TB must be transported outside the airborne precaution room for medically essential procedures that cannot be performed in the airborne precaution room, the patients should wear surgical masks that cover their mouths and noses during transport. Persons transporting the patient do not need to wear respiratory protection outside the airborne precaution room. Procedures for these patients should be scheduled at a time when they can be performed rapidly and when waiting areas are less crowded.
- E. The number of persons entering the airborne precaution room should be kept to a minimum. All persons who enter an airborne precaution room or other room where known or suspected TB patients are receiving care should wear appropriate respiratory protection as described in Section VII.C.
- F. A readily observable sign that bears the text: “No Admittance Without Wearing a Type N95 or More Protective Respirator” should be placed at the entrance of the door to an airborne precaution room when a patient suspected to have or diagnosed with TB is present in the room.

VII. RESPIRATORY PROTECTION

- A. Appropriate respiratory protection as described in Section VII.C. of this Program should be used by persons who have potential for exposure to TB in settings where administrative and engineering controls may not provide adequate protection. This may include:
 - 1. persons entering rooms in which patients with suspected or confirmed infectious TB are being isolated,
 - 2. persons present during cough-inducing or aerosol-generating procedures performed on patients with known or suspected infectious TB,
 - 3. during transport of patients who may have infectious TB in emergency transport vehicles, or
 - 4. when urgent surgical or dental care must be provided to patients who may have infectious TB before a determination can be made that the patient is non-infectious.
- B. Written standard operating procedures governing the selection and use of respirators are provided in the OUHSC/OU-Tulsa *Respiratory Protection Program*. All OUHSC/OU-Tulsa HCWs who need or use respiratory protection are covered by this program.
- C. Respirators used for protection against TB shall have the ability to:
 - 1. filter particles 1 micron in size in the unloaded state with a filter efficiency of >95% (i.e., filter leakage of <5%), given flow rates of up to 50 liters per minute;

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-
2. be qualitatively or quantitatively fit tested in a reliable way to obtain a face-seal leakage of <10%;
 3. fit the different facial sizes and characteristics of employees, which can usually be met by making the respirators available in at least three sizes; and
 4. be checked for facepiece fit, in accordance with the manufacturer's facepiece fitting instructions, by HCWs each time they put on their respirator.
- D. The user must be instructed and trained by a competent person in the proper selection, use, maintenance and limitations of respirators. See Section XI., *Training*.
- E. The employee is expected to use the provided respiratory protection in accordance with instructions and training received.
- F. Respirators may be reused, but should be regularly cleaned, disinfected, and inspected prior to reuse. Worn or deteriorated parts shall be replaced.
- G. Non-disposable respirators used by more than one worker must be thoroughly cleaned and disinfected after each use and inspected for physical change prior to use. Worn or deteriorated parts must be replaced.
- H. Respirators must be stored in a convenient, clean, and sanitary location.
- I. Persons should not be assigned to tasks requiring use of respirators unless it has been determined by a physician or other licensed healthcare professional that they are physically able to perform the work and use the equipment. The respirator user's medical status must be reviewed by the physician or other licensed healthcare professional annually.
- J. Employees who cannot achieve a fit for the respirators supplied by the facility or who have facial hair (such as a beard) that interferes with the face-to-facepiece seal of the respirator, should not be allowed to see patients with known or suspected TB unless they utilize positive pressure HEPA-filtered hooded respirators.

VIII. EMPLOYEE MEDICAL SURVEILLANCE/TB SKIN TESTING PROGRAM

A. TB SCREENING METHOD AND INTERPRETATION

1. The Mantoux technique using 5 TU PPD should be used. A summary of procedures for and interpretation of this skin test are located in Appendix C-C, *Administration and Interpretation of Skin Tests*. If skin testing is contraindicated, an IGRA test, chest x-ray or other appropriate evaluation method should be provided to the employee.
2. A two-step testing procedure should be used for all new employees and students to discern those who may be affected by the "booster phenomenon" that may occur, unless documentation of a negative skin test within the prior 12 months is provided to the appropriate OU Employee Health/Student Health office.

3. Periodic skin testing, interpretation, and other appropriate evaluations must be performed by the appropriate OU Employee Health/Student Health office or providers who have been approved by the EHSO or the appropriate OU Employee Health/Student Health office.
4. Persons who have had prior Calmette-Guerin (BCG) vaccination should not be skin tested. An IGRA test should be used.
5. According to current CDC guidelines, pregnancy is not a contraindication to TB skin testing. However, the employee may decline testing until completion of pregnancy.
6. Skin tests, IGRA tests, chest x-rays, and other medical procedures or evaluations required by this program will be offered at no cost to employees or to individuals conditionally offered positions as described in this program unless otherwise specified in this program. The cost is to be borne by the department/hiring department.

B. CONDITIONAL EMPLOYEES

1. A pre-placement evaluation should be given through the appropriate Employee Health office to all individuals conditionally offered positions covered by this policy and program. This pre-placement evaluation should consist of:
 - a. a tuberculin skin test (IGRA test, chest x-ray or other appropriate evaluation method if the skin test is contraindicated) unless a negative PPD test or chest x-ray within the last 12 months can be documented.
 - b. a determination by a physician or other licensed healthcare professional that the individual is physically able to perform the work and use required personal protective equipment if the position is anticipated to require the use of respirators.
2. Individuals identified in B.1. above who have positive test results must provide the University (through the appropriate Employee Health office) an interpretation of a subsequent non-infectious chest x-ray report before he/she is allowed to assume job duties.
 - a. If the employee does not have one, or has not had a chest x-ray since becoming skin test or IGRA test positive, the individual will be referred by the appropriate Employee Health office to OUHSC Employee Health for a chest x-ray and evaluation.
 - b. If the individual prefers, he/she may go to his/her own personal physician at his/her own expense for the chest x-ray and evaluation.

C. EXISTING EMPLOYEES

1. All existing employees covered under the scope of this program should be provided with a medical evaluation at least annually consisting of:

- a. a tuberculin skin test (IGRA test, chest x-ray or other appropriate evaluation method if a skin test is contraindicated) unless a negative skin test within the last 12 months can be documented, and
 - b. a determination by physician or other licensed healthcare professional that the individual is physically able to perform the work and use the required personal protective equipment, if the employee is anticipated to be required to wear a respirator.
2. An employee with negative TB skin test status should be provided with a TB skin test every 6 months if the employee in the course of his/her duties, works with non-human primates or enters a non-human primate facility.
 3. Employees who have positive test results will be provided with a referral by the appropriate Employee Health office to receive a follow-up chest x-ray unless contraindicated or the employee can provide the University (through the appropriate Employee Health office) with an interpretation of a subsequent non-infectious report. See Section VIII.E., *Employees With a Positive Skin or IGRA Test/Skin Test Conversion*.
 4. Those employees with positive PPD or IGRA test and negative chest x-rays or non-infectious reports should be assessed for symptoms annually by a trained occupational health professional using the form or similar form in Appendix D-D. Repeated chest x-rays will not be required unless further evaluation is determined necessary by the occupational health professional.

D. EMPLOYEES EXPERIENCING A TB INCIDENT

1. After exposure to an infective case of TB during which proper precautions were not used, all personnel, except those already known to have significant skin-test reactions or a history of BCG, should be skin-tested as soon as possible by Employee Health for a baseline result (unless a skin test was given during the three (3) months before exposure) and then a repeat skin test ten (10) weeks after exposure. Personnel whose skin tests convert should receive a chest x-ray or other appropriate evaluation method, and unless specifically contraindicated, be advised to receive preventive treatment, provided current disease has been ruled out.
2. Personnel already known to have significant skin test reactions or a history of BCG should be evaluated with an IGRA test. If the IGRA test is positive, a chest x-ray and assessment should be provided.

E. EMPLOYEES WITH SKIN TEST CONVERSIONS

1. Employees who convert to a positive skin or IGRA test while employed should be assessed for symptoms immediately. Employees at OUHSC will be given a chest x-ray by Employee Health and told to take the x-ray to City/County Health Department. For all other locations, the employee will be referred to the local City/County Health Department. The employee must provide the appropriate Employee Health office with an interpretation of a chest x-ray and/or a clinical evaluation with thirty (30) days of the referral.

2. Personnel with current pulmonary or laryngeal TB whose sputum smear shows bacilli are to be excluded from work until they are no longer infectious.
 - a. Before returning to work, the employee must provide a statement from his/her treating physician indicating the employee is no longer infectious and is able to return to regular work duties.
 - b. After work duties are resumed and while the employee remains on antituberculosis therapy, if requested by the University, the employee should provide proof to Employee Health that he/she is currently on effective drug therapy and AFB sputum smear negative.
 - c. Personnel who discontinue medication for current pulmonary or laryngeal disease before the recommended course of therapy has been completed should not be allowed to return to work.
 - d. After completion of therapy, the employee must provide a doctor's statement to the appropriate Employee Health office indicating therapy is completed.
3. Personnel who have current TB at a site other than the lung or larynx should be allowed to continue their usual activities.
4. Employees receiving preventive treatment for latent TB infection will be allowed to continue usual work activities.
5. All persons with a history of TB and/or a positive skin or IGRA test are at risk for developing current disease. These persons should be instructed to report promptly to the appropriate Employee Health office if symptoms develop that may be due to TB.

F. EMPLOYEES WHO ARE EXHIBITING SYMPTOMS OF TB

1. Clinic Managers and supervisors are responsible for identifying employees who may be exhibiting signs or symptoms of TB.
2. Those employees identified as such will be required to provide clinical documentation indicating their status with respect to TB. Based on the status, procedures identified in Section VIII.E. will be followed.

IX. REPORTING REQUIREMENTS

- A. When an employee experiences a TB incident (See Section VIII.E.), or for any clinical TB disease occurring in an employee, the employee should complete an *Employee's Report of Injury* form. The employee's supervisor should complete and sign a *Supervisor's Report of Employee's Injury* form. Links to forms and submittal procedures are found at <http://hr.ou.edu/benefits/Workerscompensation.asp>.

- B. Employee Health will document all positive skin or IGRA tests resulting from on-the-job exposures and will notify (in a timely manner) the appropriate Human Resources department and EHSO, so that the information may be properly recorded on the OK Form 300 log within the required 7 day time frame. Employee Health will track the positive skin tests and review for trends that may require attention or investigation.
- C. Employee Health should ensure that as soon as a patient or HCW is known to have TB, the HCW is reported to the Oklahoma City-County (405/521-8981), Tulsa City-County (918/744-1000), or Oklahoma State Health Department (405/271-4060) based on where that individual resides so that appropriate community contact investigation and follow-up can be performed.
- D. Employee Health or a designated party approved by Employee Health shall maintain copies of all documentation of skin testing, medical evaluation and follow up associated with these requirements and shall ensure that the confidentiality of the HCW is maintained as prescribed by federal, state, and local laws.

X. PROBLEM EVALUATION

- A. Once an employee has been identified as skin test converting, Employee Health should notify the appropriate Health Department which may perform follow-up to determine the potential source of TB infection.
- B. If a source is identified, PPD tests should be administered to employees in the same area or group who may have had similar exposure to determine if there is additional evidence of transmission. The contact investigation may extend to exposed patients if warranted under the direction of the Health Department.
- C. If a problem with patient detection, TB isolation practices, or engineering controls is identified, the Clinic Manager should ensure that corrective action is taken and all actions and information obtained in the investigation are documented.

XI. TRAINING

- A. All HCWs and other employees who have the potential for exposure to TB should be provided with training before initial assignment and at least annually thereafter.
- B. This training may be performed by the EHSO, Clinic Manager, an infection control expert, or other qualified person and must include the following:
 - 1. the general epidemiology of TB, including multi-drug resistant TB (MDR-TB); TB transmission, pathogenesis, and diagnosis; the difference between latent TB infection and active TB; the possibility of reinfection in persons with a positive PPD test and the personal health conditions that increase the employee's risk of developing TB if infected;
 - 2. the potential for occupational exposure to persons with infectious TB in the health care facility;

3. the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices, respiratory protection, and site-specific control measures;
 4. the medical surveillance program, the purpose of PPD skin testing, the significance of a positive or negative result, and the importance of participation in the skin test program;
 5. the responsibility of the HCW to seek medical evaluation promptly if symptoms develop that may be due to TB or if PPD test conversion occurs in order to receive appropriate evaluation and therapy and to prevent transmission of TB to patients and other HCWs;
 6. the importance of notifying the facility if diagnosed with active TB so appropriate contact investigation can be initiated;
 7. the procedures to follow if an exposure incident occurs; and
 8. the availability of the *OUHSC/OU-Tulsa Tuberculosis Infection Control Program* and *OUHSC/OU-Tulsa Respiratory Protection Program*.
- C. Respirator users must also receive annual training addressing the reasons for the need for wearing their respirator and the potential risks of not doing so. This training must include at a minimum:
1. why a respirator is necessary, an explanation for selecting a particular type of respirator, how the respirator is properly maintained and stored, and the operation, capabilities, and limitations of the respirator provided;
 2. instruction on how the respirator wearer must inspect, put on, fit check, and correctly wear the provided respirator (i.e. achieve and maintain proper face-seal fit on the HCW's face);
 3. procedures for cleaning and disinfecting, repairing, and storing the respirator (where appropriate);
 4. procedures for obtaining replacement parts and equipment (where appropriate);
 5. instruction in how to recognize an inadequately functioning respirator;
 6. demonstration and hands-on training to include an opportunity to handle the respirator, have it fitted properly, test its face-to-facepiece seal, wear it in normal air for a long familiarity period, and wear it in a test atmosphere (saccharin fit testing); and
 7. instructions to check the facepiece fit before each use.
- D. All training performed must be documented through completion of a quiz, with a copy of the quiz forwarded to the EHSO. The EHSO will maintain training records for at least three (3)

years.

XII. PROCEDURE-SPECIFIC PRECAUTIONS

A. COUGH-INDUCING PROCEDURES

1. Cough-inducing procedures should not be performed on patients who may have infectious TB unless the procedures are absolutely necessary and can be performed with appropriate precautions.
2. All cough-inducing procedures performed on patients who may have infectious TB should be performed using local exhaust ventilation devices or, if this is not feasible, in a room that meets the ventilation requirements for airborne precautions (see Appendix D-B).
3. HCWs should wear appropriate respiratory protection as described in Section VII.C. when present in rooms or enclosures in which cough-inducing procedures are being performed on patients who may have infectious TB.
4. After completion of cough-inducing procedures, patients who may have infectious TB should remain in the isolation room or enclosure and not return to common waiting areas until coughing subsides. They should be given tissues and instructed to cover their mouth and nose when coughing. If they must recover from sedatives or anesthesia following procedures such as bronchoscopy, they should be placed in separate isolation rooms, and not in recovery rooms with other patients, while they are being monitored.
5. Before the booth, enclosure, or room is used for another patient, enough time should be allowed to pass for at least 99.9% of airborne contaminants to be removed. This time will vary according to the efficiency of the ventilation or filtration used. For 6 air changes per hour (the minimum required for airborne precaution rooms), the minimum time required for removal of 99.9% of airborne contaminants is 69 minutes.

B. DIAGNOSTIC OR SPUTUM PRECAUTIONS

1. All sputum inductions performed on patients with known or suspected TB should be carried out in an airborne precaution room, a bathroom with an exhaust fan, or outside.
2. HCWs collecting induced sputums on patients with known or suspected TB should wear appropriate respiratory protection as described in Section VII.C. during the procedure.

C. ADMINISTRATION OF AEROSOLIZED PENTAMIDINE (AP)

1. Patients should be screened for active TB before prophylactic AP therapy is initiated. Screening should include obtaining a medical history and performing skin testing and chest radiography.

2. Before each subsequent AP treatment, patients should be screened for symptoms suggestive of TB such as development of productive cough. If such symptoms are elicited, a diagnostic evaluation for TB should be initiated.
3. Patients who have suspected or confirmed active TB should take, if clinically practical, oral prophylaxis for *P. jirveci* pneumonia.
4. AP should be done in an airborne precaution room if at all possible.
5. Only one patient should receive treatment at a time. Adequate time should be allowed between patients for removal of residual pentamidine and any infectious organisms from the air.
6. Workers administering AP should wear appropriate respiratory protection as described in Section VII.C.
7. After they have received AP, patients should not return to common waiting areas until coughing subsides.

D. BRONCHOSCOPY

1. If performing bronchoscopy in positive-pressure rooms (e.g., operating rooms) is unavoidable, TB should be ruled out as a diagnosis before the procedure is performed.
2. If the bronchoscopy is being performed for the purpose of diagnosing pulmonary disease and the diagnosis could include TB, the procedure should be performed in a room that meets airborne precaution ventilation requirements.

E. ENDOTRACHEAL SUCTIONING

Persons performing endotracheal suctioning on patients who have suspected or confirmed infectious TB should wear appropriate respiratory protection as described in Section VII.C.

F. DENTAL SETTINGS

During dental procedures, patients and dental workers share the same air space for varying lengths of time. Coughing may be stimulated occasionally by oral manipulations although no specific dental procedures have been classified as "cough inducing." Because the potential exists for transmission of TB in dental settings, the following recommendations should be followed:

1. While taking a patient's initial medical history and periodic updates, dental HCWs should routinely ask all patients whether they have a history of TB disease or symptoms suggestive of TB.
2. Patients with a medical history or symptoms suggestive of active TB should be referred promptly to the local City/County Health Department for medical evaluation of possible infectiousness. Such patients should not remain in the dental-

care facility any longer than required to arrange a referral. While in the dental care facility, they should wear surgical masks and should be instructed to cover their mouths and noses when coughing or sneezing.

3. Elective dental treatment should be deferred until a physician confirms that the patient does not have infectious TB.
4. If urgent dental care must be provided for a patient who has, or is strongly suspected of having, infectious TB, such care should be provided in facilities that can provide TB isolation. Dental HCWs should wear appropriate respiratory protection as described in Section VII.C. while performing procedures on such patients.

G. DECONTAMINATION, CLEANING, DISINFECTING, AND STERILIZING OF PATIENT CARE EQUIPMENT

1. Critical items are instruments such as needles, surgical instruments, cardiac catheters, or implants that are introduced directly into the bloodstream or into other normally sterile areas of the body. These items should be sterile at the time of use.
2. Semi-critical items include instruments such as non-invasive flexible and rigid fiberoptic endoscopes or bronchoscopes, endotracheal tubes, or anesthesia breathing circuits that may come in contact with mucous membranes but do not ordinarily penetrate body surfaces. Although sterilization is preferred for these instruments, high-level disinfection that destroys vegetative microorganisms, most fungal spores, tubercle bacilli, and small nonlipid viruses may be used. Meticulous physical cleaning of such items before sterilization or high-level disinfection is essential.
3. Noncritical items such as those that either do not ordinarily touch the patient or touch only intact skin include crutches, bedboards, blood pressure cuffs, and various other medical accessories. These items are not associated with direct transmission of TB, and washing with a detergent is usually sufficient.

APPENDIX C-A
STUDENT HEALTH
STUDENT POLICIES AND PROCEDURES

STUDENT POLICIES

I. STUDENT HEALTH TUBERCULOSIS SCREENING POLICY FOR OUHSC/OU-TULSA STUDENTS

All OUHSC students and all health science OU-Tulsa students are required to submit a current immunization form prior to matriculation (see Appendix A of the *OUHSC/OU-Tulsa Infectious Diseases Program*). This form requests tuberculosis screening information and states that a PPD should have been placed within the last year prior to enrollment. The form documents those results and asks for a follow-up chest x-ray if the result was positive. These forms are reviewed by the student health director and a copy is kept on file in the student health office.

A. OKLAHOMA CITY STUDENTS

1. Yearly tuberculin skin testing (TST) has been implemented for those colleges whose students are involved in clinical activities. Student Health coordinates this activity on an annual basis for students who have clinical activities. This is implemented in the year following matriculation and continued in subsequent years prior to graduation.
 - a. An Interferon Gamma Release Assay (IGRA) test will be offered to students with a past history of a positive TST or prior BCG vaccination more than 18 months prior to enrollment.
 - b. Follow-up for positive TST or IGRA tests is done through Student Health. If prophylaxis is indicated, the student will be referred to the City/County Health Department for follow-up clinical visits, medication and laboratory testing.
2. If an exposure occurs, the student is to report to Student Health in the Green Clinic located in the Family Medicine Center, 900 N. E. 10th Street, Oklahoma City, OK, where a baseline TST will be placed if this has not been done in the last three (3) months and a follow-up TST will then be placed ten (10) weeks subsequent thereto unless the student has a past history of a positive TST or BCG in which case an IGRA test will be performed. The student may also meet with one of the clinicians at Student Health for a history and abbreviated physical exam if signs and symptoms indicate active TB. If a conversion should occur, follow-up as outlined in Step I.1.b. will occur.
3. Any questions concerning past history or current exposure or general questions concerning tuberculosis and/or the prevention thereof regarding student healthcare workers can be directed to the Student Health office at 405/271-2577.

B. TULSA STUDENTS

1. Yearly skin testing has been implemented for those colleges whose students are involved in clinical activities. Student Health coordinates this activity on an annual basis for students who have clinical activities. This is implemented in the year

following matriculation and continued in subsequent years prior to graduation.

- a. An IGRA test will be offered to students with a past history of a positive TST or prior BCG vaccination more than 18 months prior to enrollment.
 - b. Students with positive TST or IGRA tests are referred to the Tulsa City/County Health Department for follow-up.
2. If an exposure occurs, the student is to report to the Student/Employee Health Clinic located on the 2nd Floor of the Schusterman Center Clinic.

II. SAFETY PRECAUTIONS AND AWARENESS TRAINING

- A. All students should be provided with TB awareness training to be able to recognize signs and symptoms of TB; routes of transmission; and exposure prevention measures, including identifying patients with potential TB, the need for isolating the patient and instructing the patient to use a tissue when coughing or sneezing and to wear a surgical mask at all other times, and respiratory protection requirements for the healthcare provider.
- B. Students who are expected to enter a room where a person with known or suspected TB is being isolated or treated should be aware that a respirator is required; should be trained on how the respirator works and doesn't work; how to put it on, store, or dispose of the respirator; and should be fit tested to determine the make and model (size) of respirator that fits them. These students should also be evaluated (in advance) by Student Health to ensure that wearing a respirator does not pose a health concern to the student.

APPENDIX C-B
AIRBORNE PRECAUTION ROOM REQUIREMENTS

AIRBORNE PRECAUTION ROOM REQUIREMENTS

- I. Airborne precaution rooms should be single-patient rooms with special ventilation characteristics described below. The primary purposes of the airborne precaution room are to separate patients who are likely to have infectious TB from other persons, prevent the escape of droplet nuclei from the airborne precaution room and treatment room, thus preventing entry of *M. tuberculosis* into the corridor and other areas of the facility, and provide an environment that will allow reduction of the concentration of droplet nuclei through various engineering controls.
- II. Airborne precaution rooms should be maintained under negative pressure and have a minimum ventilation rate of 6 air changes per hour.
 - A. Negative pressure should be qualitatively demonstrated (e.g., by smoke trails) daily while a room or area is in use for Airborne precaution.
 - B. Engineering controls should be maintained, and inspected and performance monitored for filter loading and leakage every 6 months, whenever filters are changed, and more often if necessary to maintain effectiveness.
- III. Airborne precaution room doors should be kept closed, except when patients or personnel must enter or exit the room, so that negative pressure can be maintained.
- IV. Air from an airborne precaution room should be exhausted directly outside; away from intake vents, employees, and the general public; and should not be recirculated into the general ventilation.
 - A. Air that cannot be exhausted in such a manner or must be recirculated should pass through HEPA filters before discharge or recirculation.
 - B. Ducts carrying air that may reasonably be anticipated to contain aerosolized *M. tuberculosis* should be maintained under negative pressure for their entire length before in-duct HEPA filtration or until the ducts exit the building for discharge.
 - C. Air systems that may reasonably be anticipated to contain aerosolized *M. tuberculosis* should be labeled "Contaminated Air-Respiratory Protection Required." The label should be placed at all points where ducts are accessed prior to a HEPA filter and at duct access points, fans, and discharge outlets of non-HEPA filtered direct discharge systems.
- V. A readily observable sign should be posted at the entrance to an airborne precaution room and should bear the following text in white on a red background:

"No Admittance Without Wearing a Type N95 or More Protective Respirator"
- VI. When an airborne precaution room or area is vacated by an individual with suspected or confirmed infectious TB, the room or area should be ventilated according to current CDC recommendations for a removal efficiency of 99.9% before permitting employees to enter without respiratory protection. For 6 air changes per hour, this time is 69 minutes. For different air change values, contact the EHSO.

- VII. Although not required, an anteroom may increase the effectiveness of the isolation room by minimizing the potential escape of droplet nuclei into the corridor when the door is opened. To work effectively, the anteroom should have positive air pressure in relation to the airborne precaution room. The pressure relationship between the anteroom and the corridor may vary according to ventilation design.

- VIII. Upper-room air Ultraviolet Germicidal Irradiation (UVGI) devices may be used as an adjunct to general ventilation in the airborne precaution room. This should be coordinated with Site Support/Operations and the EHSO.

- IX. Where possible, the entrance to airborne precaution rooms should be close to the exterior of the building.

APPENDIX C-C
ADMINISTRATION AND INTERPRETATION OF SKIN TESTS

ADMINISTRATION AND INTERPRETATION OF SKIN TESTS

I. ADMINISTRATION OF THE TUBERCULIN SKIN TEST

- A. Tuberculin skin testing (TST) is the standard method of identifying persons infected with *M. tuberculosis*. The intradermal Mantoux test, not a multiple puncture test, should be used to determine if tuberculous infection has occurred.
- B. The Mantoux test is performed by the intradermal injection of 0.1 ml of PPD tuberculin containing 5 TU (tuberculin units) into the volar surface of the forearm with a disposable tuberculin syringe. The injection should be made just beneath the surface of the skin, with the needle bevel facing upward to produce a discrete, pale elevation of the skin (a wheal) 6 mm to 10 mm in diameter.
- C. To prevent needlestick injuries, needles should not be recapped, purposely bent or broken, removed from disposable syringes, or other-wise manipulated by hand. After they are used, disposable needles and syringes should be placed in puncture-resistant containers for disposal.
- D. The reaction to the Mantoux test should be read 48 to 72 hours after the injection. The reading should be based on measurement of induration, not erythema. The diameter of induration should be measured transversely to the long axis of the forearm and recorded in millimeters.
- E. Employees and students will receive the two-step tuberculin skin test for the initial test upon inclusion in the OUHSC/OU-Tulsa skin testing program unless documentation of a negative skin test within the prior 12 months is provided to Employee Health or Student Health. Subsequent tests may be performed using a single test.
- F. Persons with previously known documented positive skin test reactions will not have a skin test.

II. TWO-STEP SKIN TEST PROCEDURE

- A. Administer the first skin test.
 - 1. If the results of the first skin test are negative, repeat the test within 7-21 days. Use the second test result as the person's baseline in determining the need for treatment or follow up.
 - a. A positive reaction to the second test probably represents a boosted reaction. That person should be considered as previously infected and managed accordingly.
 - b. If the results of the second test are negative, the person should be considered uninfected.
 - 2. If the results of the first skin test are positive there is no need to repeat the test; use

the first test as the baseline.

III. INTERPRETATION OF TUBERCULIN TESTS

- A. A reaction of >5 mm is classified as positive in:
1. Human immunodeficiency virus (HIV)-positive persons;
 2. a recent close contact of a person with active TB;
 3. persons with fibrotic changes on chest radiographs consistent with prior TB; or
 4. persons who are immunosuppressed for other reasons.
- B. A reaction of >10 mm is classified as positive in all persons who do not meet any of the criteria above, but who have other risk factors for TB including:
1. persons with clinical conditions that place them at high risk;
 2. recent immigrants (less than 5 years) from high prevalence countries;
 3. injection drug users;
 4. residents or employees of high-risk congregated settings; e.g., hospitals, homeless shelters, long-term care facilities, or other healthcare facilities; or
 5. mycobacteriology lab personnel.
- C. Recent converters for healthcare workers with none of the above risk factors are defined as follows:
1. A >10 mm increase within a two year period is classified as positive for healthcare workers in facilities providing care for patients that may have TB.
 2. A >15 mm increase within a two year period is classified as positive for all other employees.

IV. INTERPRETATION OF THE TST IN PERSONS WITH A HISTORY OF BCG VACCINATION

- A. Many foreign countries still use BCG as part of their tuberculosis control program, especially for infants. PPD sensitivity and immunity to tuberculous infection after BCG vaccination is highly variable, depending upon the strain of BCG used and the population vaccinated, so there is no reliable method of distinguishing tuberculin reactions caused by BCG from those caused by natural infections.
- B. The TST is not contraindicated for persons who have been vaccinated with BCG. However, BCG vaccination may cause a false-positive reaction to the TST, which may complicate decisions about prescribing treatment. The size of a TST reaction in a BCG-vaccinated

person is not a factor in determining whether the reaction is caused by latent TB infection or the prior BCG vaccination. All persons vaccinated with BCG who are given a TST and have a positive reaction should be evaluated and treated using the same procedures as for those not vaccinated with BCG.

- C. An Interferon Gamma Release Assay (IGRA) tuberculosis test should be used for all foreign, non-immigrant employees and students within the first semester of attendance at the University with a history of prior BCG vaccination or previous positive TST.
- D. If the TST or IGRA results are positive, a tuberculosis assessment and chest x-ray must follow.
 - 1. If the IGRA results are positive and the chest x-ray is negative for tuberculosis, Employee Health should strongly recommend INH therapy, if there are no contraindications.
 - 2. If the chest x-ray is positive for active tuberculosis, the employee or student should be referred to the local health department for treatment.
- E. If an employee or student has a positive TST or IGRA and a negative chest x-ray, an annual assessment for tuberculosis (see Appendix C-D) is still required, even if the employee/student chooses to take INH therapy.

APPENDIX C-D

SAMPLE TUBERCULOSIS SYMPTOM ASSESSMENT FORM

**SAMPLE TUBERCULOSIS SYMPTOM ASSESSMENT FORM
(ANNUAL QUESTIONNAIRE FOR EMPLOYEES WITH PAST POSITIVE PPDS)**

Name: _____ Employee ID (EMPLID) Number: _____

Department Name: _____ Department Telephone Number: _____

Department Address: _____

Today's Date: _____

Please circle 'yes' or 'no' for each question:

1. Have you, in the past calendar year, had any of the following symptoms:

- a. Fatigue Yes No
 - b. Unexplained weight loss Yes No
 - c. Night sweats Yes No
 - d. Productive cough > 3weeks Yes No
 - e. Blood in your sputum Yes No
 - f. Temperature elevation Yes No
 - g. Frequent chest colds/pneumonia Yes No
 - h. Do you currently smoke cigarettes? Yes No
- If 'yes', how many per day _____ What year did you start smoking? _____

2. If any of the above answers are 'yes', please clarify by explaining the duration and or severity at which the symptoms were experienced: _____

3. Date of first POSITIVE TB skin test: _____

4. Date of last chest x-ray: _____ Results: _____

Where was it done? _____

5. Were you referred to?

State or City/County Health Department _____

Private Physician? Name? _____

Date seen: _____

6. Did you receive any treatment as a result of the skin test or x-ray? Yes No

If the answer to #6 is 'yes', describe treatment: _____

Did you complete treatment? Yes No

Provider's Comments:

APPENDIX D
HAND HYGIENE PROCEDURES

HAND HYGIENE PROCEDURES

- I. Students and employees with patient care responsibilities should follow these hand hygiene procedures:
 - A. Wash hands with either a non-antimicrobial soap and water or an antimicrobial soap and water:
 1. when hands are visibly dirty;
 2. when hands are contaminated with proteinaceous material;
 3. when hands are visibly soiled with blood or other body fluids;
 4. if exposure to *Bacillus anthracis* or *Clostridium difficile* is suspected or proven; and
 5. before eating and after using a restroom.
 - B. If hands are not visibly soiled, use an alcohol-based hand rub or wash hands with an antimicrobial soap and water for routinely decontaminating hands in the following clinical situations:
 1. before having direct contact with patients;
 2. before donning sterile gloves when inserting a central intravascular catheter;
 3. before inserting indwelling urinary catheters, peripheral vascular catheters, or other invasive devices that do not require a surgical procedure;
 4. after contact with a patient's intact skin (e.g., when taking a pulse or blood pressure, and lifting a patient);
 5. after contact with body fluids or excretions, mucous membranes, nonintact skin, and wound dressings if hands are not visibly soiled;
 6. if moving from a contaminated-body site to a clean-body site during patient care;
 7. after contact with inanimate objects (including medical equipment) in the immediate vicinity of the patient; and
 8. after removing gloves.
 - C. Students and employees with patient care responsibilities should wear gloves for all hand contaminating activities.
 - D. Students and employees with patient care responsibilities are prohibited from wearing artificial nails (anything applied to natural nails other than nail polish is considered artificial, including bonding, tips, wrappings, tapes, and inlays). Nail polish, if chipped or worn,

should be removed. Natural nails should be maintained less than one quarter of an inch long if students or employees care for patients at high risk of acquiring infections (e.g. patients in intensive care units or in transplant units).

APPENDIX E

**GUIDELINES FOR WORK RESTRICTIONS FOR HEALTHCARE PERSONNEL WITH
PATIENT CONTACT**

Guidelines for Work Restrictions for Healthcare Personnel with Patient Contact

Disease/Problem	Work Restriction	Duration	Source
Conjunctivitis, infectious (pink eye)	Restrict from patient contact and contact with the patient's environment	Until discharge ceases	1
Cytomegalovirus infections	No restriction		1
Diarrheal diseases Acute stage (diarrhea with other symptoms)	Restrict from patient contact, contact with the patient's environment, and food handling	Until symptoms resolve and communicable disease is ruled out	1
Convalescent stage	Restrict from care of high-risk patients	Until symptoms resolve; consult with local and state health authorities regarding need for negative stool cultures	1
Diphtheria Active	Exclude from duty	Until antimicrobial therapy completed and 2 nasopharyngeal cultures obtained >24 hours apart are negative	1, 2
Post exposure (Susceptible HCWs; previously vaccinated HCWs who have not had a Td booster dose within the previous 5 years)	Exclude from duty	Same as active diphtheria	2
Asymptomatic carriers	Exclude from duty	Same as active diphtheria	2
Enteroviral infections	Restrict from care of infants, neonates, and immunocompromised patients and their environments	Until symptoms resolve	1
Hepatitis A	Restrict from patient contact, contact with patient's environment, and food handling	Until 7 days after onset of jaundice	1, 2

Disease/Problem	Work Restriction	Duration	Source
<p>Hepatitis B</p> <p>Personnel with acute or chronic hepatitis B surface antigenemia who do not perform exposure-prone procedures</p> <p>Personnel with acute or chronic hepatitis B e antigenemia who perform exposure-prone procedures</p>	<p>No restriction unless epidemiologically linked to transmission of infection</p> <p>Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures the worker can perform, taking into account specific procedure as well as skill and technique of worker.</p>	<p>Universal precautions should always be observed.</p> <p>Until hepatitis B e antigen is negative</p>	<p>1, 2</p> <p>1, 2</p>
Hepatitis C	Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures the worker can perform, taking into account specific procedure as well as skill and technique of the worker.		1
<p>Herpes Simplex Genital</p> <p>Hands</p> <p>Orofacial</p>	<p>No restriction</p> <p>Restrict from patient contact and contact with the patient's environment</p> <p>Evaluate for need to restrict from care of high-risk patients</p>	<p>Until lesions heal</p>	<p>1</p> <p>1</p> <p>1</p>
Human immunodeficiency virus (HIV)	Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures the worker can perform, taking into account specific procedure as well as skill and technique of the worker; standard precautions should always be observed.		1

Disease/Problem	Work Restriction	Duration	Source
Measles Active	Exclude from duty	Until 7 days after the rash appears	1, 2
Postexposure (susceptible personnel)	Exclude from duty	From the 5 th day after 1 st exposure through the 21 st day after last exposure and/or 4 ¹ -7 ² days after the rash appears.	1, 2
Meningococcal infections	Exclude from duty	Until 24 hours after start of effective therapy	1
Mumps Active	Exclude from duty	Until 9 days after onset of parotitis	1, 2
Postexposure (susceptible personnel)	Exclude from duty	From the 12 th day after 1 st exposure through the 26 th day after last exposure or until 9 days after onset of parotitis.	1, 2
Pediculosis	Restrict from patient contact	Until treated and observed to be free of adult and immature lice	1
Pertussis (whooping cough) Active	Exclude from duty	From the beginning of the catarrhal stage through the 3 rd week after onset of paroxysms or until 5 days after start of effective therapy.	1, 2
Postexposure (asymptomatic personnel)	No restriction, antimicrobial prophylaxis recommended		1, 2
Postexposure (symptomatic personnel)	Exclude from duty	Until 5 days after start of effective antimicrobial therapy	1, 2

Disease/Problem	Work Restriction	Duration	Source
Rubella Active	Exclude from duty	Until 5 days after the rash appears	1, 2
Postexposure (susceptible personnel)	Exclude from duty	From the 7 th day after 1 st exposure through the 21 st day after last exposure and/or 5 days after rash appears	1, 2
Scabies	Restrict from patient contact	Until cleared by medical evaluation	1
<i>Staphylococcus aureus</i> infection Active, draining skin lesions	Restrict from contact with patients and patient's environment and food handling	Until lesions have resolved	1
Carrier state	No restriction, unless personnel are epidemiologically linked to transmission of the organism		1
Streptococcal infection, group A	Restrict from patient care, contact with patient's environment, and food handling	Until 24 hours after adequate treatment started	1
Tuberculosis Active disease	Exclude from duty	Until proved noninfectious	1
PPD converter	No restriction		1
Varicella - (Chickenpox) Active	Exclude from duty	Until all lesions dry and crust	1, 2
Postexposure (susceptible personnel)	Exclude from duty	From the 10 th day after 1 st exposure through the 21 st day (28 th day if VZIG given) after last exposure or if varicella occurs until all lesions dry and crust	1, 2

Disease/Problem	Work Restriction	Duration	Source
Viral Respiratory Infections	During particular seasons (e.g., during winter when influenza and/or RSV are prevalent), consider excluding personnel with acute febrile upper respiratory infections (including influenza) from care of high-risk patients.	Until acute symptoms resolve	1, 2
Zoster (Shingles) Localized, in healthy (normal) person	Cover lesions; restrict from care of high-risk patients	Until lesions dry and crust	1, 2
Generalized or localized in immunosuppressed person	Restrict from patient contact	Until lesions dry and crust	1
Postexposure (susceptible personnel)	Restrict from patient contact	From the 8 th day after 1 st exposure through the 21 st day after last exposure or, if varicella occurs, until all lesions dry and crust	1, 2

Sources:

1. Boylard, Elizabeth A., et.al, "Guideline for Infection Control in Healthcare Personnel, 1998," *American Journal of Infection Control*, 1998, Vol.26, pp. 289-354. (Published simultaneously in *Infection Control and Hospital Epidemiology*, 1998, Vol. 19, pp. 407-463.)
2. Centers for Disease Control and Prevention, "Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC)," *Morbidity And Mortality Weekly Report (MMWR)*, Vol. 46, No. RR-18, December 26, 1997, pp. 1-44.

APPENDIX G

**GUIDELINES FOR WORK/CLASSROOM RESTRICTION FOR EMPLOYEES/STUDENTS
WITHOUT PATIENT CONTACT**

Guidelines for Work/Classroom Restrictions for Employees/Students without Patient Contact

Employees or students with the following infectious diseases should not report to work or attend classes for the duration indicated below.

Disease	Duration
Influenza (flu)	Until acute symptoms resolve
Active measles	Until 7 days after the rash appears
Active mumps	Until 9 days after onset of parotitis
Active rubella	Until 5 days after the rash appears
Clinician-documented streptococcal pharyngitis	Until 24 hours after adequate treatment started
Active pulmonary or pharyngeal Tuberculosis	Until adequate treatment has begun and there is clinical response to therapy (2-3 weeks)
Active varicella - (chickenpox)	Until all lesions dry and crust
Meningococcal infections	Until 24 hours after start of effective therapy
Active <i>Staphylococcus aureus</i> infection	Upon clearance from healthcare provider and conditional upon following the directions for wound care
Active pertussis (whooping cough)	Until 5 days after start of effective antimicrobial therapy
Conjunctivitis	Until 24 hours after adequate treatment started

APPENDIX H

**REFERRAL FACILITIES FOR EXPOSURES TO INFECTIOUS DISEASES
OTHER THAN BLOODBORNE PATHOGENS OR TUBERCULOSIS**

**Referral Facilities for Exposures to Infectious Diseases
other than Bloodborne Pathogens or Tuberculosis**

I. Oklahoma City Employees

If exposed at the VA, during business hours (8:00 a.m. - 5:00 p.m), proceed to Occupational Health Service on the first floor.

If exposed at the VA after hours, proceed to the VA Life Support Unit (emergency room).

All Others During Business Hours

Employee Health

Family Medicine Center (Green Clinic)

900 N. E. 10th

Oklahoma City, OK 73104

405/271-3100

Hours: 7:30 a.m. - 4:30 p.m. Monday through Friday, closed 11:30 - 12:30 for lunch

After Hours

Presbyterian Tower Emergency Department

700 N. E. 13th

Oklahoma City, Oklahoma 73104

405/271-4064

(A follow-up appointment should be made the next working day at Employee Health)

II. Oklahoma City Students

During Business Hours

Student Health

Family Medicine Center

900 N. E. 10th Street

Oklahoma City, Oklahoma 73104

405/271-2577

After Hours

Presbyterian Tower Emergency Department

700 N. E. 13th

Oklahoma City, Oklahoma 73104

405/271-4064

or proceed to the emergency department of the facility where the exposure occurred

(A follow-up appointment should be made the next working day at Student Health)

III. Tulsa Employees

MedCenter
2929 S. Garnett
Tulsa, OK 74139
918/665-1520

MedCenter South
10221 E. 81st St
Tulsa, Oklahoma
918/252-9300

MedCenter Midtown
1623 S. Utica
Tulsa, Oklahoma
918/392-5100

St. John Medical Center Emergency Room
1923 South Utica
Tulsa, Oklahoma
918/744-2191

Saint Francis Hospital
6161 S. Yale
Tulsa, OK
918/494-2200

IV. Tulsa Students

Student/Employee Health Clinic
444 S. Yale Ave.
Tulsa, OK 74135
918/619-4565

V. Tulsa Residents

Report to the emergency department of the facility in which the resident is working.

VI. Enid Employees

Urgent Care Plus
1805 W. Owen K. Garriott Rd.
Enid, OK 73703-0552
580/233-9012

VII. Lawton Employees

AM-PM Clinic
4411 W. Gore Blvd

Lawton, OK
580/355-0575

Prompt Care Center
412 S. W. Summit
Lawton, OK
580/357-9685

VIII. George Nigh Rehabilitation Center

After notifying their supervisor, employees should notify the facility risk manager who will refer them to the nearest emergency department.

IX. Other Locations or Other After Hour Situations

After notifying their supervisor, employees should report to the nearest emergency department and follow-up by telephone with the appropriate Employee Health office the next working day to obtain the appropriate treatment protocol(s).